Malo

8 Jubilee street, Broadbeach, QLD 4218

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1. Company Information

1.1 Contact Details

Contact Person	Contact Number	E-mail Address
Site Manager Steward Galea	0419 040 702	steward@qcp.net.au
Emergency & After-Hours Queensland Coastal Plumbing	1800 367 727	info@qcp.net.au

1.2 Supplier Details

Supplier Name	Contact Details	E-mail Address
Aline Group Australasia Pty Ltd	1800 018 999	pumps@alinepumps.com

2. Description of the Works

MALO is located at 8 Jubilee Avenue, Broadbeach and is a 9-storey residential development comprising of 3 basement carpark levels, 16 residential units over 8 levels with ground level swimming pool and communal facilities.
The Hydraulic Services Subcontractor shall as be detailed in the drawings and specifications and in strict accordance with the relevant Australian Standards, Authority requirements, Building Code of Australia and generally at law provide all **design, supervision, labour, materials, plant and equipment necessary** to complete the Hydraulic Services works in strict accordance with the documents.
The Subcontractor is to include all works that are required to be completed for the successful completion of the project and deemed fit for purpose. The work shall include but not be limited to the following:

HYDRAULIC SERVICES PACKAGE SUMMARY

1. Design Documentation and Certification.
2. Project & Authority Requirements.
3. Temporary Services for Construction.
4. Sanitary Plumbing and Drainage System.
5. Water Reticulation System
6. Stormwater Plumbing and Drainage System.

Specifically excluding:

7. Fire Services.
8. GCCC submission and inspection fees.
9. APA submission and inspection fees.
10. Civil Works
11. Supply of Sanitary Ware and Tapware, Dishwasher and Bathroom accessories.
12. Landscape irrigation (water connection points by Plumbing Subcontractor to each planter).
13. Electrical wiring of power supply and final terminations to control panels for all pumps.

3. Operation & Maintenance Procedures

3.1 How to Operate and Use

1.0 Kwikflo Packaged Pump Station

- Your wastewater disposal service is part of a low-pressure sewer system. The key element in this system is the Kwikflo packaged pump station. The tank collects all wastewater; solids in the sewage/trade waste/ effluent are then ground into a slurry, suitable for pumping. The pump generates sufficient pressure to pump this slurry to the sewer main. Points to remember: Minimise the amount of cooking grease entering the system. Regulatory agencies advise that the following items should not be introduced into any sewer, either directly or through a pumping station; Glass, Metal, Baby napkins, Socks, rags or cloth, Plastic objects (e.g. toys, utensils etc.) & Sanitary products.
- Do not leave access cover off the tank except when servicing, to prevent the entrance of foreign materials such as rocks, metal, soil animals or humans.
- During power blackouts, minimise water consumption in the building to prevent sewage backing up.
- Keep the control panel (if installed) locked or confined to prevent unauthorized access.
- If the pump is idle for long periods of time, it is advisable to start the pump occasionally by adding water to the tank.

2. Kwikflo Submersible Pump

- With correct control settings, your Kwikflo submersible pump system should operate automatically. Do not allow anything to enter the system pipework or pit which the pump is not designed to pump.
- STORMWATER / SUBSOIL DRAINAGE PUMPS
  Unless otherwise specified in writing, these pumps are only designed to pump slightly silty water – not leaves, twigs, large quantities of mud, gravel, or other foreign objects.
  SEWAGE PUMPS These pumps are only designed to pump liquids and soft solids classified as normal sewage. Under no circumstances should articles of clothing, sanitary items, rags, or other foreign objects be allowed to enter the system pipework or pit. Make sure regular maintenance is carried out on the entire system.
- If issues occur with the Pump you can refer to the trouble shooting guide as found with the Product handbook (5.3) on Page 24.

3.2 Maintenance

1.0 Kwikflo Packaged Pump Station

- Prevent infiltration or direct flow of rain or run-off water into the pump basin to minimise pump cycling. This will prevent overloading the treatment facility and will facilitate swift transportation of waste/sewage/effluent.
- If the pump is idle for long periods of time, it is advisable to start the pump occasionally by adding water to the tank.

2.0 Kwikflo Submersible Pump

- All Installations should be serviced once every 6 months. It is important to note that this timeframe may be reduced to smaller periods in conditions where abrasive particles are found within the water, excessive amount of silt are found excess debris enter the pit and/or it is subject to heavy use.
- Be careful to avoid electric shock. Isolate pumps and controls before stating work.
- Check external condition of pumps and control gear.
- Check pumps for wear.
- Check condition for electrical equipment.
- Check pit for sludge build-up / presence of foreign objects – remove if necessary.
- Check that pump cables are securely tied up and that float switch movement is not obstructed.
- Check system operation.

4.0 Manufacturers Literature

4.1 Manufacturer's product information / data sheets / materials safety data sheets etc

- Submersible Pumps_064_Control Panel
- Submersible Pums_084_AL5500
- ALI-30240
- Aline Pumpstation Instruction Manual
- Aline Submersible Installatiom-0615
- FPC 30240 Manual

5.0 Warranties

PRODUCT	WARRANTOR	WARRANTY PERIOD
EDEN Bench Mount Basin Matte White	Casa Lusso	5 Years Replacement Product
OLLIE Tall Basin Mixer	Casa Lusso	Premium Warranty (Domestic Use) 15 Year Ceramic cartridge replacement only 7 Year replacement products and parts 1 Year parts & Labour
OLLIE Wall Mixer Combination Kit	Casa Lusso	15 Years
In wall cistern- Pneumatic	Casa Lusso	7 Year Replacement Product
OMEGA Drop in bath LHS Gloss White 1650mm	Casa Lusso	7 Year Replacement Product
OMEGA Drop in Bath RHS Gloss White 1650mm	Casa Lusso	7 Year Replacement Product
EDEN Hand Shower Brushed Nickel	Casa Lusso	2 Year replacement product or parts
OLLIE In Wall Mixer Kit	Casa Lusso	Premium Warranty (Domestic Use) 15 Year Ceramic cartridge replacement only 7 Year replacement products and parts

		1 Year parts & Labour
OLLIE Shower Rail 700mm	Casa Lusso	Shower Rail: 5-year replacement products or parts. Hose: 1 year replacement product or parts.
LIDO Square Tile Grate	Casa Lusso	5 Year replacement product or parts.
In Wall Cistern Pneumatic	Casa Lusso	7 Year replacement product
VISTA Rimless Floor Pan Toilet Suite	Casa Lusso	7 Year replacement products or parts*: 1 year labour.
Turn Down Wastes – Basin Waste	Casa Lusso	5 Year replacement product or parts.
Greenplate Inbench Electric BBQ	Greenplate	Electrical Components: 2 Years Heating Element: 5 Years All Stainless-Steel Components: Lifetime*Conditions Apply.
BURAZZO Single Bowl Kitchen Sink 450mm	Casa Lusso	7 Year replacement product 1 Year labour.
SPIN Gooseneck Sink Mixer	Casa Lusso	Premium Warranty (Domestic Use) 15 Year Ceramic cartridge replacement only 7 Year replacement products and parts 1 Year parts & Labour
OLLIE Single Function Hand Shower Chrome	Casa Lusso	2 Year replacement product or parts.
MONSOON Round Shower Head Chrome 200mm	Casa Lusso	5 Year replacement product or parts
OMEGA System Integrated Shower System Brushed Nickel	Casa Lusso	Shower Rail: 5 Year replacement products or parts. Hose: 1 Year replacement product or parts.
HDB-E Trend	Stiebel Eltron	7 Year Warranty
Washing Machine Stop Capstan 1/4 Turn Cer Disc Chrome Plated	Austworld	12 Months on Product or parts.
BURAZZO Double Bowl Kitchen Sink	Casa Lusso	7 Year replacement product 1 Year labour
BURAZZO Single Bowl Kitchen Sink 390mm	Casa Lusso	7 Year replacement product 1 Year labour
ZARA Kitchen Mixer with Pull Out Dual Spray	Casa Lusso	15 Year ceramic cartridge replacement only 7:1 Year replacement products and parts: 1 Year parts & labour
KUBICA Wall Hung Basin (RHS) Gloss White	Casa Lusso	5 Year Replacement Product
SPIN Basin Mixer	Casa Lusso	Premium Warranty (Domestic Use) 15 Year Ceramic cartridge replacement only 7 Year replacement products and parts

		1 Year parts & Labour
SPIN Bottle Trap Chrome	Casa Lusso	5 Year replacement product or parts
90o Toilet Grab Rails- High Grade Satin Stainless Steel	Paco Jaanson	7 Years from date of purchase *Conditions apply
Straight Grab Rails- High Grade Satin Stainless Steel	Paco Jaanson	7 Years from date of purchase *Conditions apply
Care backrest with supporting polyurethane cushion	Paco Jaanson	5 Years from date of purchase *Conditions apply
Extended Basin Mixer Levers- Extended Sink Mixer Lever	Paco Jaanson	15 Years from date of purchase *Conditions apply
Rimless Toilet Suite (Rear or Bottom Inlets) with Raised Height Pan	Paco Jaanson	15 Years from date of purchase *Conditions apply
Pop Up Wastes	Casa Lusso	5 Year replacement product or parts

6.0 Certification

Name of Certificate	Extent of Aspect/s Certified	Basis of Certification	Reference Documentation
Form 9 Backflow Device Testing Basement 1	Registration & Report on Inspection and testing of backflow prevention devices, registered air gaps and registered break tank.	Basement 1 – Single Check Valve testable device- Passed	
Form 9 Backflow Device Testing Basement 1	Registration & Report on Inspection and testing of backflow prevention devices, registered air gaps and registered break tank.	Basement 1 – Reduced Pressure Zone Device- PASSED	
Form 9 Backflow Device Testing Basement 1	Registration & Report on Inspection and testing of backflow prevention devices, registered air gaps and registered break tank.	Basement 1 – Double check-valves- PASSED	
Form 12 Aspect Inspection Certificate Hydraulic Services- Stormwater	Stormwater Installation Includes - Fastflow Stormwater system - Gravity System - Gross pollutant trap	BCA 2019 Amendment 1 Vol 1 AS/NZ300.3	Hydraulic Drawings – H000 – H402

	- Pump station		
Form 12 Aspect Inspection Certificate Hydraulic Services-Stormwater	Stormwater Installation Includes - Fastflow Stormwater system -Gravity System - Gross pollutant trap -Pump station	BCA 2019 Amendment 1 Vol 1 AS/NZ300.3	Hydraulic Drawings – H000 – H402
Form 12 Aspect Inspection Certificate Certify Installation of Fire Rated Penetrations	Installation of passive fire systems as per below Register	AS1530.4-2014, AS 4072.1-2005 NCC (BCA) 2019 Volume 1, Amendment 1 – Part C3.15 Installed as per manufactures installation guidelines Test reports as registered	Approved documents as listed in the Development Approval for Building Works associated with the Development QLD Costal Plumbing – Malo Fire Penetration Register and Location Plans
Form 15 Compliance certificate for building design or specification	Hydraulic services design including: Roof water, and Stormwater Drainage.	The documentation listed in item 4 has been designed in accordance with the following: AS 3500-2018 Parts 0, 1 & 3 National construction code (NCC) Series Volumes 1 & 3 Queensland development code (QDC) Qld Plumbing and Drainage Act 2018 Qld standard Plumbing and Drainage Regulation 20119	SJM Hydraulics Project Number SJM22205 Design Drawings H000, H100, H200, H201, H202, H203, H204, H205, H206, H207, H300, H301, H302, H303, H304, H305, H306, H400, H401, H402.
Form 15 Compliance certificate for building design or specification	Hydraulic services.	AS/NZS3500	Hydraulic drawings H200 through to H306 FER – 22242-SFE-FER-01-Malo – Refer – 8.3, 8.4, 8.5
FORM 71 Fire Hydrant and Sprinkler System commissioning	Hydrant test equipment/pressure gauges. Hydrant system flow test. Pump appliance booster test.	Compliance- Passed	Dry fire system Required flow and pressure is 0 L/s @ 0 kPa (unassisted) and 20L/s @ 700 kPa (boosted). Street Hydrant test PART E – Street Hydrant flow test was conducted at 16 Jubilee Avenue to ensure that it can provided 20 l/s 200kPa for the dry hydrant system supply. Flow Rate Hydrant Pressure 0l/s 750kPa 10l/s 700kPa 20l/s 550kPa
Aline Operational Test Report	Stormwater DSPS/AL5500/415V /FBMS/GR 582900C	Confirm system is standing on bricks (if applicable) and secured	Aline Operational Test Report – Stormwater DSPS_AL5500_415V_FBMS_GR_582900C

		Yes Confirm Air relief holes in riser above impeller (submersible systems) Yes Confirm all unions tight Yes Confirm Pump fitted with chain for lifting Yes Confirm Low float set above pump inlet Yes Confirm Floats clear of obstruction Yes Confirm Pump and float cables secured and accessible at top of pit Yes Confirm Floats lifted to confirm correct operation Yes Visual inspection for leaks Complete Confirm Auto/Off/Manual works correctly from the control panel (if applicable) Yes Confirm System alarms activate when required (if applicable) Yes Confirm Rotation of Pumps correct Yes Confirm Pit free of debris and mud build-up Yes	

7.0 As Built Drawings (if applicable)

7.1 As-Built Drawing Register

Drawing Description	Drawing	Revision
COVER SHEET	H000	
SITE PLAN, HYDRAULIC SERVICES	H100	
BASEMENT 3 DRAINING SERVICES	H200	
BASEMENT 2 DRAINING SERVICES	H201	
BASEMENT 1 DRAINING SERVICES	H202	
LEVEL 1 / GROUND DRAINAGE SERVICES	H203	
LEVEL 2 PODIUM DRAINAGE SERVICES	H204	

LEVELS 3-9 DRAINAGE SERVICES	H205	
LEVEL 10 ROOF DRAINAGE SERVICES	H206	
BASEMENT 3 WATER SERVICES	H300	
LEVEL 1 / GROUND WATER SERVICES	H303	
LEVEL 2 PODIUM WATER SERVICES	H304	
LEVELS 3-9 WATER SERVICES	H305	
LEVEL 10 ROOF SERVICES	H306	
SANITARY DIAGRAMMATIC SHEET 1	H400	
SANITARY DIAGRAMMATIC SHEET 2	H401	

7.2 Electronic copy of as-built drawings

- A3 copy of as-built drawings

Appendix 1 – Copies of Product Warranties

Warranty 1: Basin FL135-M Specs (Eden Bench Mount Basin)
Warranty 2: Basin Mixer OL110-BN (Ollie Tall basin Mixer)
Warranty 3: Bath Mixer OL131-BN (Ollie Wall Mixer Combination Kit)
Warranty 4: Cistern K301-Q (In wall Cistern Pneumatic)
Warranty 5: Drop In Bath OM1650L-W (Omega Drop in Bath LHS Gloss White 1650mm)
Warranty 6: Drop In Bath OM1650R-W (Omega Drop in Bath RHS Gloss White 1650mm)
Warranty 7: Hand Shower EDEN-BN (Eden Hand Shower Brushed Nickel)
Warranty 8: Shower Mixer OL141-BN (Ollie In Wall Mixer Kit)
Warranty 9: Shower Rail R169-BN (Ollie Shower Rail 700mm)
Warranty 10: Square Tile Grate TWS100 (Lido Square Tile Grate)
Warranty 11: Toilet Push Plate K5110-CH (In Wall Cistern Pneumatic)
Warranty 12: Toilet TV13-W (Vista Rimless Floor Pan Toilet Suite)
Warranty 13: Turn Down Waste TDW3240-BN (Turn Down Wastes)
Warranty 14: BBG Greenplate BBQ Axxessories
Warranty 15: BBQ Greenplate Inbench BBQ
Warranty 16: BBQ Sink BU454520S (Burazzo Single Bowl Kitchen Sink 450mm)
Warranty 17: BBQ Sink Mixer SP120-CH (Spin Gooseneck Sink Mixer)
Warranty 18: Shower Hand Shower OLLIE-CH (Ollie Single Function Hand Shower)
Warranty 19: Shower MS200-R-BN (Monsoon Round Shower Head)
Warranty 20: Shower OMG02-BN (Omega System Integrated Shower System)
Warranty 21: Units Stiebel Eltron (HDB-E Trend)
Warranty 22: Dishwasher FCD60SI
Warranty 23: HN BVWM Austworld non return valves (Washing Machine Stop Capstan 1/4 Turn Cer Disc Chrome Plated)
Warranty 24: Kitchen – Sink BU754522D (Burazzo Double Bowl Kitchen Sink)
Warranty 25: Laundry Sink BU394520S (Burazzo Single Bowl Kitchen Sink 390mm)
Warranty 26: Laundry Sink Mixer SP120
Warranty 27: Sink Mixer ZA120-BN (Zara Kitchen Mixer with Pull Out Dual Spray)
Warranty 28: Basin MC101R-W (Kubica Wall Hung Basin)
Warranty 29: Basin Mixer SP100-CH (Spin Basin Mixer)
Warranty 30: Bottle Trap A186-E-CH (Spin Bottle Trap Chrome)
Warranty 31: Care 9 – 1 (90o Toilet Grab Rails- High Grade Satin Stainless Steel)
Warranty 32 Care S-1 (Straight Grab Rails- High Grade Satin Stainless Steel)
Warranty 33: Care Backrest Code BR1003 (Care backrest with supporting polyurethane cushion)
Warranty 34: Care L – 1 (Extended Basin Mixer Levers- Extended Sink Mixer Lever)
Warranty 35: Care W – 1 (Rimless Toilet Suite (Rear or Bottom Inlets) with Raised Height Pan)
Warranty 36: Paper Towel Dispenser
Warranty 37: Pop Up Wastes Without Overflow PO3280-CH (Pop Up Wastes)
Warranty 38: Robe Hook SP54
Warranty 39: Soap Dispenser B-2111
Warranty 40: Toilet Roll Holder B-264
Warranty 41: HWS L! Assessable and BBQ DHB-E_11-27_LCD_AU
Warranty 42: Rainware 2500

Appendix 2 – Copies of Certificates and Performance Testing

Certificate 1: Form 9 – Back Flow Device Test – Basement 1

Certificate 2: Form 9 – Back Flow Device Test – Basement 1

Certificate 3: Form 9 – Back Flow Device Test – Basement 1

Certificate 4: Form 12 – Stormwater.

Certificate 5: Form 12 – Stormwater.

Certificate 6: Form 12 – Fire Rated Penetrations

Certificate 7: Form 15 – Compliance Certificated for Building Design or Specification

Certificate 8: Form 15 - Compliance Certificated for Building Design or Specification.

Certificate 9: Form 71 – Fire hydrant and sprinkler system commissioning

Certificate 10: Aline Operational Test Report

Malo Broadbeach Sub Meters

MALO

8 JUBILEE AVENUE

BROADBEACH QLD 4218

GENERAL NOTES

1. THE INSTALLATION SHALL COMPLY WITH LOCAL AUTHORITY REQUIREMENTS, THE PLUMBING AND DRAINAGE ACT AND REGULATION, THE BUILDING ACT, WATER AND SEWERAGE ACT, THE NATIONAL CONSTRUCTION CODE (NCC) OF AUSTRALIA, AS/NZS3500, AS/NZS 2441, AS/NZS 2419, AS/NZS 2941, AS/NZS 5601, AS/NZS 1596, QUEENSLAND DEVELOPMENT CODE (QDC), QUEENSLAND PLUMBING & WASTEWATER CODE, WORKPLACE HEALTH AND SAFETY ACT, ENVIRONMENTAL PROTECTION ACT, SUSTAINABLE PLANNING ACT AND ALL SUB-ORDINATE AND/OR ASSOCIATED REGULATIONS, STANDARDS, GUIDELINES AND PRACTICES.

2. WHERE THE DRAWINGS DO NOT INDICATE SOIL TYPES AND REQUIREMENTS FOR EXPANSION AND MOVEMENT, IT DOES NOT IMPLY THAT SOIL CONDITIONS ARE NORMAL. SJM HYDRAULICS HAVE TAKEN ALL NECESSARY STEPS TO OBTAIN THE APPROPRIATE INFORMATION, HOWEVER THE REQUIRED GEOTECHNICAL EVIDENCE MAY NOT OF BEEN AVAILABLE AT THE TIME OF DOCUMENTATION. IT IS THEN THE RESPONSIBILITY OF THE HYDRAULIC CONTRACTOR TO OBTAIN THIS INFORMATION AND INSTALL THE APPROPRIATE SYSTEMS TO ALLOW FOR CERTAIN SOIL TYPES. SJM HYDRAULICS REFER THE CONTRACTOR TO STORMPLASTICS PTY LTD FOR DETAILED INFORMATION.

3. PROVIDE SERVICES CONNECTIONS TO ALL FIXTURES NOMINATED ON THE ARCHITECTURAL OR HYDRAULIC DRAWINGS & INSTALL ALL FIXTURES & EQUIPMENT TO THE REQUIREMENTS OF THE MANUFACTURER & ALL GOVERNING AUTHORITIES.

4. CONTRACTOR TO ENSURE ALL PIPEWORK SHALL BE CONCEALED WHERE EVER POSSIBLE. WHERE THIS IS NOT POSSIBLE THE PIPEWORK IS TO BE CHROME PLATED UNLESS OTHERWISE APPROVED.

5. ALL EXPOSED PIPEWORK IN CEILINGS AND SUSPENDED ABOVE GROUND SHALL BE CLEARLY IDENTIFIED WITH SELF ADHESIVE SIGNS SIMILAR TO SAFETYMAN, NOMINATING SERVICE AND DIRECTION OF FLOW AT NO MORE THAN 3m INTERVALS. ALL PIPEWORK BELOW GROUND SHALL BE CLEARLY IDENTIFIED BY USING CONTINUOUS TAPE INDICATING SERVICE AND DIRECTION OF FLOW AND LOCATED AT MIN. 300mm ABOVE THE OVERT OF THE PIPE.

6. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTORS FOR INTERFACES OF HYDRAULIC EQUIPMENT, SUCH AS CONTROL PANELS, HOT WATER PLANTS, METERS, URINAL FLUSHING DEVICES, FILTRATION PLANT ETC.

7. THE CONTRACTOR IS TO INSPECT ONSITE, UNCOVER & VERIFY THE LOCATION & LEVEL OF ALL EXISTING SERVICES PRIOR TO THE SUBMISSION OF ANY TENDER OFFER. EXISTING SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN SUPPLIED BY VARIOUS SOURCES ALL OF WHICH ARE NOT GUARANTEED BY SJM HYDRAULICS.

8. UNLESS PROVIDED PRIOR, THE HYDRAULIC CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL THE RELEVANT PERMITS AND PAY ALL ASSOCIATED FEES REQUIRED TO COMPLETE THE HYDRAULIC SERVICES INSTALLATION.

9. THESE DRAWINGS ARE NOT TO BE SCALED FROM. THE POSITION & LAYOUT OF THE DRAINS, PIPES & EQUIPMENT IN THE DRAWINGS ARE SHOWN INDICATIVELY. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL & OTHER RELEVANT DOCUMENTS FOR ALL SET-OUT DIMENSIONS AND SPECIFICATIONS OF FINAL POSITIONS, FIXTURES & FITTINGS, VALVES, RECEPTACLES, EQUIPMENT AND PLANT.

10. ALL EXISTING PIPEWORK SHOWN TO BE MADE REDUNDANT AND SHALL BE REMOVED AND/OR SEALED TO AUTHORITY REQUIREMENTS.

11. WHERE PIPEWORK PENETRATES FIRE RATED WALLS, FLOORS OR CEILINGS THE CONTRACTOR SHALL ENSURE THE REQUIRED FIRE RATING (FRL) OF THE STRUCTURE IS MAINTAINED. ALL MATERIALS AND PRODUCTS MUST BE APPROVED PRIOR TO INSTALLATION.

12. WHERE STRUCTURES WILL BE SUBJECT TO WATER UNDER HYDROSTATIC PRESSURES, ALL PENETRATIONS, ACCESS COVERS, OUTLETS, INLETS, CHAMBERS, MANHOLES, WELLS ETC ARE TO BE MADE WATER TIGHT INCLUDING AT THE PENETRATION OF THE BASEMENT FLOOR SLAB USING PUDDLE FLANGES, PROPRIETY WATER STOPS CAST IN-SITU AND OR TANKING.

13. CONTRACTOR TO ALLOW FOR CUTTING AND/OR CORING OF EXISTING CONCRETE, EXCAVATION, BACKFILLING AND MAKING GOOD EXISTING SLAB TO STRUCTURAL ENGINEERS REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN APPROVAL FROM A STRUCTURAL ENGINEER FOR THESE WORKS.

14. ALL PIPES SHALL BE ADEQUATELY SUPPORTED AND SECURED IN AN APPROVED MANNER. ALL COPPER SHALL NOT COME IN CONTACT WITH ANY OTHER SERVICE PIPES OR PART OF THE BUILDING STRUCTURE UNLESS INSULATED WITH 4mm THICK uPVC LAGGING.

15. THE CONTRACTOR IS TO ALLOW TO PREPARE AND SUBMIT TO SJM HYDRAULICS COMPLETED TO SCALE IN COLOUR SKETCH FORMAT "AS INSTALLED" DRAWINGS INCLUDE DIMENSIONS OF SERVICES PIPEWORK FROM PERMANENT BUILDING STRUCTURES, DEPTHS BELOW FINISHED &/OR GROUND LEVELS AND FOR BELOW GROUND DRAINAGE PIPE WORK RELATIVE LEVELS AND INVERT LEVELS.

16. THE LOCATION OF ALL SERVICES CAPPED UNDERGROUND FOR FUTURE EXTENSION SHALL BE MARKED WITH 300SQ x 150mm THICK CONCRETE MARKER WITH 150SQ ENGRAVED PLATE INDICATING THE SERVICE TYPE, SIZE AND DEPTH.

17. MAKE GOOD ANY DAMAGE TO OTHER SERVICES AND TO FLOORS, WALLS, CEILINGS, ROADWAYS, FOOTINGS, EXISTING BUILDINGS, LANDSCAPING AND SURFACES GENERALLY AND ANY OTHER WORK THAT MAY BE DISTURBED OR INJURED BY CARTAGE OR OTHER OPERATIONS IN CARRYING OUT THE WORK.

18. THE HYDRAULIC CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RECTIFICATION WORKS AS REQUIRED FOR ANY DEFECTIVE WORK DUE TO MATERIALS AND/OR WORKMANSHIP FOR A PERIOD OF 12 MONTHS FROM COMPLETION.

19. FOR SEISMIC REQUIREMENTS, USE GRIPPLE SEISMIC BRACES OR EQUAL . APPROVED SEISMIC BRACES SHOULD BE TESTED TO AN ISO RECOGNISED PROCEDURE SUCH AS ANSI/ASHRAE 171 AND REQUIRED TO PASS AC-156 SHAKE TABLE TESTING. WIRE ROPE PRODUCTS MUST BE SUPPLIED IN KITS USING CERTIFIED PRE-STRETCHED WIRE, FASTENERS AND BRACKETRY SUPPLIED AS TESTED. WIRE FASTENERS MUST BE LOCKABLE DEVICES RATED FOR DYNAMIC LOADS AND HAND SWAGING IS NOT ALLOWED. WHEN USING PRODUCTS THAT RELY ON CLAMPING OR FRICTION THE INSTALLER MUST ENSURE THAT THE FASTENERS ARE TORQUED AS PER MANUFACTURERS GUIDELINES. CONCRETE ANCHORS USED TO FIX SEISMIC BRACES SHOULD CONFORM TO ETA PROTOCOLS FOR SEISMIC BRACING. IN ORDER TO ENSURE CONFORMANCE TO AS1170.4 CONTRACTORS ARE REQUIRED TO OBTAIN A FORM 15 FROM AN RPEQ CERTIFYING THAT THE DESIGN WILL CONFORM TO STANDARDS AND FORM 16 INSPECTION AT COMPLETION.

SERVICE NOTES

1. ALL SANITARY PLUMBING & DRAINAGE SHALL BE DWV SN6 uPVC PIPE AND FITTINGS TO AS1260 WITH SOLVENT JOINTS. PIPEWORK UNSIZED TO BE LAID AT MINIMUM GRADES AS SPECIFIED IN AS3500.

2. ALL TRADE WASTE PLUMBING & DRAINAGE ABOVE AND BELOW GROUND SHALL BE 'COESTILEN' HDPE OR EQUALLY APPROVED.

3. ALL 100ø STORMWATER DRAINAGE SHALL BE SN4 DWV uPVC PIPE AND FITTINGS TO AS1254 WITH SOLVENT WELDED JOINTS. ANY STORMWATER LARGER THAN 100ø SHALL BE SN2 PVC-U PIPE & FITTINGS TO AS1254 WITH SOLVENT WELDED JOINTS. ALL UNSIZED DRAINAGE IS TO BE LAID AT A MINIMUM GRADE OF 1% OR EQUALLY APPROVED.

4. PROVIDE COMPACT 7-10mm CRUSHED BLUE METAL BEDDING AROUND ALL INGROUND SANITARY PIPEWORK. WHERE THE MINIMUM PIPE COVER CAN NOT BE ACHIEVED, PROVIDE MEANS OF PROTECTION SUCH AS CONCRETE ENCASEMENT OR PAVING.

5. ALL WATER SERVICES & GAS SERVICES PIPEWORK ABOVE GROUND SHALL BE UNLESS OTHERWISE NOTED, TYPE 'B' SOLID DRAWN COPPER TUBE AS A MINIMUM TO AS-1432. ALL PIPEWORK BELOW SLAB SHALL BE AS FOR ABOVE GROUND BUT BENT & FORMED IN ONE PIECE WITHOUT JOINTS TO SUIT APPLICATION & SPIRAL OVERWRAPPED WITH DENSO TAPE 600, (OR EQUALLY APPROVED). CONTRACTOR IS TO CONSIDER ANY PIPEWORK LOCATED IN CONTAMINATED & CORROSIVE AREAS AND COMPLY WITH AS3500.1, 5.11, 5.12 & 5.13.

6. ALL WATER SERVICES CONNECTIONS WITH PRESS-FIT FITTING MADE OF COPPER OR GUNMETAL. INSPECTION OF UN-PRESSED FITTINGS UTILISES A POSITIVE LEAK PATH FOR THE WHOLE RANGE 2.2kPa TO 300kPa WHEN A DRY PRESSURE TEST IS PERFORMED AND 100kPa TO 650kPa WITH A WET PRESSURE TEST. THIS SAFETY FUNCTION SHOULD BE FACILITATED BY A CHANNEL IN THE METALLIC BODY OF THE FITTING AND ITS EFFICACY MUST BE WARRANTED BY THE MANUFACTURER. AFTER PRESSING, THE CONNECTION IS PERMANENT AND INSEPARABLE WITH THE SAFETY FUNCTION EFFECTIVELY REMOVED DURING THE PRESSING PROCESS. THE SEAL IS MADE OF EPDM, WITH PERFORMANCE CHARACTERISTICS ALLOWING USE IN SOLAR APPLICATIONS.. THE FITTING BODY HAS A CYLINDRICAL PIPE GUIDE IN FRONT OF THE SEAL. FITTINGS MUST CARRY WATERMARK APPROVAL, BE SUPPLIED BY ONE MANUFACTURER AND BE ZERO LEAD. ALTERNATIVE OPTION IS WITH SLIP AND SILVER SOLDERED BRAZED JOINTS. (MIN 15% SILVER)

7. ALL GAS CONNECTION WITH PRESS-FIT FITTINGS MADE OF COPPER OR GUNMETAL. INSPECTION OF UN-PRESSED FITTINGS UTILISES A POSITIVE LEAK PATH IN THE WHOLE RANGE 2.2kPa TO 300kPa WITH A DRY PRESSURE TEST. THIS SAFETY FUNCTION SHOULD BE FACILITATED BY A CHANNEL IN THE METALLIC BODY OF THE FITTING AND ITS EFFICACY MUST BE WARRANTED BY THE MANUFACTURER. AFTER PRESSING, THE CONNECTION IS PERMANENT AND INSEPARABLE WITH THE SAFETY FUNCTION EFFECTIVELY REMOVED DURING THE PRESSING PROCESS. THE SEAL IS MADE OF "DHNBR" AND THE FITTING BODY HAS A CYLINDRICAL PIPE GUIDE IN FRONT OF THE SEAL. FITTINGS CARRY PERFORMANCE CERTIFICATIONS TO INTERNATIONAL GAS STANDARDS DVGW VP 614 AND ANSI LC4. FITTINGS MUST BE SUPPLIED BY ONE MANUFACTURER ONLY AND BE ZERO LEAD. ALTERNATIVE OPTION IS WITH A SLIP AND SILVER SOLDERED BRAZED JOINTS. (MIN 15% SILVER)

8. ALL IN GROUND DOMESTIC AND FIRE SERVICES TO BE SDR11 PN16 & OR PN20 AS NOTED OR EQUALLY APPROVED. ALL SERVICES IN GROUND ARE TO BE COLOUR CODED IN ACCORDANCE WITH AUSTRALIAN STANDARDS AND ADDITIONAL LOCAL AUTHORITIES STANDARDS.

9. ALL FIRE SERVICE PIPEWORK ABOVE GROUND SHALL BE MEDIUM DUTY GALVANISED STEEL PIPE WITH ROLLED GROOVED AND/OR FLANGED CONNECTIONS.

10. ALL WATER SERVICE PIPE SIZES SHOWN ARE INTERNAL BORE WHERE AN ALTERNATE PIPE MATERIAL ARE PROPOSED, APPROVAL MUST BE OBTAINED AND THE EQUIVALENT PIPE SIZES USED.

11. HOT WATER FLOW AND RETURN PIPEWORK IS TO BE INSULATED WITH EQUAL MATERIAL TO THERMOTEC 4-ZERO FIRE RETARDANT CLOSED CELL POLYETHYLENE FOAM WITH INCORPORATED ALUMINIUM FOIL WRAP. INSTALL AROUND ALL PIPEWORK AS TIGHTLY AS POSSIBLE WITHOUT GAPS. ALL JOINTS SHALL BE WRAPPED IN 4-ZERO PRESSURE SENSITIVE FOIL TAPE.

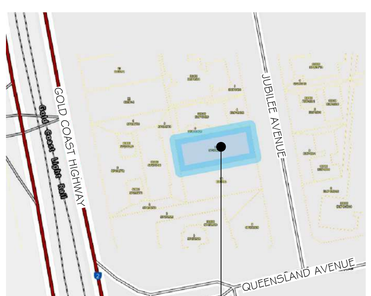
12. CONTRACTOR SHALL ALLOW FOR ACOUSTIC LAGGING IN ACCORDANCE WITH THE PROJECT ACOUSTIC REPORT. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM WITH PROJECT PRINCIPAL PRIOR TO SUBMISSION OF TENDER.

13. WHERE OPERATION OF AUTOMATIC FIRE-EXTINGUISHING EQUIPMENT COULD EXTINGUISH A GAS APPLIANCE FLAME.
(A) ALL BURNERS OF THE GAS APPLIANCE SHALL HAVE A FLAME SAFEGUARD SYSTEM; OR
(B) THE INSTALLATION SHALL BE FITTED WITH A SYSTEM WHICH WILL SHUT OFF THE GAS SUPPLY WHEN THE FIRE EXTINGUISHING SYSTEM OPERATES. THE SYSTEM SHALL REQUIRE PRESSURE PROVING OF THE DOWNSTREAM INSTALLATION PRIOR TO RESTORATION OF THE GAS SUPPLY.

14. CONTRACTOR SHALL ALLOW FOR PRESSURE REDUCING VALVES AS REQUIRED TO MEET THE REQUIRED MAXIMUM STATIC PRESSURE OF 500KPA AT ANY OUTLET WITHIN A BUILDING. DOCUMENTATION IS A GUIDE ONLY.

SYMBOLS

- FLOOR WASTE GULLY (FWG)
- BUCKET TRAP FLOOR WASTE GULLY (BT/FWG)
- TUNDISH (TD)
- GRATED SUMP (SWP)
- MANHOLE (SMH/SWMH)
- OVERFLOW RELIEF GULLY (ORG)
- STORMWATER/RAINWATER OUTLET (SWO/RWO)
- BALCONY OUTLET (BO)
- PLANTER DRAIN OUTLET (PDO)
- DIRECTION OF FLOW
- PIPE REDUCER
- INSPECTION OPENING (IO)
- INSPECTION OPENING TO SURFACE LEVEL (IOSL)
- EXPANSION JOINT
- STOP VALVE ON RISER
- STOP VALVE ON DROPPER
- WATER POINT OR HOSE TAP WITH SV
- STOP VALVE IN PATH BOX
- STOP VALVE (SV)
- RETICULATION SERVICE POINT
- FIRE HYDRANT (FH)
- DUAL PILLAR HYDRANT (DPH)
- HYDRANT BOOSTER
- FIRE HOSE REEL (FHR)
- PUMP
- [T] THERMOSTATIC MIXING VALVE
- [TV] TEMPERING VALVE (UNO)
- [S] SENSOR
- [P] PRESSURE GAUGE
- [R] REGULATOR
- PRESSURE REDUCTION VALVE
- METER
- METER IN VALVE PIT
- FUTURE METER
- CHECK VALVE ASSEMBLY
- DUAL CHECK VALVE ASSEMBLY
- BALANCING VALVE
- SOLENOID VALVE
- EMERGENCY SHUT OFF VALVE
- MONITORED FIRE HYDRANT ISOLATION VALVE
- DOUBLE CHECK VALVE (TESTABLE) ASSEMBLY
- SINGLE CHECK VALVE (TESTABLE) ASSEMBLY
- REDUCED PRESSURE ZONE ASSEMBLY
- BREAK
- CONNECTION TO EXISTING SERVICE
- RISER OFF LATERAL
- DROPPER OFF LATERAL
- DROPPER WITH BRANCH OR CHANGE IN LEVEL
- GRATED TRENCH DRAIN
- CAST IN BEAM
- EXTENT OF CONCRETE TO BE CUT & REPLACED TO STRUCTURAL ENGINEERS REQUIREMENTS
- CAST IN STRUCTURE
- H000 — SERVICE CONTINUES ON DRAWING NOMINATED
- RISE / SERVICE / SERVICE SIZE / DROP / (X.X l/s) / DP FLOW RATE — SERVICE IDENTIFICATION
- RISE / SERVICE / SERVICE SIZE / DROP — EXISTING SERVICE RISER/DROPPER



LOCALITY PLAN
NOT TO SCALE

LINETYPES

- SANITARY DRAINAGE
- SANITARY RISING MAIN
- VENT PIPE
- STORMWATER DRAINAGE
- STORMWATER RISING MAIN
- SYPHONIC SERVICE
- SUB-SOIL DRAINAGE
- TRADE WASTE DRAINAGE
- TRADEWASTE VENT PIPE
- COLD WATER
- HOT WATER
- WARM WATER
- NON POTABLE COLD WATER
- NON POTABLE HOT WATER
- NON POTABLE WARM WATER
- RAINWATER SERVICE
- RECYCLED WATER SERVICE
- IRRIGATION WATER SERVICE
- FIRE SERVICE
- FIRE SPRINKLER SERVICE
- GAS SERVICE
- COMPRESSED AIR
- DEMOLISHED SERVICE
- REDUNDANT SERVICE
- EX SANITARY/SEWER
- EX STORMWATER
- EX TRADE WASTE
- EX VENT PIPE
- EX TRADE WASTE VENT PIPE
- EX RISING MAIN
- EX COLD WATER
- EX HOT WATER
- EX WARM WATER
- EX RAINWATER SERVICE
- EX RECYCLED WATER SERVICE
- EX NON POTABLE COLD WATER
- EX NON POTABLE HOT WATER
- EX NON POTABLE WARM WATER
- EX GAS SERVICE
- EX FIRE SERVICE
- EX FIRE SPRINKLER
- EX SUB SURFACE DRAIN
- CIVIL WATER SERVICE
- CIVIL SEWER SERVICE
- CIVIL STORMWATER SERVICE
- CIVIL GAS SERVICE
- CIVIL ELECTRICAL SERVICE
- CIVIL ELECTRICAL CONDUIT

DRAWING SERIES LEGEND:

- H000 - COVER SHEET, GENERAL NOTES, LEGEND & LOCALITY PLAN
- H100 - SITE PLAN
- H200 - DRAINAGE LAYOUTS OR HYDRAULIC LAYOUTS
- H300 - WATER, FIRE & GAS LAYOUTS
- H400 - DIAGRAMMATICS
- H500 - DETAILS & SCHEDULES
- H600 - FIRE COVERAGE
- H700 - HYDRAULIC SETOUTS

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AC	AIR CONDITIONING
ADJ	ADJACENT
AMR	AUTOMATIC METER READING
AP	ACCESS PANEL
AS	AUSTRALIAN STANDARD
B	BASIN
BB	BABY BATH
BCU	BOILING / CHILLED WATER UNIT
BG	BOX GUTTER
BGS	BOX GUTTER SUMP
BID	BIDET
BM	BAIN MARIE
BT	BUCKET TRAP
BTH	BATH
BV	BALANCING VALVE
BWU	BOILING WATER UNIT
CD	CONDENSATE DRAIN
CDR	CAPPED DRAINAGE RISER
CICL	CAST IRON CEMENT LINED
CIS	CAST IN SLAB
CM	COFFEE MACHINE
COV	COMBI (CONVECTION OVEN)
CSK	CLEANERS SINK
CT	COOK TOP
CTDP	COOLING TOWER DUMP POINT
Cu	COPPER
CV	CHECK VALVE
CW	COLD WATER
CWU	CHILLED WATER UNIT
C/W	COMPLETE WITH
DB	DISABLED BASIN
DCT	DOMESTIC COOK TOP
DCV	DOUBLE CHECK VALVE
DF	DRINKING FOUNTAIN
DFR	DEEP FRYER
DG	DISCONNECT GULLY
DIA	DIAMETER(Ø)
DICL	DUCTILE IRON CEMENT LINED
DP	DOWNPIPE
DPH	DUAL PILLAR HYDRANT
DPS	DOWNPIPE SPREADER
DS	DOWNSTREAM
DSHR	DISABLED SHOWER
DT	DISCONNECTOR TRAP
DW	DISHWASHER
DWC	DISABLED WATER CLOSET
DWV	DRAINAGE WASTE & VENT
DWG	DRAWING
EDVP	EDUCT VENT PIPE
EG	EAVES GUTTER
EJ	EXPANSION JOINT
EPD	ELEVATED PIPEWORK DROPPER
EW	EYE WASH
EX	EXISTING
F	FRIDGE
FFL	FINISHED FLOOR LEVEL
FGL	FINISHED GROUND LEVEL
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FRC	FIBRE REINFORCED CONCRETE
FRL	FIRE RATING LEVEL
FS	FIRE SERVICE
FSS	FIRE SPRINKLER SERVICE
FSL	FINISHED SURFACE LEVEL
FTD	FIRE TEST DRAIN
FTS	FIRE TANK SUCTION
FU	FIXTURE UNITS
FW	FLOOR WASTE
FWG	FLOOR WASTE GULLY
GIT	GREASE INTERCEPTOR TRAP
GMS	GALVANISED MILD STEEL
GO	GRATED OUTLET
GR	GRILLER
GS	GAS SERVICE
GTD	GRATED TRENCH DRAIN
GW	GLASS WASH
HD	HEAVY DUTY
HL	HIGH LEVEL
HT	HOSE TAP
HTRW	HOSE TAP RAIN WATER
HTVP	HOSE TAP VANDAL PROOF
HV	HYDRANT VALVE
HW	HOT WATER
HWF	HOT WATER FLOW
HWR	HOT WATER RETURN
HWU	HOT WATER UNIT
IDVP	INDUCT VENT PIPE
IL	INVERT LEVEL
IM	ICE MACHINE
IO	INSPECTION OPENING
IOSL	INSPECTION OPENING TO SURFACE LEVEL
IW	ICE WELL
kPa	KILOPASCALS
kW	KILOWATT
LD	LIGHT DUTY
LL	LOW LEVEL
LPG	LIQUEFIED PETROLEUM GAS
L/s	LITRES SECOND
LVL	LEVEL
MAX	MAXIMUM
MD	MEDIUM DUTY
m/H	METRES HEAD
MIN	MINIMUM
MJ	MEGAJOULE
MSCL	MILD STEEL CEMENT LINED
NG	NATURAL GAS
NP	NON POTABLE
NPCW	NON POTABLE COLD WATER
NPHW	NON POTABLE HOT WATER
NPWW	NON POTABLE WARM WATER
NRV	NON RETURN VALVE
NTS	NOT TO SCALE
O/F	OVER FLOW
OJ	OBLIQUE JUNCTION
OL	OVERT LEVEL
ORG	OVERFLOW RELIEF GULLY
PDO	PLANTER DRAIN OUTLET
PRV	PRESSURE REDUCTION VALVE
PSVP	PUMP STATION VENT PIPE
PVC	POLY VINYL CHLORIDE
R	REDUNDANT
RCP	REINFORCED CONCRETE PIPE
RL	REDUCED LEVEL
RM	RISING MAIN
RO	ROOF OUTLET
RPZD	REDUCED PRESSURE ZONE DEVICE ASSEMBLY
RV	RELIEF VENT
RW	RAIN WATER
RWT	RAIN WATER TANK
RWH	RAIN WATER HEAD
RWO	RAIN WATER OUTLET
S	SEWER
SD	SANITARY DRAINAGE
SDO	SPOON DRAIN OUTLET
SDPS	SANITARY DRAINAGE PUMP STATION
SFWG	SEALED FLOOR WASTE GULLY
SHR	SHOWER
SK	SINK
SL	SURFACE LEVEL
SMH	SEWER MANHOLE
SP	SANITARY PLUMBING
SPR	FIRE SPRINKLER SERVICE
SPS	SEWER PUMP STATION
SRM	SEWER RISING MAIN
SS	STAINLESS STEEL
SSD	SUB SOIL DRAIN
SSHR	SAFETY SHOWER
SSL	STRUCTURAL SLAB LEVEL
ST	SANITARY STACK
STV	STACK VENT
SV	STOP VALVE
SW	STORMWATER
SWMH	STORMWATER MANHOLE
SWO	STORMWATER OUTLET
SWP	STORMWATER PIT
SWPS	STORMWATER PUMP STATION
SWRM	STORMWATER RISING MAIN
SY	SYPHONICS
SYO	SYPHONIC OUTLET
T	LAUNDRY TUB
TD	TUNDISH
TG	TEST GATE
TMV	THERMOSTATIC MIXING VALVE
TPR	TEMPERATURE PRESSURE RELIEF
TR	TROUGH
TV	TEMPERING VALVE
TW	TRADE WASTE
TWST	TRADE WASTE STACK
TWVP	TRADE WASTE VENT PIPE
UCV	UNIT CONTROL VALVE ASSEMBLY
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
US	UPSTREAM
U/S	UNDERSIDE
VCP	VITRIFIED CLAY PIPE
VP	VENT PIPE
WC	WATER CLOSET
WM	WASHING MACHINE
WT	WATER TAP
WTP	WASTEWATER TREATMENT PLANT
WW	WARM WATER

SCHEDULE & DETAIL LABELS:

(THE DRAWINGS INCLUDE LABELS TO IDENTIFY PARTICULAR ITEMS OF THE INSTALLATION. REFER TO THE LIST BELOW FOR ABBREVIATIONS AND THE SCHEDULES ON H600 SERIES OF DRAWINGS FOR SPECIFIC REQUIREMENTS OF EACH ITEM).

BG.#	- BOX GUTTER	IWT.#	- IRRIGATION WATER TANK
EG.#	- EAVES GUTTER	O/F.#	- OVERFLOW
DWPS.#	- DOMESTIC WATER PRESSURE SET	RCWPS.#	- RECYCLED WATER PRESSURE SET
DWT.#	- DOMESTIC WATER TANK	RWPS.#	- RAINWATER PRESSURE SET
FHP.#	- FIRE HYDRANT PUMP	RWO.#	- RAINWATER OUTLET
FJP.#	- FIRE JACKING PUMP	SPS.#	- SEWER PUMP STATION
FHT.#	- FIRE HYDRANT TANK	SWPS.#	- STORMWATER PUMP STATION
FST.#	- FIRE SPRINKLER TANK	SSPS.#	- SUB SOIL PUMP STATION
GTD.#	- GRATED TRENCH DRAIN	SWO.#	- STORMWATER OUTLET
GIT.#	- GREASE INTERCEPTOR TRAP	SYO.#	- SYPHONIC OUTLET
GPT.#	- GROSS POLLUTANT TRAP	SMH.#	- SEWER MANHOLE
HWCP.#	- HOT WATER CIRCULATION PUMP	SWMH.#	- STORMWATER MANHOLE
HWP.#	- HOT WATER PLANT	SWDT.#	- STORMWATER DETENTION TANK
IWPS.#	- IRRIGATION WATER PRESSURE SET	TP.#	- TREATMENT PLANT

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TENANT: N/A
LOCAL AUTHORITY: GOLD COAST CITY COUNCIL
NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

COVER SHEET

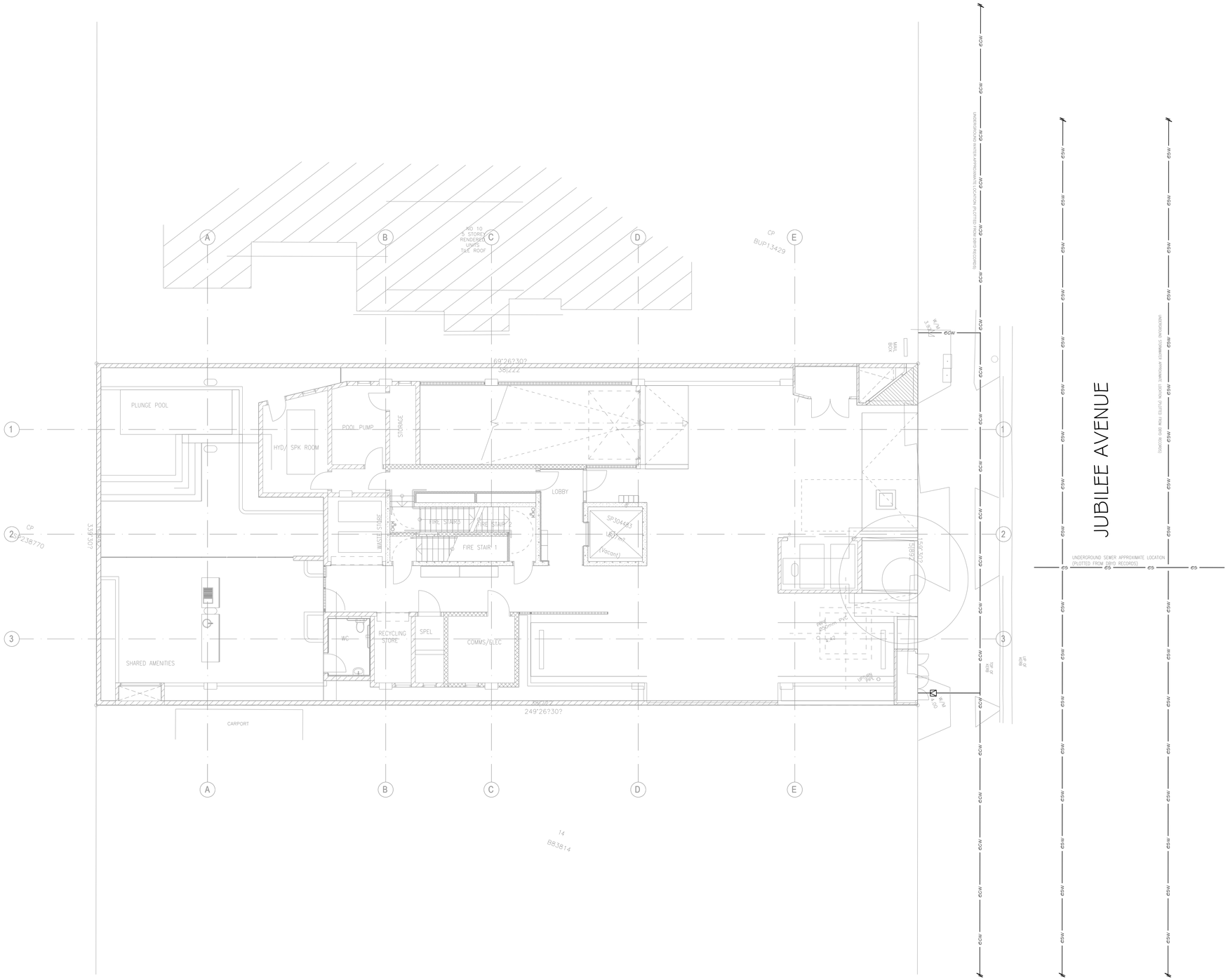
DESIGNED	CHECKED BY
QCP	QCP

SCALE

NTS @ A1

DATE	GBCC LICENCE No.
JULY 2023	1214559

PROJECT No.	DRAWING No.	ISSUE
22205	H000	AC1



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ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

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PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

SITE PLAN
HYDRAULIC SERVICES

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
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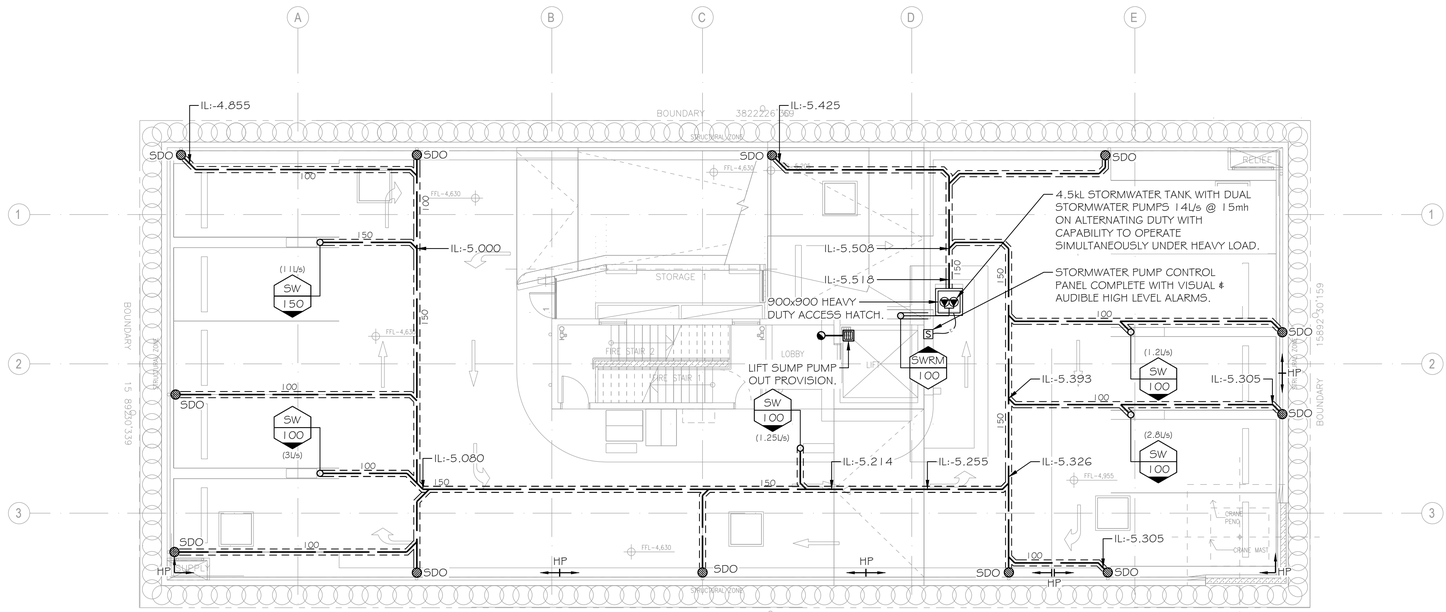
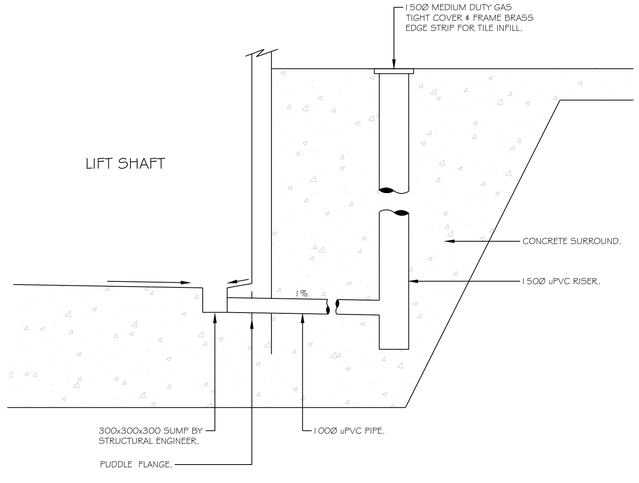
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No. ISSUE
22205	H100 AC1





LIFT SUMP DETAIL

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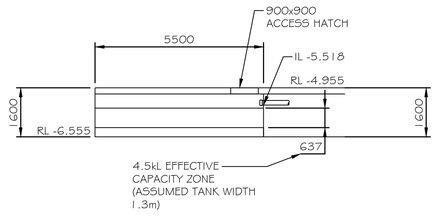

STORMWATER TANK SECTION

NOT TO SCALE

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AC1	10.09.24	AS CONSTRUCTED	QCP

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ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m

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PROJECT

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8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

BASEMENT 3
DRAINAGE SERVICES

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
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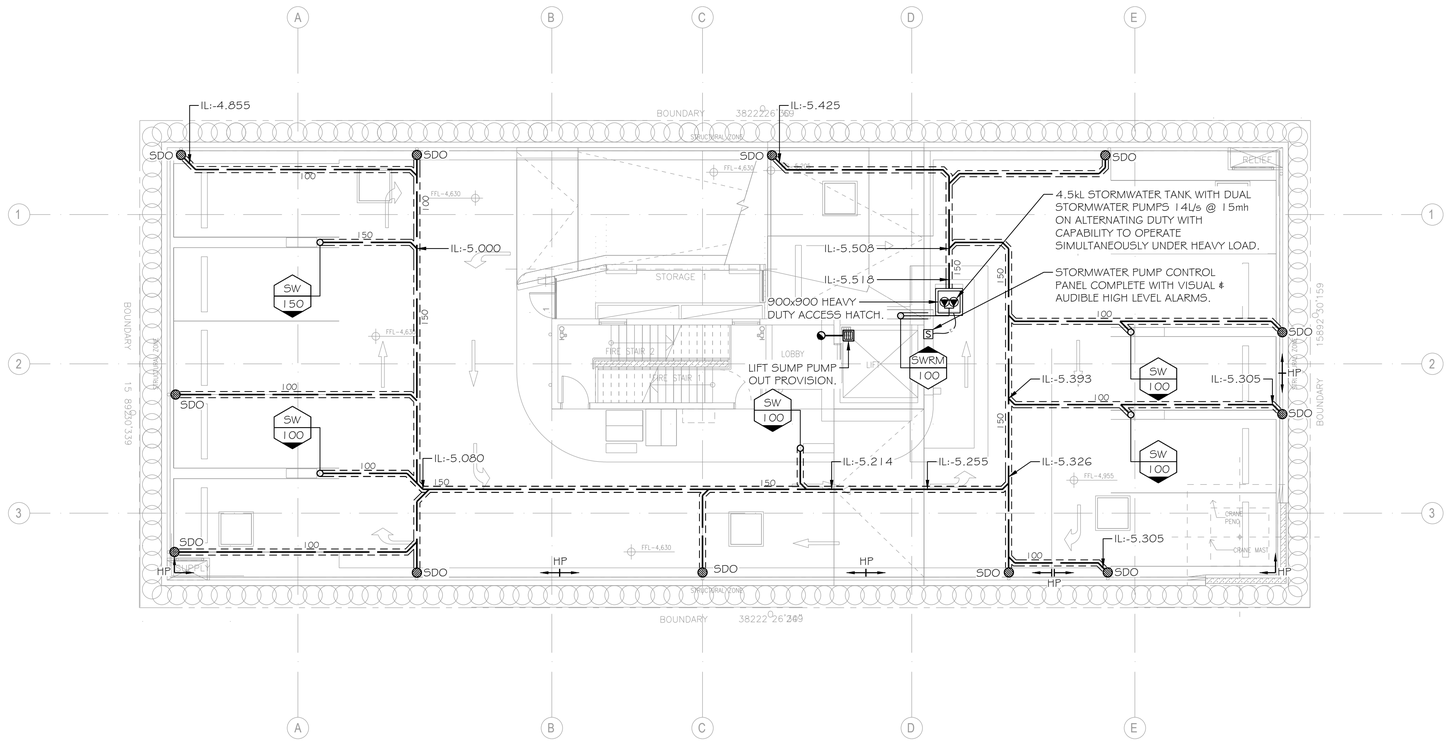
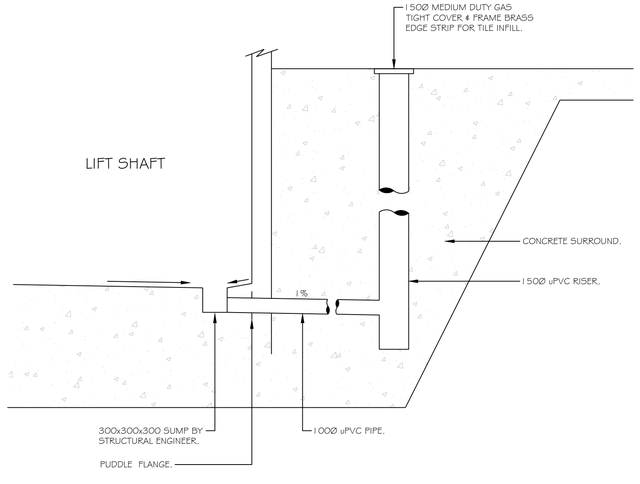
DATE	QBCC LICENCE No.
JULY 2023	1214559

PROJECT No.	DRAWING No.	ISSUE
22205	H200	AC1





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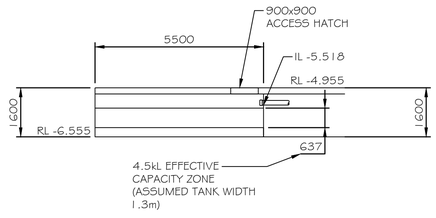

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NOT TO SCALE

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ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m

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DRAWING TITLE

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SCALE	
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PROJECT No.	DRAWING No.	ISSUE
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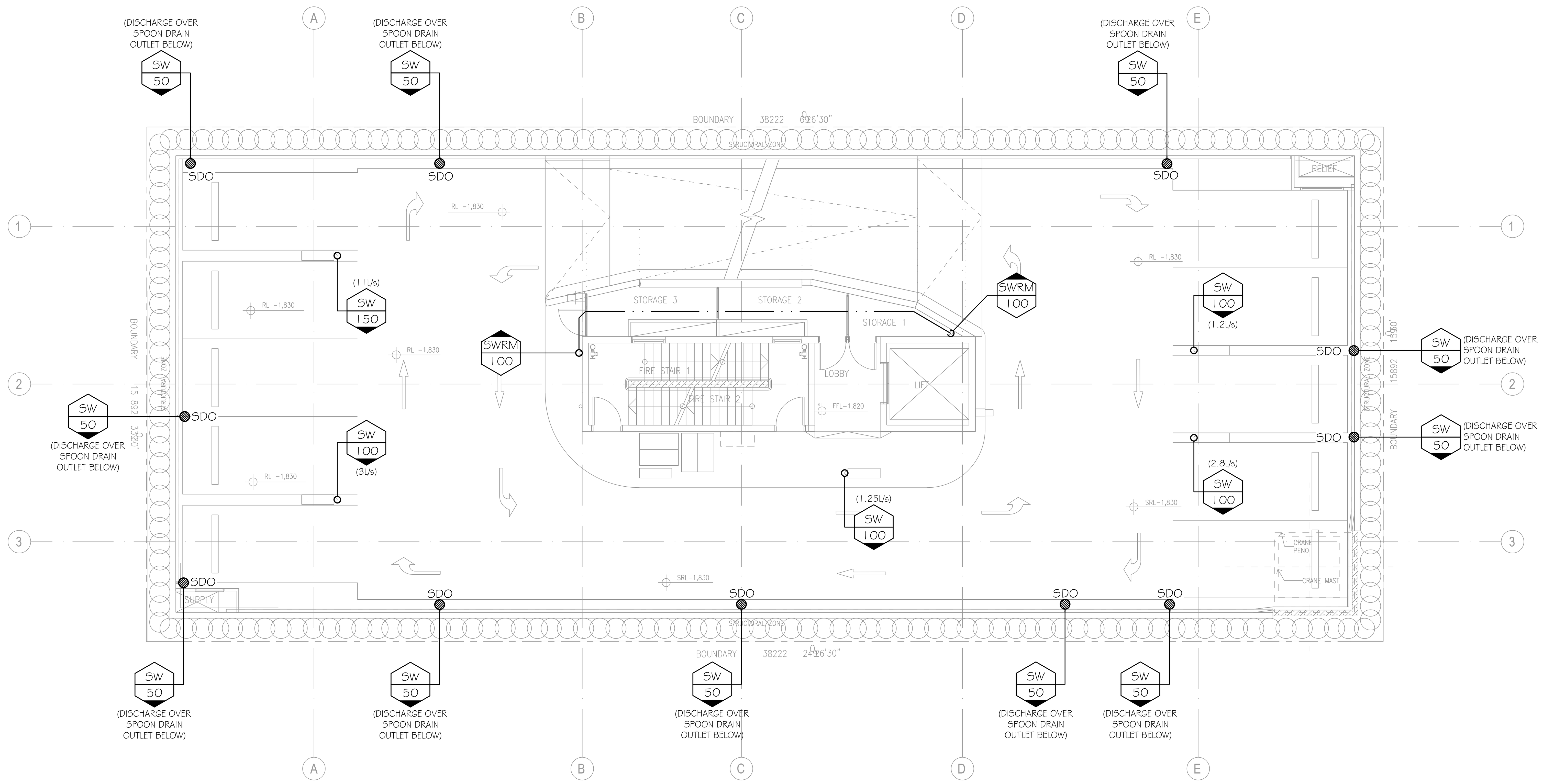

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ISSUE STATE

AS CONSTRUCTED

SCALE

metres 0 2 4 6 8m

SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

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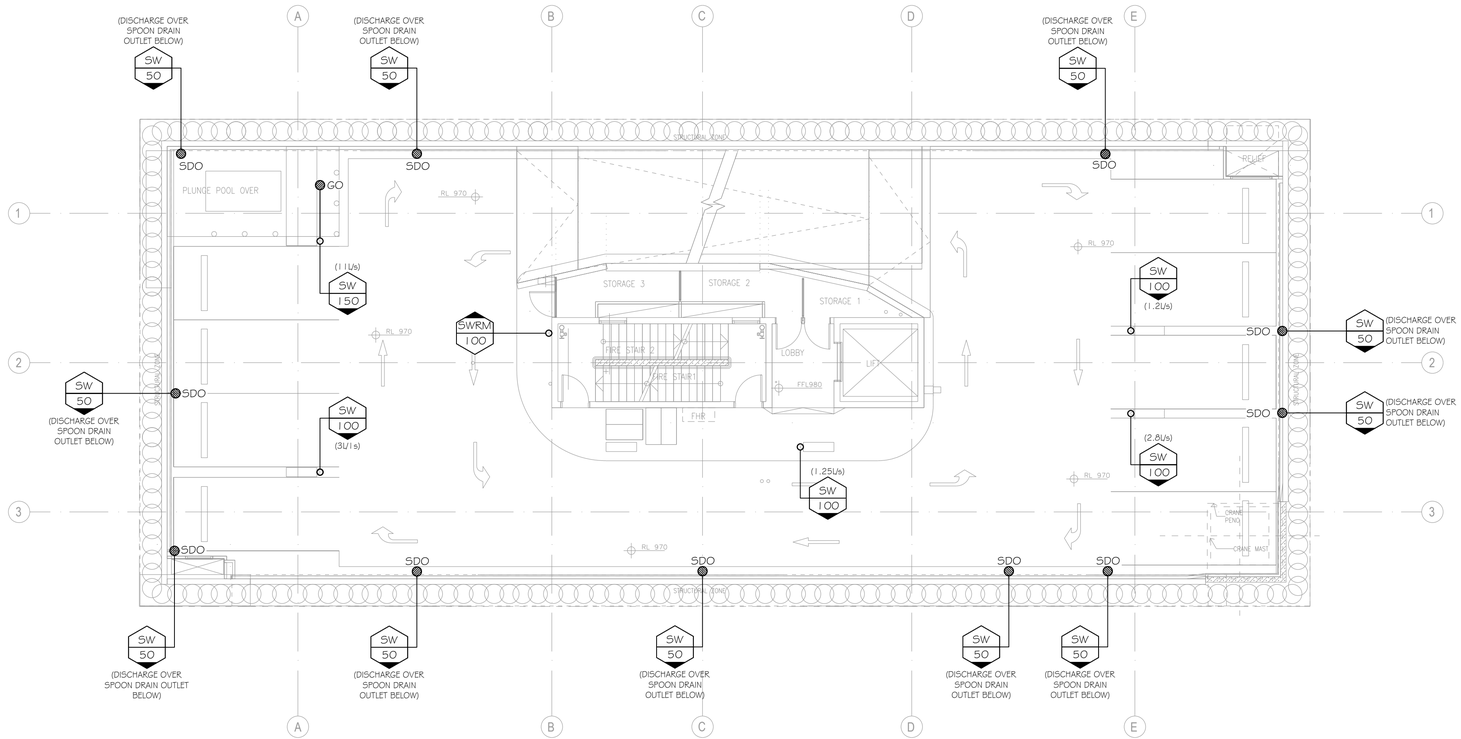
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

BASEMENT 2
DRAINAGE SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H201	AC1



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ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
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AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
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PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

BASEMENT 1
DRAINAGE SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
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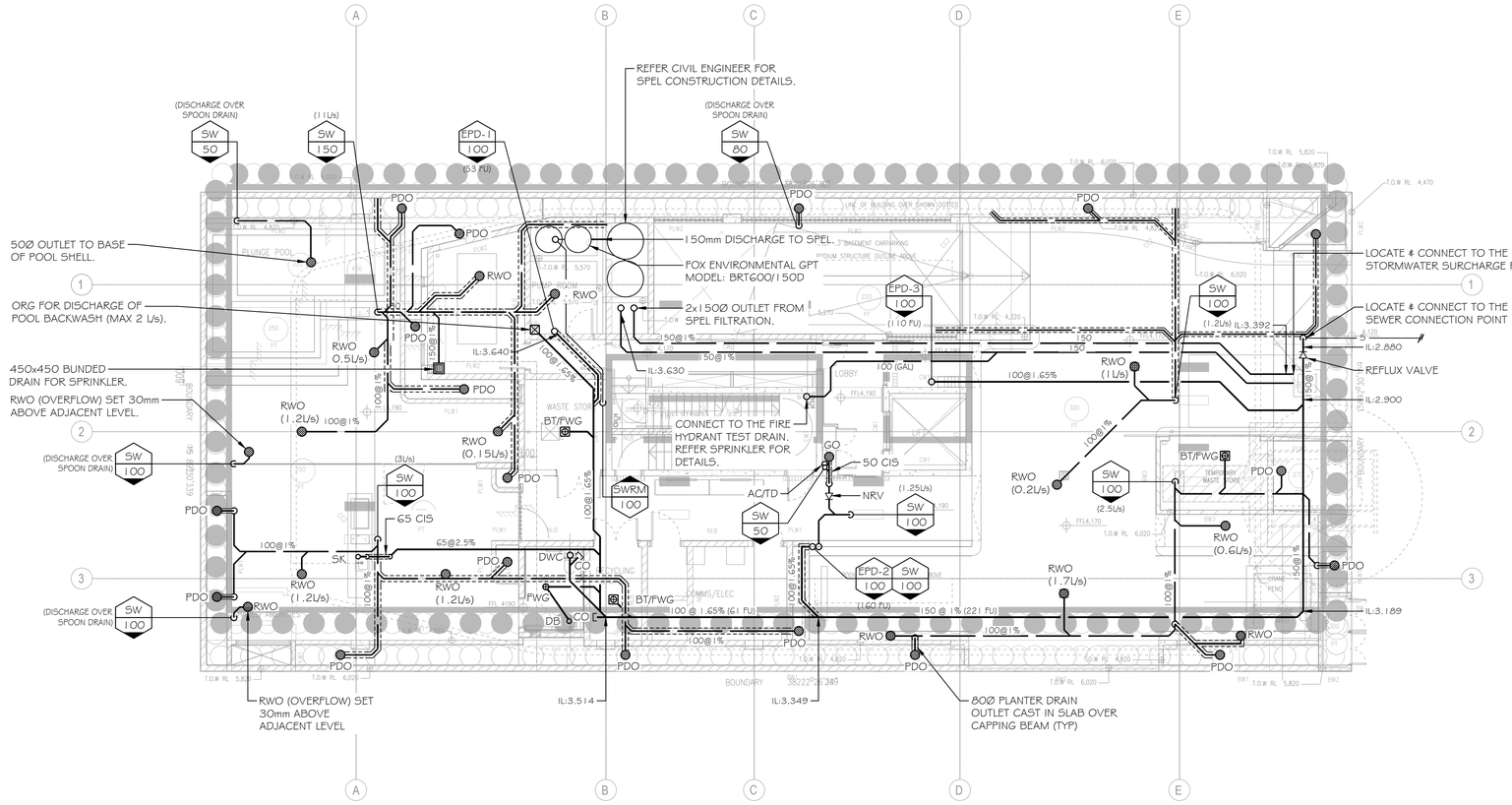

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ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
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gmb
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PROJECT

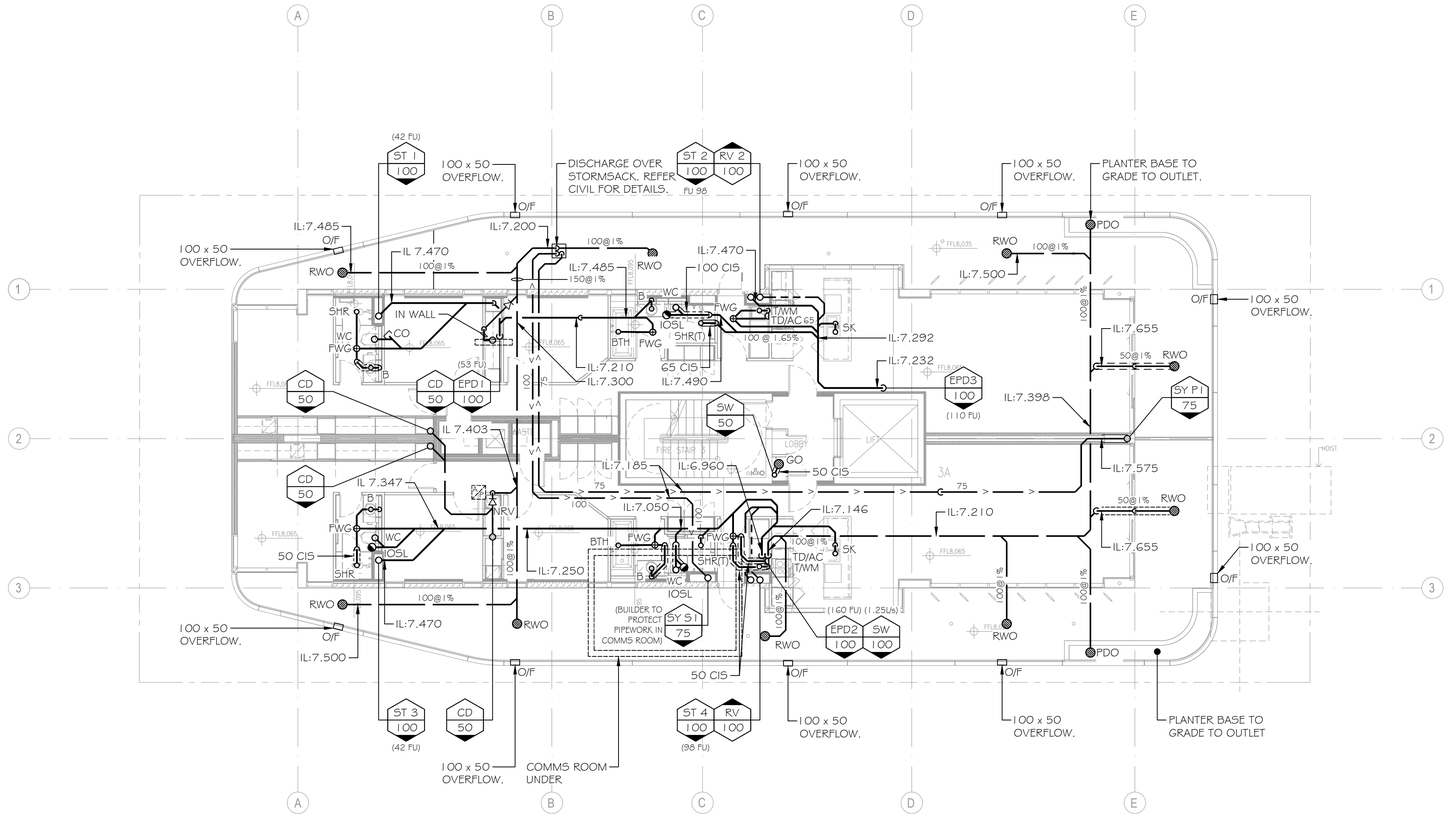
MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVEL 1 / GROUND
DRAINAGE SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H203	AC1

NOTE:
REFER FASTFLOW FOR FINAL SYPHONIC SYSTEM DETAILS



COUNCIL INFORMATION

APPLICATION No.: PCS 2023-1153
RPD: LOT 8 ON SP304483
ADDRESS: 8 JUBILEE AVENUE
BROADBEACH QLD 4218

OWNER: STRZELECKI PTY LTD
TENANT: N/A
LOCAL AUTHORITY: GOLD COAST CITY COUNCIL
NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APR.
AC1	10.09.24	PRELIMINARY BA ISSUE	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

CLIENT

PROJECT

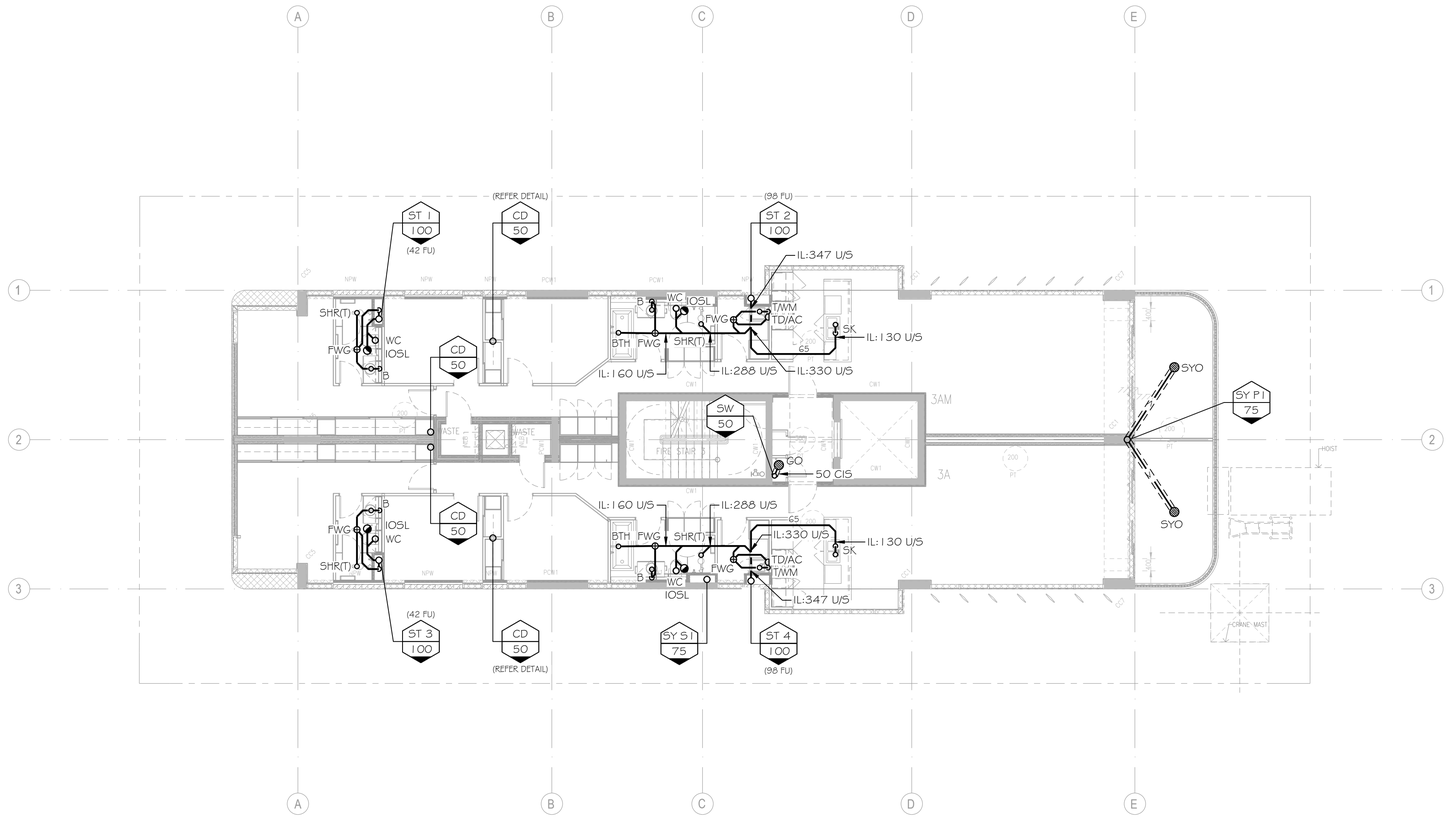
MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

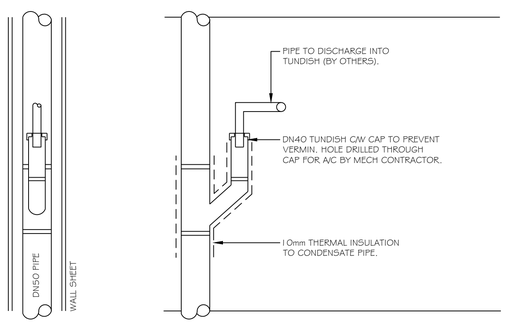
DRAWING TITLE

LEVEL 2 PODIUM
DRAINAGE SERVICES

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
1:100 @ A1	
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No. ISSUE
22205	H204 AC1

NOTE:
REFER FASTFLOW FOR FINAL SYPHONIC SYSTEM DETAILS





CROSS SECTION ELEVATION

CONCEPT CONDENSATE DROPPER IN WALL DETAIL

NOT TO SCALE

COUNCIL INFORMATION

APPLICATION No.: PCS 2023-1153
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ISSUE	DATE	AMENDMENT DESCRIPTION	APR.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres 0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

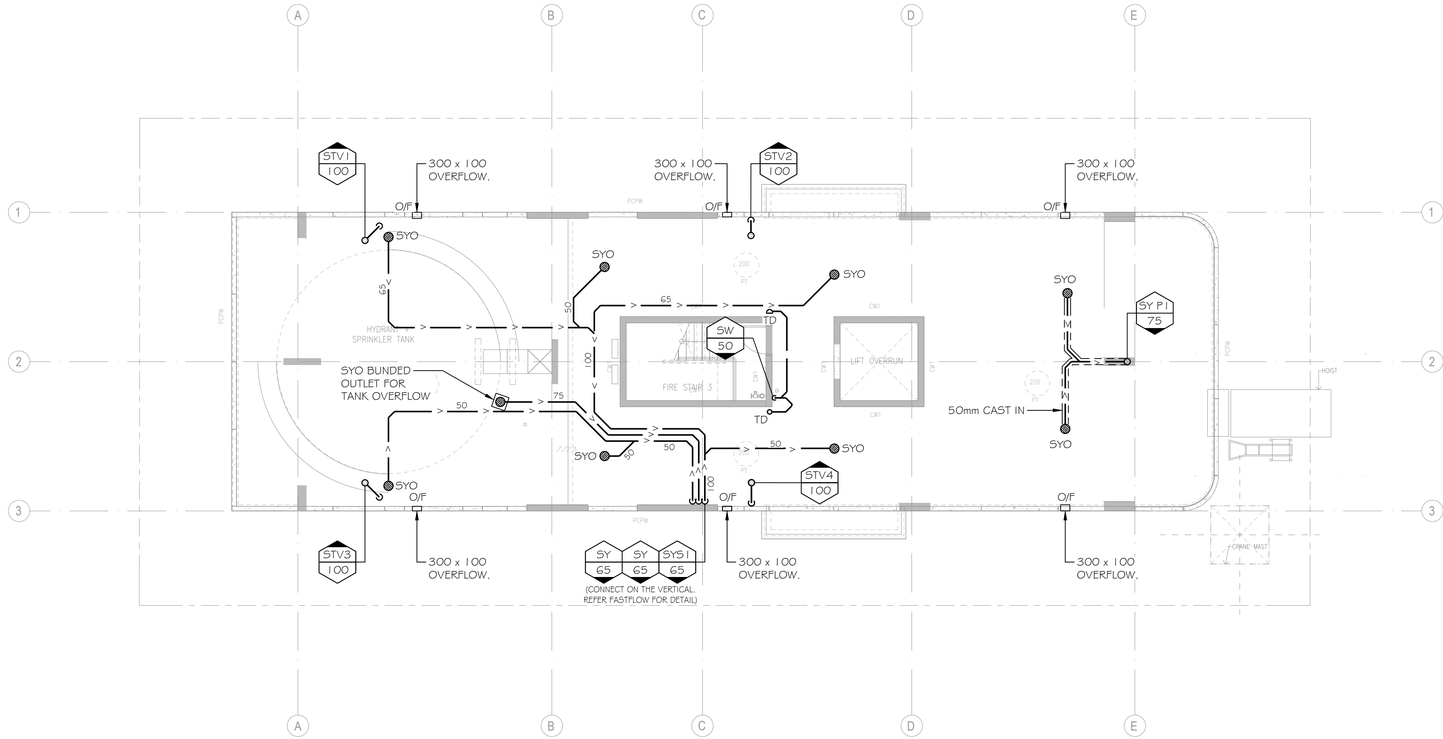
CLIENT

PROJECT
MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE
LEVELS 3-9
DRAINAGE SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H205	AC1

NOTE:
REFER FASTFLOW FOR FINAL SYPHONIC SYSTEM DETAILS



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ISSUE	DATE	AMENDMENT DESCRIPTION	APR.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

CLIENT

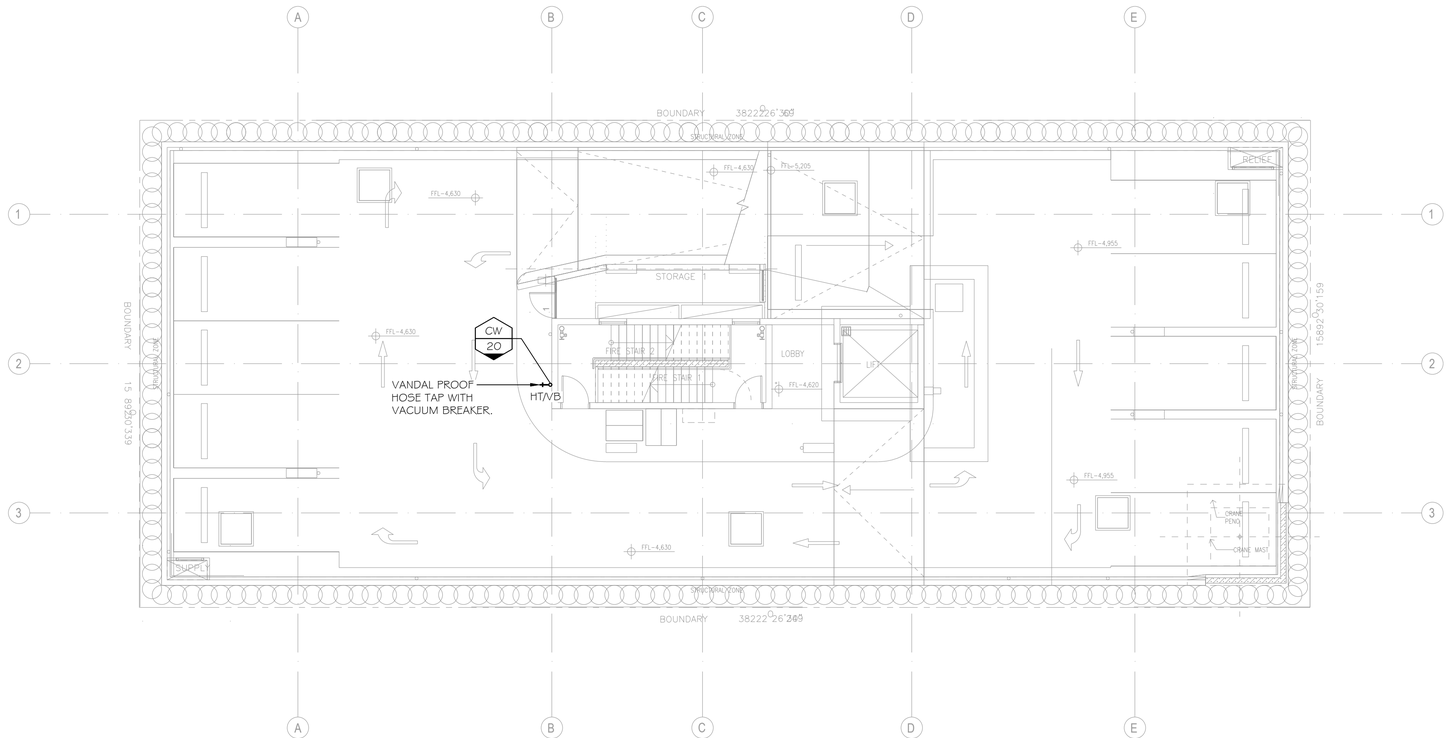
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVEL 10 ROOF
DRAINAGE SERVICES

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
1:100 @ A1	
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No.	ISSUE
22205	H206	AC1



COUNCIL INFORMATION

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ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

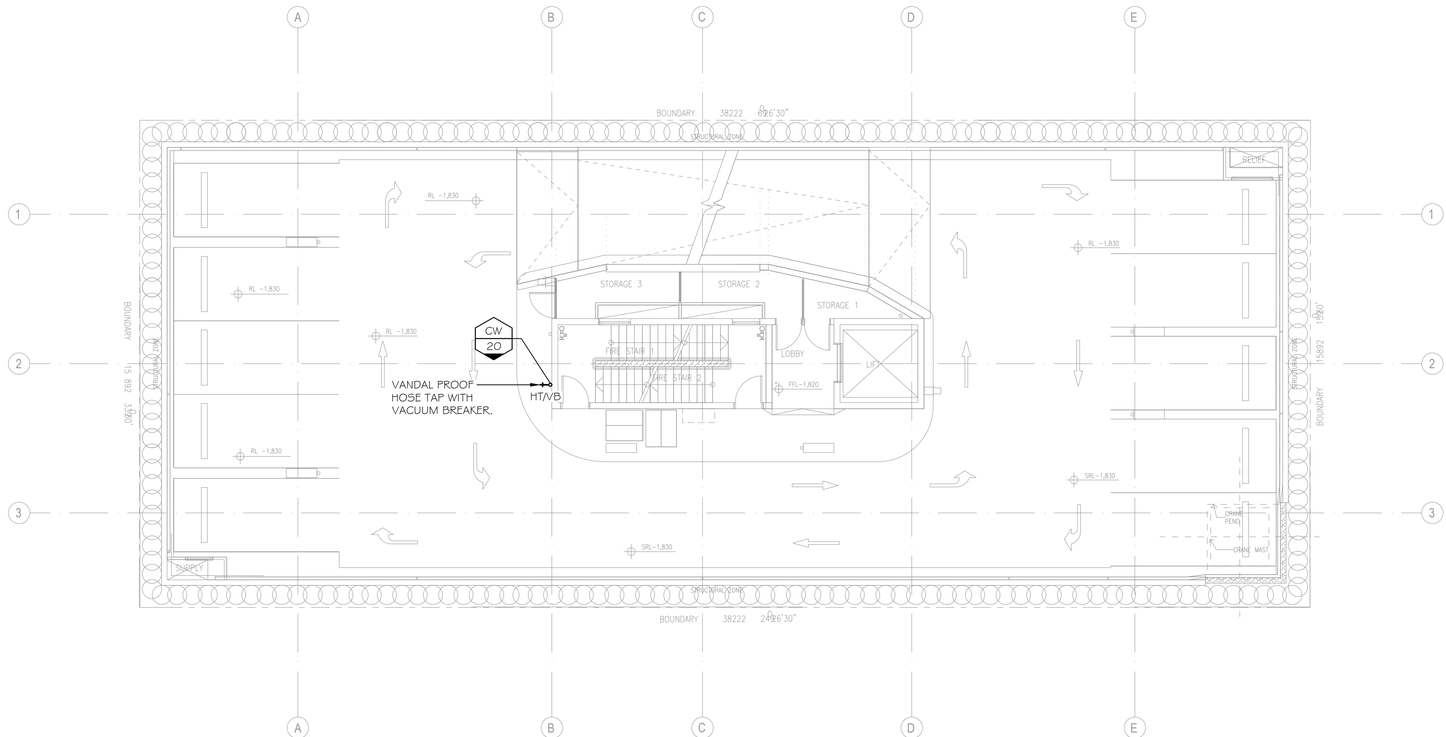
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

BASEMENT 3
WATER SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H300	AC1



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LOCAL AUTHORITY: GOLD COAST CITY COUNCIL
NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

CLIENT

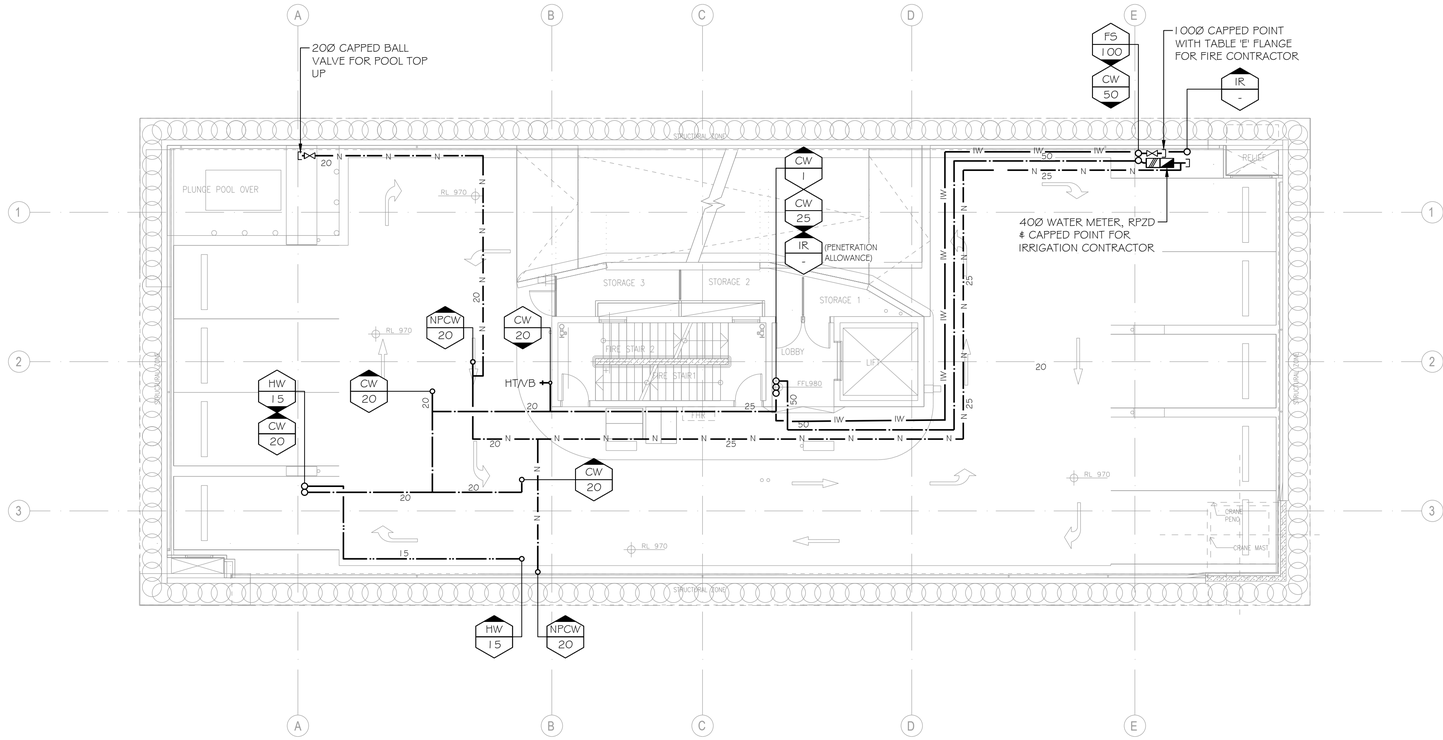
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

BASEMENT 2
WATER SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H301	AC1



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AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

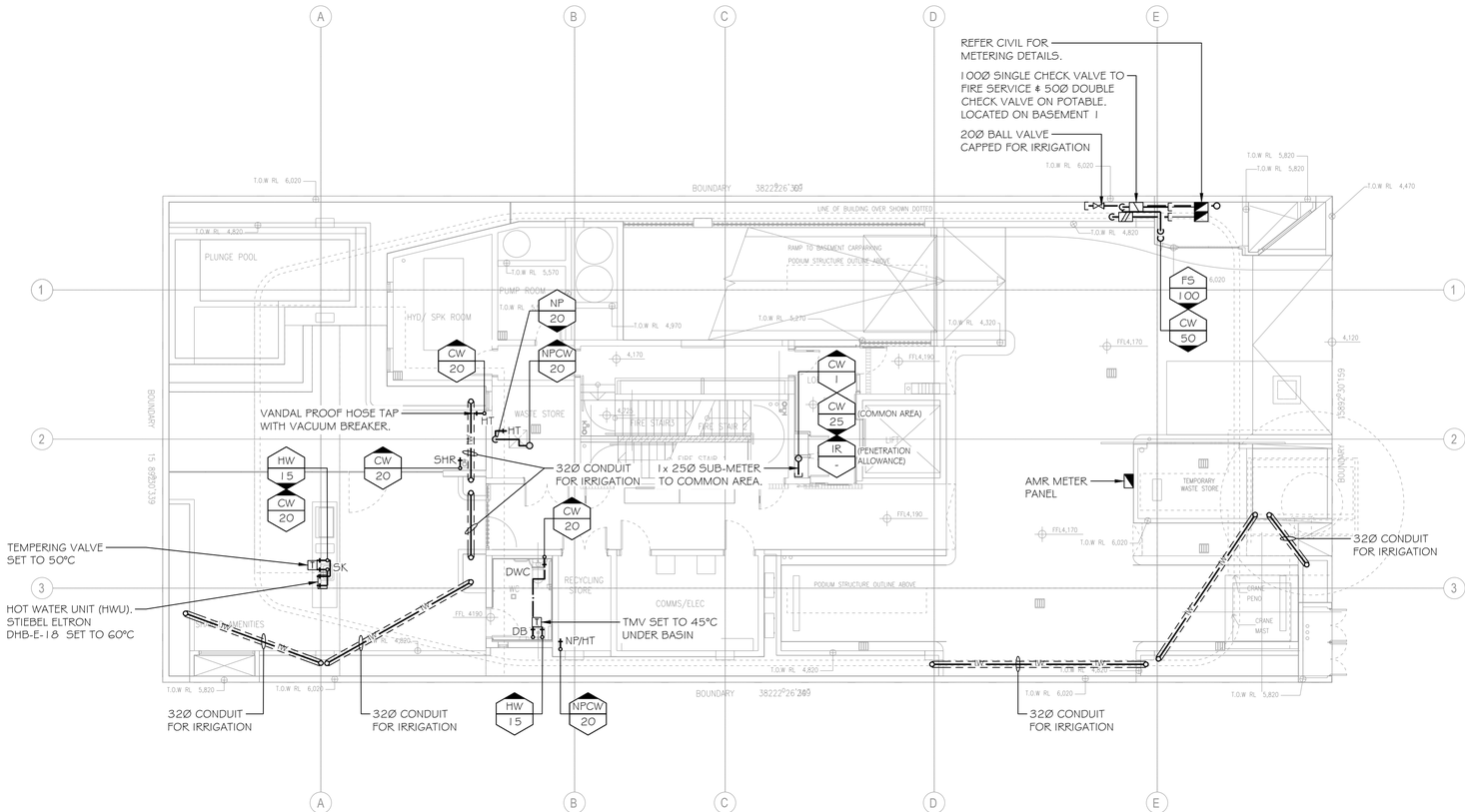
BASEMENT 1
WATER SERVICES

DESIGNED	CHECKED BY
QCP	QCP

SCALE
1:100 @ A1

DATE	QBCC LICENCE No.
JULY 2023	1214559

PROJECT No.	DRAWING No.	ISSUE
22205	H302	AC1



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ISSUE	DATE	AMENDMENT DESCRIPTION	APR.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

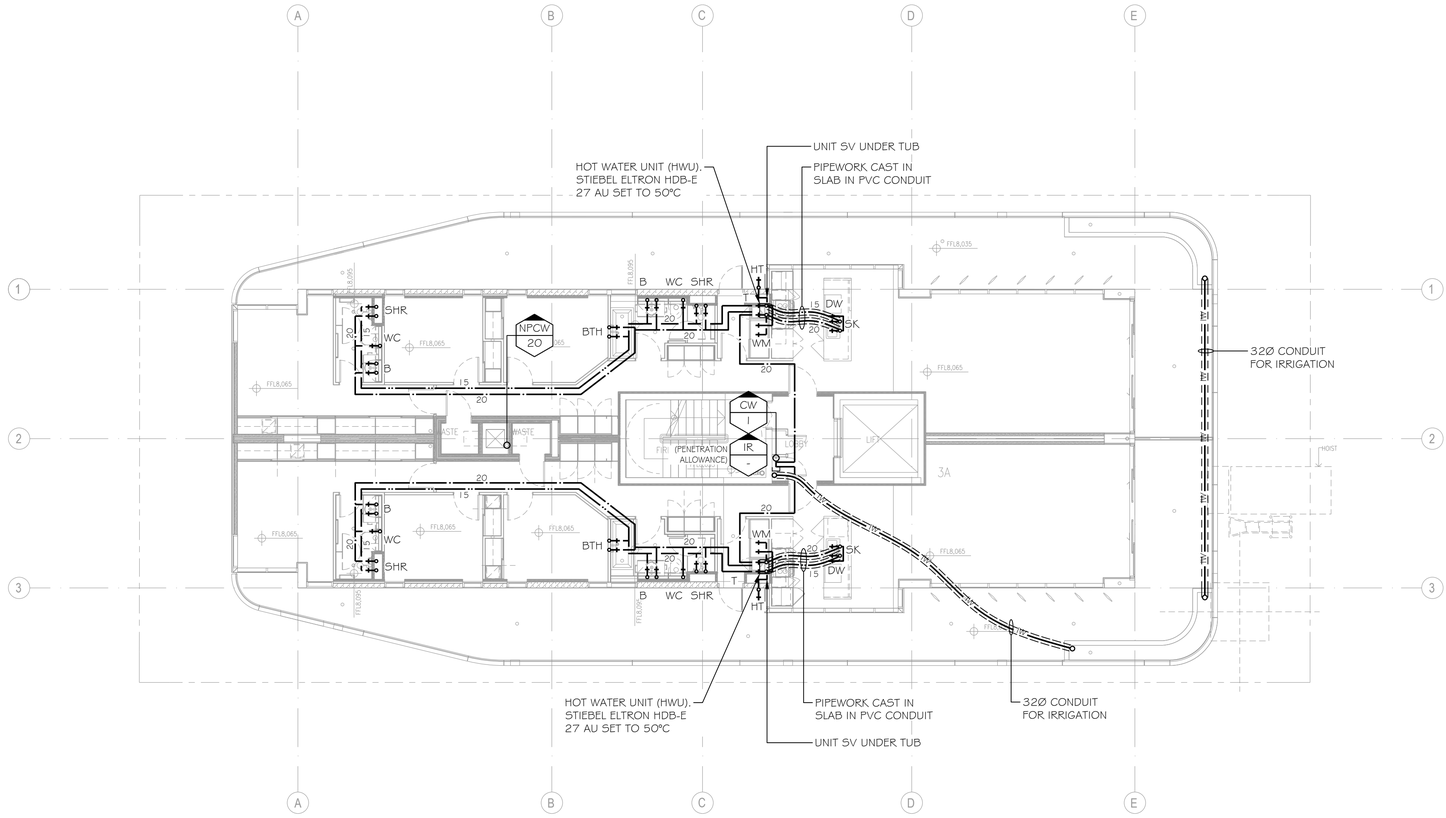
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVEL 1 / GROUND
WATER SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H303	AC1



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ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres 0 2 4 6 8m

SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

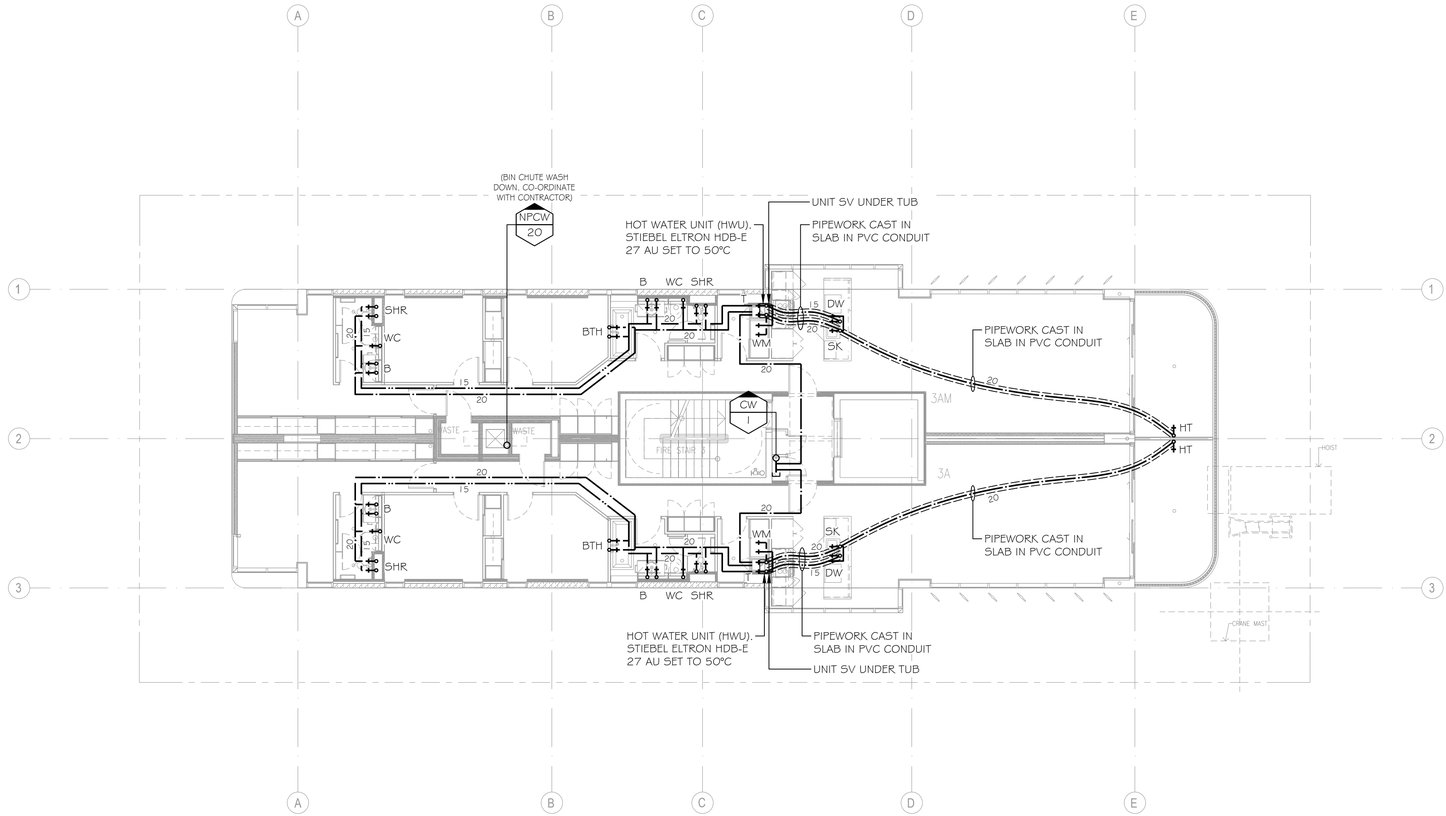
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVEL 2 PODIUM
WATER SERVICES

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
1:100 @ A1	
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No.	ISSUE
22205	H304	AC1



COUNCIL INFORMATION

APPLICATION No.: PCS 2023-1153
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OWNER: STRZELECKI PTY LTD
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LOCAL AUTHORITY: GOLD COAST CITY COUNCIL
NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

CLIENT

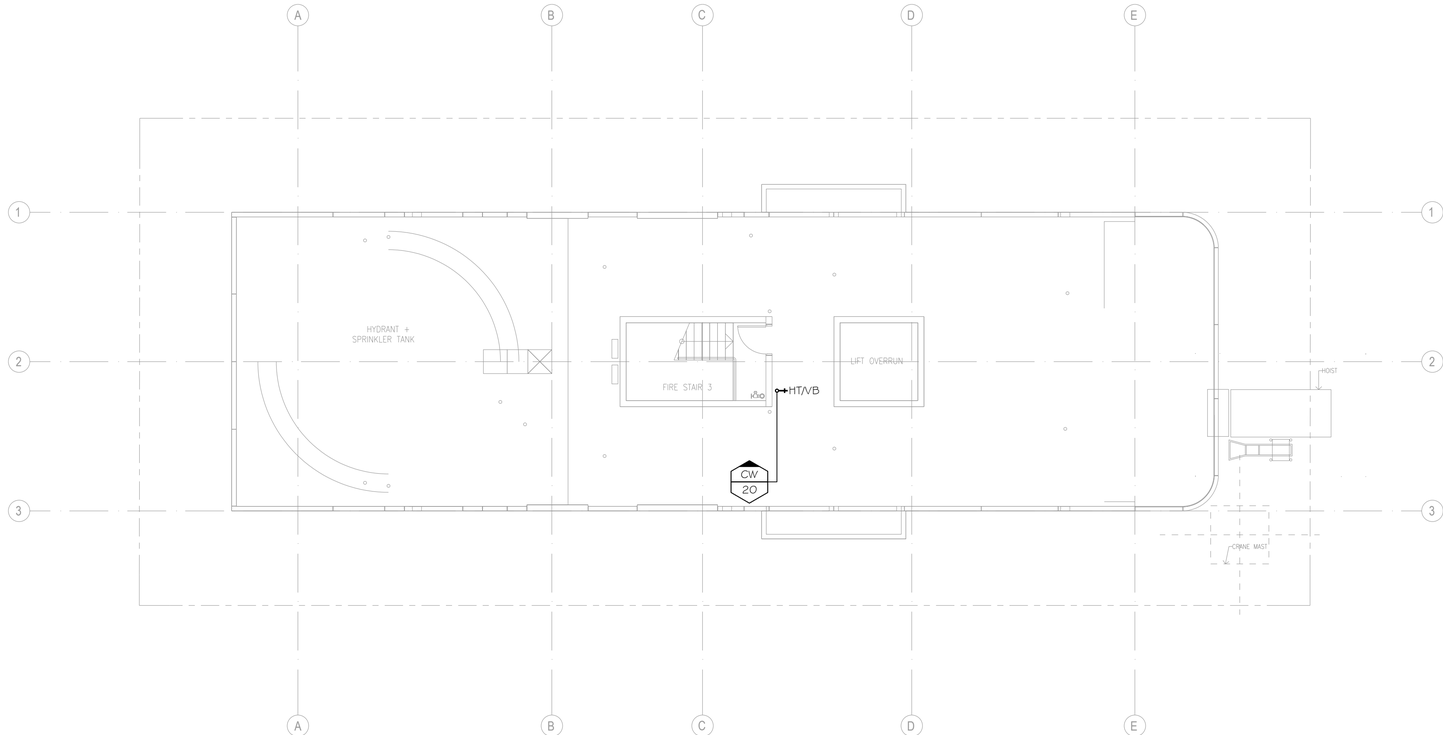
PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVELS 3-9
WATER SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H305	AC1



COUNCIL INFORMATION

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ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

metres
0 2 4 6 8m
SCALE 1:100

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb
Guida Moseley Brown Architects

CLIENT

PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

LEVEL 10 ROOF
WATER SERVICES

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
1:100 @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H306	AC1

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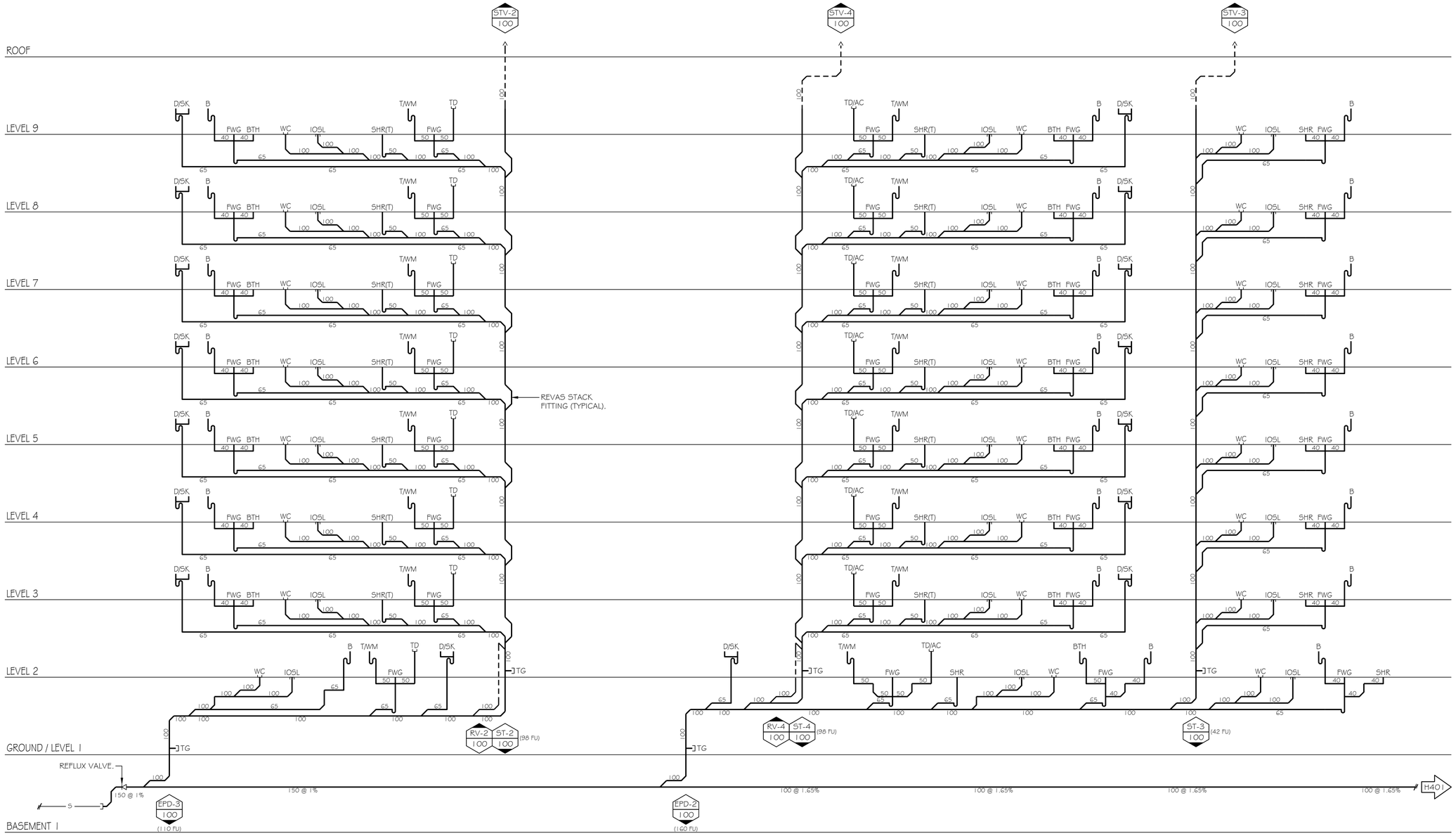

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NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
A	07.09.23	BA ISSUE	RW
B	08.12.23	CONSTRUCTION ISSUE	RW

KEY PLAN / NORTH POINT

ISSUE STATE

CONSTRUCTION ISSUE

SCALE

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

PROJECT
MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE
SANITARY DIAGRAMMATIC
SHEET 1

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
NTS @ A1	
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No.	ISSUE
22205	H400	B

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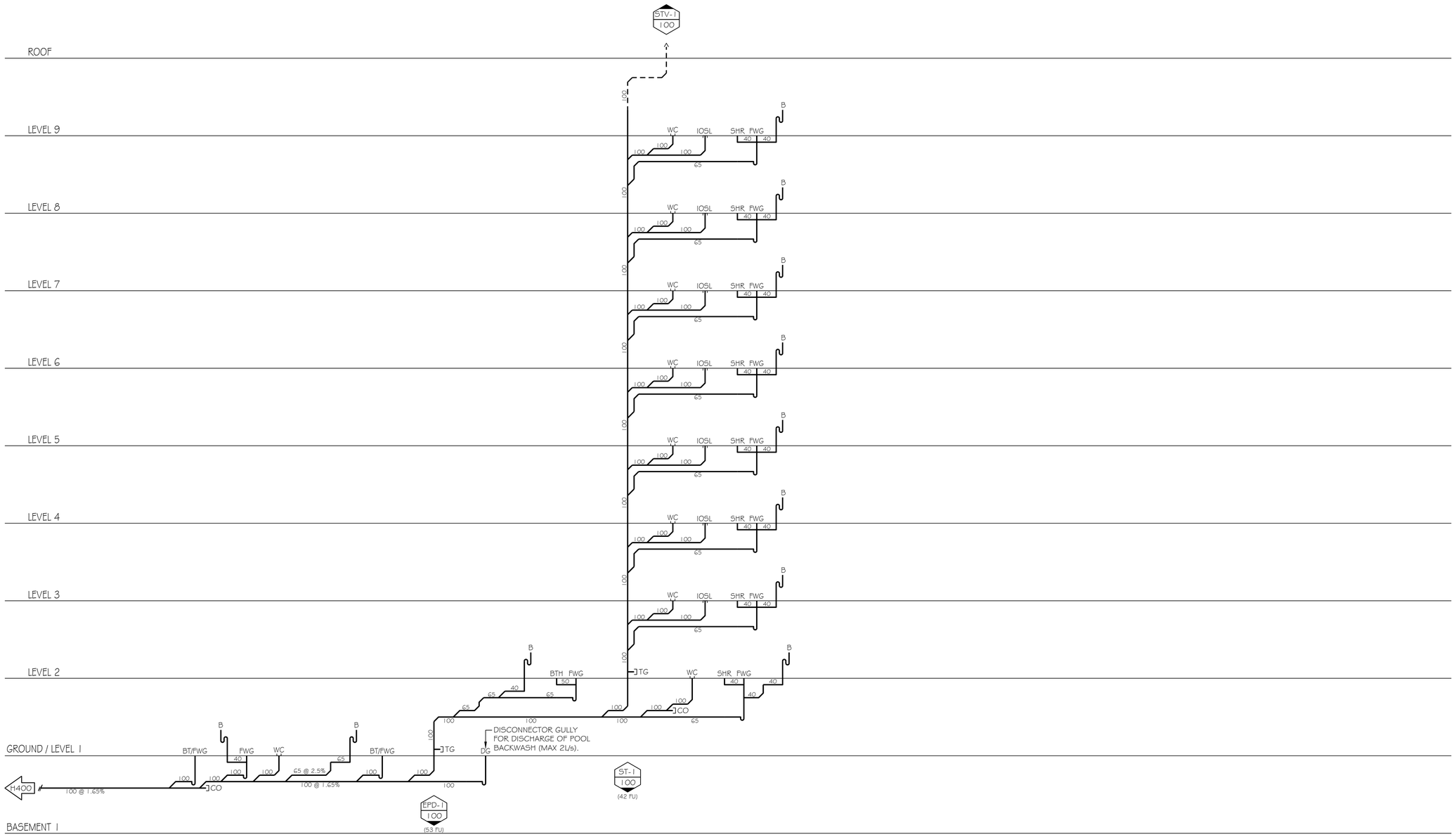

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ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

PROJECT

MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE

SANITARY DIAGRAMMATIC
SHEET 2

DESIGNED	CHECKED BY
QCP	QCP
SCALE	
NTS @ A1	
DATE	QBCC LICENCE No.
JULY 2023	1214559
PROJECT No.	DRAWING No.	ISSUE
22205	H401	AC1

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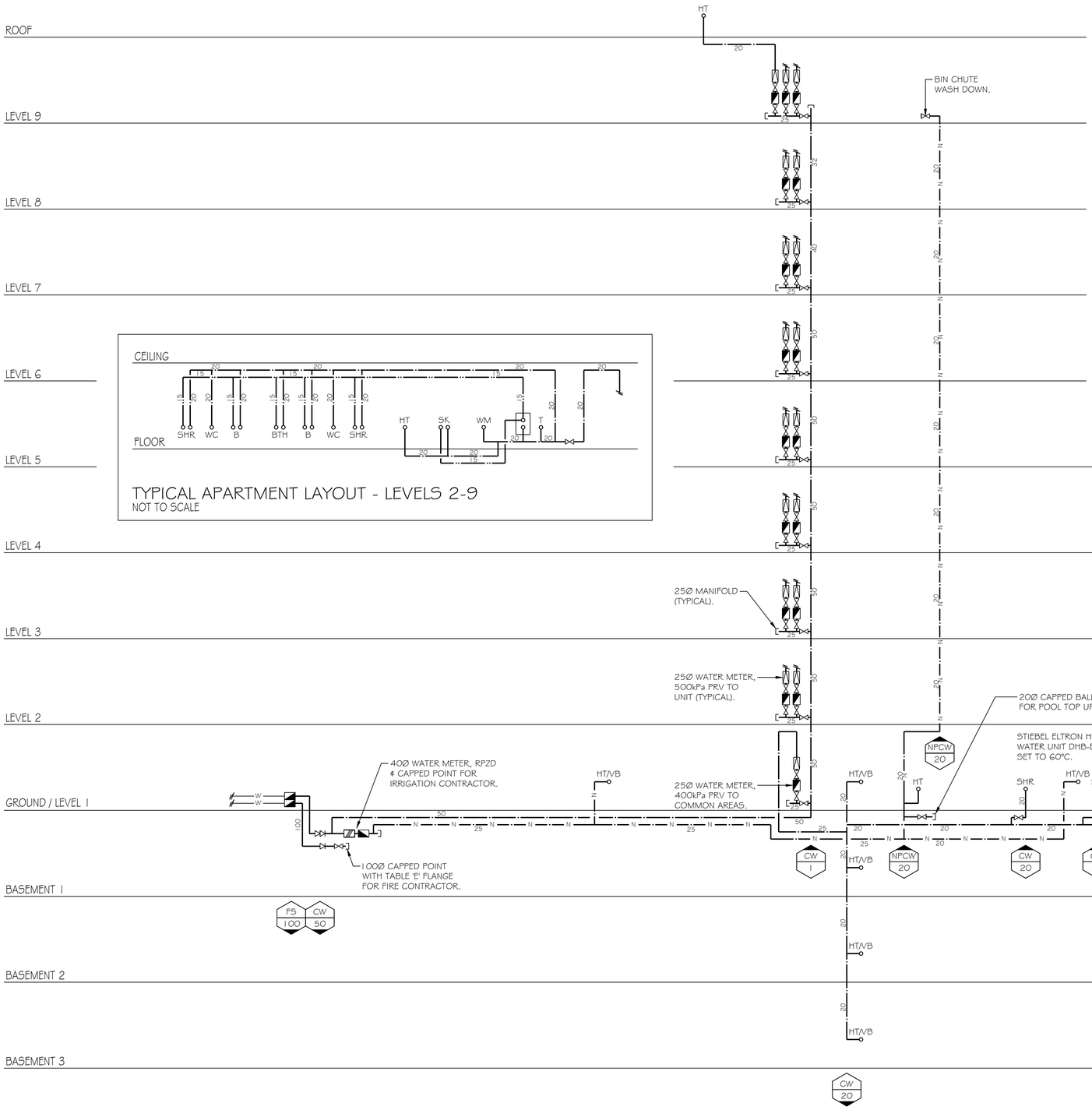
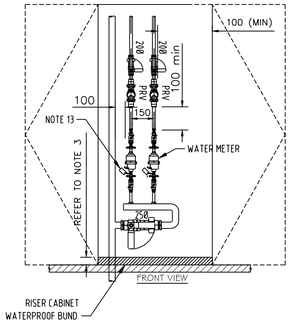


TYPICAL APARTMENT LAYOUT - LEVELS 2-9
NOT TO SCALE



SUB-WATER METER NOTES:

1. AMR SUB METER SHOWN. REFER TO LOCAL AUTHORITY STANDARD DRAWINGS FOR INSTALLATION, MATERIAL DETAILS AND COMPONENT LIST.
2. THE CABINET SHALL BE MARKED CLEARLY WITH THE WORDS "WATER SUB-METERS" ON THE OUTSIDE OF THE DOOR AS SHOWN. WHERE MORE THAN ONE SUB METER CABINET IS INSTALLED THEN EACH CABINET SHALL HAVE A CABINET ID NUMBER FIXED TO THE OUTSIDE OF THE DOOR AS SHOWN.
3. ALL CABINETS SHALL BE WATERPROOFED AND BUNDED AND DRAINED TO THE STORMWATER SYSTEM THROUGH A MIN DN50 DOWNPIPE TO MANAGE SEEPAGE FROM MAINTENANCE EVENTS. ALL PENETRATIONS SHALL BE SEALED. BUND STORAGE SHALL BE 1 LITRE MINIMUM.
4. WHERE AMR IS TO BE INSTALLED, REFER TO AMR SPECIFICATIONS FOR ADDITIONAL INSTALLATION DETAILS.
5. THE CABINET SIZE SHALL PROVIDE FOR THE MINIMUM DIMENSIONS SHOWN. THE CABINET SIZE SHALL PROVIDE FOR THE MINIMUM DIMENSIONS SHOWN.
6. WATER SUBMETER CABINETS SHALL ALLOW ACCESS TO THE METER ASSEMBLY FOR MAINTENANCE AND CUSTOMER INTERACTION.
7. A MINIMUM AREA OF 2m OR AN AREA OF 1.5 x DOOR WIDTH (WHICH EVER IS GREATER) SHALL BE PROVIDED FOR MAINTENANCE AND 2 CUSTOMER INTERACTION. THE CABINET SHALL HAVE ADEQUATE LIGHTING AND SHALL NOT REQUIRE ADDITIONAL AIDS SUCH AS LADDERS TO MAINTAIN METERS OR TO OBTAIN METER DATA.
8. FOR EXTERNAL INSTALLATION, MATERIAL DETAILS AND COMPONENT LIST
9. THE CABINET MATERIAL SHALL BE EITHER 1mm THICK STEEL OR 1.5mm THICK 5251 OR 5083 ALLOY ALUMINIUM. CABINETS SHALL BE POWDER COATED TO SUIT BUILDING ARCHITECTURE.
10. ALL EXTERNAL EDGES ARE TO BE ROUNDED WITH ALL EDGES AND CORNERS ACCURATELY AND NEATLY ROUNDED.
11. CABINET DOOR/S SHALL HAVE A HAND OPERATED ONE POINT STAINLESS STEEL QUARTER TURN LATCH TO CLOSE THE DOOR AND SHALL HAVE LIFT OFF TYPE PLATED BRASS HINGES WITH STAINLESS STEEL HINGE PINS.
12. THE SUB METERS MAY BE INSTALLED IN A FIRE FACILITY CABINET WITH SHOWN INSTALLATION DIMENSIONS TO BE MAINTAINED.
13. SUB METERS SHALL BE TAGGED, REFER LOCAL AUTHORITY STANDARD DRAWINGS FOR TAG DETAILS.

TYPICAL WATER METER CUPBOARD CONCEPT DETAIL

NTS

NOTE:
ALL WATER METERS TO BE LINKED TO AUTOMATIC METER READ SYSTEM IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.

COUNCIL INFORMATION

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NEW FIXTURES: 184 NEW FIXTURE LOADING UNITS: 221

ISSUE	DATE	AMENDMENT DESCRIPTION	APP.
AC1	10.09.24	AS CONSTRUCTED	QCP

KEY PLAN / NORTH POINT

ISSUE STATE

AS CONSTRUCTED

SCALE

AS CONSTRUCTED BY

QLD COASTAL PLUMBING

ARCHITECT

gmb

Guida Moseley Brown Architects

CLIENT

PROJECT
MALO
8 JUBILEE AVENUE
BROADBEACH QLD 4218

DRAWING TITLE
WATER DIAGRAMMATIC
SHEET 1

DESIGNED	CHECKED BY	
QCP	QCP	
SCALE		
NTS @ A1		
DATE	QBCC LICENCE No.	
JULY 2023	1214559	
PROJECT No.	DRAWING No.	ISSUE
22205	H402	AC1

Manufacturers Literature

Submersible Pump Control Systems

Control systems for submersible pump systems are crucial in order to maintain safe liquid levels, alert operators of pump faults or blockages, and report to BMS applications. There are many different types of controller, each designed to manage a different aspect of level control, with optional add-ons further expanding capabilities.

A level control system for a submersible pump system consists of three main parts aside from the holding well itself; the pumps, floats or level transducers and a control panel. In a typical setup, the floats or transducers report directly back to the panel in order to determine when the liquid level reaches a pre-determined 'cut-in' level, at which point the control panel sends power to the pumps in order to lower the level.

Pump control systems can be very basic, consisting of a single float, pump and panel, or can be extremely complicated with possible set ups including 3+ pumps, 4+ floats and a primary and auxiliary panel.

Single, Dual and Triplex Configurations

This relates directly to the quantity of pumps in the system. As pump out systems are often specified to have built in redundancy, often a dual or even triplex pump controller will be required. Single controllers are available, but are primarily only used in smaller applications where only one pump is required.

Single Control Panel

Dual Control Panel


Triplex Control Panel

BMS and non-BMS Panels


External
BMS Module

Non-BMS
Control Panel

BMS, or Building Management System, is an industry standard method of reporting faults and alarms to a central system for compliance and quick diagnosis of issues.

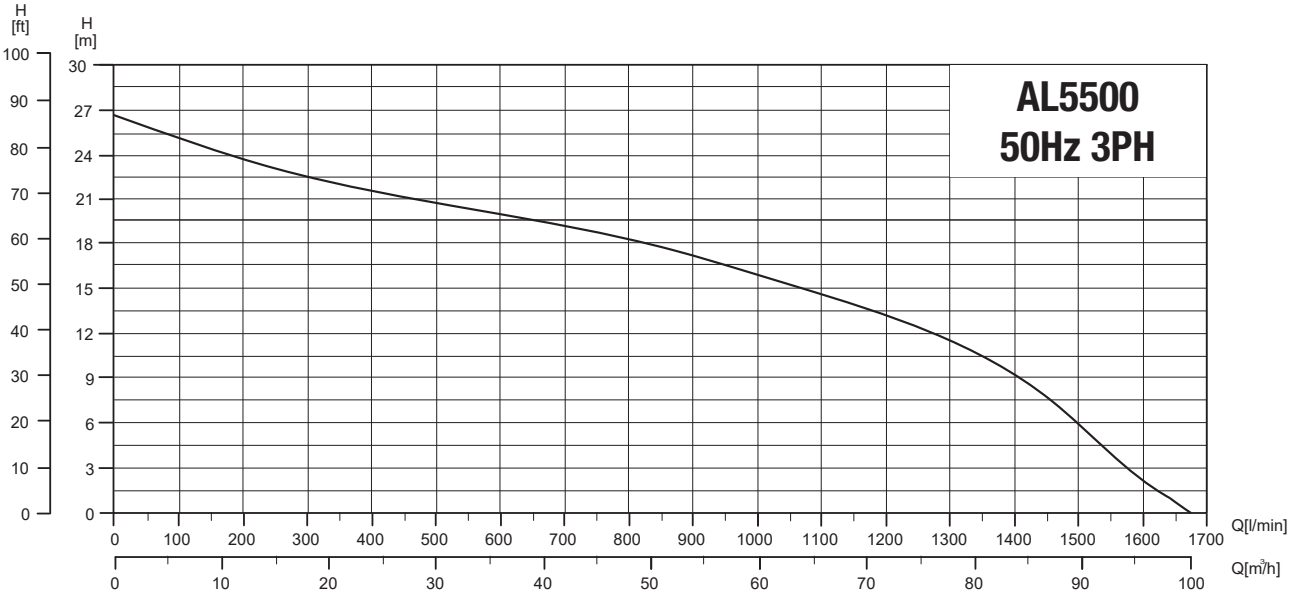
BMS functionality is available in varying complexity on all control panel variants, however, as BMS is not always required, more basic panels without this feature are available.

Features & Benefits

Submersible drainage pump suitable for drainage of greywater and stormwater from building basements and sumps in domestic, commercial and industrial applications. Can be installed free standing or mounted on optional guide rails.

- Three phase 415V 50Hz 2 pole induction motor
- Pump body: Cast iron
- Impeller: Cast iron
- Mechanical seal: Ceramic-Graphite, Silicon Carbide alloy
- Submersible depth: 5m
- Liquid temperature up to + 40°C
- Ambient temperature up to + 40°C
- Passage of suspended solid up to 30mm
- Maximum starts per hour: 20

Performance Curve



Specifications

TYPE	HP	KW	CONTINUOUS AMP RATING	OPERATING TEMPERATURE	VOLTAGE	AUTO/ MANUAL	DISCHARGE (MM)	CABLE LENGTH
Open Channel	7.5	5.5	11	0°C to 40°C	415V	Manual	100	10M

OUTLET		MAX FLOW (LPM)	FLOW AT M HEAD (LPM)					MAX HEAD (M)	DIMENSIONS	WEIGHT (KG)
MM	INCH		10M	14M	18M	22M	25M		L X W X H (MM)	
100	4"	1550	1350	1150	800	350	50	25	400 x 340 x 770	78

415 Vac Supply

A1 A2 A3 E

MSW1
Main Isolator

N

C1 TOL1 CB2

L1 T1 L2 T2 L3 T3

P1 P2 P3

M 3~

P1 415V Pump

Contactor 3P Thermal Overload Circuit Breaker

C2 TOL2 CB3

P2 415V Pump

Contactor 3P Thermal Overload Circuit Breaker

CB1
Circuit Breaker

240V 240N T1 12V 0V

Transformer 12Vac

12 Vac 0 Vac

C1 A1 A2
Contactor 18A 240Vac

C2 A1 A2
Contactor 18A 240Vac

TOL2 95 96
Pump 2 Thermals
NC Contact

TOL1 95 96
Pump 1 Thermals
NC Contact

KEYPAD CONNECTION PIN 1
PUMP 1 FAULT | PUMP 2 FAULT
PUMP 1 | PUMP 2 240V 10A MAX
IMPORTANT: READ INSTALLATION AND OPERATION MANUAL BEFORE USE
DUAL PUMP CONTROLLER
Aline PUMPING WITH INNOVATION
MODE SELECT | INPUT1 4-20mA -ve +ve | INPUT2 | INPUT3 | INPUT4 | BMS/ REMOTE | STROBE - + | SIREN - + | POWER 12Vac

Input 1 Low Level
Input 2 Stop Level
Input 3 Start Level
Input 4 High Level
Strobe Light
Buzzer

INPUT SWITCHES
Low Voltage Connections

POWER IN 9-12V DC/AC | SIGNAL IN
ME 20 BMS
VOLTAGE FREE CONTACTS
POWER | HIGH LEVEL | PUMP 1 FAULT | PUMP 2 FAULT

Common
Power On
High Level
C1
Pump 1 Run
C1 Aux NO
Pump 1 Fault
C2
Pump 2 Run
C2 Aux NO
Pump 2 Fault

BMS Voltage Free

Aline PUMPING WITH INNOVATION	Client	ALINE	MATelec O/N		Panel Description	ALI-30240 Three Phase, Dual Pump Controller c/w BMS	Drawn By	DG
	Order Number		Works Order				Date Drawn	
	Serial Number		Reference				Page	1 of 1

Aline
Pumping with Innovation

Packaged Pump Stations

INSTALLATION, OPERATION, MAINTENANCE & WARRANTY

1800 018 999
ALINEPUMPS.COM.AU

KWIKFLO
PUMP STATIONS & TRADE WASTE

Since commencing operation in 1995, Aline Pumps has been dedicated to providing solutions in all fields of the plumbing industry. We have been customising pumps to the exact requirements of clients in the civil and building industries with a range of robust, reliable pumps and environmentally approved pollution control systems.

Aline Pumps provide full end to end service for all areas of commericial and domestic pumping, from urgent spare part requirements to fully custom built pumping systems. The ability of our trained sales and service personnel to provide innovative, economical and reliable solutions is supported by an unparalleled product range. This has resulted in a formidable reputation and extensive acceptance within all industry sectors.

We are capable of handling any repair regardless of its complexity, including onsite service, installation and all other aspects of maintenance. Our products are complemented by a broad range of locally manufactured and globally sourced pumping and allied equipment. We are a well established company with ISO9001, ISO 19001, ISO 14001 & AS/NZS 4801 certifications.

DISTRIBUTED BY:	INSTALLATION DATE:
	SERIAL NUMBER:

Contents

SECTION 1 - KWIKFLO PACKAGED PUMP STATION

SECTION 2 - KWIKFLO SUBMERSIBLE PUMP

SECTION 3 - CONTROL PANEL

INTRODUCTION

Kwikflo packaged pump stations are assembled at our Sydney manufacturing facility, with our extensive and comprehensive product range coupled with over 30 years' experience in packaged pump station manufacture we can produce an engineered solution to solve the most complex application.

With tank sizes ranging from 100L to 100,000L, in a range of materials including polyethylene, fibre glass & concrete we have a "complete packaged pump solution" to meet your site specific specifications. We stock a complete range of submersible pumps including dewatering, cutter, vortex, grinder & high pressure models for pressure sewer applications. Available with a complete range of accessories that removes the complexity out of purchasing & installing a packaged pump station. Accessories include access cover options, guide rail or freestanding pump configurations, inlet and outlet tank connections, Electrical conduit connections, risers, dry valve pits, custom built control panels, lifting chains other specialized site specific requirements.

IMPORTANT

Only qualified personnel should install, operate and repair your pump station system.

Any wiring of pumps should be performed by a qualified electrician.

Before installation local authorities must be consulted for all applicable codes and regulations.

WARNING

OPERATION MAY CAUSE INJURY. TAKE ALL NECESSARY PRECAUTIONS.
WEAR PROTECTIVE EQUIPMENT. REFER TO ENGINEERS DEPARTMENT.

SAFETY PRECAUTIONS

- Ensure installer is aware of "Confined Spaces" guidelines.
- Make sure that there is sufficient oxygen and that there are no poisonous gases present.
- Check the explosion risk before welding or using electric hand tools.
- Do not ignore health hazards. Observe strict cleanliness.
- Ensure that the lifting equipment (where required) is in good condition.
- All personnel who are to work with sewage systems should be vaccinated against diseases that can occur.
- Keep a first aid kit handy.

PRIOR TO INSTALLATION - INSTALLERS CHECKLIST

Before installing the pump station, check the depth of the inlet pipe as this will determine the tank depth. (See tank inlet specification.)

CAUTION:

- Installation should be carried out by experienced and qualified tradesmen
- Before digging call any relevant local authorities to locate and underground lines or cables
- The installation of a pump station requires prior approval of local authorities. Questions relating to this should be directed to a responsible officer of local council and/or other relevant authority.

The following information must be regarded as a guide only and is to be read in conjunction with printed detail sheet for the particular tank installation proposed.

1. **A)** Determine the best location for your tank, and control panel (if applicable).

   B) Correct appraisal of site conditions is essential before installation of sewage and storm water tanks. Installers must recognise that these tanks when empty will float on approximately 50mm of water. The upward thrust at the base of the tank fully immersed in water could buckle the tank base. Close attention to site conditions is therefore necessary.

   C) Consider…
   - Drainage, particularly at the tank base
   - The rise in water due to:
     - Tidal conditions
     - Saturation of the ground during heavy rain
     - Likelihood of flooding or run-off water from any source
   - The quality of available backfill

   D) Where tanks are installed under adverse site conditions, the utmost care is required to prevent any chance of the vessel being forced out of the ground by upward pressure of ground water. This can occur if the excavation is not properly drained.

   E) For all installations tanks must be bedded on cement slurry with locking reo bars installed in the holes provided (see Installation Procedure). This will prevent the base of the tank buckling.

2. Check for any damage to tanks. During transport and handling over rough ground, be careful to avoid “bruising”. Contact with sharp stones or dropping of the tank may result in fractures, which must be repaired before installation to prevent leakage through the tank wall. Refer to supplier.
3. Minimise the use of elbows on the inlet line. If required, use only 45° elbows.
4. Plan your installation location carefully to ensure that the inlet pipe stays within the allowable inlet height
5. Determine where the incoming power will be supplied from and if it is suitable for the rated load of your pump station.
6. Mount the control panel, when applicable, in accordance with electrical codes make sure the alarm light is clearly visible.
7. Make sure you have all the necessary equipment and supplies before starting your installation
8. Determine the length of electrical cable required as all joints in cables must be made by an approved submersible spliced connection. Only extend cables with cable of equal or greater submersion rating and electrical current carrying capacity.
9. Finish ground level in relation to tank lid, as tank lid risers are not normally recommended. Also, lids must not be buried at any time.
10. Maximum of 3 polyethylene risers (or 1 metre total riser height) may be used on any one tank installation. Any installation using more than 3 risers (or over 1 meter in total riser height) will void warranty on both tank and risers.

Uniseal Installation

SUGGESTED INSTALLATION INSTRUCTIONS

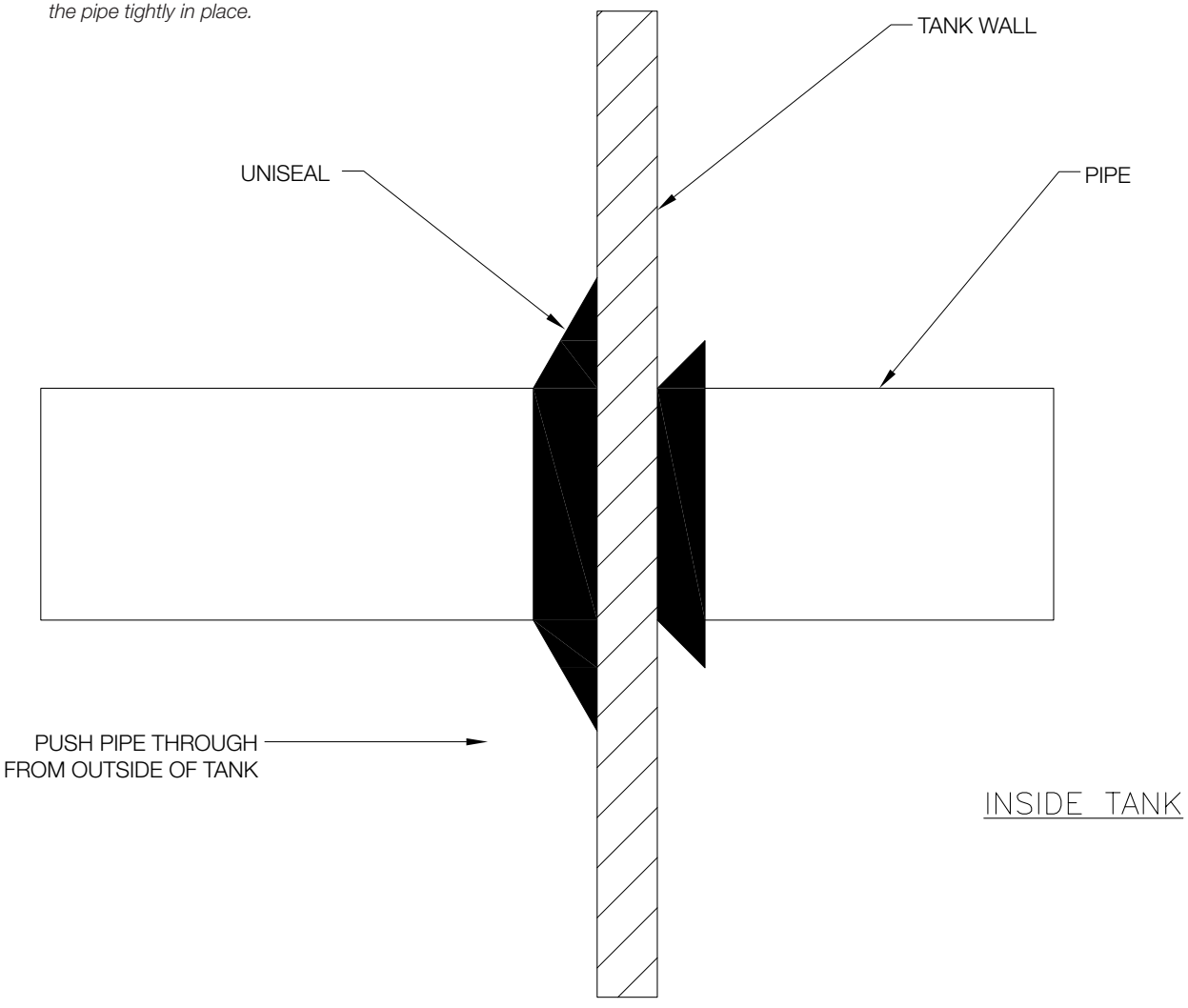
For “U.S-130 Uniseal” cut hole approximately 3-5 mm less than the “Uniseal” diameter, when fitted on to the pipe.

Cut hole to correct size as described above.

- Ensure the hole is clean cut. Irregularities cause poor sealing and leakage.
- Insert the Uniseal into the hole with the wide side facing the pipe to be inserted.
- Make certain that the pipe end to be inserted is clean cut, file the edges so that there are no sharp points to cut the Uniseal.
- Using a detergent or lubricant, lubricate the outside of the pipe end to be inserted, then push the pipe through the Uniseal, from the large flange side.

SIZE	PIPE ID	PIPE OD	HOLESAW SIZE
U200	50mm	60mm	76.2mm
U300	76mm	89mm	101.6mm
U400	101mm	114mm	127mm
U600	152mm	168mm	177.8mm

Note: *The detergent or lubricant will be squeezed off as the pipe passes through the Uniseal. The co-efficient of friction of the rubber holds the pipe tightly in place.*



KWIKFLO PUMP STATIONS & TRADE WASTE

PROCEDURE FOR INSTALLATION

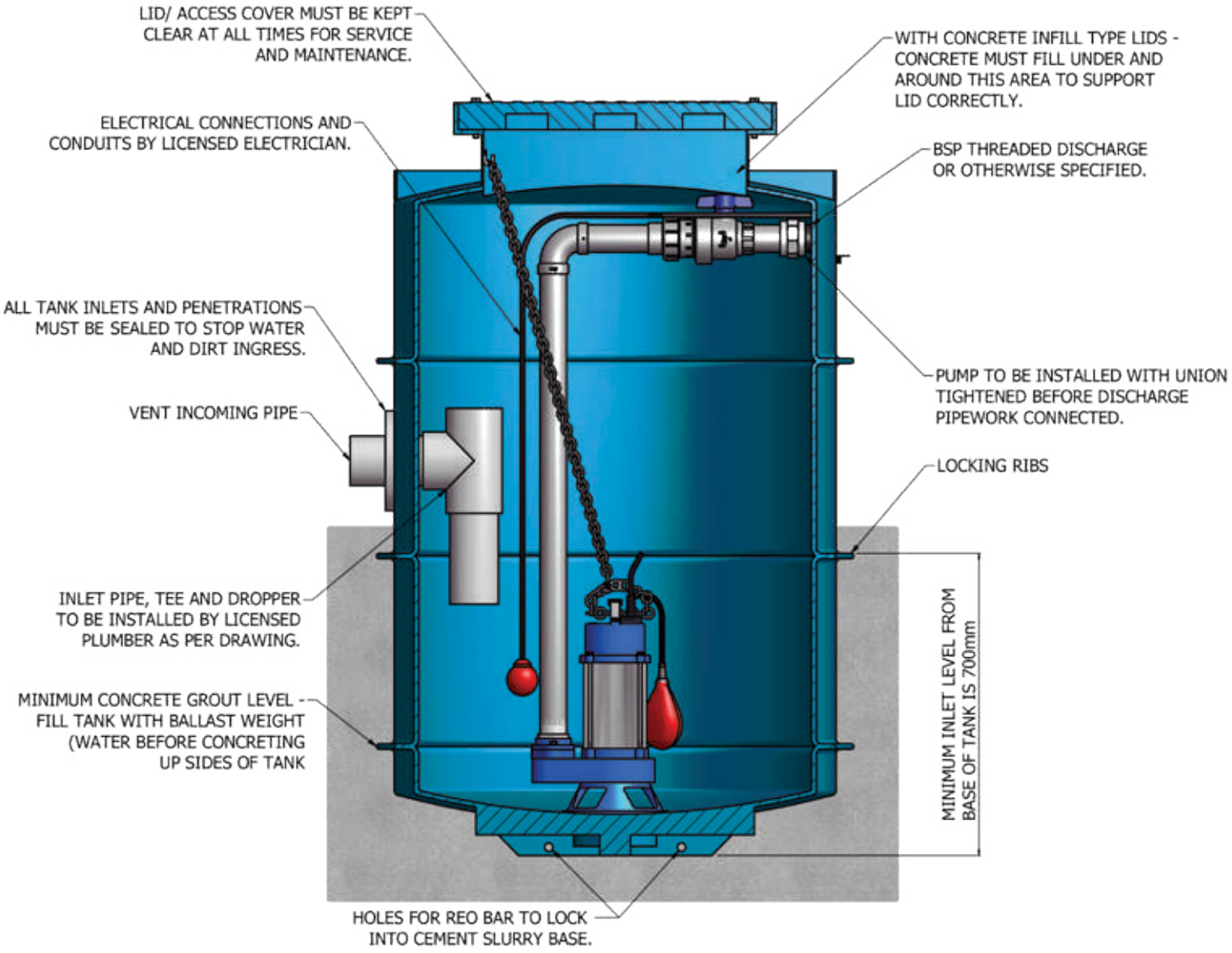
See "Typical Installation", Page 6

1. The hole for the tank should be no greater than 250 to 300mm oversize to tank diameter, with due regard to the amount of concrete or backfill to be used under and around the tank.
2. It is suggested the base of the tank be drained, especially in water charged ground, before, during and until concrete encasement has set, to hold the tank securely in the ground.
3. Lay minimum of 100mm of 20mpa concrete in bottom of excavation.
4. Lower tank into hole, while concrete is still a slurry. Ensure no rocks or sharp objects fall into hole as damage to the tank wall and base could occur.
5. Where locking holes are provided in the base of the tank, fit reo bar so it penetrates the concrete slurry to stop the tank base moving.
6. Level and adjust tank to suit installation conditions.
7. Fill tank with water up to the first rib or at least 300-400mm depth.
8. Secure tank with stabilizing bars or timbers to hold in place before encasing with concrete.
9. Put pumps into tank and connect unions (where fitted) before installing discharge line, to make sure connections are free and level.
10. The tanks are provided with a collar approximately 300mm from the base. The purpose of this collar is to create a bond between the tank and the backfill material to withstand the upward forces when the tanks are empty.
11. Check local council and other authorities' requirements concerning levels. Ensure you have relevant inspector's approval before backfilling commences.
12. Whilst site conditions will determine the amount of concrete encasement, you should refer to engineer's instructions for each individual site.
13. Backfill material must not exceed 100mm to underside of lid when fitted with trafficable type concrete in-fill lid.
14. When backfilling use sand or soil only. At all times be careful that rocky or sharp objects are not used. Avoid use of heavy soils that do not consolidate.
15. Inlet pipes must be vented.
16. Inlet pipes must be fitted with a "T" junction and dropper pipe on the inside of tank.
17. All pipe connections to tanks must be sealed to stop water and dirt ingress.
18. Minimum inlet height from base of tank to the underside of pipe should be at least 700mm.

AFTER INSTALLATION

1. Ensure that the tank is protected from accidental contact by motor vehicles, construction or farm equipment, or wandering livestock.
2. Where there is danger of stock being able to walk on the lid, the tank must be fenced to prevent the risk of the lid being holed, or injury to livestock. Alternatively, a specially constructed lid able to withstand the required traffic can be supplied; it is preferable for this to be specified prior to installation.

TYPICAL INSTALLATION DRAWING



KWIKFLO PUMP STATIONS & TRADE WASTE

SAFETY PRECAUTIONS - USE, CARE & OPERATION OF PACKAGED PUMP STATION

You wastewater disposal service is part of a low pressure sewer system. The key element in this system is the Kwikflo packaged pump station. The tank collects all wastewater; solids in the sewage/trade waste/ effluent are then ground into a slurry, suitable for pumping. The pump generates sufficient pressure to pump this slurry to the sewer main.

Points to remember:

- Minimise the amount of cooking grease entering the system
- Regulatory agencies advise that the following items should not be introduced into any sewer, either directly or through a pumping station:
  - Glass
  - Metal
  - Baby napkins
  - Socks, rags or cloth
  - Plastic objects (e.g. toys, utensils etc.)
  - Sanitary napkins or tampons

In addition you must NEVER introduce into any sewer:

  - Explosives
  - Flammable material
  - Lubricating oil and/or grease
  - Strong chemicals
  - Petrol or gasoline
- Do not leave access cover off the tank except when servicing, to prevent the entrance of foreign materials such as rocks, metal, soil animals or humans.
- Prevent infiltration or direct flow of rain or run-off water into the pump basin to minimise pump cycling. This will prevent overloading the treatment facility and will facilitate swift transportation of waste/sewage/effluent.
- To reduce the risk of electrical shock, pumps and control panels must be properly earthed in accordance with AS3000 wiring rules and all applicable state or local council ordinances.
- During power blackouts, minimise water consumption in the building to prevent sewage backing up.
- Always keep the shut-off valve completely open when system is in operation (unless advised otherwise by proper authorities). Before removing the pump from the station be sure to close the shut-off valve. (This prevents backflow from the pressure sewer).
- Keep the control panel (if installed) locked or confined to prevent unauthorized access.
- If the pump is idle for long periods of time, it is advisable to start the pump occasionally by adding water to the tank.

Kwikflo pumpstations are designed and built to pump storm water, waste water, trade waste and sewage. Please check what your pumpstation is designed for prior to use.

In general the following items should <u>NEVER</u> be introduced into a pump station.

- Sanitary items

- Rocks

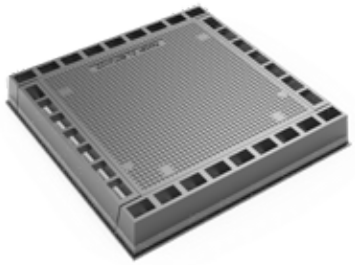
- Debris

- Rags

MANHOLE COVER INSTALLATION AND USE GUIDELINES

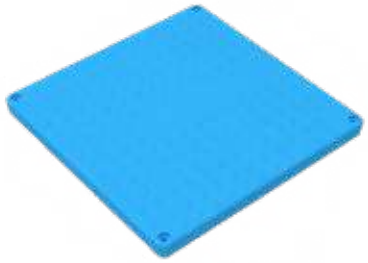
Key considerations:

- Cover Type. Most commonly used are Standard Poly, Cast Iron or Galvanised Grate Covers.



Cast Iron Solid Top

Hinged Galvanised Grate



Standard Polyethylene Cover

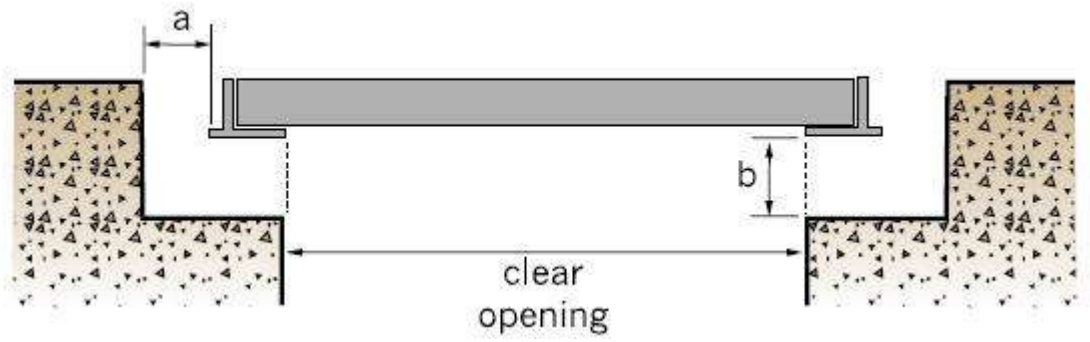
Other options available on request include: Concrete infill covers, multipart covers, Paver infill covers, Tile infill covers, Stainless steel or brass edged covers, Gas-tight covers and lockable covers.

- Load Class. Select the correct cover and rebate to suit application. The table below gives a summary of those offered by APSS/Hercules Access Covers

Rating	Class A	Class B	Class C	Class D	Class E	Class F	Class G
Typical Use	Areas (including footways) accessible only to pedestrians & pedal cyclists & closed to other traffic (extra light duty	Areas (including footways & light tractor paths) accessible to vehicles (excluding commercial vehicles) or livestock (light duty)	Malls and areas open to slow moving commercial vehicles (medium duty)	Carriage ways of roads & areas open to commercial vehicles (heavy duty)	General docks & aircraft pavements (extra heavy duty - E)	Docks & aircraft pavements subject to high wheel loads (extra heavy duty - F)	Docks & aircraft pavements subject to very high wheel loads(extra heavy duty - G)
Nominal Wheel Loading (Kg)	350	2,670	5,000	8,000	13,000	20,000	30,000
Serviceability Load (kN)	6.7	53	100	140	267	400	600
Ultimate Limit State Design Load (kN)	10	80	150	210	400	600	900

- Position the pump station so that removal of access cover is not obstructed by walls, kerbs or other obstacles
- Install with access cover positioned in the frame provided to ensure correct fitment. The frame should be completely supported by a bed of concrete as below. Dimensions for various load ratings are tabulated

- Install with cover positioned in the frame provided to ensure correct fitment. The frame should be completely supported by a bed of concrete as below. Dimensions for various load ratings are tabulated



Load Class	A (mm)	B (mm)
A, B	30	30
C, D	50	50
E, F, G	50	75

- Concrete of minimum strength of 32MPa and minimum aggregate of 12mm is recommended
- Some covers have a cambered edge to counteract the wheel motion of moving traffic. Where applicable, make sure the cover is oriented appropriately relative to the predominant flow of traffic. If the frame has an undercut interface, this should be on the side closest to oncoming traffic, while the corresponding opposite angled edge is furthest from approaching traffic
- Tiles or pavers must be fully restrained and bonded to the concrete bed. Epoxy mortar is recommended
- Decorative edging may require a deeper rebate than specified, depending on finish level
- Applications where back pressure is expected may require additional reinforcement to hold the frame and cover in position. Engineering advice should be sought specific to each application.

INSTALLATION STEPS

1. Form the access pit and rebate to size required. Refer to the above
2. Position the frame and cover in rebate
3. Check that unit is level and does not rock
4. Pour concrete around frame (and into cover if applicable). Vibrate to ensure all cavities in and around the frame are filled. Some formwork may be required, although in most cases the structure of your APSS tank will act as such
5. Ensure when preparing and pouring concrete that the lid and any hinges will not be contacted or fouled by concrete
6. Level and finish concrete, or lay pavers/pavement material
7. Allow concrete to fully set before removing cover. Doing so earlier may cause twisting of the frame and a poor fit

GENERAL USE CAUTIONS

- Each cover is a matched pair to its frame. As such, covers should not be switched. Fit and seal may be compromised if done so
- Ensure when installing the cover that no foreign objects such as rocks or debris are between the cover and frame as these can damage the seal and reduce service life of the cover

BREAKDOWN - SAFETY WHEN SERVICING

- Be aware of “Confined Spaces” guidelines.
- To reduce the risk of electrical shock, always disconnect the pump from the power source before handling or servicing. Lock out power and tag.
- Do not wear loose clothing that may become entangled in the impeller or other moving parts.
- Keep clear of suction and discharge opening. DO NOT insert fingers into pump whilst power is connected.
- Always wear appropriate safety gear such as safety glasses when working on the pump or piping.
- Cable should be protected at all times to avoid punctures, cuts, bruises and abrasions. INSPECT FREQUENTLY.
- Never handle connected power cables with wet hands.
- To reduce the risk of electrical shock, all wiring and junction connections should be made in accordance with local codes and regulations.

WARNING

OPERATION MAY CAUSE INJURY. TAKE ALL NECESSARY PRECAUTIONS.
WEAR PROTECTIVE EQUIPMENT. REFER TO ENGINEERS DEPARTMENT.

WARRANTY

Kwikflo Packaged Pump Stations manufactured by Aline Pumps are guaranteed to be free from defects in material or workmanship for one (1) year from the date of shipment from factory in Silverwater.

No claim will be recognised for any alleged defects in tanks that may have been apparent prior to installation, whether due to faults in manufacture or faults caused by transport and handling.

The obligation of this warranty, statutory or otherwise, is limited to replacement or repair at Silverwater factory or at a point designated by Aline Pumps, of such part as shall appear to us, upon inspection at such point, to have been defective in material or workmanship.

This warranty does not obligate Aline Pumps to bear the cost of labour or transportation charges in connection with replacement or repair of defective; nor shall it apply to a pump upon which repairs or alterations have been made unless authorized by Aline Pumps in writing.

No warranty is made in respect to electrical control panel, pumps, motors or trade accessories, such being subject to warranties of their respective manufacturers.

No express, implied or statutory warranty, other than herein set forth is made or authorized to be made by Aline Pumps.

In no event shall Aline Pumps be liable for consequential damages or contingent liabilities arising out of the failure of any Kwikflo Packaged Pump Station or parts thereof to operate properly.

Aline Pumps is not responsible for losses, injury, or death resulting from a failure to observe safety precautions set out herein, or misuse or abuse of pumps or related equipment.

A properly completed Warranty Registration form must be on file at the Kwikflo (Aline Pumps) office in order to activate your warranty.

If you have a claim under the provisions of the warranty, contact your local Kwikflo distributor.

When contacting your representative for service, please forward the following details.

Please fill and keep this information and return enclosed warranty card.

Invoice No. _____ Tank Model No. _____

Pump Model No. _____ Job No. _____

INSTALLATION, CARE & MAINTENACE OF YOUR

KWIKFLO

PUMP STATIONS & TRADE WASTE

SUBMERSIBLE PUMP

THIS SECTION CONTAINS IMPORTANT SAFETY AND WARRANTY INFORMATION ABOUT YOUR PUMP. PLEASE READ IT CAREFULLY BEFORE INSTALLATION OR OPERATION. PLEASE ALSO ENSURE THAT ALL RELEVANT PARTIES RECEIVE A COPY.

WARNING

1. Only qualified and competent tradespeople should attempt installation or other work on your Kwikflo submersible pump and its associated equipment.
2. All necessary care should be taken to avoid electric shock. Do not work on or touch your electric submersible pump, or anything in electrical contact with it (e.g. water in pit), unless the system has first been electrically isolated.
3. Do not enter pit without confined space all necessary safety equipment for confined spaces.
4. Do not leave open pit unattended or barricaded.
5. Incorrect operation or application of your Kwikflo submersible pump could cause personal injury or damage to the pump.

WARNING

OPERATION MAY CAUSE INJURY. TAKE ALL NECESSARY PRECAUTIONS.
WEAR PROTECTIVE EQUIPMENT. REFER TO ENGINEERS DEPARTMENT.

TAKING DELIVERY OF YOUR KWIKFLO SUMBERISBLE PUMP

1. Please ensure all parts ordered/requested have been delivered and delivery paperwork and instruction manuals are complete.
2. Inspect pumps and equipment for any signs of damage.
3. Take notice of any warning stickers/labels.

STORAGE

1. Store your equipment securely in an area protected from damage by vandals, weather or other construction persons or equipment.
2. Avoid long-term storage of the pumps in the pit during construction period or prior to commissioning.
3. Do not allow electrical leads to become immersed in water.

INSTALLATION

THE INSTALLATION OF YOUR KWIKFLO PUMPING EQUIPMENT MUST ONLY BE CARRIED OUT BY SUITABLY QUALIFIED AND COMPETENT TRADESPERSONS.

BEFORE BEGINNING INSTALLATION PROCEDURES, THESE INSTALLATION AND OPERATING INSTRUCTIONS SHOULD BE STUDIED CAREFULLY. THE INSTALLATION SHOULD ALSO BE IN ACCORDANCE WITH LOCAL REGULATIONS AND ACCEPTED CODES OF PRACTICE.

PITS AND TANKS

For tanks and pits supplied as part of your Kwikflo package, please refer to the Kwikflo Packaged Pump Station manual supplied.

In general, the pit should be dimensioned according to the relation between the water flow into the pit and the pump capacity. Also, consideration should be made of the physical dimensions of the pump and enough room allowed for any control gear; float switches etc., to operate freely when determining both the pit depth and area.

The pit walls, floor and ceiling must be constructed of a suitably solid material or designed to prevent silt, mud, rock or other foreign objects from entering the pit.

Pit lids and grates must also be designed to prevent entry of silt, mud, rocks or other foreign objects.

Be sure to provide adequate access to the pumps and their associated valves etc.

Pits with sealed or gas-tight lids must be adequately vented by a dedicated vent pipe direct to the tank.

PUMP POSITIONING

The pump should be mounted on a firm solid surface away from inlet pipes etc., and if possible, elevated by 100mm form the base of the pit. Do not hang pump from discharge pipework, lifting chain or electrical cable.

Secure the pump with a lifting chain or other suitable means to the top of the pit at the manhole to prevent pump from tipping over or “walking” on pit floor and to provide a means of lifting the pump out of the pit. **N.B. The pump should never be lifted by the electrical cable.**

Allow enough free cable in the pit to enable pump to be lifted out of the manhole without electrical disconnection. This free cable should be coiled neatly and attached to the lifting chain at the top of the pit.

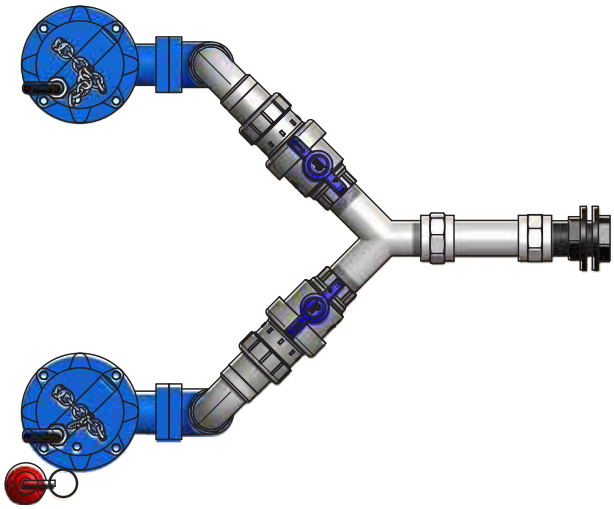
N.B. The pit should be cleaned totally of silt, mud and other foreign objects prior to pump installation and be kept clean following this (see Care and Maintenance).

PIPEWORK

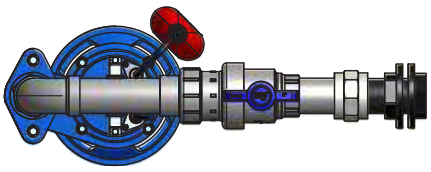
Rigid PVC pipework (minimum Class 9 pressure pipe) should be used in preference to flexible hose. Non pressure-rated pipe or hose should not be used.

An isolation valve must be provided in the common discharge line and a metal – seated swing check valve and barrel union/quick coupling must be provided on each individual pump discharge line before connection to the common discharge line (see Figure 1.1)

Diagram Figure [1.1]



DUAL PUMPS



SINGLE PUMP

The valves and unions must be located as close as practical to the top of the pit at the manhole.

Pipe size should generally be calculated by system flow rate and length of run employing accepted methods and principles. However, pipework should be at least the same size as pump discharge connection.

PUMP CONTROLS

GENERAL:

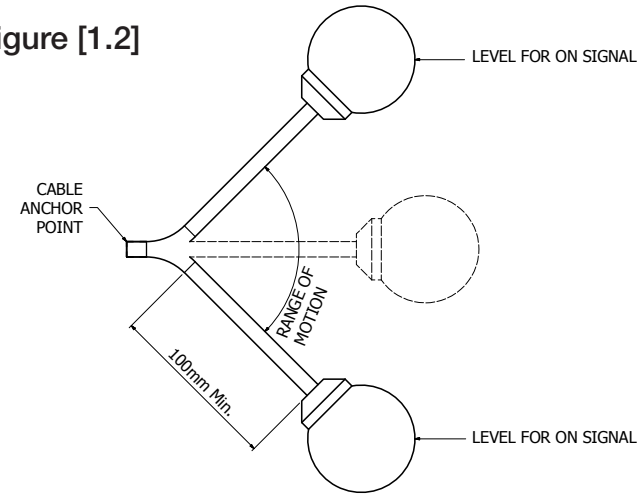
Care should be taken to ensure that the adjustment of the float level controls is correct. Cycling (excessive starting and stopping) and dry-running void warranty.

FLOAT SWITCH TYPES:

Differential: These float switches operate when tilted at approximately 45° up or down. They can be used as direct on-line controls for single phase up to 10 amps or as signal controls.

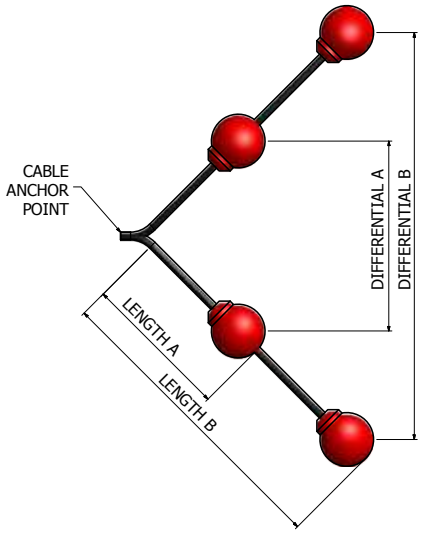
For use as signal controls, differential floats should be anchored approximately 100mm from the float head as show in **Figure 1.2.**

Diagram Figure [1.2]



Be careful to position the float switch according to whether it is to provide an “On” signal or an “Off” signal. For use as direct on-line or differential control, the length of cable from the head to the anchor point determines the depth of the differential **(see Figure 1.3)**

Diagram Figure [1.3]



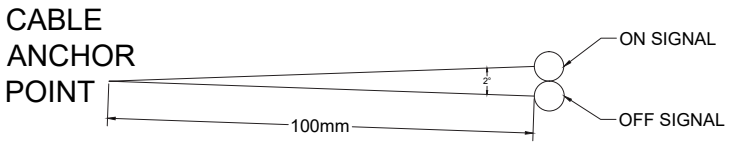
Ensure that the float will not tangle on any other equipment in the pit.

Some differential floats may have provision for normally closed operation or normally open operation. Read manufacturer's literature or test with a continuity tester to determine this.

****Ensure that all unused active conductors are terminated safely****

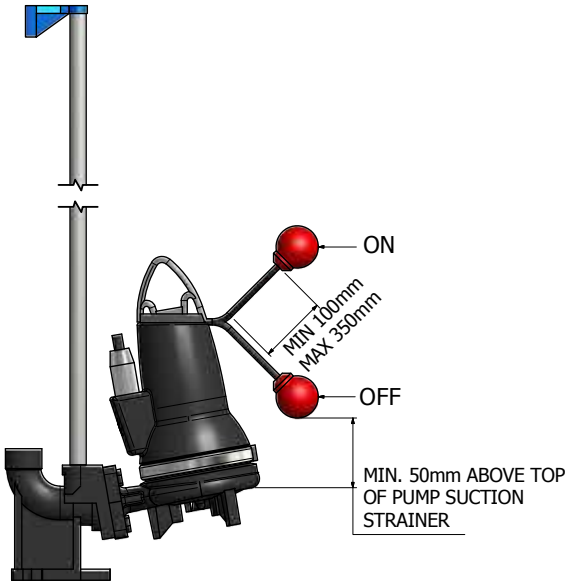
CR Type: These float switches are only used as signal controls. They work on a differential of 2° and therefore should be anchored at the position of the required signal **(see Figure 1.4)**

Diagram Figure [1.4]



Single Pump integrated Float Switch: Ensure that the float switch cable is attached to the pump by the clip/bracket provided. The float switch should be adjusted as per the manufacturer's specification. However, a standard arrangement is shown in **Figure 1.5** as a guide.

Diagram Figure [1.5]



Single Pump, Separate Float Switch: The float switch should be free to move in the same way as an integrated float switch and can be adjusted similarly. The float switch cable should be anchored securely by a cable tie or similar at the desired pivot point. The pivot point can be at the discharge pipework, body of the pump or other similar anchoring point.

A mounting clip/bracket can be used where provided. Consideration should be made for the ease of removal of the float switch form the pit for inspection in case of the pit flooding.

Excess cable should be coiled neatly and attached to a suitable point at the manhole.

DUAL PUMP KITS:

For installers supplying their own control gear or connecting pumps to original control gear:

It is your own responsibility to ensure that the control gear is suitably set up to protect the pumps from cycling and dry-running.

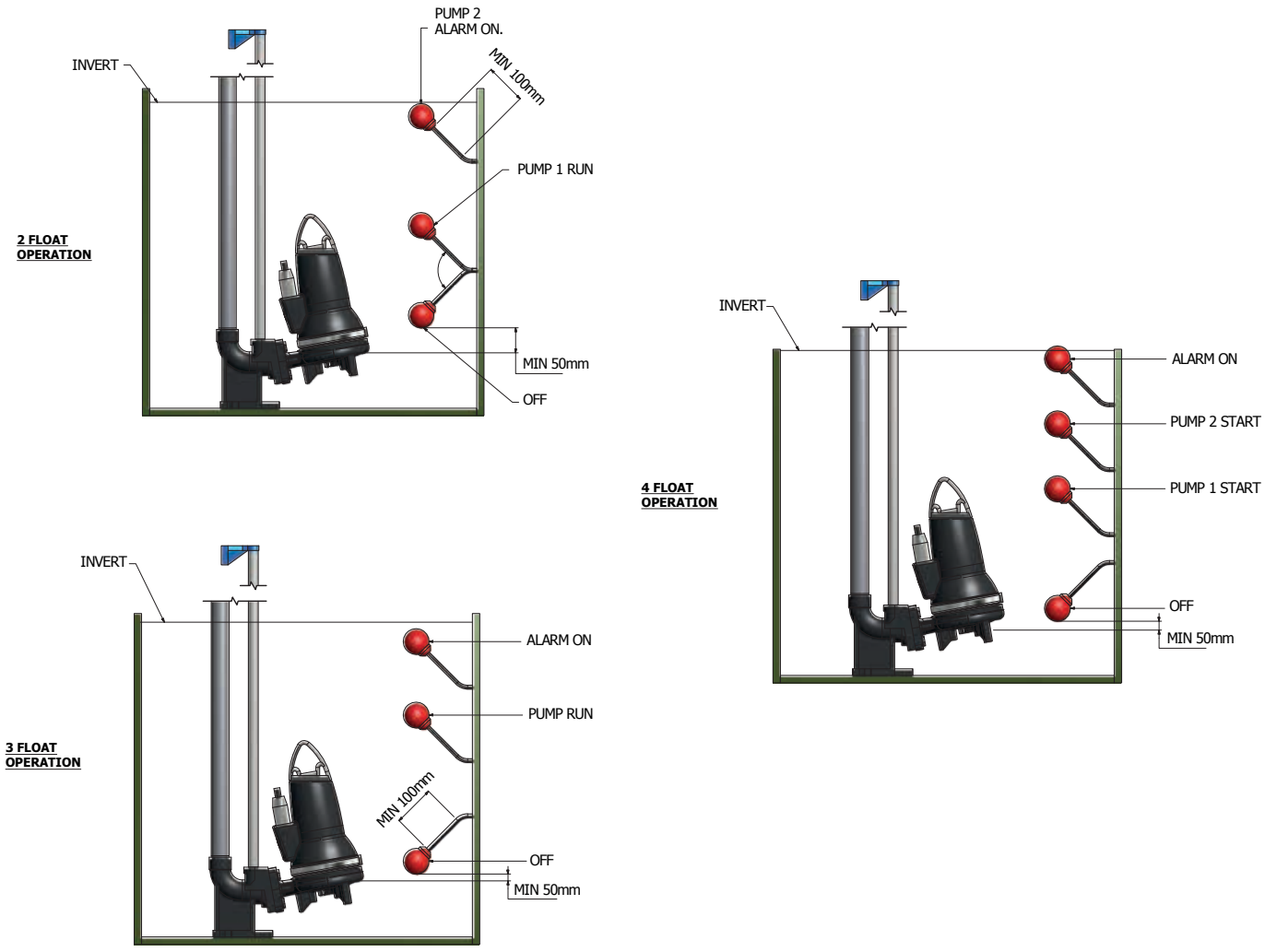
Generally, dual pump kits supplied with Kwikflo standard control gear are provided complete with float switches mounted in a conduit or bracket manufactured to the approximate dimensions supplied. This float set should be checked for accuracy of dimensions and float switch adjustment and adjusted as necessary **(see Figure 1.6)**

Mount the conduit on a hook or similar bracket at the manhole ensuring that the conduit is held securely but is easily removable form the pit as a complete unit for maintenance. Be careful to position the float set away from obstructions to allow free movement of the float switches. Allow enough loose cable in the pit for the float set to be completely removed from the pit manhole. Coil this neatly and attach to the manhole.

Warning: Do not allow the liquid level to drop below the suction inlet of the pump. Dry-running voids Warranty.

Diagram Figure [1.6]

STANDARD INSTALLATION



ELECTRICAL CONNECTION

ELECTRICAL WORK MUST ONLY BE PERFORMED BY QUALIFIED AND COMPETENT PERSONNEL.

ELECTRICAL CONNECTION SHOULD BE CARRIED OUT IN ACCORDANCE WITH LOCAL REGULATIONS.

READ ALL WIRING DIAGRAMS AND INSTRUCTION SHEETS SUPPLIED BEFORE ATTEMPTING ELECTRICAL CONNECTION. IF IN DOUBT, CONTACT KWIKFLO FOR ADVICE AND COPIES OF WIRING DIAGRAMS OR INSTRUCTION SHEETS.

SUPPLY: Ensure available power supply complies with electrical data on pump and control panel nameplates.

Power should be supplied via a main isolating switch. If the pump is not installed close to the switch it must be of a lockable type.

Three-phase pumps must be connected through a hand-resettable thermal overload (generally incorporated into standard Kwikflo control panels).

It is advisable for single-phase pumps to also be supplied via a hand-resettable thermal overload.

All internally fitted thermal overloads and thermistors must be connected as per manufacturers' instructions.

A clearly-marked dedicated circuit of an adequate capacity must be used. Pay careful attention to voltage drop regulations.

CONTROL PANELS: Connection to control panels must be made as per instruction sheets and wiring diagrams supplied. Generally float switch cables supplied as a set are marked by tags on the end of the cable.

All unused wires are to be terminated in insulated connectors.

Mount control panels in a vibration-free position as close as practical to the pit. Allow at least 1m × 1m clear-standing space in front of control panel and position well away from possible damage by vehicles/machinery etc.

Thermal overloads fitted should be adjusted to full load amps noted on pump nameplate.

For three-phase pumps, check direction of rotation. Correct rotation is clockwise, looking down on top of pump. Swap any two phases to change rotation. To visually inspect direction of impeller rotation, it may be necessary to remove the suction strainer.

Keep clear of unprotected impeller.

CONDUITS: All wiring from control panel to pit must be in approved conduit or trunk.

Conduits from pit to control panel must be adequately sized with a minimum amount of bends to allow easy insertion/withdrawal of wires. Minimum 2 × 32mm or 1 × 50mm conduit with long radius bends is standard procedure for dual systems to 1.5kw.

All conduits entering control panel must be sealed internally with silicon or similar to prevent ingress of moisture or fumes from pit.

CABLES: DO NOT ALLOW CABLE ENDS TO BE SUBMERSED

Joints in cables must be made by an approved submersible splice. Only extend cables with cable of equal or greater submersion rating and current carrying capacity.

Leave enough slack cable in pit to allow easy and complete removal of equipment form pit. Ensure that this loose cable is secured at the pit manhole to prevent float switch fouling or entry into pump impeller.

COMMISSIONING

A commissioning service is offered by Kwikflo and its agents for systems installed in specified areas. This may or may not have been included in the price of the system. Please read your quotation carefully to determine this.

A Commissioning Application Form must be filled out and returned to Kwikflo three days prior to commissioning (see Annexure A). Extra charges for commissioning will be made for installations not conforming with this booklet.

GENERAL COMMISSIONING PROCEDURE

1. Double-check all aspects and details covered by this booklet.
2. Check all electrical connections are complete and correct.
3. Check adequacy of power supply. Switch on all isolating switches.
4. Double-check pump rotation (three-phase only).
5. Check amp draw of motors. Compare to pump name plate details.
6. Ensure pit is clear of silt, mud, building debris and other foreign objects.
7. Double-check thermal overload setting
8. Run through complete system operation ensuring that the pumps switch off before running dry or sucking air
9. Return all selector switches to auto position

OPERATION

In general, with correct control settings, your Kwikflo submersible pump system should operate automatically.

Do not allow anything to enter the system pipework or pit which the pump is not designed to pump.

STORMWATER / SUBSOIL DRAINAGE PUMPS

Unless otherwise specified in writing, these pumps are only designed to pump slightly silty water – not leaves, twigs, large quantities of mud, gravel or other foreign objects.

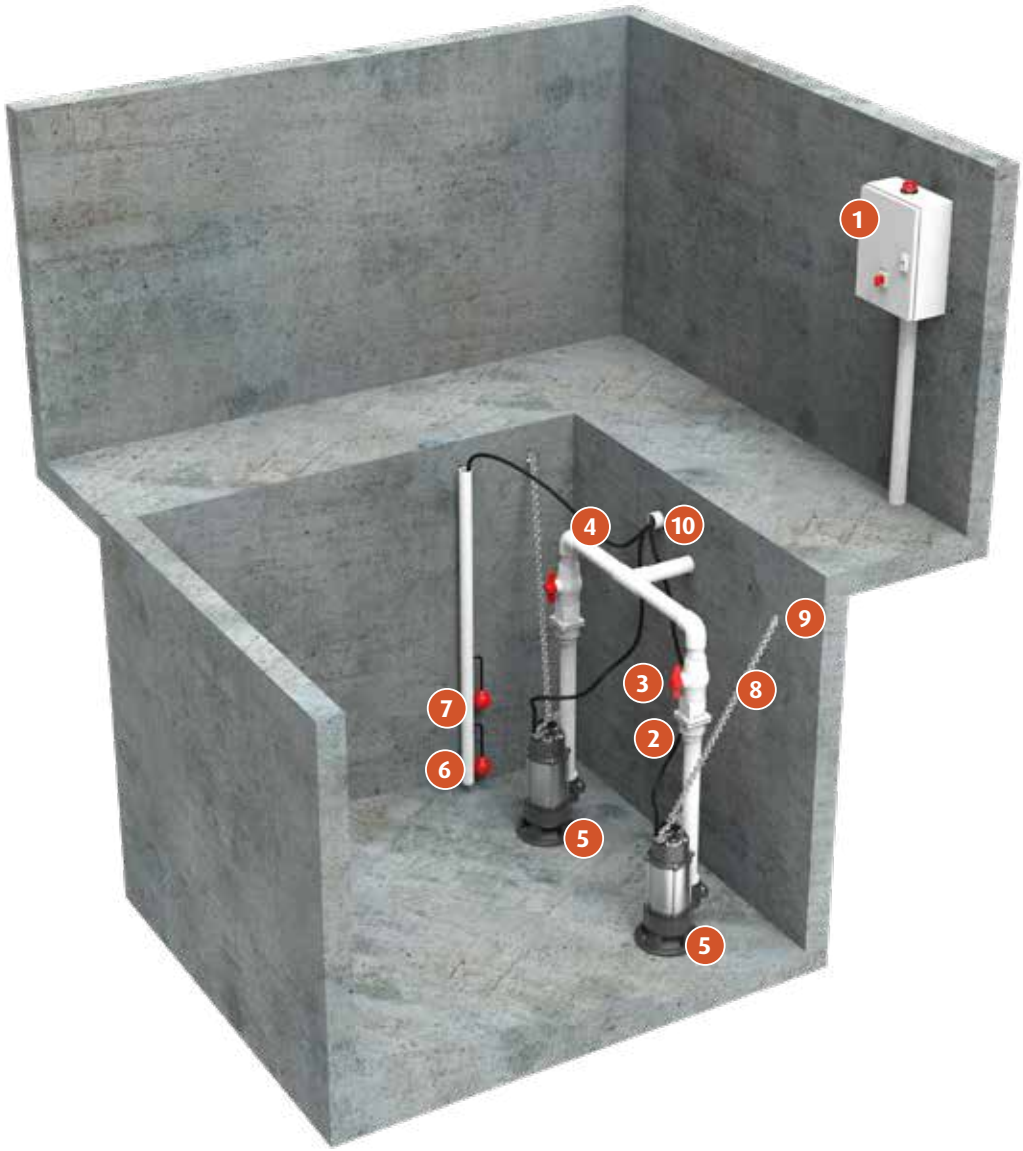
SEWAGE PUMPS

These pumps are only designed to pump liquids and soft solids classified as normal sewage. Under no circumstances should articles of clothing, sanitary items, rags or other foreign objects be allowed to enter the system pipework or pit.

Make sure regular maintenance is carried out on the entire system.

TYPICAL INSTALLATION DRAWING

No.	Description
1	Control Panel
2	PVC Swing Check Valve to suit pump size
3	PVC Ball Valve to suit pump size
4	PVC pipe & fittings. Adaptors, Elbows, Tee etc. to suit pump size
5	Submersible Pump - Freestanding (shown) or Guide-rail setup. Standard pump cable lengths - 10m, 20m
6	Float Switch - Start/Stop. Standard Float Switch cable lengths - 20m, 40m
7	Float Switch - High Level. Standard float switch cable lengths - 20m, 40m
8	Chain - Stainless steel or galvanized
9	Mounting Hooks - Stainless steel or galvanized
10	Electrical conduit - minimum 40mm diameter to allow for 2 x float switches & 2 x submersible pump cables



WARNING
Before installation the pit must be cleared of debris, foreign waste, silt, sludge & rocks. Failure to do so will cause premature pump failure & void the warranty.

NOTES
Please discuss with our team if there is any diversion to the shown installation layout, as incorrect configurations may void product warranty.

CONTENTS OF YOUR SUBMERSIBLE PUMP KIT

CONTENTS	IMAGE	QTY
Submersible Pump		
Check Valve		
Ball Valve		
Float Switches		
Lifting Chains		
Control Panel		

TROUBLE-SHOOTING GUIDE

Pump Motor does not run

1. Water level in pit below off float level.
2. Power failure – check isolating switches and circuit breakers or fuses
3. Thermal motor protection set too low – adjust and reset
4. Loose terminal connection
5. Float switch movement obstructed

Motor trips circuit breakers or thermal overload after short time of operation

1. Temperature of pumped liquid too high
2. Impeller jammed or partly jammed by foreign objects
3. Phase failure
4. Voltage too low
5. Thermal overload set too low
6. Impeller corroded to cover plate from lack of use or moisture entry during storage

Pump runs but does not pump

1. Gate valve closed
2. Suction strainer or discharge line blocked
3. Pump too small for application
4. Incorrect direction of rotation
5. Air lock in pump – check that pump does not suck air before switching off. Vents discharge line below check valve.

Pump will not switch off after emptying tank

1. Off float switch adjusted too low
2. Incorrect wiring
3. Float switch fused
4. Off float switch movement obstructed

Repeated banging sound after pump switches off or tank continues emptying after pump switches off

1. Discharge line syphoning – check that discharge point is not lower than pump.

CARE & MAINTENANCE

ONLY QUALIFIED AND COMPETENT PERSONNEL SHOULD ATTEMPT TO CARRY OUT MAINTENANCE WORKS ON YOUR SUBMERSIBLE PUMP SYSTEM.

Installation conditions will determine regularity of maintenance intervals. However, all installations should be serviced once every six months. More regular servicing is required for applications where there are abrasive particles in water, excessive silt or debris entering the pit, or where the pumps are subject to heavy usage.

It is a good idea to keep a close eye on your newly-installed system until the time of the first maintenance service, to determine if more regular servicing is required.

Particular care should be taken to keep the pit clean while construction works are in progress.

MAINTENANCE SCHEDULE: Additional to any requirements in manufacturer's manual –

1. Be careful to avoid electric shock. Isolate pumps and controls before stating work
2. Check external condition of pumps and control gear
3. Check pumps for wear
4. Check condition for electrical equipment
5. Check pit for sludge build-up / presence of foreign objects – remove if necessary
6. Check that pump cables are securely tied up and that float switch movement is not obstructed
7. Check system operation

WARRANTY

Your Kwikflo Submersible Pump and its associated fittings and equipment supplied by Kwikflo are guaranteed to be free from defects in material or workmanship for a period if twelve months from the purchase date, as per our **Terms & Conditions of Sale.** This does not cover incorrect installation or application, or any other circumstances beyond the control of Kwikflo Nor are any consequential damages covered.

The Kwikflo **Warranty** is only redeemable to the original purchaser of the equipment unless authorized otherwise by our service staff and covers only parts and labour associated with repair of the defective item in our workshop; i.e. labour or parts associated with travel to site or removal of pumps form pits is not covered. This is particularly applicable to units installed incorrectly.

Serial No. Or Invoice No must be supplied with all Warranty claims.

Freight and insurance for all goods returned for Warranty inspection must be pre-paid.

Installation, application or operation not in compliance with this booklet or any other information supplied, either verbally or in writing, immediately voids this **Warranty**.

Kwikflo reserves the right to inspect any Warranty claim before authorizing rectification work to be carried out under Warranty. Any item not directly manufactured or imported by Kwikflo is subject to all warranty conditions of the respective manufacturer or importer and, in most cases, requires inspection by the manufacturer or importer.

Failure to carry out proper maintenance works at suitably regular intervals voids this **Warranty**.

This **Warranty** does not cover any pump installation in any situation for which it is not specified in writing unless the pump has been supplied to a written specification.

INSTALLATION, CARE & MAINTENACE OF YOUR

KWIKFLO

PUMP STATIONS & TRADE WASTE

CONTROL PANEL

WELCOME TO DUAL PUMP CONTROL

Your Dual Pump Controller reflects the superior quality and attention to detail in design, engineering and manufacturing that has distinguished MATelec Products for decades. The controller incorporates the very latest in micro-processor technology, ensuring you, the owner/operator, of many years of functional, reliable and 'user friendly' operation.

Please read this manual prior to installation and operation of the controller.

WARNING

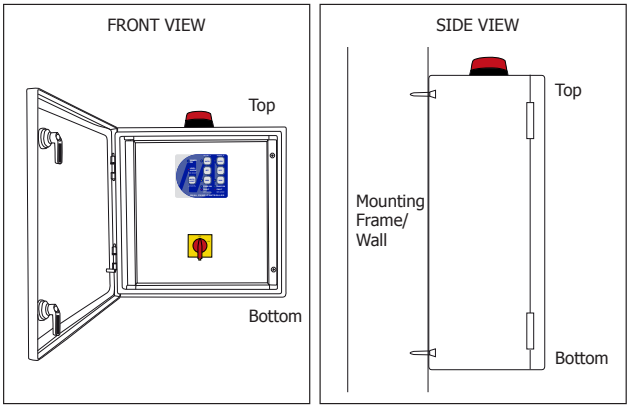
ALL ELECTRICAL CONNECTIONS MUST BE CARRIED OUT BY A SUITABLY QUALIFIED AND REGISTERED ELECTRICIAN.

SAFETY

- Prior to Installation, ensure power supply is isolated.
- Power supply must be Circuit Breaker Protected. (Qualified Electrician to determine appropriate amp rating.)
- Electrical connection to the panel must be carried out in accordance with 'Connection Instructions', see page 3.
- Additions or modifications to the control panel are not permitted and will void warranty.
- The controller is not intended for use by children or infirm persons without supervision.
- Repairs to the Controller must only be carried out by a suitably qualified Electrician.

INSTALLATION

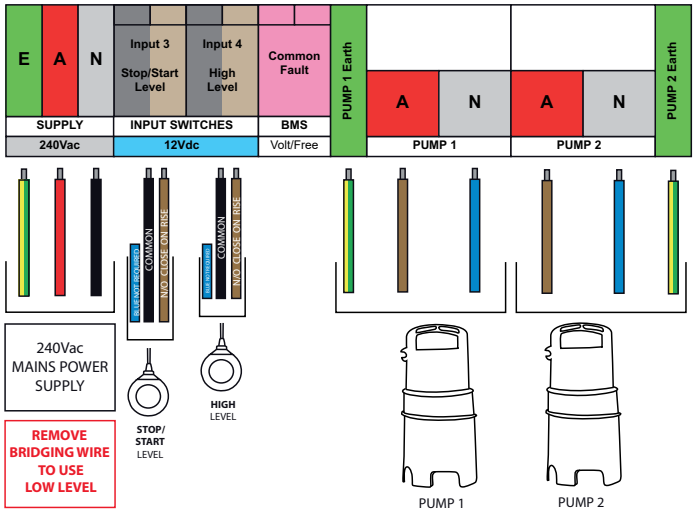
MOUNTING



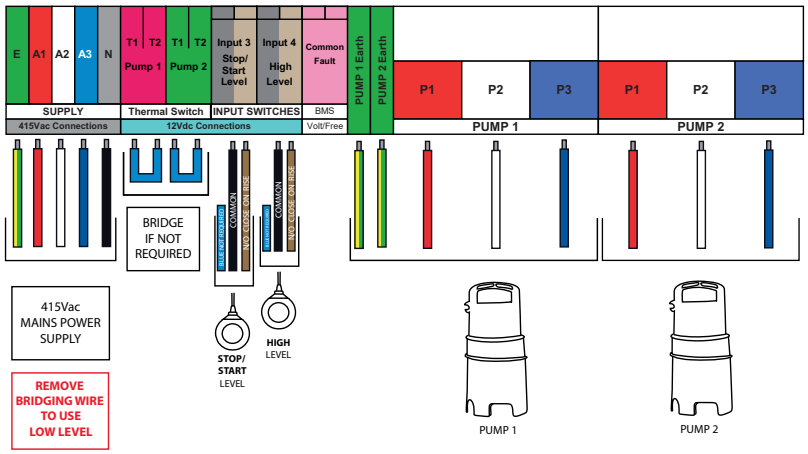
1. Controller enclosure must be mounted in a vertical position.
2. Ensure mounting method does not compromise enclosure weather proof rating.
3. Ensure access to main isolator is not restricted.
4. Ensure cables/conduits entering the panel have mechanical protection and that the penetrations are sealed and do not compromise the weather proof rating of the enclosure.

CONNECTION

Single Phase



Three Phase



NOTE: *Controller must be earthed and all electrical connections must be carried out by a suitably qualified*

Electrician. For Single Working Level Float Switch Applications, connect to "Start (Input 3)" terminals only, and NO bridge wire is required in "Stop (Input 2)" terminals.

KWIKFLO PUMP STATIONS & TRADE WASTE

OPERATION

This controller can perform control functions for most Dual Pump pumping applications. It is more than likely that the control parameters have already been set up for your particular application, however, hereunder you will find details of the set up and configuration options.

There are 6 DIP switches located on the lower side of the control module, which allows for selecting “mode” and “feature” options, as per the following table:

DIP Switch	Position	Function
1/2	Off/Off	**Mode A:** Standard typical float switch configuration (Start, Stop and High Level). No Low Level
	Off/On	**Mode B:** Standard configuration plus low level (Start, Stop, High Level and Low Level).
	On/Off	**Mode C:** Standard configuration plus Prime Loss enabled, on Low Level (Input 1)
	On/On	**Mode D:** Pressure Pumping configuration (Lead, Lag and Low Pressure)
3	Off	Operating Pump alternates each time a pump start is triggered, or after 30 minutes continuous running.
	On	Operating Pump alternates after 6 hours continuous running.
4	Off	Anti-seize Timer disabled
	On	Anti-seize Timer 6 seconds every 7 days enabled
5	Off	When placed in Manual Mode, pump remains in Manual Mode
	On	When placed in Manual Mode after 5 minutes the pump will revert to Auto
6	Off	High Level Alarm automatically resets upon open circuit of high level input. High Level alarm has 15 minute delay.
	On	High Level Alarm can only be reset manually. High Level Alarm has 5 minute delay.

Mode A: Standard Configuration

Start/Stop/High Level operation. When the Pump Start input is closed contact (triggered), the Duty Pump will be turned on. The pump will remain on until both the Pump Start and Pump Stop Inputs have turned off (Open Circuited). Upon High Level, both pumps will run until the Pump Stop Input turns off.

In addition to this, there is a maximum idle timer, which will trigger a Pump Start condition, if either pump has not run for 4 hours, and the Stop Float Contacts are closed. The pump will continue to run until the Stop Float Contacts open. Input functions are as follows:

Input	Function
Input 1	Not used
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

Mode B: Standard Configuration plus Low Level Alarm

As per Mode A, except it has an active Low Level input. The Low Level input must be closed, for Pump Start and Pump Stop inputs to function. The High Level input however, will still override the Low Level and run both pumps. Input functions are as follows:

Input	Function
Input 1	Low Level
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

The basic logic on which a High or Low Level Alarm is determined, is set out in the Table below:

Input 1 Low Level	Input 2 Pump Stop	Input 3 Pump Start	Input 4 High Level	Pump State	Alarm
Closed	Open/Closed	Open	Open	Off	-
Closed	Open/Closed	Closed	Open	On	-
Closed	Open/Closed	Closed	Closed	Both On	High Level (after Timeout)
Closed	Open/Closed	Open	Closed	Both On	High Level (after Timeout)
Open	Open/Closed	Open	Open	Off	-
Open	Open/Closed	Closed	Open	Off	Low Level
Open	Open/Closed	Open	Closed	Off	Low Level
Open	Open/Closed	Closed	Closed	Both On	High Level (after Timeout)

If there is a Low Level Alarm, then both Pumps will be locked out until the alarm is manually reset. This lockout will only be over ridden upon a High Level condition where both the Pump Start and High level inputs are closed.

Note that after a High level is triggered, the pumps will both run until the Pump Start and Stop inputs are opened.

Mode C: Standard Configuration plus Prime Loss

As per Mode A, except Input 1 is connected to a prime loss/flow switch. If at any stage, after Pump Start, or whilst a pump is running, the Prime Loss input opens, for a continuous 1 minute period, a fault is immediately triggered for that pump and duty alternates. Input functions are as follows:

Input	Function
Input 1	Prime Loss
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

Mode D: Pressure Pumping Configuration

Duty Pump: Lead Pump
Standby Pump: Lag Pump
Input functions are as follows:

Input	Function
Input 1	Not Used
Input 2	Lead Pump Pressure Switch (set at say 350kPa)
Input 3	Lag Pump Pressure Switch (set at say 350kPa)
Input 4	Low Pressure Switch (set at say 200kPa)

Typical Operation for Mode D:

- Pressure drops to 400kPa: Lead (for this cycle) Pump cuts in.
- Pressure increases and Pump cuts out.
- Cycle continues with duty (Lead and Lag) alternating between the two pumps.
- If pressure drops to 350kPa, Lead Pumps will cut in and remain running until Lead Pressure Switch opens circuit. Then duty alternates.
- No faults are logged against the Lead Pump if the Lag Pump starts.
- The controller has inbuilt timers for “Delayed” Start and Stop to obviate pump chatter. Upon Input 1 contact closure, the pump will not start (delay start) for 1 second and will not stop (minimum run time) for 10 seconds (or 11 seconds from close of Input contacts). This “run on” occurs even if Lead Pressure switch opens circuit during this initial period. If however run time exceeds 11 seconds, the pump will stop immediately upon “Open Circuit” occurring.
- If the Lead Pressure Switch input closes circuit as well as he Low Pressure Switch input, both pumps will be turned on and the Low Pressure Timer will begin counting. If this condition exists for a period of 60 seconds, then both pumps are shut down and the system signals a level alarm. This would be typical of a Loss of Prime, or Burst main situation.
- Pressure switches are normally Closed and Opened on High Pressure.

Maximum Run and Alternation Mode

With DIP Switch 3 set to “Off” the unit will alternate as usual each time a pump start condition occurs. Additionally, the controller will automatically alternate pump duty if a pump has been running continuously for 30 minutes (maximum run timer)

Setting this DIP Switch to “On” will cause the controller to operate in “Circulation Mode” where duty will only alternate once the pump has run for 6 hours of accumulated time.

Anti-Seize Timer

With DIP Switch 4 set to “On”, the Anti-seize timer will automatically run the pumps for 6 seconds, every 7 days. This pump operation will completely override all inputs including the low level (if enabled). This feature will only run pumps that are set in Auto. This “Pump Run”, will alternate between Pump 1 and Pump 2. A pump that has been locked out due to a fault will not run.

Manual Mode Timeout

With DIP Switch 5 set to “On” the pump will only remain in Manual Mode for 5 minutes, after which time, it automatically reverts to Auto.

High Level Alarm Reset

With DIP Switch 6 set to “Off”, the High Level Alarm will automatically reset once the High Level input opens circuit. The controller will also use the alternate High Level Alarm Delay. Typically used for Storm Water applications. High Level Alarm delay in this mode is 15 minutes.

Setting this DIP Switch to “On”, will cause the High level Alarm to remain active until the controller is reset. The High Level Alarm will use the standard High Level Alarm activation delay. Typically used for Sewerage applications. High Level Alarm delay in this mode is 5 minutes.

Audible and Visual Alarm Test

By pressing the Mute/Reset button on the Keypad continuously for a period of 5 seconds, the Strobe, Siren and indicator Lights will be powered up for inspection.

Fault Reset

To reset all faults on the controller, press and old the Mute/Reset button on the Keypad continuously for a period of 3 seconds until an acknowledgement beep is heard.

Pump Fault

A Pump Fault is indicated for two types of faults. A Thermal Overload will be indicated by way of a steady Fault Indicator Light. Both types of faults can be reset by way of the Fault Reset button.

Level Alarms

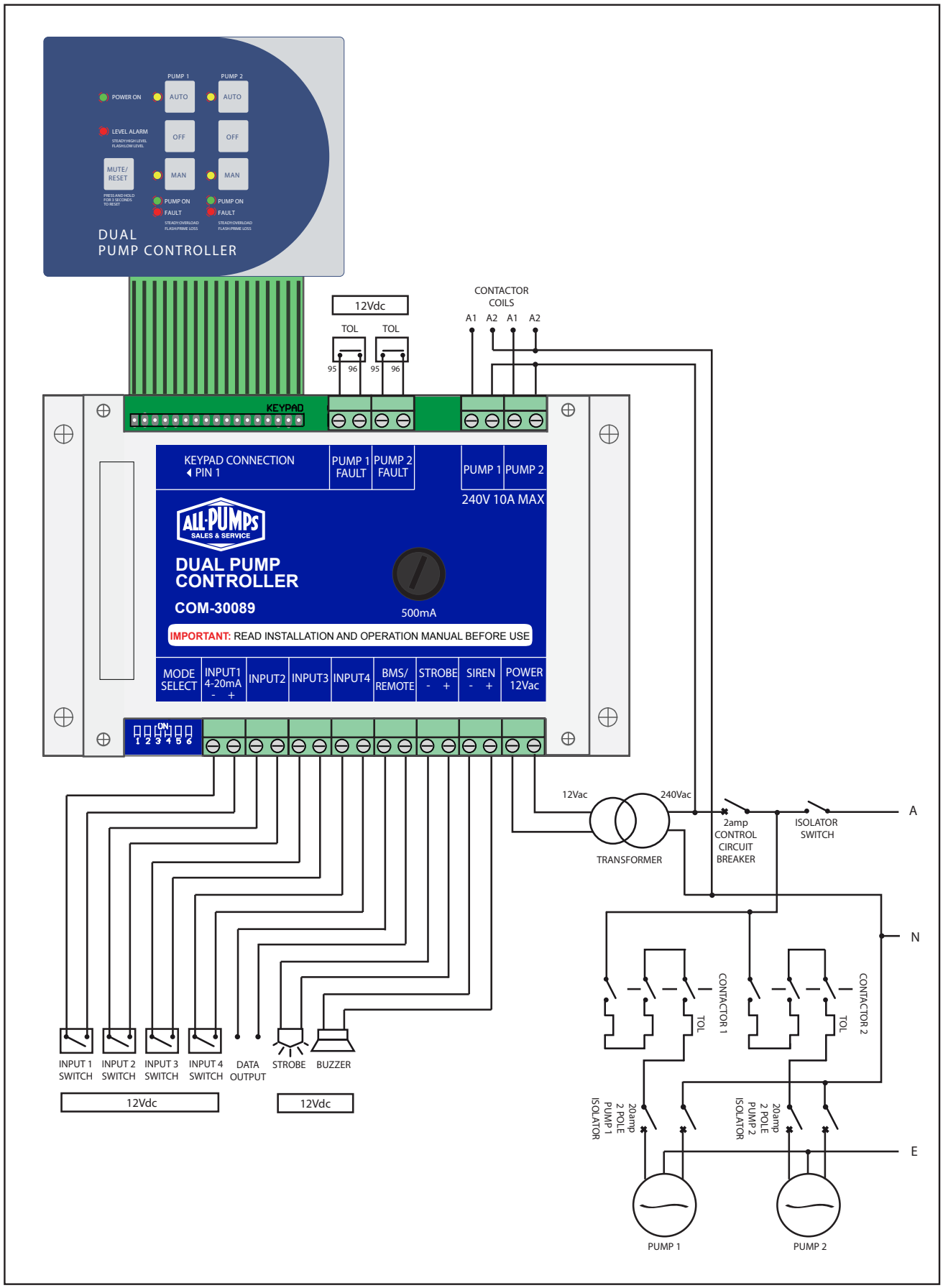
A High Level Alarm is indicated by way of a steady Level Alarm Indicator Light. A Low Level/Low pressure Alarm is indicated by way of a Flashing Level Alarm Light.

Auto Silencing Alarm Feature

The audible Alarm is programmed to sound for 5 minutes continuously, unless muted and will thereafter automatically silence and enter “Chirp” mode. In “Chirp” mode, the Audible Alarm will sound briefly (2 seconds) every 5 minutes.

CIRCUIT DIAGRAM

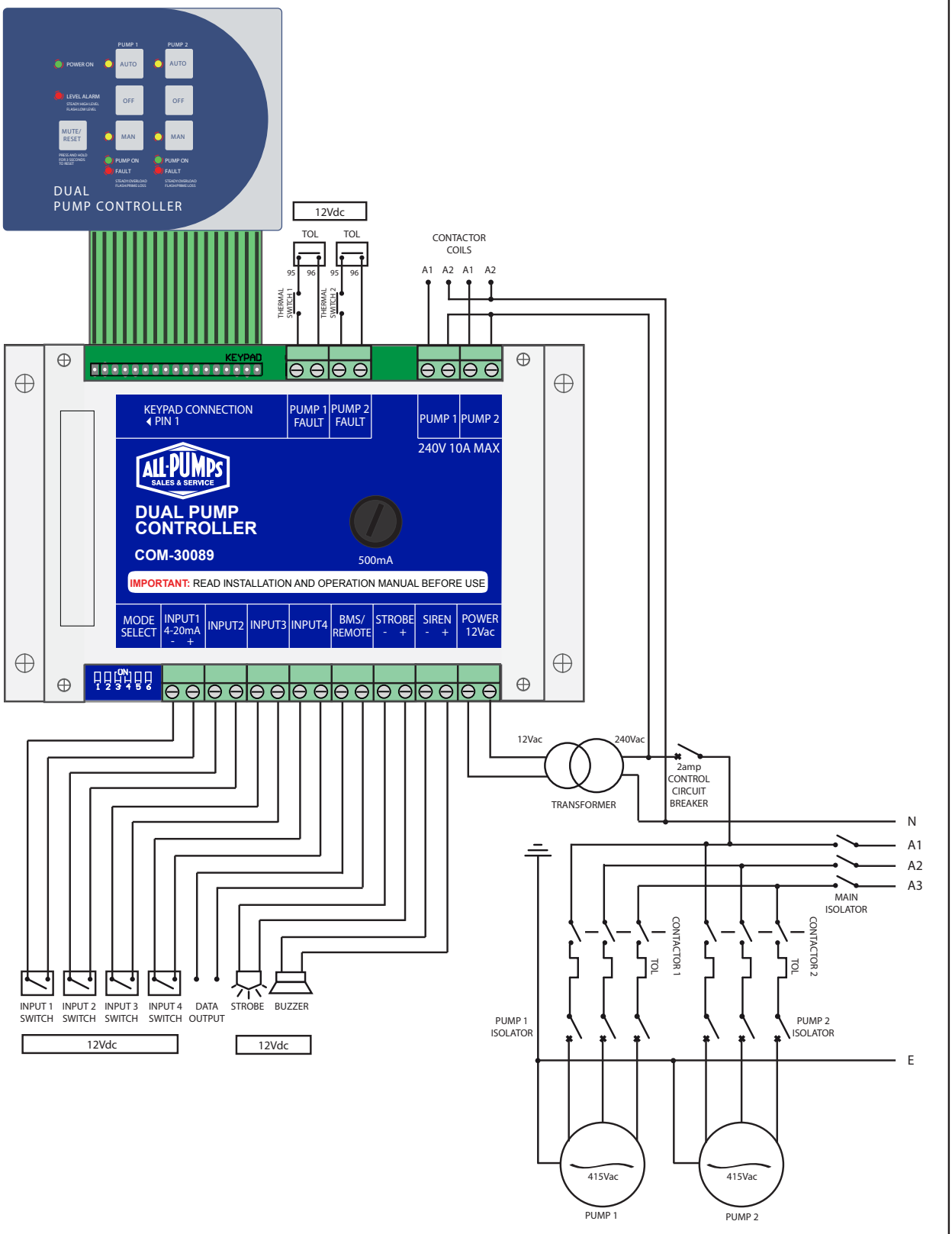
Single Phase



KWIKFLO PUMP STATIONS & TRADE WASTE

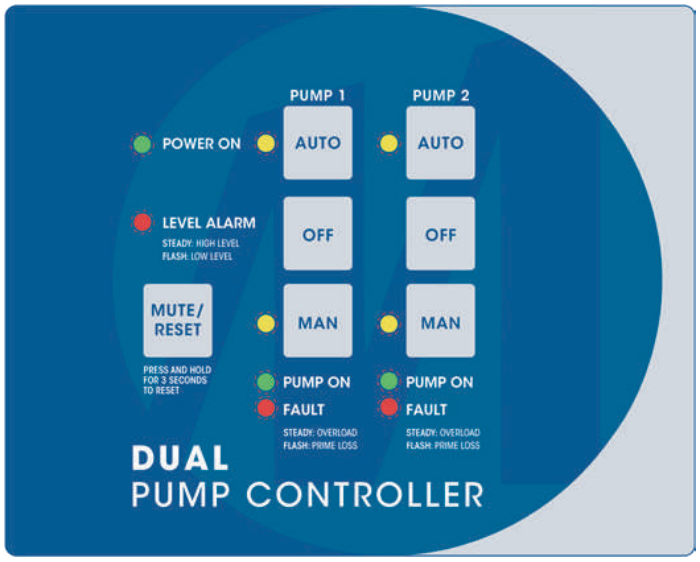
CIRCUIT DIAGRAM

Three Phase



AT A GLANCE

A quick reference to the controller's Keypad and Indicator functions and meanings.



KEYPAD

INDICATORS

POWER ON

POWER ON
Power is turned on.

LEVEL ALARM

LEVEL ALARM ON
A high level alarm has been present for the preset time.

FLASHING
A low level alarm is present.

PUMP ON

ON STEADY
Pump switched on to run.

FAULT

ON STEADY
A pump fault/overload has occured.

FLASHING
A prime loss fault has occured.

PUSH BUTTONS

MUTE/ RESET

Silences the siren and if held down for 3 seconds, clears all faults.

AUTO

If selected (the LED indicator will confirm if on) the particular pump is set to Automatic Pumping Mode.

OFF

Turns Aline Pumpsoff.

MAN

If selected (the LED indicator will confirm if on) the particular pump is set to Manual Pumping Mode.

KWIKFLO PUMP STATIONS & TRADE WASTE

NOTES

Aline
Pumping with Innovation

KWIKFLO
PUMP STATIONS & TRADE WASTE

PHONE: 1800 018 999 | EMAIL: pumps@alinepumps.com
OFFICE: 2-10 Yarunga St, Prestons NSW 2170 Australia
WEB: www.alinepumps.com.au

Aline
PUMPING WITH INNOVATION

SUBMERSIBLE SUMP PUMP RANGE

Installation Operating Maintenance Instructions & Warranty Conditions

IMPORTANT

This instruction manual must be read and adhered to prior to installating and/or operating the pump/s.

For safety reasons, persons who have not read these instructions should not be authorised to use the pump.

The Installer must provide a copy of this manual to the Operator of the pump/s.

While this booklet is comprehensive, it is not exhaustive. Therefore, if you need clarification of any of the information contained herein, please contact us.

PRIOR TO INSTALLATION & OPERATION

The Installer must consult a WHS supervisor and/or adhere to all relevant criteria and regulations. The installer should consult an engineer for site assessment and correct installation methods.

When the pump is delivered, first perform the following checks.

INSPECTION

While unpacking, inspect the product for damage during shipment, and make sure all the fasteners, clamps, etc. are tightened properly.

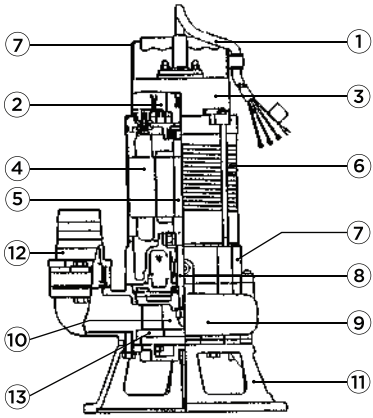
SPECIFICATION CHECK

Check the model number to make sure it is the product that was ordered. Be certain it is the correct voltage and frequency.

PRODUCT SPECIFICATIONS

CAUTION:

- Do not operate this product under any conditions other than those for which it is specified.
- Failure to observe this precaution can lead to electrical shock, electrical leakage, fire, water leakage, damage to property, injury and death.



1. Cable		
2. Protector	6. Motor Frame	10. Impeller
3. Motor Cover	7. Oil Chamber	11. Stand/Strainer
4. Motor	8. Mechanical Seal	12. Discharge
5. Shaft	9. Casing	13. Wear Plate

INSTALLATION

CAUTION:

- Do not use pump in liquids other than water, sewage, or chemically stable wastewater. Do not use pump in oil, salt water, flammable liquids, or organic solvents.
- Use with a power supply voltage within ±5% of the rated voltage.
- Do not use in water temperatures outside the range of 0-35°C. This can lead to failure, electrical leakage, shock or fire.
- Do not use in the vicinity of explosive or flammable materials, or areas classified as hazardous.
- Use only in fully assembled state.

NOTE: *Consult your dealer or representative before using with any liquids others than those indicated in this document.*

PREPARING FOR INSTALLATION

Before installing the pump at a work site, you will need to have the following tools and instruments ready.

- Insulation resistance tester
- AC Voltmeter
- AC ammeter (clamp on type)
- Bolt and nut tighteners
- Power supply connection tools
- Ensure adequate power supply is available

NOTE: *Please read also the instructions that come with each of the test instruments.*

CHECKS TO MAKE BEFORE INSTALLATION

When a three pin plug is used:
Use the megohmeter to measure the insulation resistance between the cabtyre cable plug tips and ground.

When connection leads are used:
With the megohmeter, measure the insulation resistance between each core lead and the ground lead (Green/Yellow).

Reference insulation resistance:
20Ω or greater.

NOTE: *The reference insulation resistance (20Ω or greater) is the value when the pump is new or has been repaired.*

WARNING:

- When installing the pump, pay close attention to its centre of gravity and weight. If it is not lowered into place correctly, it may fall and be damaged or cause injury.
- When transporting the pump by hand, be sure to employ manpower commensurate with the weight of the pump. To avoid back injury when lifting the pump, bend the knees to pick it up rather than bending your back.

CAUTION:

- Do not under any circumstances install or move the pump by suspending it from the power cable. The cable may be damaged, causing electrical leakage, shock, fire, injury or death.

1 Attach the hose to the hose coupling as far as it will go, then fasten it securely with the hose band.

2 Avoid dropping the pump or other strong impact. Lift the pump by holding it firmly with both hands or by attaching a rope or chain to the handle.

3 Install the pump in an upright position on a secure base. Ensure that the inlet to the pump is not blocked by sludge, mud, solids, plastic bags, rubbish.

4 Where a float switch is attached to the pump, ensure the float switch is free to operate without interfering with tank walls, pipe work etc.

5 A swing check non-return valve and isolating valve should be fitted to discharge pipe close to the pump but accessable so that it can be replaced.

6 The pump must not be used in or at swimming pools, garden ponds or where there are people in the water.

CAUTION:

- Avoid dry operation, which will not only lower performance but can cause the pump to malfunction, leading to electrical leakage and shock.

7 Install the pump in a location with sufficient water level, where water collects readily.

NOTE: *Please refer to "Operating Water Level" (page 10) for the water level necessary for operation.*

NOTE: *The discharge end should be located higher than the water surface. If the end of the hose or pipe is submerged, water may flow back to the pump when the pump is stopped; and if the hose end is lower than the water surface, water may overflow when the pump is turned off.*

CAUTION:

- If large quantities of earth are sucked up, damage resulting from erosion in the pump can lead to electrical leakage and shock.

8 To prevent the pump strainer stand from becoming submerged in mud, causing it to suck in debris, mount it on a block or firm base.

ELECTRICAL WIRING

PERFORMING ELECTRICAL WIRING

WARNING:

- Electrical Wiring should be perfromed by a qualified/licenced person in accord with all applicable regulations. Failure to observe this precaution not only risks breaking the law but is extremely dangerous.
- Incorrect wiring can lead to electrical leakage, electrical shock, fire, property damage, injury or death.
- Always make sure the pump is equipped with the specified overload protectors and fuses or breakers, as required by law, so as to prevent electrical shock from an electrical leak or pump malfunction.
- The voltage, frequency and current rating are displayed on the name plate, please ensure that the power supply meets the requirements.

GROUNDING

WARNING:

- Do not use the pump without first earthing it properly. Failure to earth it can lead to electrical shock from an electrical leak or pump malfunction.

CAUTION:

- Do not attach the earth wire to a gas pipe, water pipe, lightening arrestor or telephone earth wire. Improper earthing can result in electrical shock.

CONNECTING THE POWER SUPPLY

WARNING:

- Before connecting leads to the terminal, make certain the power supply is turned off (circuit breaker, etc), to avoid electrical shock, shorting,

or unexpected starting of the pump, leading to injury or death.

WARNING:

- Before inserting the power supply plug make certain the power supply is turned off (circuit breaker etc), to avoid electrical shock, shorting, or unexpected starting of the pump, leading to injury or death.

CAUTION:

- Do not use the pump with the power cable or plug connected loosely, which can result in electric shock, shorting, fire, injury or death.

CAUTION:

- Draw power from a dedicated power outlet. Sharing the outlet with other equipment may overheat the branch outlet and could result in a fire.
  - When using a three pin plug, connect as described in the manufacturer's instructions.
  - When a single-phase power source is used, connect the leads to the control panel terminals as shown in the diagram, making sure they do not become twisted together.

CAUTION:

- Be sure to use a dedicated power supply with a ground/earth leakage circuit breaker.

POWER CABLE

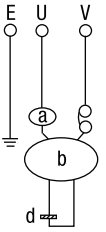
CAUTION:

- If it is necessary to extend the power cable, use a core size equal to or larger than the original. This is necessary not only for avoiding a voltage drop, but to prevent cable overheating which can result in fire, electrical leakage, electrical shock, injury and death. Refer to AS3000
- If a cable with cut insulation or other damage is submerged in the water, there is a danger of water seeping into the motor causing a short. This may result in damage to pump, electrical leakage, electrical shock, fire, injury or death.
- Be careful not to let the power cable be cut or become twisted. This may result in damage to the pump, electrical leakage, electrical shock, fire, injury or death.

- If it is necessary to submerse the connection leads of the power cable in water, first seal the leads completely in a molded sleeve, to prevent electrical leakage, electrical shock, fire, injury or death.
- Do not allow power cable leads or power supply plug to become wet.
- Make sure that the cable does not become excessively bent or twisted, and does not rub against a structure in a way that might damage it.

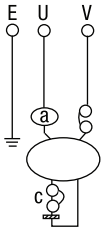
ELECTRICAL CIRCUIT DIAGRAMS

SINGLE PHASE BELOW 1HP (INCLUDE 1HP)



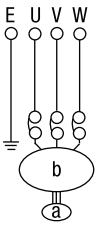
E: Earth Cord
Colour:
yellow/green (green)
U: Power
Colour: brown
V: Power Cord
Colour: blue

SINGLE PHASE ABOVE 1HP



E: Earth Cord
Colour:
yellow/green (green)
U: Power
Colour: brown
V: Power Cord
Colour: blue

THREE PHASE



E: Earth Cord
Colour:
yellow/green (green)
U: Power
Colour: brown/orange
V: Power
Colour: grey
W: Power
Colour: black

- THREE PHASE PUMPS must be connected to a external motor starter fitted with a contactor and overload. The nominal current of the motor starter must correspond to the electrical data marked on the pump nameplate.

CHECKING OF DIRECTION OF ROTATION (THREE PHASE PUMPS ONLY)

The direction of rotation should be checked every time the pump is connected to a new installation.

Check the direction of rotation as follows:

At all times keep fingers and hands away from impeller.

1. Position the pump so that the impeller can be observed.
2. Start the pump momentarily, pump will jerk – be careful.
3. Observe the rotation of the impeller. The correct direction of the rotation is indicated by an arrow on the top of the motor (anticlockwise when seen from the bottom). If the impeller rotates in the wrong direction, reverse the direction of rotation by interchanging two phases of the motor.

If the pump is connected to a piping system, the direction of rotation can be checked as follows:

1. Start the pump and check the quantity of water or the discharge pressure.
2. Stop the pump and interchange two of the phases to the motor.
3. Start the pump and check the quantity of water or the discharge pressure.
4. Stop the pump.
5. Compare the results taken under point 1 and 3. The connection which gives the larger quantity of water or the higher pressure is the correct direction of rotation.

OPERATION

BEFORE STARTING

1. Make sure once again that the product is of the correct voltage and frequency rating.

CAUTION:

- Using the product with a voltage and frequency other than the rated voltage frequency will not only lower its performance but damage the product.

NOTE: *Confirm the rated voltage and frequency on the model name plate.*

2. Confirm the wiring, supply voltage, circuit breaker capacity, and motor insulation resistance.

Reference insulation resistance: 20Ω or greater.

NOTE: *The reference insulation resistance (20Ω or greater) is the value when the pump is new or has been repaired.*

3. The setting on the circuit breaker or other overload protector should be made in accord with the rated currency of the pump.

NOTE: *See the model name plate on the pump for its rated current.*

TEST OPERATION

WARNING:

- Never operate the pump while it is suspended in the air. The recoil will result in injury, property damage or death.

1. Run the pump for a short time (3–10 minutes) and confirm the following:

- Using an ammeter (clamp-on type), measure the operating current at the L1, and L2 phase leads on the terminal.

Countermeasure: If the operating current exceeds the rated value, pump motor overload may be a cause, or there may be insufficient back pressure. Make sure the pump has been installed under proper conditions as described in Installation (page 5).

- Using an AC voltmeter (tester), measure voltage at the terminals.

Supply voltage tolerance: within ±5% of rated voltage.

Countermeasure: If the supply voltage is outside the tolerance, possible causes are the power supply capacity or an inadequate extension cable. Look again at Electrical Wiring (page 8) and make sure the conditions are proper.

CAUTION:

- In case of very excessive vibration, unusual noise or odour, turn off the power immediately and consult with your nearest dealer or representative. Continuing to operate the pump under abnormal conditions may result in electrical shock, fire, property damage, injury or death.

2 If the test operation reveals no problems, continue operating the pump.

OPERATION

WARNING:

- Do not operate the pump in dry pit, well, trench etc.
- The pump may become very hot during operation. To avoid being burned, be careful not to contact the pump accidentally.
- Make sure no extraneous objects such as pins, nails or other metal objects, cloth, wipes, rocks, wood, napkins or sanitary items or products of this nature are sucked into the pump. These can damage the pump or cause it to malfunction, and can result in electrical shock or electrical leakage.
- In case of a power outage, turn off the power to the pump to avoid having it start unexpectedly when the power is restored, presenting serious danger to people in the vicinity.
- Pay careful attention to the water level while the pump is operating. Dry operation may cause the pump to malfunction.

  NOTE: *See page 10, "Operating water level" for the water level necessary for operation.*

- Sharp bends in the hose, especially near its base, may cause air pockets to form resulting in idle operation. Lessen the degree of bending while continuing to operate the pump.

OPERATING WATER LEVEL

CAUTION:

- Do not operate the pump below the C.W.L. (continuous running water level). Failure to observe this condition may result in damage to pump, electrical leakage or electrical shock.

MOTOR PROTECTION SYSTEM (Autocut Protector)

Some single phase pumps have a built-in motor protection system (Autocut Protector). If an excessive current is detected or the motor overheats, for reasons such as the following, the pump will automatically, stop operating regardless of the water level, to protect the motor.

- Change in supply voltage polarity
- Overload
- Open-phase operation or operation under constraint

NOTE: *Always determine the cause of the problem and resolve it before resuming operation. Simply repeating cycles of stopping and restarting will result in damage to the pump. Do not continue operation at a very low lift, low water level, or while the strainer stand is clogged with debris. Not only will performance suffer, but such conditions may cause noise, heavy vibration, and malfunctioning.*

MAINTENANCE AND INSPECTION

Regular maintenance and inspections are necessary for continued efficient functioning of the pump. If any abnormal conditions are noticed, refer to the section on Troubleshooting (pages 12-13) and take corrective measures immediately.

It is highly recommended that a spare pump be kept ready in case of any problems.

PRIOR TO INSPECTION

WARNING:

- Consult WHS supervisor for correct proceedures.

WARNING:

- Detach the power cable from the receptacle or terminals, after making certain the power supply (circuit breaker, etc) is turned off. Failure to follow this precaution will result in a serious accident or death from electrical shock or unexpected starting of the pump motor.

1 Washing the Pump: Remove accumulated matter from the surface of the pump and wash it with clean water. Take special care to remove any debris from the impeller.

2 When inspecting the pump exterior look for any peeling or chipped paint, and make sure the nuts and bolts are fastened tightly. Any cracks in the surface should be repaired by cleaning up that area, drying it and then applying touchup coating.

NOTE: *touchup is not supplied. Note that some kinds of damage or looseness may require that the unit be dismantled for repairs. Please consult with your nearest dealer.*

Frequency	Inspection Items
MONTHLY	Measure insulation resistance – Reference resistance 1Ω or greater ***NOTE:*** *if the insulation resistance has become notably lower than previous inspection, an inspection of the motor will be necessary.* • Measure operating current - Compare with rated current. • Measure supply voltage - Compare with allowable range (within ±5% of rated voltage) • Pump inspection. • A noticable drop in performance may indicate wear in the impeller, etc., or else clogging of the strainer stand, etc. Remove clogged debris, and replace any worn parts.
BI-ANNUALLY	• Oil inspection. • Check the oil every six months or after 1,000 hours of use, whichever comes first.
ANNUALLY	• Change Oil. • Change oil every 12 months or after 2,000 hours of use, whichever comes first. • Designated Oil: Turbine oil VG32 - Caltex – or similar. • Change mechanical seal. ***NOTE:*** *Trained personnel are required for inspecting and replacing the mechanical seal. Consult with your nearest dealer or representative.*
2 TO 5 YEARS	• Overhaul – This should be carried out even if there are no problems with the pump. The frequency depends on how continuously the pump is in use. ***NOTE:*** *Consult with your nearest dealer*

STORAGE

When the pump is out of use for an extended period, wash it and dry it thoroughly, then store it indoors.

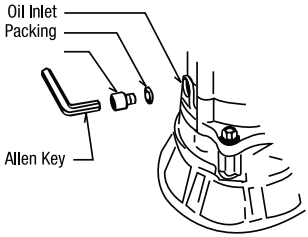
NOTE: *Always run a test operation before putting the pump back into service.*

When the pump is left installed in the water, it should be run at regular intervals (about once a week).

OIL INSPECTION & CHANGE

- Inspecting Oil
  Remove the Oil Plug (Hex. Bolt) and tilt the pump to drain a small amount of oil. If the oil is milk white or has water mixed with it, the Mechanical seal maybe faulty. In this case the pump will need to be dismantled and repaired.
- Replacing the Oil
  Remove the Oil Plug and drain all the oil, then replace it with the specified amount.

NOTE: *Used oil and other waste products should be disposed of by a qualified agent, in accord with applicable laws. The Oil Plug packing and O-Ring should be replaced each time the oil is inspected or changed.*



TROUBLESHOOTING

Trouble	Cause	Remedy
Does not start. Starts, but immediatly stops.	1. Power Failure 2. Large discrepancy between power source and voltage 3. Significant drop in voltage 4. Motor phase malfunction 5. Electric circuit connection faulty 6. Faulty connection of control circuit 7. Fuse blown 8. Faulty magnetic switch 9. Water is not at level indicated by float 10. Float is not at appropriate level 11. Float defective 12. Short circuit breaker is functioning 13. Foreign matter clogging pump 14. Motor burned out 15. Motor bearing failure	1.- 3. Contact electric power company and devise counter measures 4. Inspect connections and magnetic switch 5. Inspect electric circuit 6. Correct wiring 7. Replace with correct type of fuse 8. Replace correct type of magnetic switch 9. Raise water level 10. Move float to appropriate starting level 11. Repair or replace 12. Repair location of short circuit 13. Remove Foreign matter 14. Repair or replace 15. Repair or replace

Aline
PUMPING WITH INNOVATION

TROUBLESHOOTING

Trouble	Cause	Remedy
Operates, but stops after a while.	1. Prolonged dry operation has activated motor protector and caused the pump to stop 2. High liquid temperature has activated motor protector and caused the pump to stop.	1. Raise stop water level 2. Lower liquid temperature
Does not pump. Inadequate volume.	1. Reverse rotation 2. Significant drop in voltage 3. Operating a 60Hz pump on 50Hz 4. Discharge head is high 5. Large piping loss 6. Low operating water level causes air suction 7. Leaking from discharge piping 8. Clogging of discharge piping 9. Foreign matter in suction inlet 10. Foreign matter clogging pump 11. Worn impeller	1. Correct rotation (operation 2, 3) 2. Contact electric power company and devise counter measures 3. Check nameplate 4. Recalculate and adjust 5. Recalculate and adjust 6. Raise water level or lower pump. 7. Inspect, repair 8. Remove foreign matter 9. Remove foreign matter 10. Disassemble and remove foreign matter 11. Replace impeller
Over current.	1. Unbalanced current and voltage 2. Significant voltage drop 3. Motor phase malfunction 4. Operating 50Hz pump on 60Hz 5. Reverse rotation 6. Low head, Excessive volume of water 7. Foreign matter clogging pump 8. Motor bearing is worn or damaged	1. Contact electric power company and devise counter measure 2. Contact electric power company and devise counter measure 3. Inspect connections and magnetic switch 4. Check nameplate 5. Correct rotation (see page 7) 6. Replace pump with low head pump 7. Disassemble and remove foreign matter 8. Replace bearing
Pump vibrates; excessive operating noise.	1. SHut off valve closed too far 2. Piping resonates 3. Reverse rotation	1. Open shut off (valve) 2. Improve pipe mounting 3. Correct rotation (see page 7)

WARRANTY CONDITIONS

ALINE warrants to the original user that its products are free from defects in materials and workmanship at the time of shipment and will make good, by repair or at its option by replacement, faults and/or defects which appear during the warranty period of twelve (12) months after the purchase date, provided that:

1. the equipment was correctly installed and under proper use in accordance with the 'Installation, Operation and Maintenance Instructions' issued by ALINE and also accepted codes of good practice, relevant Australian Standards and Government regulations.
2. the claim for goods under warranty arises solely from alleged faulty and/or defective materials and/or workmanship.
3. the company is notified in writing within twenty four (24) hours, after the discovery of any alleged faults and/or defects stating the date, place of purchase and invoice number.
4. the repair is carried out by ALINE or its agent who has been specifically authorised in writing to carry out the repair under warranty.
5. the faulty and/or defective goods are returned freight paid and at the purchaser's risk to the company or its authorised agent as required.
6. pumps returned for service/warranty which have been used for other than clean water must be clearly marked with details of the pumped liquid or application involved.
7. it is the customers responsibility to advise the company when any product returned for service/warranty has been in contact or used with hazardous liquids.
8. goods are maintained and serviced according to instructions set ALINE

ALINE warranty does not cover the failure or defect of any product, process, system, part or component:-

- due to advice, directions or instructions provided by ALINE, it's Staff and/or contractors.
- that is determined by ALINE to be fair, normal wear and tear, misuse and abuse
- the Supplier shall not be under any liability for any injury, including loss of life, damage, loss including consequential damage or loss including physical, financial, mental damage or loss, disease resulting from the use of its products or resulting from any faults and/or defects therein. This includes the cost of taking up and reinstalling the equipment and the tradesperson's time and material costs.
- damage caused by abnormal operating conditions, tampering, war, violence, storm, cataclysm or any other force majeure.
- damage caused by pumps jamming on metal objects, wood, wet wipes, sanitary napkins, cloth, non-degradable toweling.
- damage caused by the equipment being used for an application for which it is not manufactured or recommended for.
- damage caused by sand or abrasive materials, corrosion due to saline water,

hazardous liquids, electrolytic action, liqiud temperature beyond the recommended range, cavitation, improper supply voltage, or insufficient liquid to enable the pump to perform to specification.

- damage caused by inadequate power supply, under voltage, power surge or spike, and generator power supply.
- damage caused by the lack of maintenance of installation including but not limited to regular cleaning of pits, pumpwells and float switches
- damage caused by incorrect installation including, but not limited to, incorrect valves, incorrect installation of valves and incorrect electrical termination
- unless an appropriate consulting engineer and WHS officer has agreed to and given written consent to the installation and operating instructions, guidelines, operations, maintenance, service and repairs.
- if the alleged fault or defect would have been detectable prior to installation.

This warranty does not exclude any condition or warranty implied by the Trade Practices Act or seperate state laws and is in additon to any right that the original purchaser or any subsequent purchase may have at law.

In the case of equipment or components which are not manufactured, repaired or installed by ALINE but are supplied by the company, the warranty is limited to that extended by the manufacturer, supplier, repairer or installer of such equipment or components.

ALINE has made a diligent effort to accurately illustrate and describe it products in all its literature and quotations. However, such illustrations and descriptions are not a warranty.

The above express warranty is in lieu of and excludes all other warranties, express or implied including without limitation, merchantability or fitness for a particular purpose.

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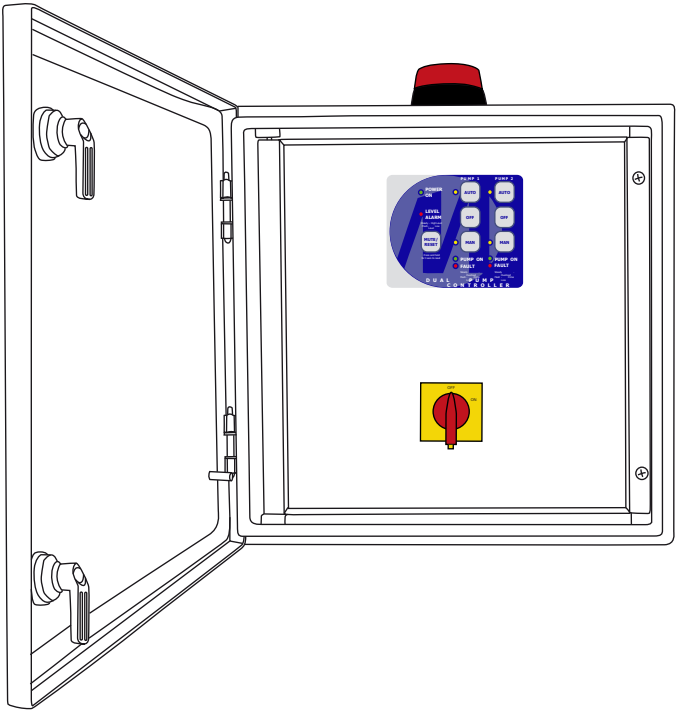
PUMP**CONTROL**

OWNER'S OPERATION MANUAL

Dual Pump Controller Installation and Operating Instructions

MODEL: FPC-30240



WELCOME TO DUAL PUMP CONTROL

Your Dual Pump Controller reflects the superior quality and attention to detail in design, engineering and manufacturing that has distinguished MATelec Products for decades. The controller incorporates the very latest in microprocessor technology, ensuring you, the owner/operator, of many years of functional, reliable and 'user friendly' operation.

Please read this manual prior to installation and operation of the controller.

CONTENTS

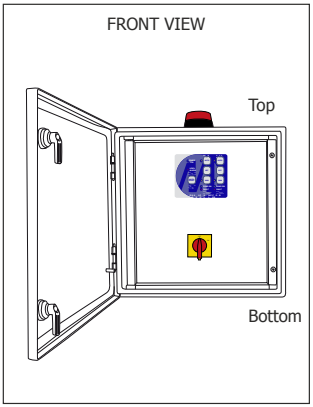
WARNING: All electrical connections must be carried out by a suitably qualified and registered electrician.

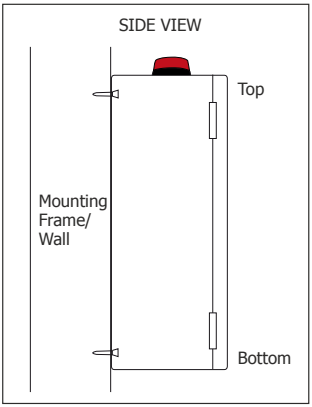
SAFETY

- Prior to Installation, ensure power supply is isolated.
- Power supply must be Circuit Breaker Protected. (Qualified Electrician to determine appropriate amp rating.)
- Electrical connection to the panel must be carried out in accordance with 'Connection Instructions', see page 3.
- Additions or modifications to the control panel are not permitted and will void warranty.
- The controller is not intended for use by children or infirm persons without supervision.
- Repairs to the Controller must only be carried out by a suitably qualified Electrician.

INSTALLATION

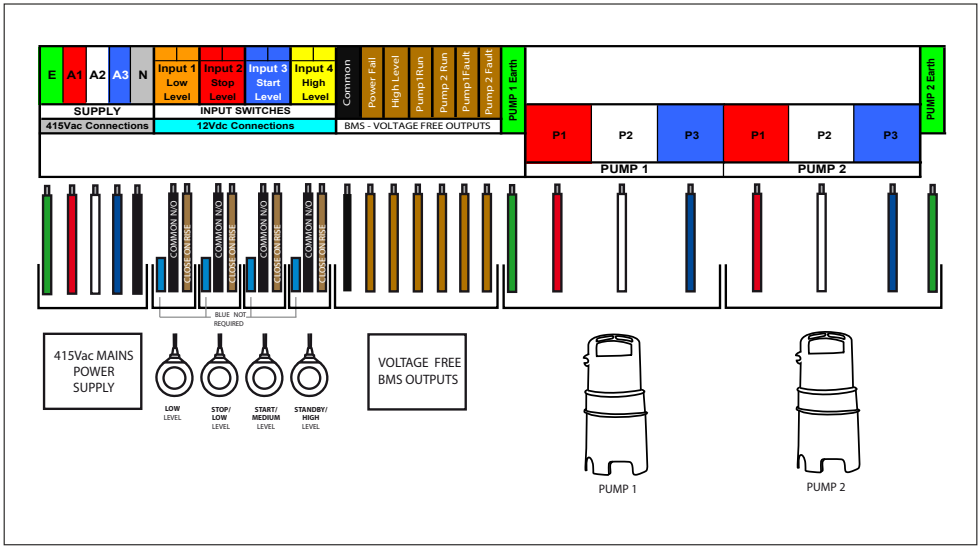
MOUNTING





1. Controller enclosure must be mounted in a vertical position.
2. Ensure mounting method does not compromise enclosure weather proof rating.
3. Ensure access to main isolator is not restricted.
4. Ensure cables/conduits entering the panel have mechanical protection and that the penetrations are sealed and do not compromise the weather proof rating of the enclosure.

CONNECTION



NOTE: Controller must be earthed and all electrical connections must be carried out by a suitably qualified Electrician. For Single Working Level Float Switch Applications, connect to "Start (Input 3)" terminals only, and NO bridge wire is required in "Stop (Input 2)" terminals.

OPERATION

This controller can perform control functions for most Dual Pump pumping applications. It is more than likely that the con trol parameters have already been set up for your particular application, however, hereunder you will find details of the set up and configuration options.

There are 6 DIP switches located on the lower side of the control module, which allows for selecting "mode" and "feature" options, as per the following table:

DIP Switch	Position	Function
1/2	Off/Off	**Mode A:** Standard typical float switch configuration (Start, Stop and High Level). No Low Level
	Off/On	**Mode B:** Standard configuration plus low level (Start, Stop, High Level and Low Level).
	On/Off	**Mode C:** Standard configuration plus Prime Loss enabled, on Low Level (Input 1)
	On/On	**Mode D:** Pressure Pumping configuration (Lead, Lag and Low Pressure)
3	Off	Operating Pump alternates each time a pump start is triggered, or after 30 minutes continuous running.
	On	Operating Pump alternates after 6 hours continuous running.
4	Off	Antiseize Timer disabled
	On	Antiseize Timer 6 seconds every 7 days enabled
5	Off	When placed in Manual Mode, pump remains in Manual Mode
	On	When placed in Manual Mode after 5 minutes the pump will revert to Auto
6	Off	High Level Alarm automatically resets upon open circuit of high level input. High Level alarm has 15 minute delay.
	On	High Level Alarm can only be reset manually. High Level Alarm has 5 minute delay.

Mode A: Standard Configuration

Start/Stop/High Level operation. When the Pump Start input is closed contact (triggered), the Duty Pump will be turned on. The pump will remain on until both the Pump Start and Pump Stop Inputs have turned off (Open Circuited). Upon High Level, both pumps will run until the Pump Stop Input turns off.

In addition to this, there is a maximum idle timer, which will trigger a Pump Start condition, if either pump has not run for 4 hours, and the Stop Float Contacts are closed. The pump will continue to run until the Stop Float Contacts open. Input func tions are as follows:

Input	Function
Input 1	Not used
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

Mode B: Standard Configuration plus Low Level Alarm

As per Mode A, except it has an active Low Level input. The Low Level input must be closed, for Pump Start and Pump Stop inputs to function. The High Level input however, will still override the Low Level and run both pumps. Input functions are as follows:

Input	Function
Input 1	Low Level
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

The basic logic on which a High or Low Level Alarm is determined, is set out in the Table below:

Input 1 Low Level	Input 2 Pump Stop	Input 3 Pump Start	Input 4 High Level	Pump State	Alarm
Closed	Open/Closed	Open	Open	Off	
Closed	Open/Closed	Closed	Open	On	High Level (after Timeout)
Closed	Open/Closed	Closed	Closed	Both On	High Level (after Timeout)
Closed	Open/Closed	Open	Closed	Both On	
Open	Open/Closed	Open	Open	Off	Low Level
Open	Open/Closed	Closed	Open	Off	Low Level
Open	Open/Closed	Open	Closed	Off	High Level (after Timeout)
Open	Open/Closed	Closed	Closed	Both On	

If there is a Low Level Alarm, then both Pumps will be locked out until the alarm is manually reset. This lockout will only be over ridden upon a High Level condition where both the Pump Start and High level inputs are closed.

Note that after a High level is triggered, the pumps will both run until the Pump Start and Stop inputs are opened.

Mode C: Standard Configuration plus Prime Loss

As per Mode A, except Input 1 is connected to a prime loss/flow switch. If at any stage, after Pump Start, or whilst a pump is running, the Prime Loss input opens, for a continuous 1 minute period, a fault is immediately triggered for that pump and duty alternates. Input functions are as follows:

Input	Function
Input 1	Prime Loss
Input 2	Pump Stop
Input 3	Pump Start
Input 4	High Level

Mode D: Pressure Pumping Configuration

Duty Pump: Lead Pump
Standby Pump: Lag Pump
Input functions are as follows:

Input	Function
Input 1	Not Used
Input 2	Lead Pump Pressure Switch (set at say 350kPa)
Input 3	Lag Pump Pressure Switch (set at say 350kPa)
Input 4	Low Pressure Switch (set at say 200kPa)

Typical Operation for Mode D:

- Pressure drops to 400kPa: Lead (for this cycle) Pump cuts in.
- Pressure increases and Pump cuts out.
- Cycle continues with duty (Lead and Lag) alternating between the two pumps.
- If pressure drops to 350kPa, Lead Pumps will cut in and remain running until Lead Pressure Switch opens circuit. Then duty alternates.
- No faults are logged against the Lead Pump if the Lag Pump starts.
- The controller has inbuilt timers for "Delayed" Start and Stop to obviate pump chatter. Upon Input 1 contact closure, the pump will not start (delay start) for 1 second and will not stop (minimum run time) for 10 seconds (or 11 sec onds from close of Input contacts). This "run on" occurs even if Lead Pressure switch opens circuit during this initial period. If however run time exceeds 11 seconds, the pump will stop immediately upon "Open Circuit" occurring.
- If the Lead Pressure Switch input closes circuit as well as he Low Pressure Switch input, both pumps will be turned on and the Low Pressure Timer will begin counting. If this condition exists for a period of 60 seconds, then both pumps are shut down and the system signals a level alarm. This would be typical of a Loss of Prime, or Burst main situation.
- Pressure switches are normally Closed and Opened on High Pressure.

Maximum Run and Alternation Mode

With **DIP Switch 3** set to "Off" the unit will alternate as usual each time a pump start condition occurs. Additionally, the controller will automatically alternate pump duty if a pump has been running continuously for 30 minutes (maximum run timer)

Setting this DIP Switch to "On" will cause the controller to operate in "Circulation Mode" where duty will only alternate once the pump has run for 6 hours of accumulated time.

Anti-Seize Timer

With **DIP Switch 4** set to "On", the Antiseize timer will automatically run the pumps for 6 seconds, every 7 days. This pump operation will completely override all inputs including the low level (if enabled). This feature will only run pumps that are set in Auto. This "Pump Run", will alternate between Pump 1 and Pump 2. A pump that has been locked out due to a fault will not run.

Manual Mode Timeout

With **DIP Switch 5** set to "On" the pump will only remain in Manual Mode for 5 minutes, after which time, it automati cally reverts to Auto.

High Level Alarm Reset

With **DIP Switch 6** set to "Off", the High Level Alarm will automatically reset once the High Level input opens circuit. The controller will also use the alternate High Level Alarm Delay. Typically used for Storm Water applications. High Level Alarm delay in this mode is 15 minutes.

Setting this DIP Switch to "On", will cause the High level Alarm to remain active until the controller is reset. The High Level Alarm will use the standard High Level Alarm activation delay. Typically used for Sewerage applications. High Level Alarm delay in this mode is 5 minutes.

Audible and Visual Alarm Test

By pressing the **Mute/Reset** button on the Keypad continuously for a period of 5 seconds, the Strobe, Siren and indica tor Lights will be powered up for inspection.

Fault Reset

To reset all faults on the controller, press and old the **Mute/Reset** button on the Keypad continuously for a period of 3 seconds until an acknowledgement beep is heard.

Pump Fault

A Pump Fault is indicated for two types of faults. A Thermal Overload will be indicated by way of a steady Fault Indicator Light. Both types of faults can be reset by way of the Fault Reset button.

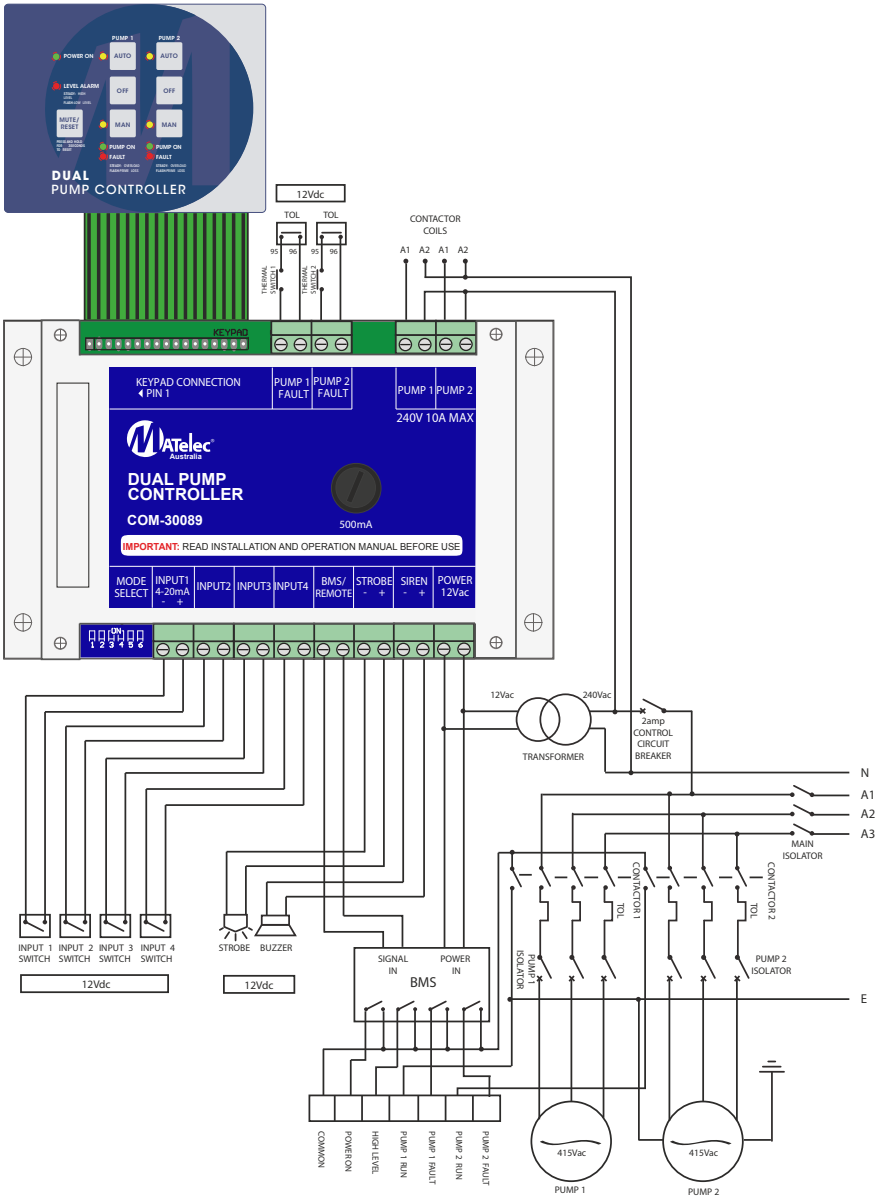
Level Alarms

A High Level Alarm is indicated by way of a steady Level Alarm Indicator Light.
A Low Level/Low pressure Alarm is indicated by way of a Flashing Level Alarm Light.

Auto Silencing Alarm Feature

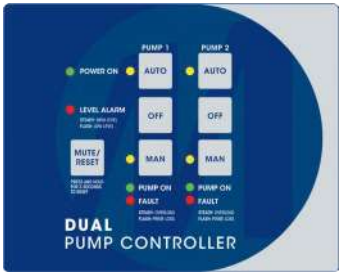
The audible Alarm is programmed to sound for 5 minutes continuously, unless muted and will thereafter automatically silence and enter "Chirp" mode. In "Chirp" mode, the Audible Alarm will sound briefly (2 seconds) every 5 minutes.

CIRCUIT DIAGRAM



AT A GLANCE

A quick reference to the controller's Keypad and Indicator functions and meanings.



KEYPAD

INDICATORS

POWER ON

Power is turned on.

LEVEL ALARM

LEVEL ALARM ON

A high level alarm has been present for the preset time.

FLASHING

A low level alarm is present.

PUMP ON

ON STEADY

Pump switched on to run.

FAULT

ON STEADY

A pump fault/overload has occured.

FLASHING

A prime loss fault has occured.

PUSH BUTTONS

MUTE/ RESET

Silences the siren and if held down for 3 seconds, clears all faults

AUTO

If selected (the LED indicator will confirm if on) the particular pump is set to Automatic Pumping Mode

OFF

Turns all pumps off

MAN

If selected (the LED indicator will confirm if on) the pump is set to Manual Pumping Mode

DISTRIBUTED BY:

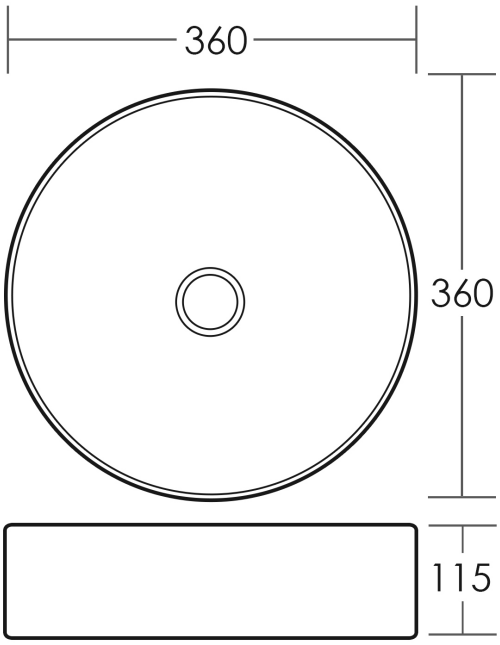
INSTALLATION DATE:
SERIAL NUMBER:

APPENDIX 1

EDEN

Bench Mount Basin Matte White

5 YEAR WARRANTY



SPECIFICATIONS

Size	360x360mm
Depth	115mm
Material	High Quality Vitreous China Construction
Capacity	6 litres
Waste Size	32mm without Overflow
Code	FL135-M
Warranty	5 year replacement product

CASA LUSSO

Fine Lines

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Available at

hb Highgrove Bathrooms

www.highgrovebathrooms.com.au

CASA LUSSO
OLLIE Tall Basin Mixer - Installation Instructions

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW CASA LUSSO TAPWARE, WE HOPE YOU AND YOUR FAMILY ENJOY YOUR NEW PRODUCT AND CONSIDER US FOR ANY FUTURE PROJECT. CASA LUSSO PRODUCTS HAVE BEEN MANUFACTURED UNDER THE HIGHEST STANDARDS OF QUALITY AND WORKMANSHIP.

Chrome
OL110-CH

Matte Black
OL110-MB

Brushed Nickel
OL110-BN

15 YEAR
WARRANTY

AS 3718
WM 30023
CASA LUSSO

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

Product warranties are personal to the person who acquires the product for their own consumption or use and not for resale or resupply. Claims with this product cannot be made by anyone other than the consumer. Where a product is covered by parts and labour warranty, the warranty covers both the repair of the defective part or the provision of a spare part to replace the defective part and the installation of that part.Where a product is covered by parts only, the warranty covers both the repair of the defective part or the provision of a spare part in replacement. It does not include the removal of the defective part or the installations of the repaired or replaced part. We reserve the right to provide minor components (e.g. handles, aerators, hoses, dress rings and washers) as 'Parts Only' to the customer. Casa Lusso reserves the right to alter, or amend this warranty offer in writing at any time.

FEATURES

Product Code: OL110-CH / OL110-BN / OL110-MB

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

Material: Solid Brass Construction

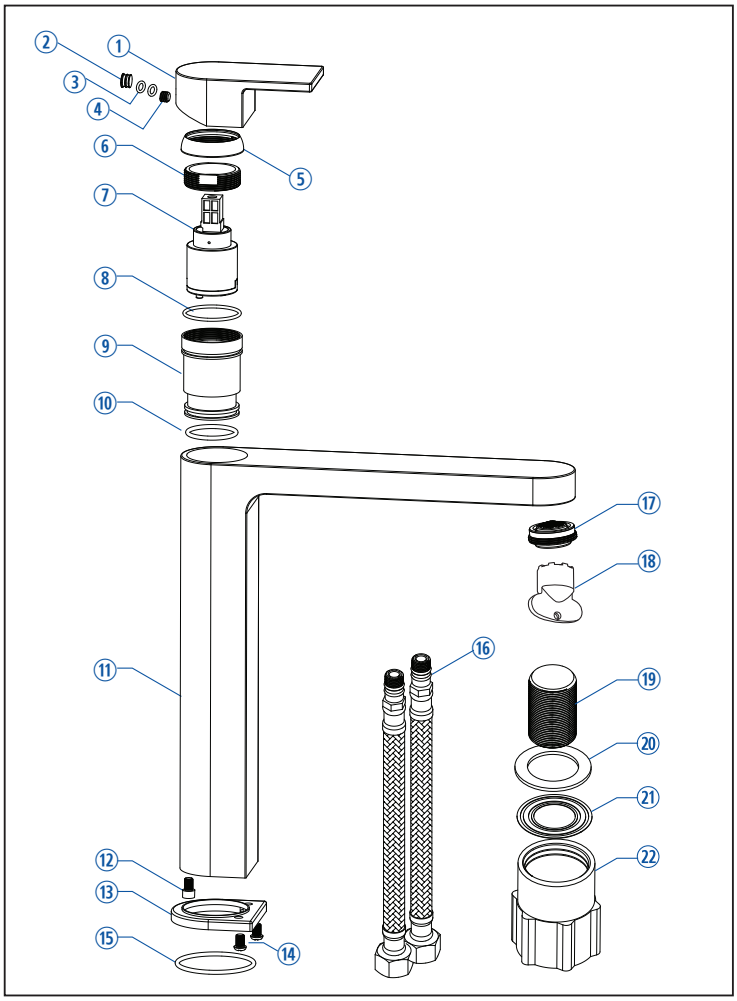
WELS: WELS 6 Star, 4.5 litres per minute

Made to Australian Standards code:
AS 3718
Water supply - Tapware WM 30023

1 Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. 2 Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

casa LUSSO
OLLIE Tall Basin Mixer - Installation Instructions



CONTENTS

1 Handle	13 Base Plate
2 Concealed Push Cap	14 Hex Key Screw
3 O-Ring	15 O-ring
4 Hex Key Screw	16 Inlet Flexi Hose
5 Brass Dome Cover	17 Water Efficiency Aerator
6 Cartridge Securing Nut	18 Aerator key
7 Cartridge	19 Threaded Pipe
8 O-ring	20 Rubber Washer
9 Internal Mixer Body	21 Washer
10 O-ring	22 Quick Fix Nut
11 Mixer Body	
12 Hex Key Screw	

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation:*
  500 kPa maximum operating pressure at any outlet within a building. *(Ref. AS/NZS 3500)*
- *Maximum hot water temperature: 80°C.*

INSTALLATION

1. Install the flexible hoses into the mixer and hand tighten in place. The flexible hoses are to be fitted into the correct inlets for hot water and for cold water (Red band for hot and blue band for cold). Ensure hoses are not twisted, kinked or bent.

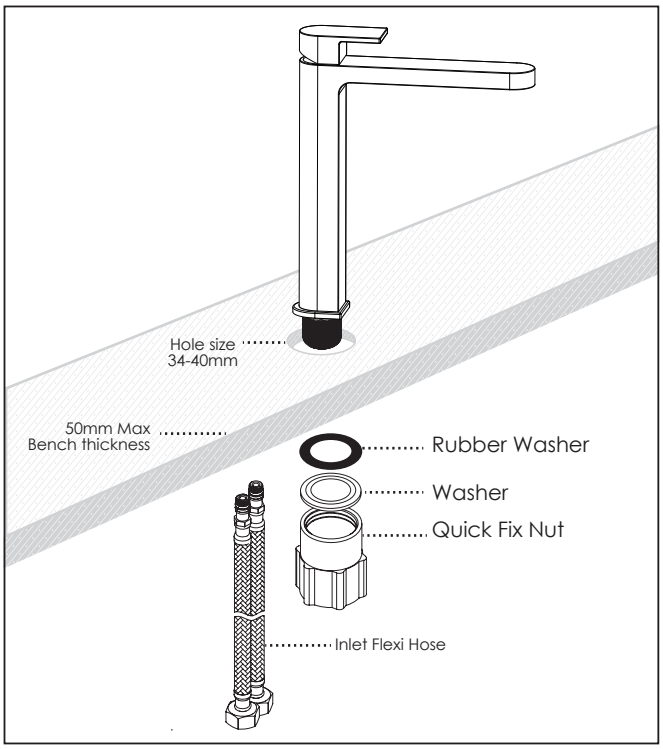
DO NOT USE SPANNER TO TIGHTEN AS IT CAN DAMAGE THE O RING

2. Place the mixer into position and secure using the quick fit cylinder.

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

3. Ensure gauze strainers are placed into the flexible hoses then connect the isolating taps.

ALL INSTALLATIONS MUST COMPLY WITH AS/NZS3500



FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

CASA LUSSO

OLLIE Wall Mixer Combination Kit - Installation Instructions

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Chrome
OL131-CH

15 YEAR WARRANTY

AS 3718
WM 30023
CASA LUSSO

Matte Black
OL131-MB

Brushed Nickel
OL131-BN

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

Product warranties are personal to the person who acquires the product for their own consumption or use and not for resale or resupply. Claims with this product cannot be made by anyone other than the consumer. Where a product is covered by parts and labour warranty, the warranty covers both the repair of the defective part or the provision of a spare part to replace the defective part and the installation of that part.Where a product is covered by parts only, the warranty covers both the repair of the defective part or the provision of a spare part in replacement. It does not include the removal of the defective part or the installations of the repaired or replaced part. We reserve the right to provide minor components (e.g. handles, aerators, hoses, dress rings and washers) as 'Parts Only' to the customer. Casa Lusso reserves the right to alter, or amend this warranty offer in writing at any time.

FEATURES

Product Code: OL131-CH / OL131-MB / OL131-BN

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

Material: Solid Brass Construction

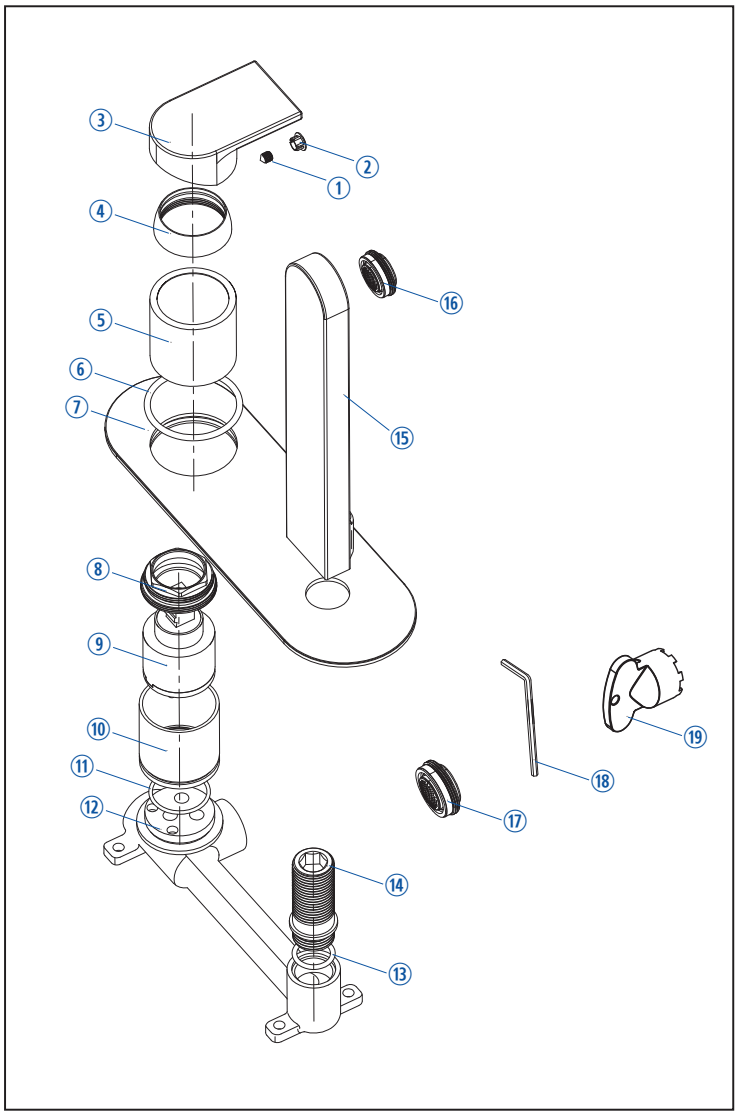
WELS: WELS 6 Star, 4.5 litres per minute
Nil with included Bath Aerator

Made to Australian Standards code:
AS 3718
Water supply - Tapware WM 30023

1 Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. 2 Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

OLLIE Wall Mixer Combination Kit - Installation Instructions



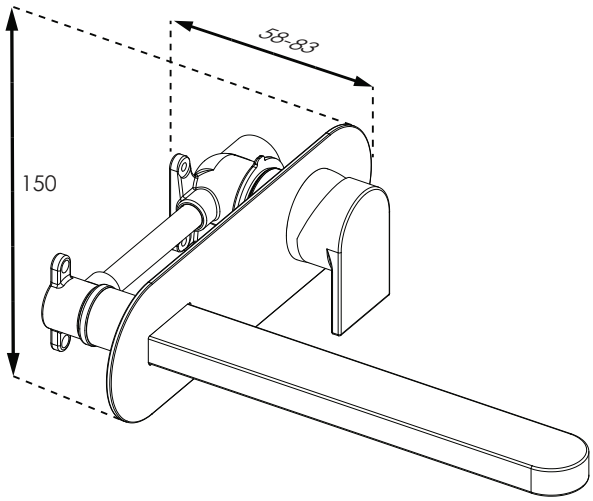
CONTENTS

1 Screw	11 O-ring
2 Button	12 Internal Mixer Body (WB131)
3 Handle	13 O-ring
4 Beautify Cover	14 Joint
5 Copper Ring Jacket	15 Spout
6 O-ring	16 Aerator
7 Faceplate	17 Aerator
8 Pressing Nut	18 Hex Wrench
9 Cartridge	19 Wrench
10 Fission Circle	

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation:*
  500 kPa maximum operating pressure at any outlet within a building. *(Ref. AS/NZS 3500)*
- *Maximum hot water temperature: 80°C.*



INSTALLATION

1. Mount the mixer body into the wall

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

2. Connect the water supply to the Hot/Cold Inlets of the mixer body marked H and C.
3. Install the faceplate onto the mixer body.
4. Install the handle and diverter onto the mixer body and tighten with allen key.

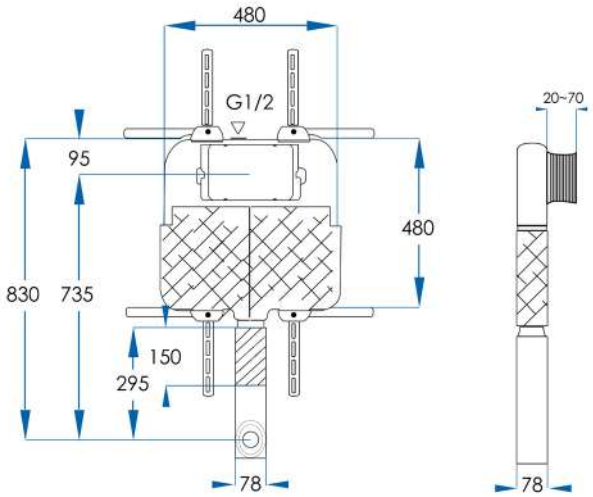
ALL INSTALLATIONS MUST COMPLY WITH AS/NZS3500

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

IN WALL CISTERN

Pneumatic

7 YEAR WARRANTY



PNEUMATIC PLATE To suit K301-Q

K5210-B
Black

K5210-W
White

Size	232x148x95mm
Material	Glass
Warranty	7 year replacement product

K5233-MB
Matte Black

K5233-CH
Chrome

K5233-BB
Brushed Brass

K5233-BN
Brushed Nickel

Size	235x150x100mm
Material	ABS Construction
Warranty	7 year replacement product

WaterMark
AS1172.2
WMK26574
WDI

SPECIFICATIONS

Features	Suitable for stud internal wall partitions
Installation	Supplied to suit pneumatic push plates specified above (sold separately)
Code	K301-Q
Warranty	7 year replacement product

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Available at

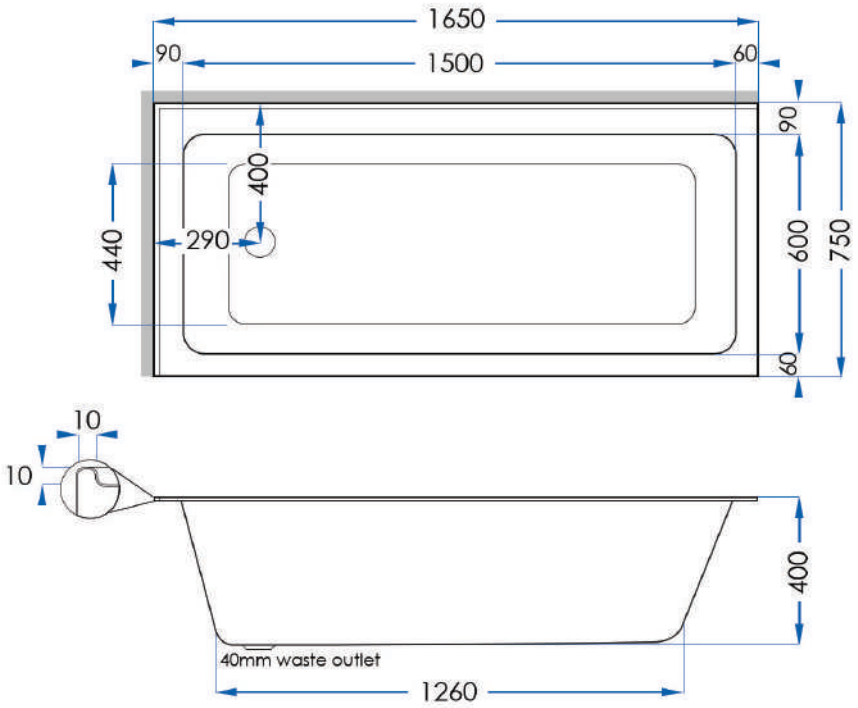
hbj Highgrove Bathrooms

www.highgrovebathrooms.com.au

OMEGA

Drop In Bath LHS Gloss White 1650mm

7 YEAR WARRANTY



SPECIFICATIONS

Size	1650x750mm
Height	400mm
Weight	25kg
Capacity	210L
Material	Sanitary Grade Pure Acrylic
Waste Size	40mm
Code	OM1650L-W
Warranty	7 year replacement product

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Available at

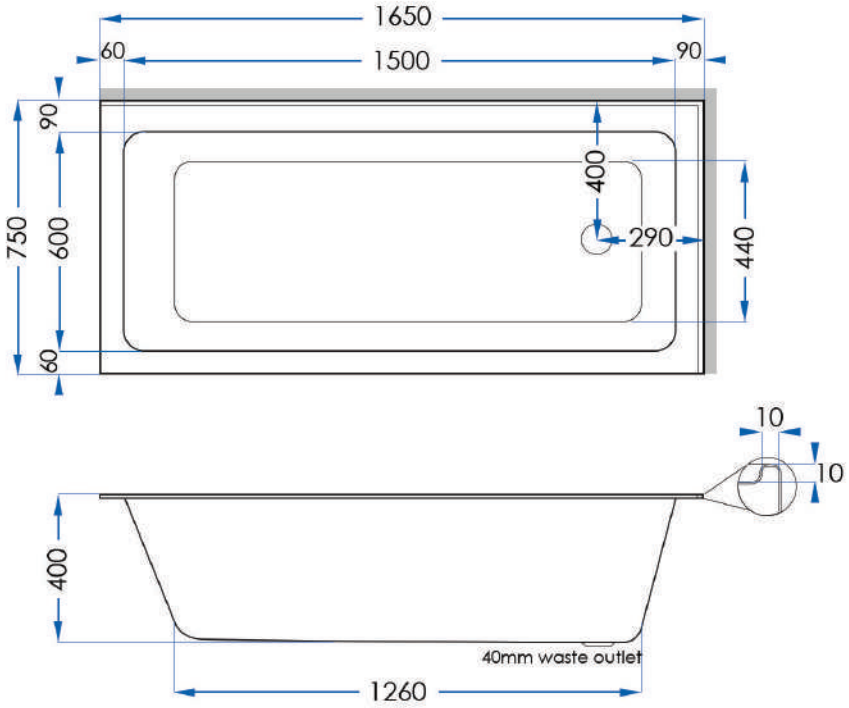
hb **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

OMEGA

Drop In Bath RHS Gloss White 1650mm

7 YEAR WARRANTY



SPECIFICATIONS

Size	1650x750mm
Height	400mm
Weight	25kg
Capacity	210L
Material	Sanitary Grade Pure Acrylic
Waste Size	40mm
Code	OM1650R-W
Warranty	7 year replacement product

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Available at

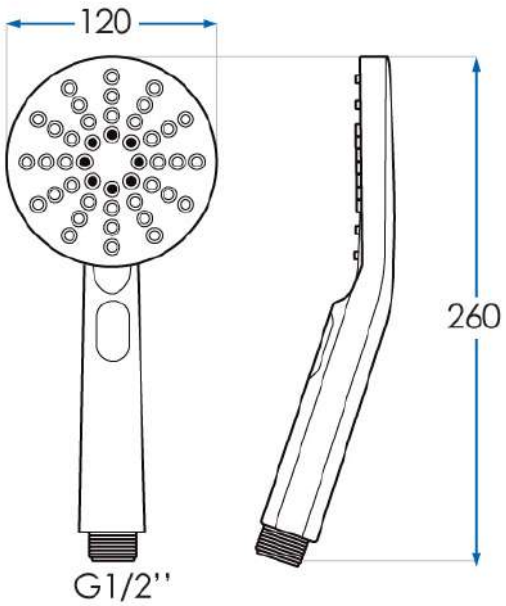
hb **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

EDEN

Hand Shower Brushed Nickel

2 YEAR WARRANTY



WaterMark
AS/NZS 3662
LN023083
Casa Lusso

SPECIFICATIONS

Water Consumption	WELS 4 Star, 7.5 litres per minute
Features	4 Function Hand Shower with Unique Push Button
Material	ABS construction with a Brushed Nickel finish and easy clean silicon nozzles.
Code	EDEN-BN
Warranty	2 year replacement product or parts

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CASA LUSSO
OLLIE In Wall Mixer Kit - Installation Instructions

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15 YEAR WARRANTY

AS 3718
WM 30023
CASA LUSSO

Chrome
OL141-CH

Matte Black
OL141-MB

Brushed Nickel
OL141-BN

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

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FEATURES

Product Code: OL141-CH / OL141-MB / OL141-BN

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

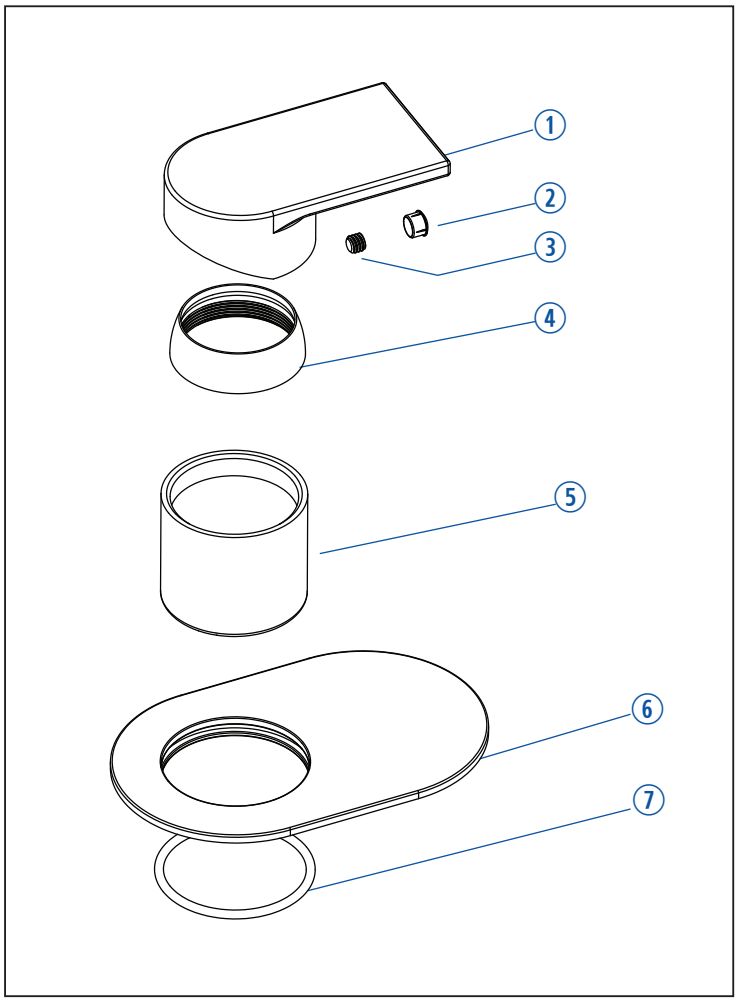
Material: Solid Brass Construction

Made to Australian Standards code:
AS 3718
Water supply - Tapware WM 30023

1 Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. 2 Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

OLLIE In Wall Mixer Kit - Installation Instructions



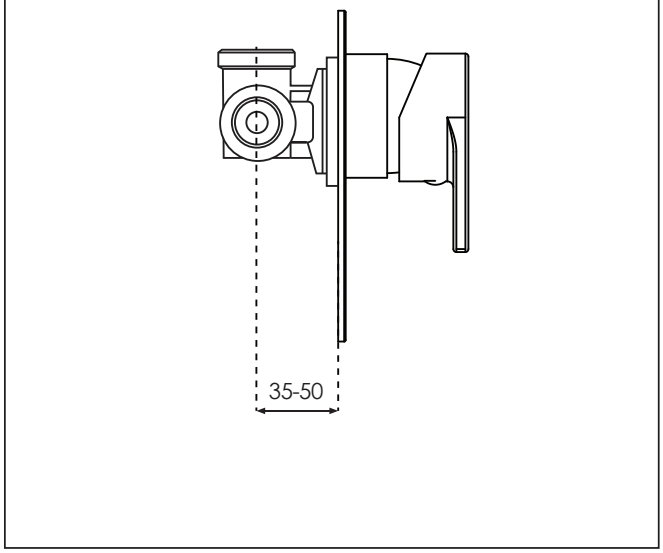
CONTENTS

1. Handle
2. Concealed Push Cap
3. Hex Key Screw
4. Brass Dome Cover
5. External Mixer body
6. Faceplate
7. O-ring

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation:*
  500 kPa maximum operating pressure at any outlet within a building. *(Ref. AS/NZS 3500)*
- *Maximum hot water temperature: 80°C.*



INSTALLATION

1. Mount the mixer body into the wall.

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

2. Connect the water supply to the Hot/Cold Inlets of the mixer body marked H and C.
3. Install the faceplate onto the mixer body.
4. Install the handle onto the mixer body and tighten with allen key

ALL INSTALLATIONS MUST COMPLY WITH AS/NZS3500

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

OLLIE

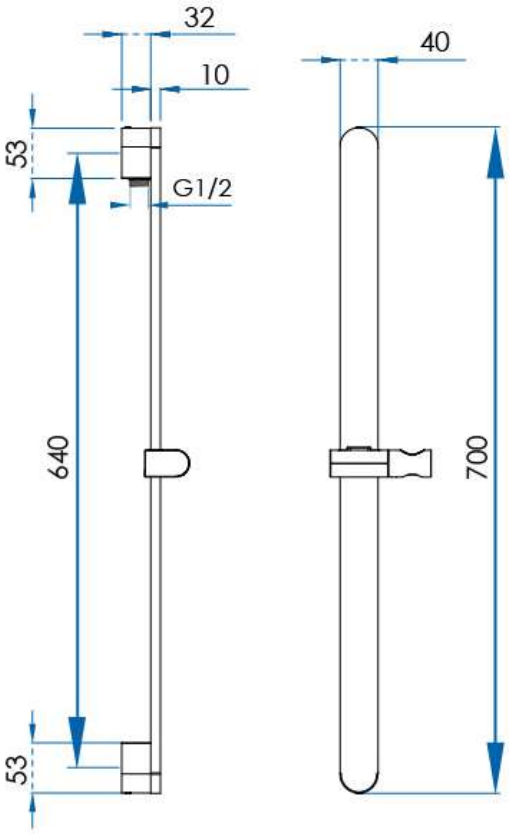
Shower Rail 700mm

5 YEAR WARRANTY

Chrome

Matte Black

Brushed Nickel



SPECIFICATIONS

Features	Adjustable Hand Shower holster
Material	Solid Brass Construction
Includes	Shower Rail and Hose
Warranty	
Shower Rail	5 year replacement product or parts
Hose	1 year replacement product or parts

AVAILABLE IN 3 FINISHES	
CODE	**FINISH**
R169-CH	Chrome
R169-MB	Matte Black
R169-BN	Brushed Nickel

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Available at

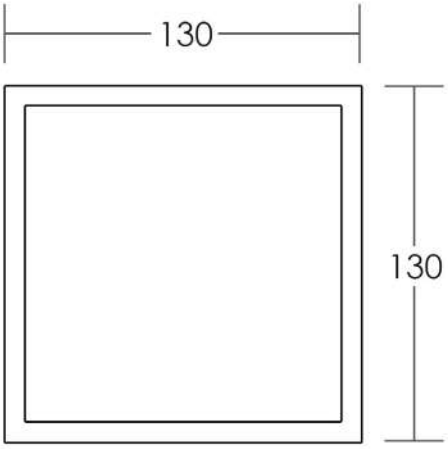
hbj Highgrove Bathrooms

www.highgrovebathrooms.com.au

LIDO

Square Tile Grate

5 YEAR WARRANTY



WaterMark
WMTS 040:2021
LN23041
Casa Lusso

SPECIFICATIONS

Material 316 Stainless Steel Construction
Finish Polished
Tile Depth 14mm
Warranty 5 years replacement product or parts
Size Chart

	Length	Width	Waste Outlet
TWS80	130	130	80
TWS100	130	130	100

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Available at

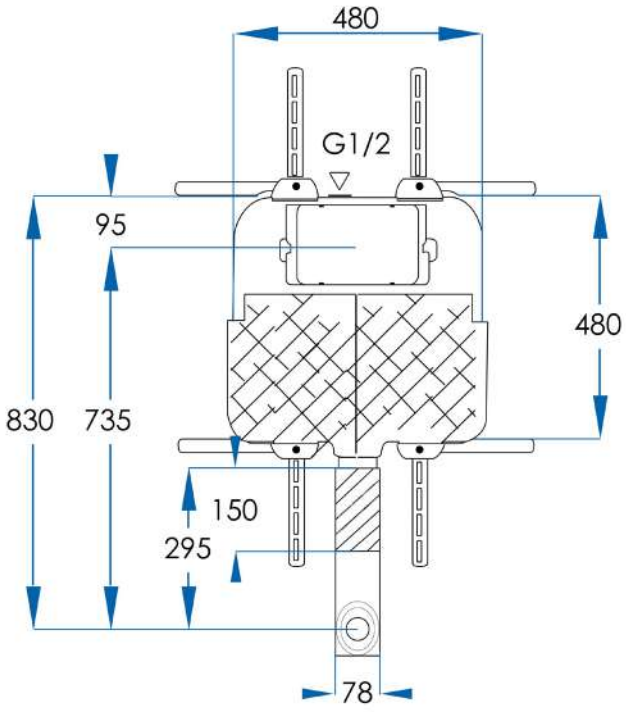
hbj Highgrove Bathrooms

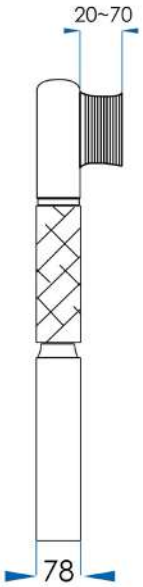
www.highgrovebathrooms.com.au

IN WALL CISTERN

Pneumatic

7 YEAR WARRANTY



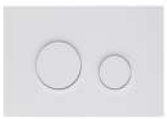


SPECIFICATIONS

Features	Suitable for stud internal wall partitions.
Installation	Supplied to suit pneumatic push plates specified below (sold separately).
Code	K301-Q
Warranty	7 year replacement product

WaterMark
AS1172.2
WMK26574
WDI

PNEUMATIC PLATES To suit K301-Q



HK174-M
Matte White

HK174-MB
Matte Black

HK174-CH
Chrome

HK174-BB
Brushed Brass

HK174-BN
Brushed Nickel

HK174

Size 243x159x94mm
Material ABS Construction
Warranty 7 year replacement product

K5110-M
Matte White

K5110-MB
Matte Black

K5110-CH
Chrome

K5110-BB
Brushed Brass

K5110-BN
Brushed Nickel

K5110

Size 236x152x94mm
Material ABS Construction
Warranty 7 year replacement product

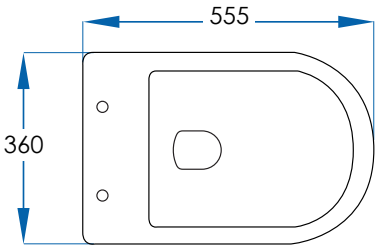
CASA LUSSO

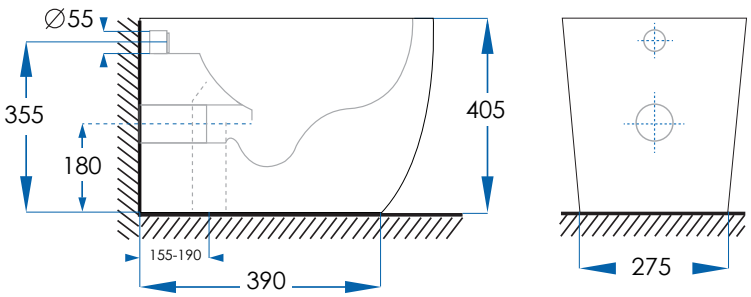
Available at hb Highgrove Bathrooms.com.au

VISTA

Rimless Floor Pan Toilet Suite

7 YEAR WARRANTY





WaterMark
AS1172
LN 23142
Casa Lusso

The more stars the more water efficient
WATER RATING
www.waterrating.gov.au
3.4 litres average flush
4.5L per full flush | 3L per half flush
In accordance with AS/NZS 6400
Licence No. 0422
Casa Lusso Pty Ltd.

SPECIFICATIONS

Water Consumption	WELS 4 Star, 4.5L/full, 3L/half, 3.4L/avg flush
Features	Highest Quality Viterous China Construction
	Rimless Flushing Technology
	Heavy Duty Duraplast Quick Release Soft Close Seat
	Suitable for In-Wall Cistern K301 or K301-Q
Installation	Standard P Trap
	Supplied with S-Trap Adaptor to suit 155-190mm Set Out
Code	TVI3-W
Warranty	7 year replacement product or parts*:1 year labour
	*Excludes valves, seats, button assembly, links, flush pipes & other internal components which carry a 1 year replacement warranty

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Available at

hbj Highgrove Bathrooms

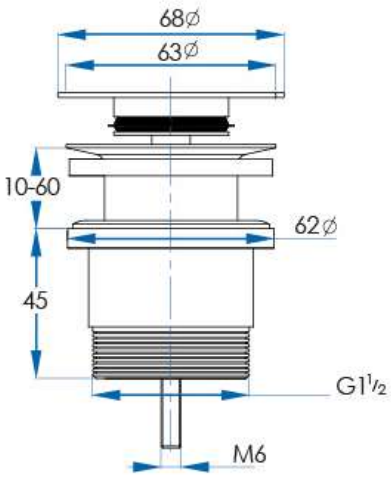
www.highgrovebathrooms.com.au

TURN DOWN WASTES

Basin Waste

5 YEAR WARRANTY

Polished Chrome finish	Matte Black finish	Brushed Nickel finish
		
TDW3240-CH	**TDW3240-MB**	**TDW3240-BN**
Gloss White finish	**Matte White finish**	**Brushed Brass finish**
		
TDW3240-W	**TDW3240-M**	**TDW3240-BB**
Gunmetal		
		
TDW3240-GM		



WaterMark
WMTS 040:2021
LN23041
Casa Lusso

SPECIFICATIONS

Material	Solid Brass Construction
Notes	Compatiable with Basins, and Integrated Basins with or without an overflow.
Warranty	5 years replacement product or parts

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Available at

hb Highgrove Bathrooms

www.highgrovebathrooms.com.au

GREENPLATE®
Sustainable Product Solutions

Greenplate BBQ Accessories

Greenplate offer a range of accessories to compliment our Inbench Electric Barbecues and our Stainless Steel Benches. These additional items add praticality to the barbecues and offer solutions for any situation.

Key Features:

- Greenplate Lift Off Lid
- Quality 304 Stainless Steel Construction
- Suitable for supervised or gated venues such as schools or caravan parks

- Greenplate Hinged Lid
- Quality 304 Stainless Steel Construction
- Quality Stainless Steel piano hinge MIG welded becoming an intergrated part of the Inbench BBQ unit

A: Unit 2/15 Natasha Street Capalaba QLD 4157
P: 07 3245 3008
F: 07 3245 3009
E: info@greenplate.com.au
W: www.greenplate.com.au

Redland Business and Retail Awards
Winner 2019
Yura from Quandamooka!

COMPASS ASSURANCE ISO 9001 QUALITY

JAS-ANZ

AUSTRALIAN OWNED

GREENPLATE®
Sustainable Product Solutions

Greenplate Hinged BBQ Cover

Key Features:

- Elegant yet robust stainless steel design.

- Available pre and post purchase of the BBQ. Fixed via the perimeter studs located around the edge of the cooking plate.

- Duel pair of stainless-steel friction hinges provides soft closing with ability to safely fix open in various positions.

- Internal aluminium shield reduces heat transfer from the BBQ plate to the cover.

- Includes stainless steel security fixings and handle. Ensuring structural longevity in all environments.

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COMPASS ASSURANCE ISO 9001 QUALITY

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AUSTRALIAN OWNED

GREENPLATE®
Sustainable Product Solutions

Greenplate Above Bench Housing

Key Features:

- An all-in-one upmarket stainless steel design.

- Available pre and post purchase of the BBQ. Fixed via the perimeter studs located around the edge of the cooking plate.

- Perfect for retrofitting or clients preferring the button above the benchtop.

- Switch Labelling manufactured utilising Tuff Signage and 3M VHB adhesive. Ideal for resistance to vandalism and harsh weather conditions.

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Sustainable Product Solutions

AUSTRALIAN MADE®

Greenplate Inbench Electric BBQ

Key Features:

- Red & Green LED Push Button Lighting
- Duplex Stainless-Steel
- Adjustable Cooking Temp 50°C to 400°C
- Audible On/ Off Tones
- 6 Second Hold-to-Start Child Safety Feature
- Digital Temp Display & Cycle Counter

Dimensions:

Cooking Surface: *410mm x 410mm*

Overall Plate: *540mm x 540mm*

Cut Out Size: *490mm x 490mm*

Weight: *42kg**

Electrical Information:

Power Supply: 200/230VAC | 50/60Hz Self-Selecting

Element: 1800Watts 7.8Amps

ESO Approval #: SAA172029

Patent #: 761137

Conformant to AS/NZS 60335.1-2011 + A1 Standards for General Electrical Appliance Safety.

1.5m Electrical Lead

All Electrical work must be carried out by appropriate Electrical Licensed Personnel.

Warranty:

Electrical Components: *2 Years*

Heating Element: *5 Years*

All Stainless-Steel Components: *Lifetime**

Conditions Apply.

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W: www.greenplate.com.au

COMPASS ASSURANCE ISO 9001 QUALITY
JAS-ANZ
AUSTRALIAN OWNED
LIFE TIME STRUCTURAL WARRANTY

GREENPLATE®
Sustainable Product Solutions

Greenplate Inbench BBQ Features & Benefits

Greenplate's ® innovative & patented technology is designed & manufactured in Brisbane, Australia. Incorporating premium quality components, Australian Made certification & comprehensive, personalised aftermarket service, it is clear why Greenplate's ® Inbench PID Electric Barbecues are so popular in the Australian and International barbecue market.

WHY CHOOSE A GREENPLATE ® FOR ALL YOUR BARBECUE NEEDS:

1. Electrical

- Low Voltage (24V), 1.8kW patented heating element with an industry-leading 5-year warranty. Other suppliers still use conventional 3.6 kW oven type elements
- 24 Volts is supplied to the cooking plate and 5 Volts to the control button ensuring absolute safety for end-users and cleaners
- 10 Amp Wiring – reduced electrical installation costs and maintenance
- **Significant and verifiable** reduction in energy consumption – particularly beneficial in today's world where reduction in carbon footprint is becoming increasingly more important. The patented heating technology allows for significant power cost reduction – **potentially halve your power bill** for BBQs!
- **PID** digital control with no relays or moving electronic parts on our circuit boards ensuring the best possible performance and reliability
- Cooking plate temperature factory pre-set at 320ºC – other products on the market will get to a maximum of 225ºC.
- Adjustable temperature control for authorised personnel / access door key holders – no more complaints about hotplates not getting hot enough – **temperature range between 50ºC and 320ºC**
- Optional **SMART BBQ MANAGEMENT SYSTEM** that allows remote data monitoring and control

2. Structural

- **All Stainless Steel** Construction – No Aluminium Frames or Composite Panels.
- Delivered fully assembled – lower install time and cost
- No Powder Coating making it easier to keep tagging and graffiti issues under control – no ghosting. Allows the use of chemical-based graffiti removal agents if needed without risk to exterior finish and appearance
- 321 Stainless Steel used for our cooking plates – covered by a Lifetime Structural Warranty
- Large fat bucket which can be mounted on a convenient slider for easy access and cleaning (*optional accessory*). Stainless steel baffled fat tray with slider available also available (*optional accessory*)

3. Service

AUSTRALIAN MADE®

- **2-year Warranty** on electrical components
- **5-year Warranty** on heating element
- **Lifetime Warranty** on structural elements including cooking plate
- We fully support all older Greenplate units and provide parts for repair, regardless of age
- A fully dedicated Technical Service Team hotline to provide personalised aftermarket support & in the event replacement parts are needed, they can be dispatched within 24 hours of receipt of your purchase order.

Reliable → Efficient → Sustainable → IOT Compatible → Cost Effective

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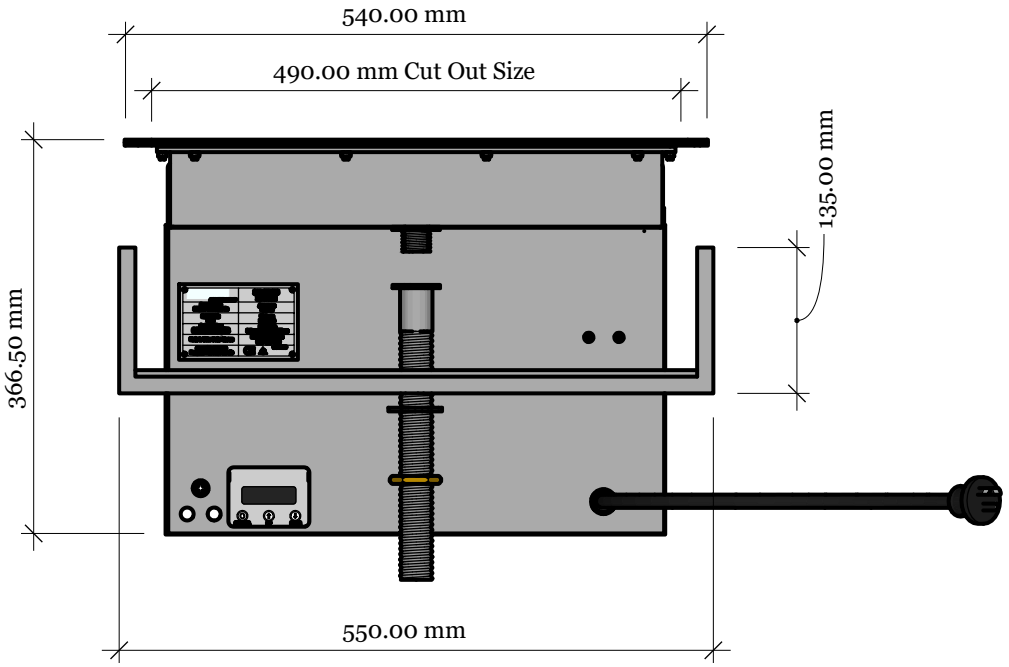
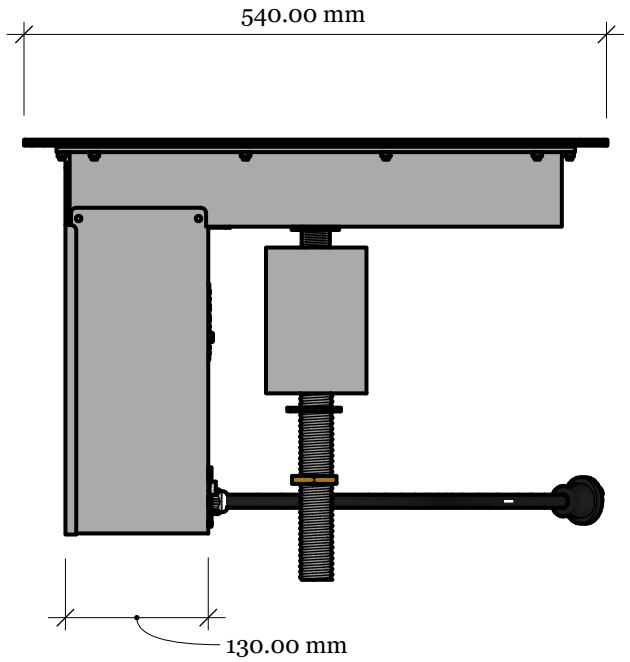
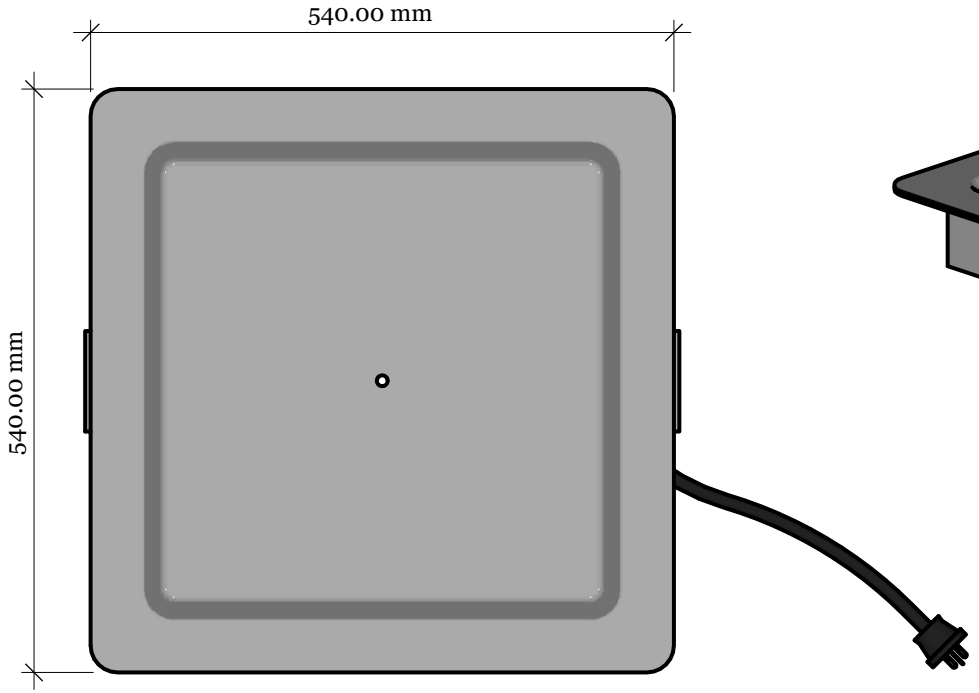
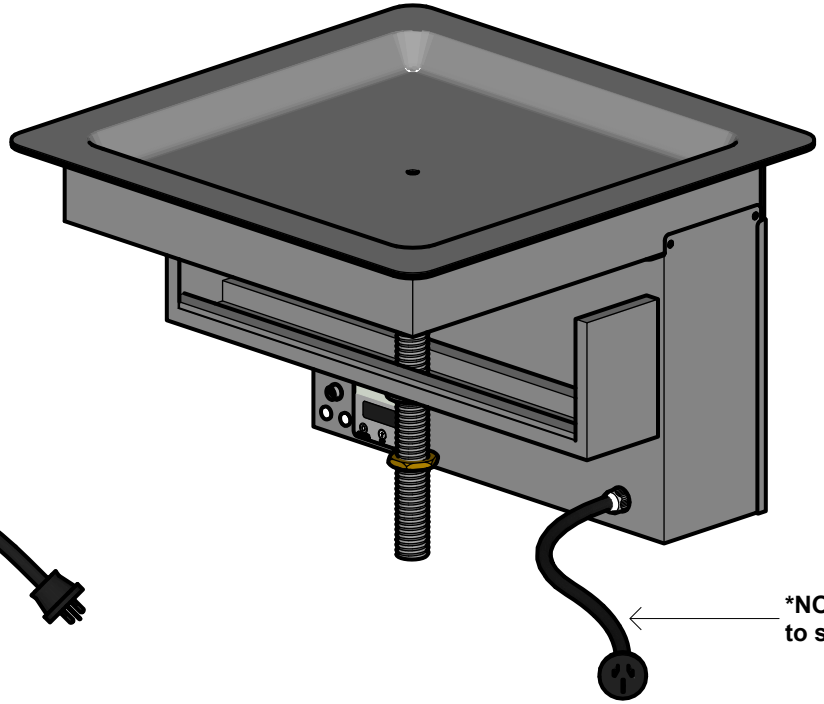
LIFE TIME STRUCTURAL WARRANTY









NOTE: Electrical Lead not drawn to scale Lead is 1500.00 mm Long

GREENPLATE® Sustainable Product Solutions

COMPANY NAME
Greenplate PTY LTD
Unit 2/15 Natasha Street,
Capalaba 4157, Queensland,
Australia

PROJECT
Greenplate Inbench BBQ Unit

DRAWN BY
EK

ISSUE
8/09/2021

DRAWING NO.
037 - SD - S

SCALE
1:7 (1mm:7mm @A4)

A4.1

GREENPLATE®
Sustainable Product Solutions

Greenplate Inbench PID BBQ Important Installation Requirements

1. **Correct wiring of the Greenplate ® Barbecue is essential. Incorrect installation will void the Warranty. Each Greenplate ® barbecue plate must have its own 10 amp circuit with a 20 amp RCBO C-Curve type A. Having a rated residual operating current not exceeding 30mA in the sub-board, as per AS3000.2018 standard requires a minimum of 2.5 mm² cabling for each unit for longer runs larger cabling will be required. If unsure contact Greenplate Pty Ltd service on 0411 845 534. An Australian approved 3 pins, 10 amp electrical lead is supplied with the BBQ. All electrical work must be carried out by appropriated electrical licenced personnel in accordance with the National wiring rules.**

2. **Unit must be installed in a weather proof enclosure to IPX4 or equivalent, minimum 50 mm clearance around electrical housing is required. Please protect barbecue plate and benches from industrial fallout during any construction as rust from filings or chemicals will not be covered under warranty**

3. **Benches not supplied by Greenplate Pty Ltd must be adequately cross ventilated. Ventilate bench to allow free air flow through cabinet. Failure to ventilate the bench can result in premature failure of equipment, this is not covered under warranty. Cross Ventilation area of 0.035m² required. All Greenplate ® benches are pre-fitted with adequate ventilation.**

4. Cut square hole into bench top where desired (490 mm x 490 mm). Carefully lower Greenplate ® 300 BBQ unit into opening. Install hold down U bracket, threaded drain pipe and washers as per (Figure 3.). Position ON/Off push button switch to your desired location (19 mm hole). Mount switch plate, instruction and safety labels to outside of bench. (Note: safety labels are a legal requirement in public spaces).

   If bench/cabinet is deeper than the thread of the switch, routing out the back of the bench where switch is to be fitted to 40 mm is required. This will allow the nut to thread onto the back of the switch and for the connection of the switch to the cable.

5. Ensure appropriate grease collection bin and bag (supplied) is placed under the drain tube.

6. Plug BBQ lead into power point having an earth contact (10 amp, 230 VAC) and turn ON (at wall only). Set temperature module to your required temperature, 320°C is recommended, for general use.

7. Switch on mains power, after 5 seconds the BBQ will beep once for thermocouple or twice for thermostat selected. Push the switch to start the BBQ. A buzzer will sound once and the push button switch will light red when BBQ is heating and green when desired cooking temperature is reached. The timer is preset to switch off the barbecue after 28 minutes. To stop barbecue during cycle press and hold the switch for 5 seconds the BBQ will beep 3 times identifying the shutdown end of cooking cycle.

8. A security setting is available by switching the micro switch #1 and # 2 on the PCB control board to on position.
   This selects the press and hold, for the six seconds delay function, and should be accessed by qualified personnel only.

9. **Clean the plate prior to use with warm soapy water to remove any dirt and for safe hygienic cooking. Ensure the plate is cleaned regularly to maintain its appearance and longevity. Greenplate also can supply BBQ cleaning kits upon request.**

10. **This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.**

11. **WARNING:** Charcoal or similar combustible fuels must not be used with this appliance

Greenplate Service Line 0411 845 534

Updated 07-02-2022

A: Unit 2/15 Natasha Street Capalaba QLD 4157
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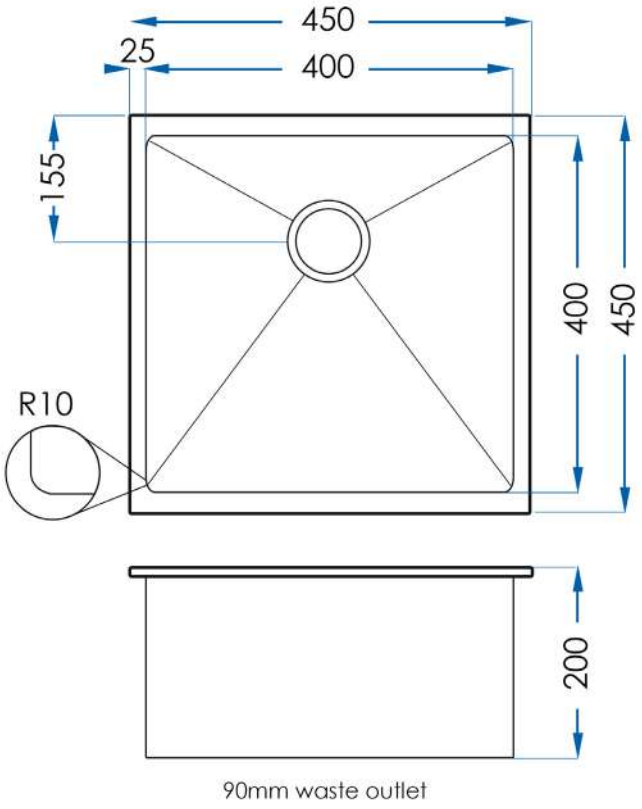
BURAZZO

Single Bowl Kitchen Sink 450mm

7 YEAR WARRANTY



SPECIFICATIONS

Size	450x450mm
Bowl Size	400x400mm
Depth	200mm
Material	1.2mm Stainless Steel (304)
Finish	Brushed
Waste Size	90mm (Waste not included)
Installation	Undermount or Inset
Code	BU454520S
Warranty	7 year replacement product 1 year labour

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Available at

hbj **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

SPIN Gooseneck Sink Mixer - Installation Instructions

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW CASA LUSSO TAPWARE, WE HOPE YOU AND YOUR FAMILY ENJOY YOUR NEW PRODUCT AND CONSIDER US FOR ANY FUTURE PROJECT. CASA LUSSO PRODUCTS HAVE BEEN MANUFACTURED UNDER THE HIGHEST STANDARDS OF QUALITY AND WORKMANSHIP.

Chrome
SP120-CH

Matte Black
SP120-MB

Brushed Brass
SP120-BB

Brushed Nickel
SP120-BN

Gunmetal
SP120-GM

15 YEAR WARRANTY

WaterMark
AS/NZS 3718
LN030023
Casa Lusso

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

Product warranties are personal to the person who acquires the product for their own consumption or use and not for resale or resupply. Claims with this product cannot be made by anyone other than the consumer. Where a product is covered by parts and labour warranty, the warranty covers both the repair of the defective part or the provision of a spare part to replace the defective part and the installation of that part.Where a product is covered by parts only, the warranty covers both the repair of the defective part or the provision of a spare part in replacement. It does not include the removal of the defective part or the installations of the repaired or replaced part. We reserve the right to provide minor components (e.g. handles, aerators, hoses, dress rings and washers) as 'Parts Only' to the customer. Casa Lusso reserves the right to alter, or amend this warranty offer in writing at any time.

FEATURES

Product Code: SP120-CH / SP120-MB / SP120-BB SP120-BN / SP120-GM

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

Material: Solid Brass Construction

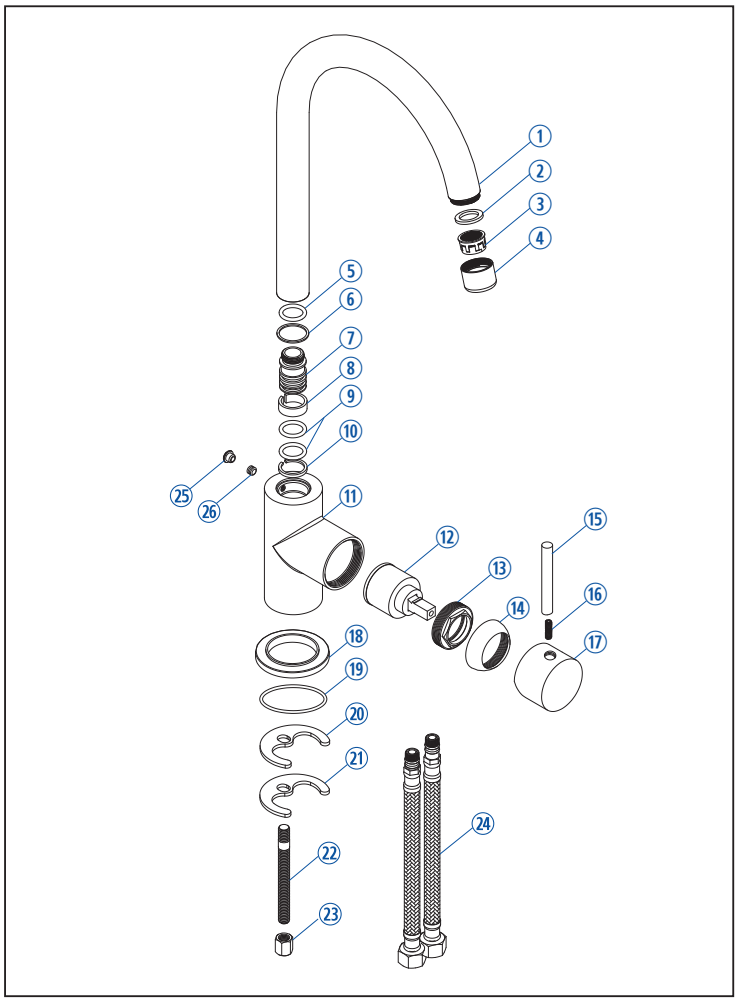
WELS: WELS 5 Star, 6 litres per minute

Made to Australian Standards code:
AS/NZS 3718
Water supply - Tapware LN030023

[1] Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. [2] Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

SPIN Gooseneck Sink Mixer - Installation Instructions



CONTENTS

1	Spout	14	Brass Dome Cover
2	Washer	15	Handle Lever
3	Water Efficiency Aerator	16	Screw
4	Aerator Shell	17	Handle
5	O-ring	18	Base
6	White Gasket	19	O-ring
7	Joint	20	Rubber Washer
8	Block Circle	21	Washer
9	O-ring	22	Screw Pole
10	Block Circle	23	Screw nut
11	Mixer Body	24	Inlet Flexi Hose
12	Cartridge	25	Concealed Push Cap
13	Pressing Nut	26	Hex Key Screw

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation: 500 kPa maximum operating pressure at any outlet within a building.* (Ref. AS/NZS 3500)
- *Maximum hot water temperature: 80°C.*

INSTALLATION

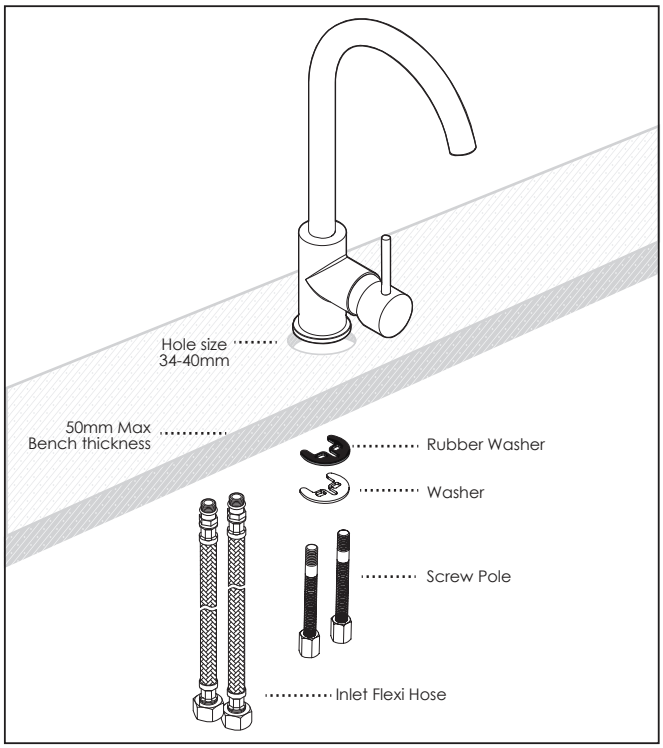
1. Install the flexible hoses into the mixer and hand tighten in place. The flexible hoses are to be fitted into the correct inlets for hot water and for cold water (Red band for hot and blue band for cold).

DO NOT USE SPANNER TO TIGHTEN AS IT CAN DAMAGE THE O RING

2. Place the mixer into position and secure using the horse shoe and fixing nut.

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

3. Ensure gauze strainers are placed into the flexible hoses then connect the isolating taps.

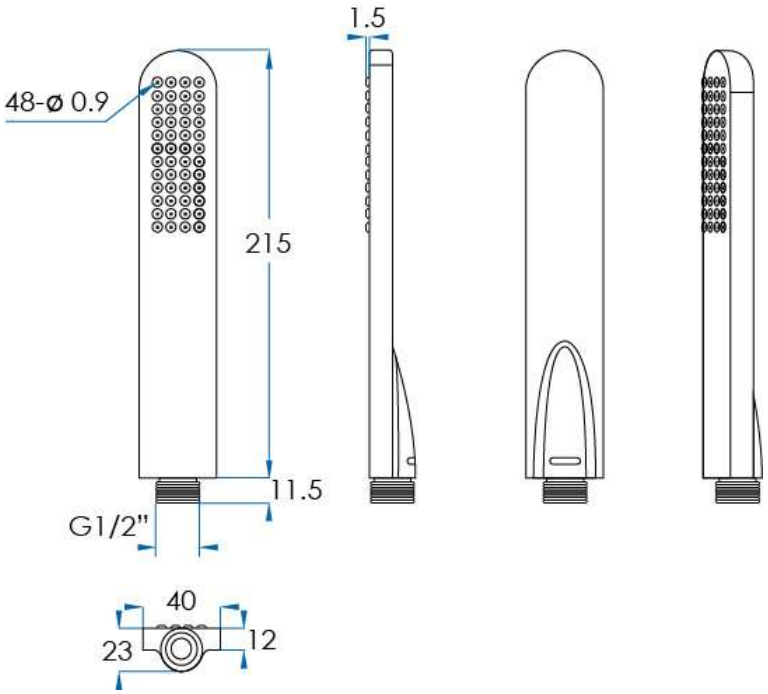


FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

OLLIE

Single Function Hand Shower Chrome

2 YEAR WARRANTY



WaterMark
AS/NZS 3662
LN023083
Casa Lusso

SPECIFICATIONS

Water Consumption	WELS 3 Star, 8 litres per minute
Features	Single Function Hand Shower
Material	Solid Brass construction with Chrome plated finish and easy clean silicon nozzles
Code	OLLIE-CH
Warranty	2 year replacement product or parts

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Available at

hb Highgrove Bathrooms

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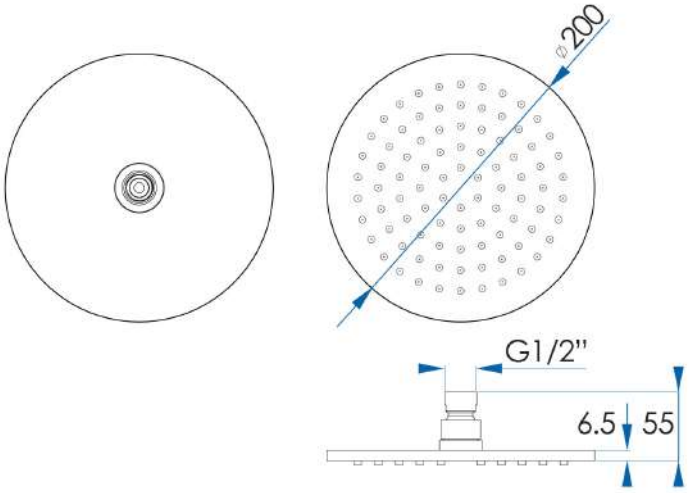
MONSOON

Round Shower Head Chrome 200mm

5 YEAR WARRANTY

WaterMark
AS/NZS 3662
LN023083
Casa Lusso

The more stars the more water efficient
WATER RATING
www.waterrating.gov.au
9 litres per minute
In accordance with AS/NZS 6400
Licence No. 0422
Casa Lusso Pty Ltd.



SPECIFICATIONS

Water Consumption	WELS 3 Star, 9 litres per minute
Material	304 Stainless Steel with Mirror Finish
Warranty	5 year replacement product or parts
Code	MS200R-CH

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Available at

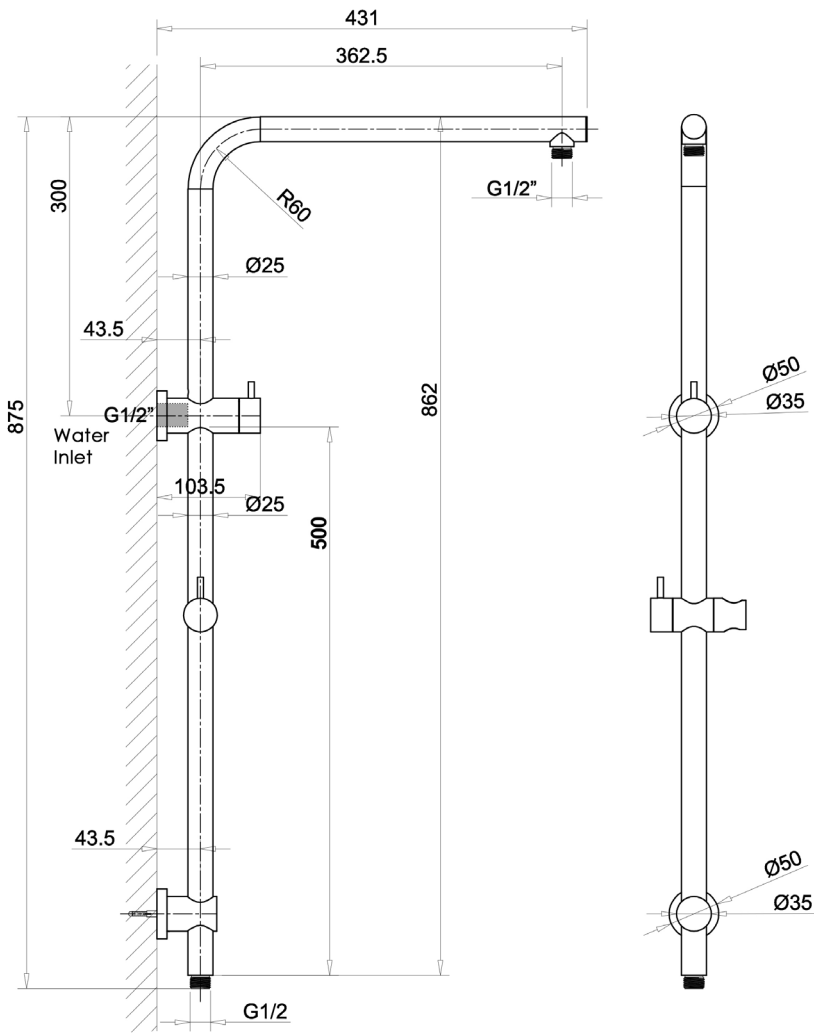
hbj Highgrove Bathrooms

www.highgrovebathrooms.com.au

OMEGA

System Integrated Shower System Brushed Nickel

5 YEAR WARRANTY



SPECIFICATIONS

Features	Contemporary design and functionality. Built in divertor allows you to easily switch from overhead to hand shower. Height adjustable and lockable slide mechanism. Suitable for brand new or retrofit installation. Includes Shower Hose.
Material	Solid brass construction sliding rail and fixing brackets with a Brushed Nickel finish.
Code	OMG02-BN
Warranty	Shower Rail: 5 year replacement product or parts Shower Hose: 1 year replacement product or parts

CASA LUSSO

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Available at

hb Highgrove Bathrooms

www.highgrovebathrooms.com.au

STIEBEL ELTRON

7 YEAR WARRANTY

HDB-E Trend

- Electric instantaneous water heater designed to supply multiple draw-off points
- Maximum temperature of 50 °C, compliant with AS3498 standards
- Accurate temperature delivery due to electronic closed-loop control.
- The quick-action bare wire heating system is suitable for hard and soft water.

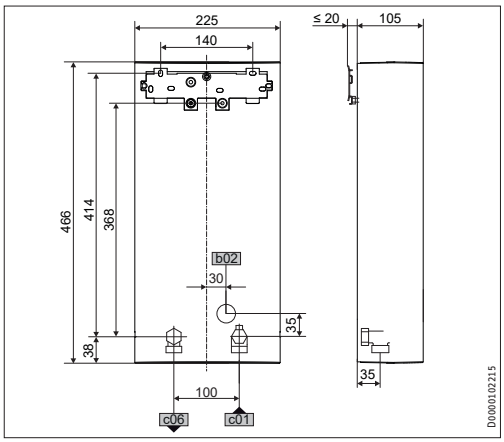
HDB-E Trend AU

INSTANT HOT WATER AT A MAXIMUM OF 50 DEGREES

Instantaneous water heater for supplying several draw-off points. Maximum temperature of 50 °C in compliance of AS3498 and is maintained up to the output limit via the electronic controller. The bare wire heating system is suitable for hard and soft water areas.

		Trend		
Model		**HDB-E 13 Trend AU**	**HDB-E 18 Trend AU**	**HDB-E 27 Trend AU**
		204211	**204212**	**204213**
Rated output (415 V)	kW	14.5	19.4	28
Rated current (415 V)	A	20	27	38.9
Fuse protection	A	20	32	40
Electrical installation		As per AS/NZS3000		
Installation requirements		AS/NZS3500.4.2 & local requirements		
Switch on flow rate	L/min	>2.5		
Max. temperature	°C	50		
Water connection		G 1/2 A		
Max. permissible pressure	MPa	1.0		
Max. permissible inlet temperature	°C	50		
IP rating		IP 25		
Height	mm	466		
Width	mm	225		
Depth	mm	105		
Weight	kg	2.9		
Approvals		WaterMark Lic No. WMKA00301. AS3498		

Temperature Rise (415 V)	**HDB-E 13 Trend AU**	**HDB-E 18 Trend AU**	**HDB-E 27 Trend AU**
6 L/min	+34 °C	+46 °C	-
8 L/min	+26 °C	+34 °C	+50 °C
10 L/min	+20 °C	+27 °C	+40 °C
12 L/min	+17 °C	+23 °C	+33 °C
14 L/min	+14 °C	+19 °C	+28 °C



Dimensions and Connections
In-wall or bottom entry connection available.

Calculating Output Water Temperature
Add the above temperature rise values to your incoming cold water temperature to calculate output at a desired flow rate.

Seasonal Average Cold Water Temperatures
Melbourne: 15 °C
Sydney/Brisbane/Perth/Adelaide: 18 °C
Canberra/Hobart: 14 °C
Townsville/Darwin: 25 °C

The HDB-E electric instantaneous 3 phase water heater delivers hot water not exceeding 50 °C in accordance with AS3498. Refer to AS/NZS3500.4, local requirements and installation instructions to determine if additional delivery temperature control is required.

PRODUCT SPECIFICATION SHEET

FRANKE

Urban 600mm Semi Integrated Dishwasher

FCDW60SI

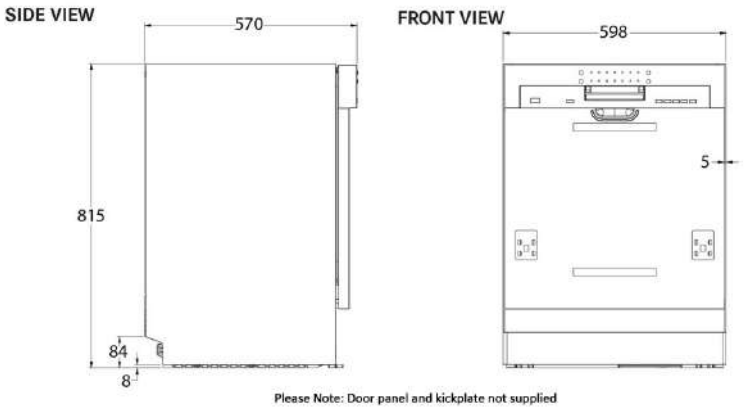
Features:

- 14 place settings, 12.5L/wash
- Noise level 49db
- Delay start and child lock
- 7 programmes
- WELS 4.5 stars & 3 stars energy rating

Finish:
Semi Integrated

Dimensions:
W598 x D570 x H815mm

WELS Reg. Number:
D02317



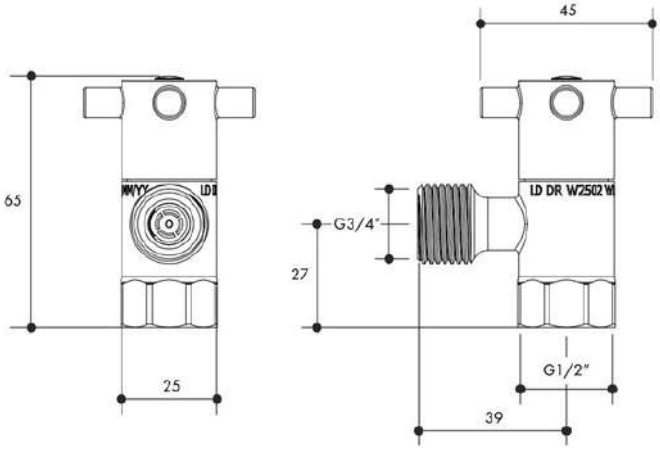
Please Note: Door panel and kickplate not supplied

Harvey Norman
COMMERCIAL DIVISION

BVWM

Product Specifications

Washing Machine Stop Capstan 1/4 Turn Cer Disc Chrome Plated



Unit is shipped in 1 per box

FEATURES

Check Valve: Yes
Finish: Chrome Plated
Metal Type: DZR Brass
Original Ceramic Disc : Yes
Watermarked: Yes

SPECIFICATIONS

Maximum Water Pressure (KPa): 1000

WARRANTY

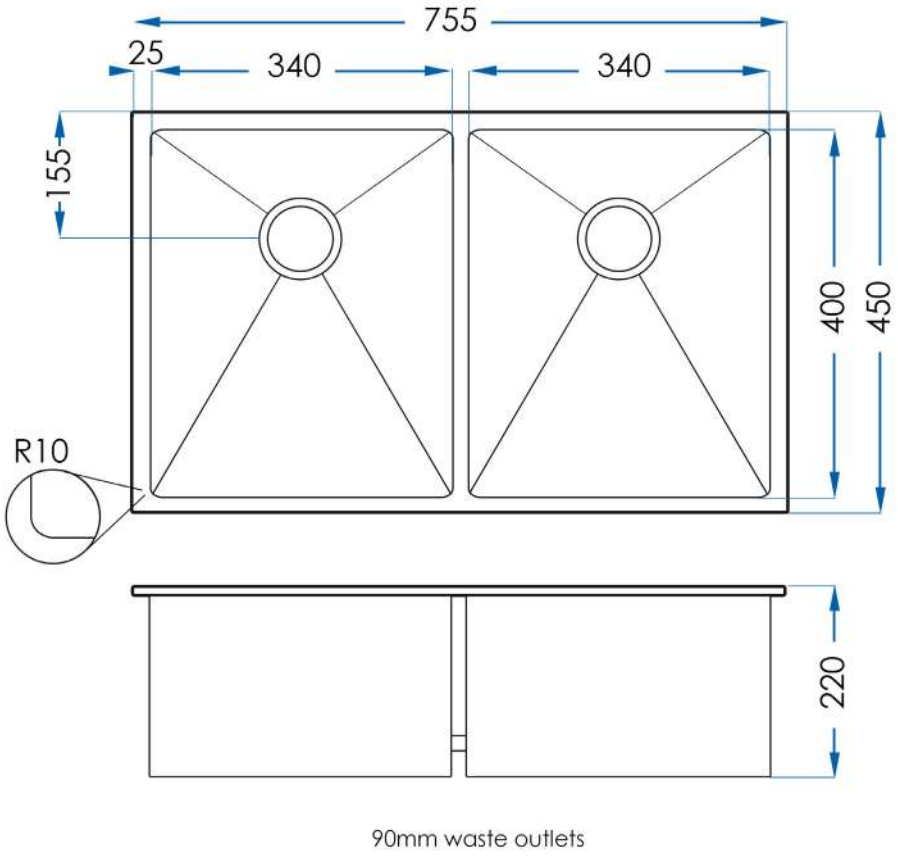
12 months on Product or Parts

1300 780 430
www.austworld.com.au

BURAZZO

Double Bowl Kitchen Sink

7 YEAR WARRANTY



90mm waste outlets

SPECIFICATIONS

Size	755x450mm
Bowl Size	340x400mm
Depth	220mm
Material	1.2mm Stainless Steel (304)
Finish	Brushed
Waste Size	90mm (Waste not included)
Installation	Undermount or Inset
Code	BU754522D
Warranty	7 year replacement product 1 year labour

CASA LUSSO

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Available at

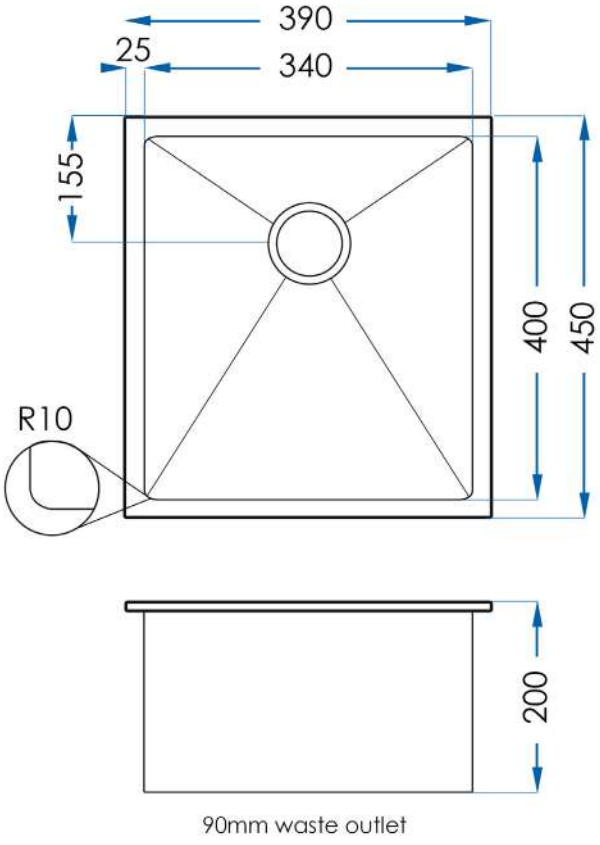
hb Highgrove Bathrooms

www.highgrovebathrooms.com.au

BURAZZO

Single Bowl Kitchen Sink 390mm

7 YEAR WARRANTY



SPECIFICATIONS

Size	390x450mm
Bowl Size	340x400mm
Depth	200mm
Material	1.2mm Stainless Steel (304)
Finish	Brushed
Waste Size	90mm (Waste not included)
Installation	Undermount or Inset
Code	BU394520S
Warranty	7 year replacement product 1 year labour

CASA LUSSO

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Available at

hbj **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

SPIN Gooseneck Sink Mixer - Installation Instructions

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW CASA LUSSO TAPWARE, WE HOPE YOU AND YOUR FAMILY ENJOY YOUR NEW PRODUCT AND CONSIDER US FOR ANY FUTURE PROJECT. CASA LUSSO PRODUCTS HAVE BEEN MANUFACTURED UNDER THE HIGHEST STANDARDS OF QUALITY AND WORKMANSHIP.

Chrome
SP120-CH

Matte Black
SP120-MB

Brushed Brass
SP120-BB

Brushed Nickel
SP120-BN

Gunmetal
SP120-GM

15 YEAR WARRANTY

WaterMark
AS/NZS 3718
LN030023
Casa Lusso

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

Product warranties are personal to the person who acquires the product for their own consumption or use and not for resale or resupply. Claims with this product cannot be made by anyone other than the consumer. Where a product is covered by parts and labour warranty, the warranty covers both the repair of the defective part or the provision of a spare part to replace the defective part and the installation of that part.Where a product is covered by parts only, the warranty covers both the repair of the defective part or the provision of a spare part in replacement. It does not include the removal of the defective part or the installations of the repaired or replaced part. We reserve the right to provide minor components (e.g. handles, aerators, hoses, dress rings and washers) as 'Parts Only' to the customer. Casa Lusso reserves the right to alter, or amend this warranty offer in writing at any time.

FEATURES

Product Code: SP120-CH / SP120-MB / SP120-BB SP120-BN / SP120-GM

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

Material: Solid Brass Construction

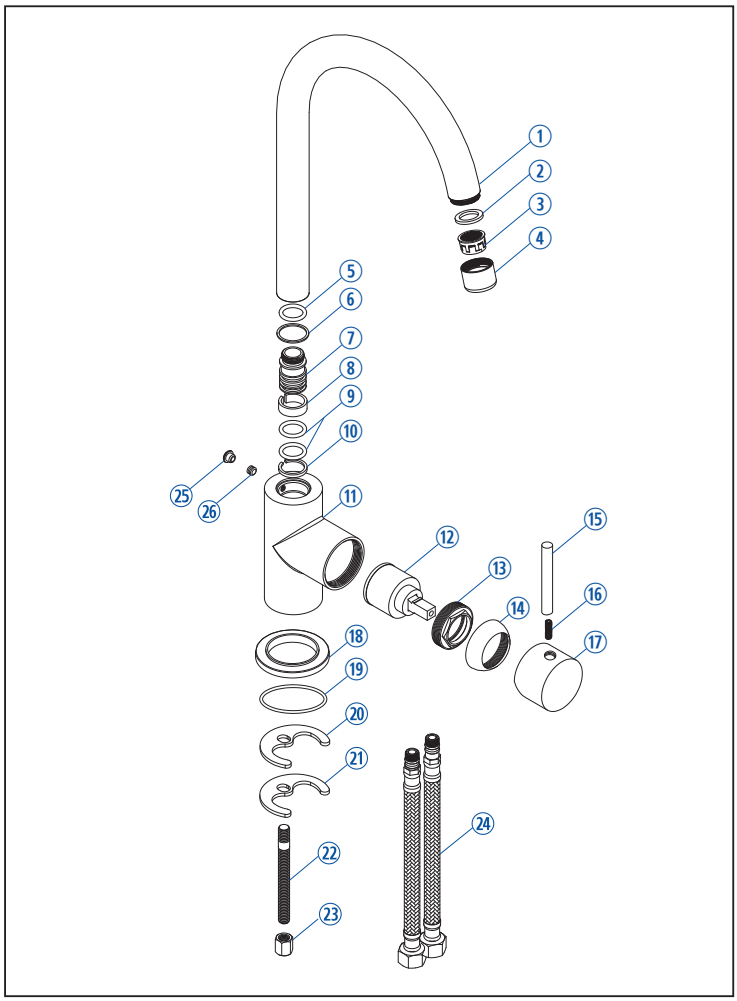
WELS: WELS 5 Star, 6 litres per minute

Made to Australian Standards code:
AS/NZS 3718
Water supply - Tapware LN030023

[1] Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. [2] Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

SPIN Gooseneck Sink Mixer - Installation Instructions



CONTENTS

1	Spout	14	Brass Dome Cover
2	Washer	15	Handle Lever
3	Water Efficiency Aerator	16	Screw
4	Aerator Shell	17	Handle
5	O-ring	18	Base
6	White Gasket	19	O-ring
7	Joint	20	Rubber Washer
8	Block Circle	21	Washer
9	O-ring	22	Screw Pole
10	Block Circle	23	Screw nut
11	Mixer Body	24	Inlet Flexi Hose
12	Cartridge	25	Concealed Push Cap
13	Pressing Nut	26	Hex Key Screw

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation: 500 kPa maximum operating pressure at any outlet within a building.* (Ref. AS/NZS 3500)
- *Maximum hot water temperature: 80°C.*

INSTALLATION

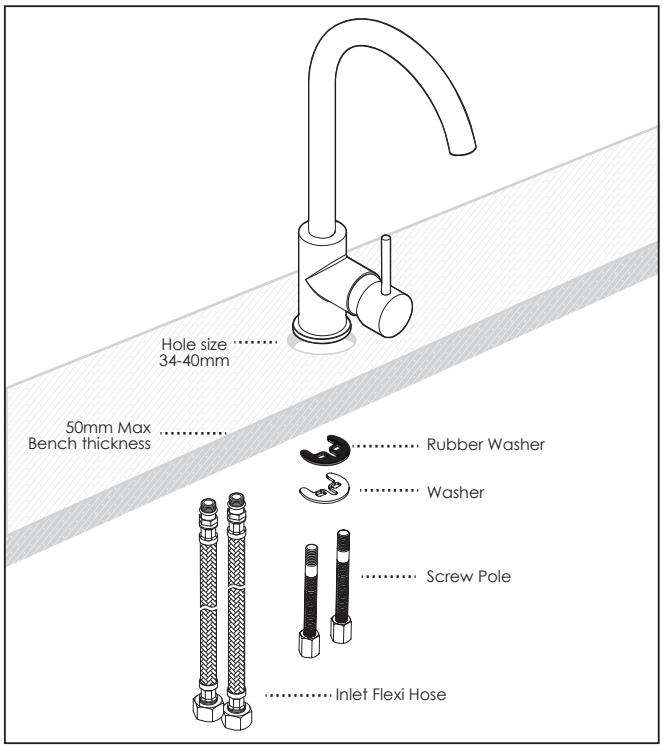
1. Install the flexible hoses into the mixer and hand tighten in place. The flexible hoses are to be fitted into the correct inlets for hot water and for cold water (Red band for hot and blue band for cold).

DO NOT USE SPANNER TO TIGHTEN AS IT CAN DAMAGE THE O RING

2. Place the mixer into position and secure using the horse shoe and fixing nut.

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

3. Ensure gauze strainers are placed into the flexible hoses then connect the isolating taps.



FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

ZARA

Kitchen Mixer with Pull Out Dual Spray

15 YEAR WARRANTY

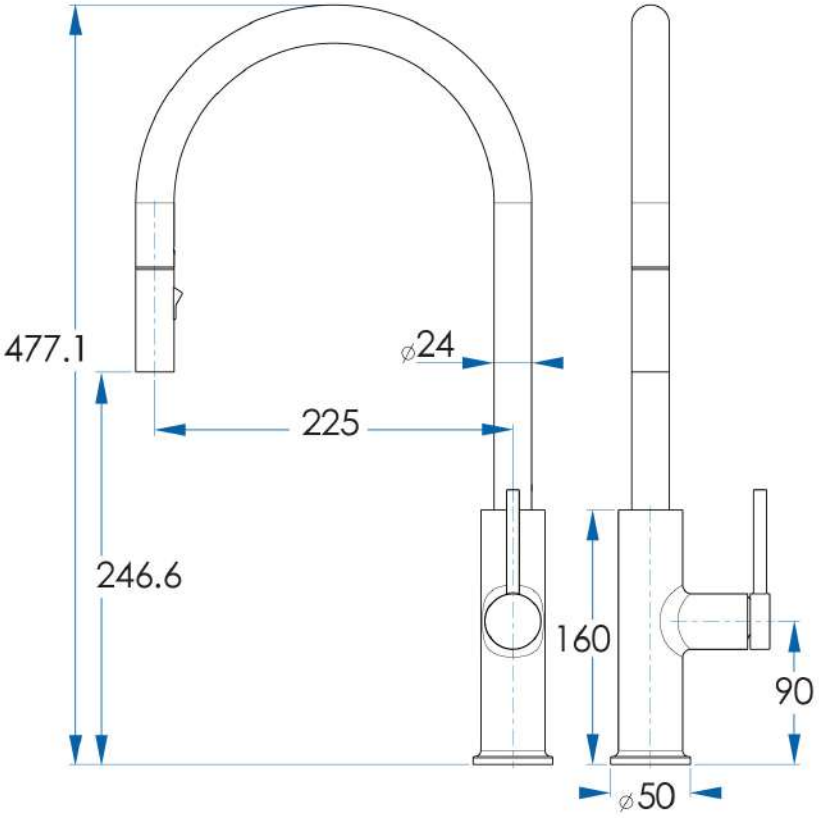
Chrome

Matte Black

Brushed Brass

Brushed Nickel

Gunmetal



CODE	FINISH
ZA120-CH	Chrome
ZA120-MB	Matte Black
ZA120-BB	Brushed Brass
ZA120-BN	Brushed Nickel
ZA120-GM	Gunmetal

WaterMark
AS/NZS 3718
LN030023
Casa Lusso

The more stars the more water efficient
WATER RATING
www.waterrating.gov.au
4 litres per minute
In accordance with AS/NZS 6400
Licence No. 0422
Casa Lusso Pty Ltd.

SPECIFICATIONS

Water Consumption	WELS 6 Star, 4 litres per minute
Features	Dual Spray Functionality
Material	Solid Brass Construction
Includes	x1 Tap, x2 300mm flexi tails and fixing kit
Warranty	15 Year ceramic cartridge replacement only 7:1 Year replacement products and parts: 1 Year parts & labour

CASA LUSSO

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Available at

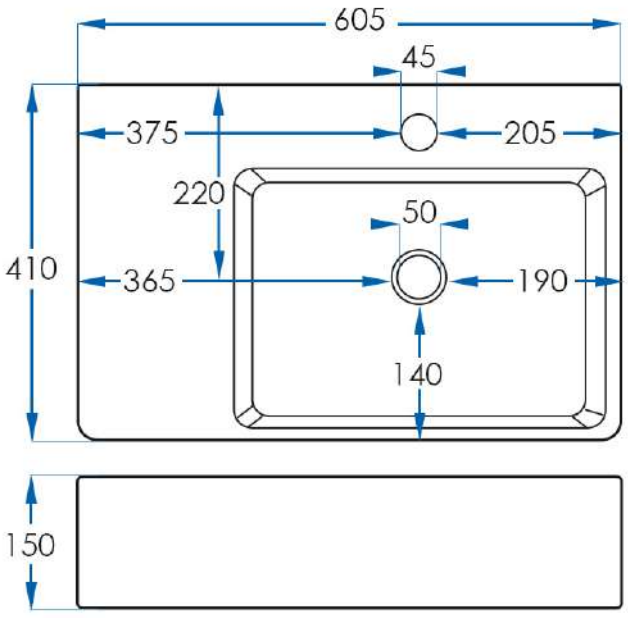
hb Highgrove Bathrooms

www.highgrovebathrooms.com.au

KUBICA

Wall Hung Basin (RHS) Gloss White

5 YEAR WARRANTY



SPECIFICATIONS

Size	605x410mm
Depth	150mm
Material	High Quality Vitreous China Construction
Waste Size	32mm with Overflow
Code	MC101R-W
Warranty	5 year replacement product

CASA LUSSO

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Available at

hb **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

CASA LUSSO
SPIN Basin Mixer - Installation Instructions

CONGRATULATIONS ON THE PURCHASE OF YOUR NEW CASA LUSSO TAPWARE, WE HOPE YOU AND YOUR FAMILY ENJOY YOUR NEW PRODUCT AND CONSIDER US FOR ANY FUTURE PROJECT. CASA LUSSO PRODUCTS HAVE BEEN MANUFACTURED UNDER THE HIGHEST STANDARDS OF QUALITY AND WORKMANSHIP.

Chrome
SP100-CH

Matte Black
SP100-MB

15 YEAR WARRANTY

AS 3718
WM 30023
CASA LUSSO

Brushed Brass
SP100-BB

Brushed Nickel
SP100-BN

Gunmetal
SP100-GM

GENERAL INFORMATION

MAINTENANCE

- Clean regularly using mild soap and dry with a soft cloth.
- Do not use abrasive cleaners, harsh detergents or citrus based cleaners on any products as these will scratch the surface.
- Tightening or adjustment of Tapware over time is considered general maintenance.
- Failure to clean/replace aerators/flow restrictors as required will void warranty.
- Damage to finishes that arise from installation or post installation will void warranty.

The warranty will not apply if:

- The product has been damaged by improper use;
- The product has not been used in accordance with any applicable instruction guide;
- The purchaser has attempted to modify or repair the product;
- The purchaser has failed to observe the cleaning and maintenance guidelines;
- The product is not installed by a licenced Plumber.
- Flow controllers/ aerators not regularly cleaned/ replaced.

Product warranties are personal to the person who acquires the product for their own consumption or use and not for resale or resupply. Claims with this product cannot be made by anyone other than the consumer. Where a product is covered by parts and labour warranty, the warranty covers both the repair of the defective part or the provision of a spare part to replace the defective part and the installation of that part.Where a product is covered by parts only, the warranty covers both the repair of the defective part or the provision of a spare part in replacement. It does not include the removal of the defective part or the installations of the repaired or replaced part. We reserve the right to provide minor components (e.g. handles, aerators, hoses, dress rings and washers) as 'Parts Only' to the customer. Casa Lusso reserves the right to alter, or amend this warranty offer in writing at any time.

FEATURES

Product Code: SP100-CH / SP100-MB
SP100-BB / SP100-BN
SP100-GM

Premium Warranty (Domestic Use) :
15 year Ceramic cartridge replacement only
7 year Replacement products and parts[1]
1 year parts & labour[2]

Material: Solid Brass Construction

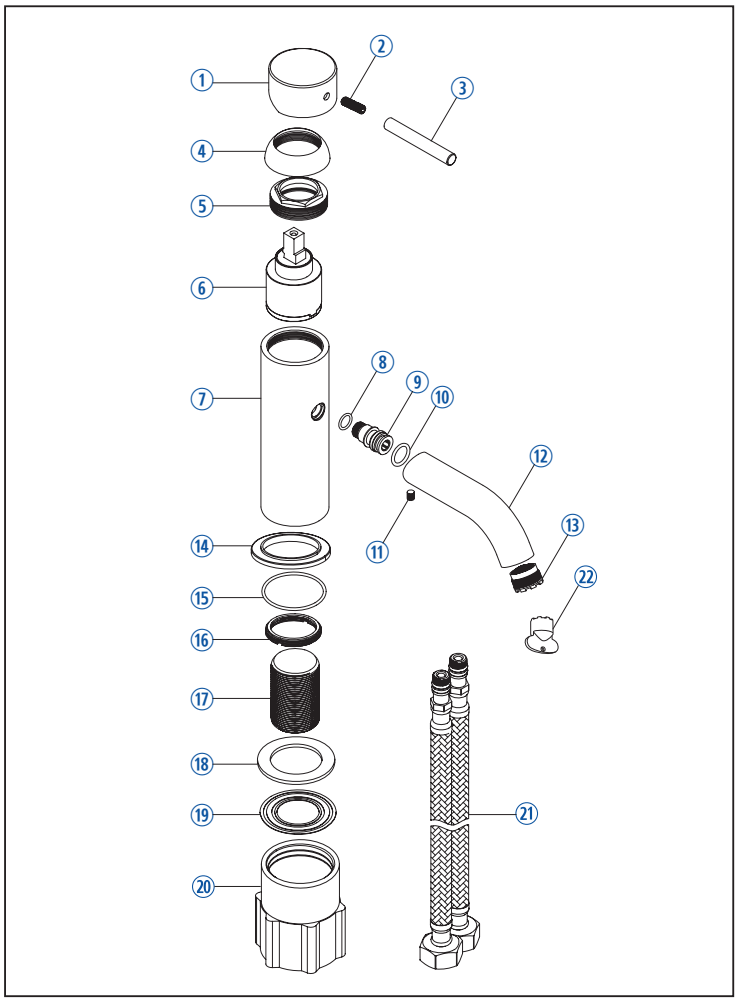
WELS: WELS 5 Star, 6 litres per minute

Made to Australian Standards code:
AS 3718
Water supply - Tapware WM 30023

[1] Excludes Damage to ceramic disk cartridges from pieces of copper tube, plastic tube, sand, dirt or thread tube etc. All speciality finishes are subject to 2 year replacement product and parts and 1 year replacement product and parts & labour. [2] Jumper valves and ceramic disk spindles; 1 year parts only.

FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

casa LUSSO
SPIN Basin Mixer - Installation Instructions



CONTENTS

IMPORTANT

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

- *Hot and cold water inlet pressures should be equal.*
- *Inlet pressure range: 150 – 500 kPa*
- *New Regulation: 500 kPa maximum operating pressure at any outlet within a building.* *(Ref. AS/NZS 3500)*
- *Maximum hot water temperature: 80°C.*

INSTALLATION

1. Install the flexible hoses into the mixer and hand tighten in place. The flexible hoses are to be fitted into the correct inlets for hot water and for cold water (Red band for hot and blue band for cold). Ensure hoses are not twisted, kinked or bent.

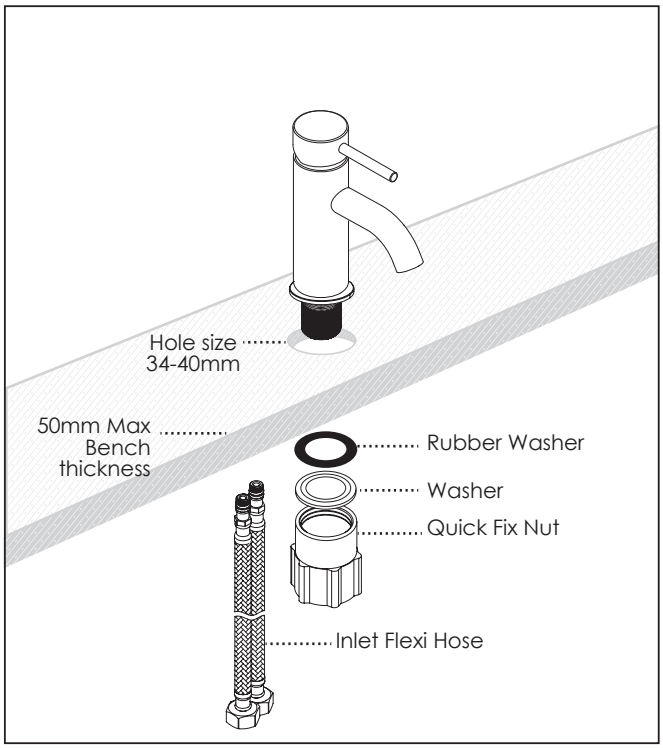
DO NOT USE SPANNER TO TIGHTEN AS IT CAN DAMAGE THE O RING

2. Place the mixer into position and secure using the quick fit cylinder.

IT IS IMPORTANT TO FLUSH OUT THE WATER PIPES BEFORE INSTALLING THE MIXER.

3. Ensure gauze strainers are placed into the flexible hoses then connect the isolating taps.

ALL INSTALLATIONS MUST COMPLY WITH AS/NZS3500

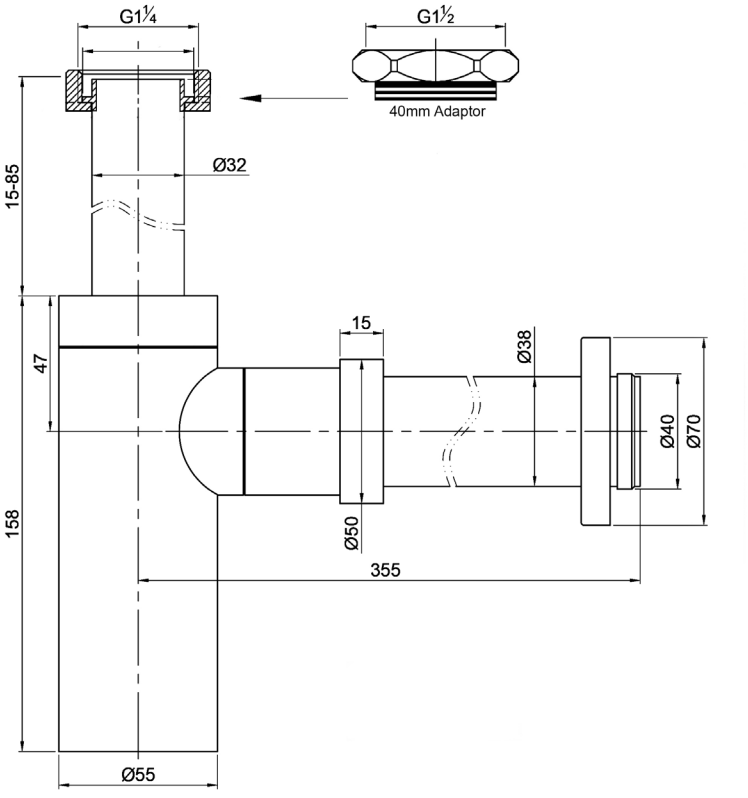


FAILURE TO COMPLY WITH ANY OF THE ABOVE INSTRUCTIONS WILL VOID ALL WARRANTIES

SPIN

Bottle Trap Chrome

5 YEAR WARRANTY



WaterMark
WMK26021
AS1589AIFL
ApprovalMark

SPECIFICATIONS

Features	Australian Standards Watermark Approved High Quality Chrome Plated Brass Construction
Installation	Adjustable height and width for easy installation Standard 32/40mm connection
Code	A186-E-CH
Warranty	5 year replacement product or parts

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Available at

hbj **Highgrove** Bathrooms

www.highgrovebathrooms.com.au

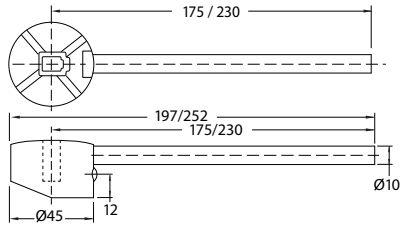
paco jaansōn

BENELLI CARE

Extended Basin Mixer Levers
Code: ALS-CREMED170 + ALS-CREMED230

Extended Sink Mixer Lever
Code: ALS-CREMED40

ALS-CREMED170/230 - Dimensions
45mm (w) x 197mm/252mm (d) x 24mm (h)



Suits

Rondo
Basin Mixer
ALS-ROB

Rondo
Wall Mixer
ALS-ROWMC

Toledo
Basin Mixer
ALS-TOB

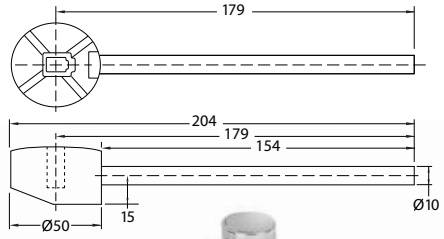
Toledo
Wall Mixer
ALS-TOWM

DESCRIPTION

The Paco Jaanson Care range is committed to providing innovative solutions formed through knowledge and insight to ensure critical living hubs like bathrooms are designed to fully consider the needs of users and their carer's, to maximise independence and a greater degree of user comfort, dignity, respect & safety.

Their aged care and disability solutions are adaptable and allow flexibility when renovations or redesign is being considered. Benelli puts the user first so you can choose Paco Jaanson with confidence.

ALS-CREMED40 - Dimensions
45mm (w) x 197mm (d) x 24mm (h)



Suits

Isis
Sink Mixer
ALS-ISSM

Features

Solid Brass Construction

Chrome Plated Finish

15 Years Limited Manufacturers Warranty

1 Year Limited Commercial Warranty

Suitable for installation to comply to Australian Standard AS 1428.1-2009 Amendment No.1 Design for access and mobility

PRICING STRUCTURE

Retail Pricing

ALS-CREMED170	ALS-CREMED230	ALS-CREMED40
$71.50 gst included	$71.50 gst included	$71.50 gst included

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

paco jaansōn

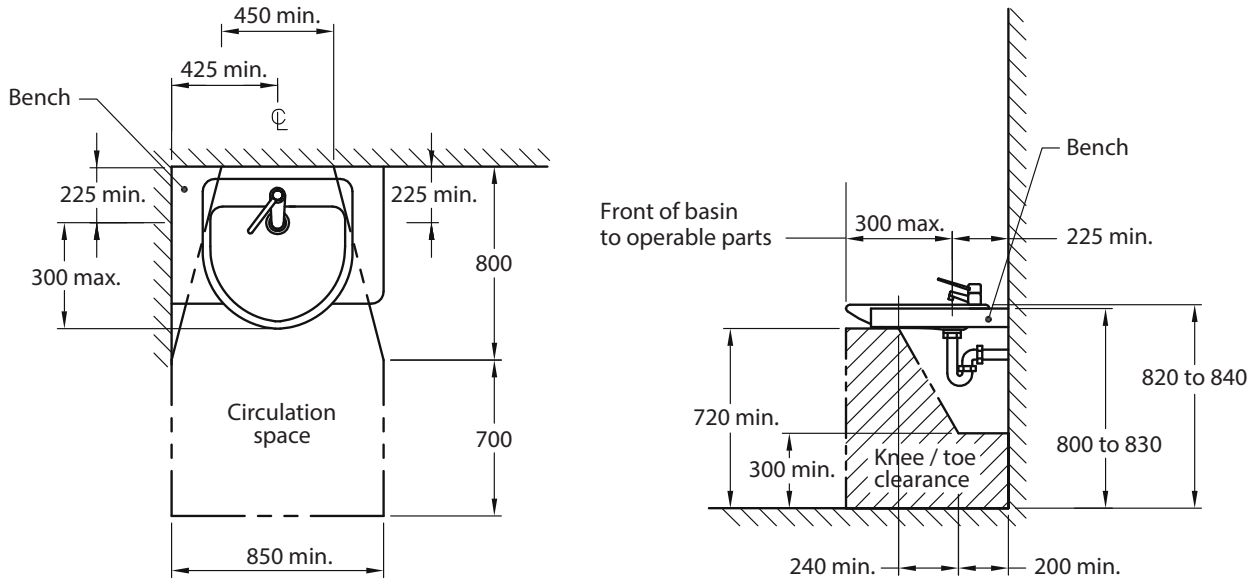
BENELLI CARE

Extended Basin Mixer Levers
Code: ALS-CREMED170 + ALS-CREMED230

Extended Sink Mixer Lever
Code: ALS-CREMED40

ACCESS AND MOBILITY

Suitable for installation to comply to Australian Standard
AS 1428.1-2009 Amendment No.1 Design for access and mobility



DIMENSIONS IN MILLIMETRES

WASHBASIN FOR ACCESSIBLE SOLE - OCCUPANCY UNIT

www.standards.org.au

All installations should be carried out by a qualified tradesman in compliance with the national Plumbing & Drainage Code and any State or Local Authority Regulations, in accordance with AS/NZS 3500 series of standards and AS/NZA 6400.

WARRANTY STATEMENT

Paco Jaanson extended mixer handles are guaranteed for 15 years from date of purchase subject to the following conditions:

1. Installation has been carried out by a licensed plumber in accordance with the plumbing code of Australia.
2. All maintenance and adjustments to the product after the installation have been carried out by a licensed plumber.
3. Only mild household detergents and soft (non-abrasive) cloth has been used to clean the product.
4. All goods of substandard quality manufacture (excluding imperfections permitted within AS1976 - vitreous china used in sanitary applications) will be credited or replaced by Paco Jaanson when advised within the warranty period, subject to prior inspection and agreement.
5. Proof of purchase is required for warranty claims.

FULL WARRANTY & CONDITIONS
www.pacojaanson.com.au

LIMITATIONS

To the extent permitted under the Trade Practices Act and other relevant legislation, Paco Jaanson's liability is limited to:
The cost of replacing the goods, or The cost of obtaining equivalent goods, or The cost of having the goods repaired. Paco Jaanson is not responsible for any lack of operation or performance of goods (or any loss or damage) where goods are used or adapted for a with other goods not supplied by Paco Jaanson. It is the responsibility of the customer and installer before installation to ensure are correct and free of obvious visible faults.
Paco Jaanson is not responsible for the labour and rectification costs incurred in the above circumstance.

PRICING STRUCTURE

Retail Pricing

ALS-CREMED170	ALS-CREMED230	ALS-CREMED40
$71.50 gst included	$71.50 gst included	$71.50 gst included

PACO JAANSON BATHROOM INNOVATIONS

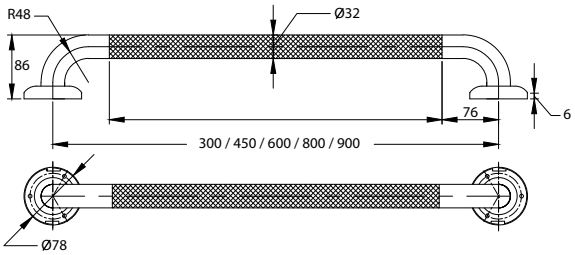
Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

paco jaansōn

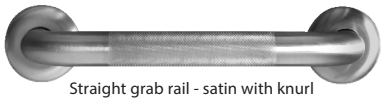
BATHROOM CARE

Straight Grab Rails - High Grade Satin Stainless Steel
Available in 300, 450, 600, 800 + 900mm lengths

Dimensions - Centre to centre
300/450/600/800/900mm (w) x 86mm (d) x 78mm (h)



Straight grab rail - satin



Straight grab rail - satin with knurl

DESCRIPTION

The Paco Jaanson Care range is committed to providing innovative solutions formed through knowledge and insight to ensure critical living hubs like bathrooms are designed to fully consider the needs of users and their carer's, to maximise independence and a greater degree of user comfort, dignity, respect & safety.

Their aged care and disability solutions are adaptable and allow flexibility when renovations or redesign is being considered. Benelli puts the user first so you can choose Paco Jaanson with confidence.

Features

32mm diameter 304 satin stainless steel

Snap flange cover conceals fixings

Fixings by others

High grade stainless steel - Satin finish
- 300mm length (CRSG01-300S)
- 450mm length (CRSG01-450S)
- 600mm length (CRSG01-600S)
- 800mm length (CRSG01-800S)
- 900mm length (CRSG01-900S)

Knurl option for better grip
- 300mm length (CRSG01-300SK)
- 450mm length (CRSG01-450SK)
- 600mm length (CRSG01-600SK)
- 800mm length (CRSG01-800SK)
- 900mm length (CRSG01-900SK)

7 Years Limited Manufacturers Warranty

1 Year Limited Commercial Warranty

Suitable for installation to comply to Australian Standard AS 1428.1-2009 Design for access and mobility

PRICING STRUCTURE

(All prices nominated are Excluding GST)

Retail Pricing : Satin	Satin with knurl
CRSG01-300S $55.00	CRSG01-300SK $65.00
CRSG01-450S $55.00	CRSG01-450SK $65.00
CRSG01-600S $60.00	CRSG01-600SK $70.00
CRSG01-800S $90.00	CRSG01-800SK $100.00
CRSG01-900S $90.00	CRSG01-900SK $100.00

PACO JAANSON BATHROOM INNOVATIONS

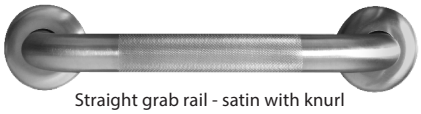
Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

paco jaansōn

BATHROOM CARE

Straight Grab Rails - High Grade Satin Stainless Steel
Available in 300, 450, 600, 800 + 900mm lengths

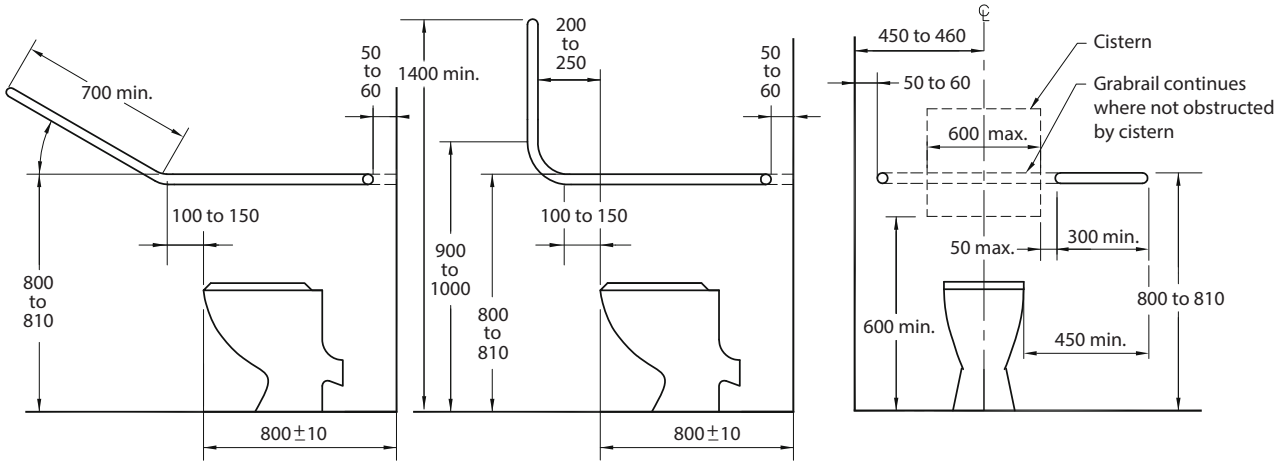
Straight grab rail - satin



Straight grab rail - satin with knurl

ACCESS AND MOBILITY

Suitable for installation to comply to Australian Standard AS 1428.1-2009 Design for access and mobility



DIMENSIONS IN MILLIMETRES
POSITIONS OF GRABRAILS IN WATER CLOSETS

www.standards.org.au

All installations should be carried out by a qualified tradesman in compliance with the national Plumbing & Drainage Code and any State or Local Authority Regulations, in accordance with AS/NZS 3500 series of standards and AS/NZA 6400.

WARRANTY STATEMENT

Paco Jaanson grab rails are guaranteed for 7 years from date of purchase subject to the following conditions:

1. Installation has been carried out by a licensed plumber in accordance with the plumbing code of Australia.
2. All maintenance and adjustments to the product after the installation have been carried out by a licensed plumber.
3. Only mild household detergents and soft (non-abrasive) cloth has been used to clean the product.
4. All goods of substandard quality manufacture will be credited or replaced by Paco Jaanson when advised within the warranty period, subject to prior inspection and agreement.
5. Proof of purchase is required for warranty claims.

FULL WARRANTY & CONDITIONS
www.pacojaanson.com.au

LIMITATIONS

To the extent permitted under the Trade Practices Act and other relevant legislation, Paco Jaanson's liability is limited to:

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PRICING STRUCTURE

(All prices nominated are Excluding GST)

Retail Pricing : Satin	Satin with knurl
CRSG01-300S $55.00	CRSG01-300SK $65.00
CRSG01-450S $55.00	CRSG01-450SK $65.00
CRSG01-600S $60.00	CRSG01-600SK $70.00
CRSG01-800S $90.00	CRSG01-800SK $100.00
CRSG01-900S $90.00	CRSG01-900SK $100.00

PACO JAANSON BATHROOM INNOVATIONS

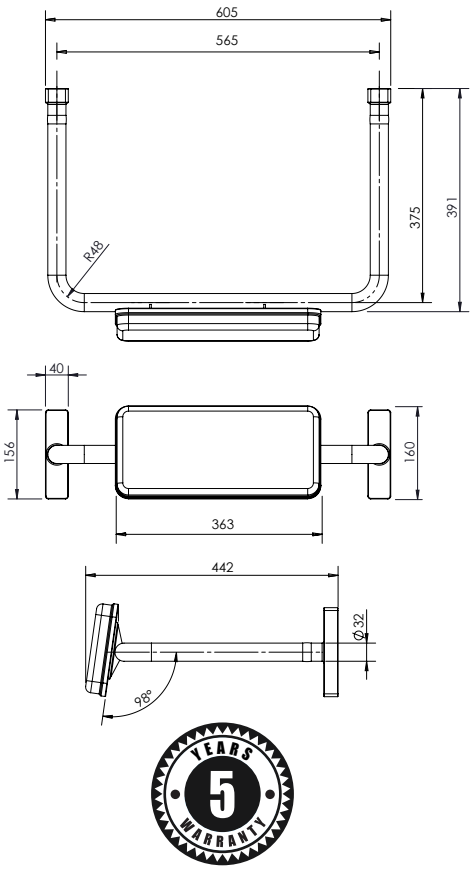
Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

paco jaansōn

BATHROOM CARE

Care backrest with supporting polyurethane cushion
Code: BR1003

Overall Dimensions
605mm (w) x 442mm (d) x 160mm (h)



DESCRIPTION

The Paco Jaanson Care range is committed to providing innovative solutions formed through knowledge and insight to ensure critical living hubs like bathrooms are designed to fully consider the needs of users and their carer's, to maximise independence and a greater degree of user comfort, dignity, respect and safety.

Their aged care and disability solutions are adaptable and allow flexibility when renovations or redesign is being considered. Benelli puts the user first so you can choose Paco Jaanson with confidence.

Features

32mm satin "304" stainless steel tubular frame*

Supporting, easy to clean polyurethane cushion

Concealed fixings

Suits Care toilet suites
HDC615-HG-583WWC/WBB/WGG,
HDC692-HEP-800-WWC/WBB/WGG and
Care floor pan HDC692-HEBTW, HDC692-HEBTB,
HDC692-HEBT

5 Years Limited Manufacturers Warranty

1 Year Limited Commercial Warranty

Suitable for installation to comply
to Australian Standard AS 1428.1-2009
Design for access and mobility

Based on location of toilet seat hinging point, determine desired length of 30mm Diameter Stainless Steel Bar to achieve 95°-100° angle on seat when raised.

Cut Stainless Steel Bar to suit.

PRICING STRUCTURE

(All prices nominated are Excluding GST)

Retail Pricing:
BR1003
$270.00

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

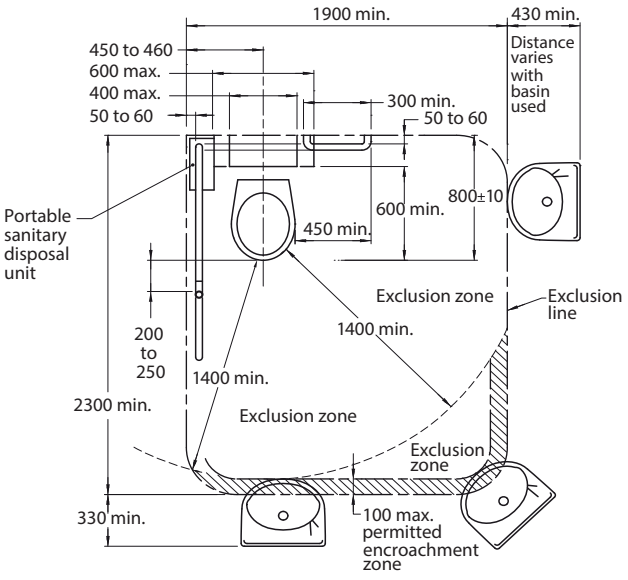
paco jaansōn

BATHROOM CARE

Care backrest with supporting polyurethane cushion
Code: BR1003

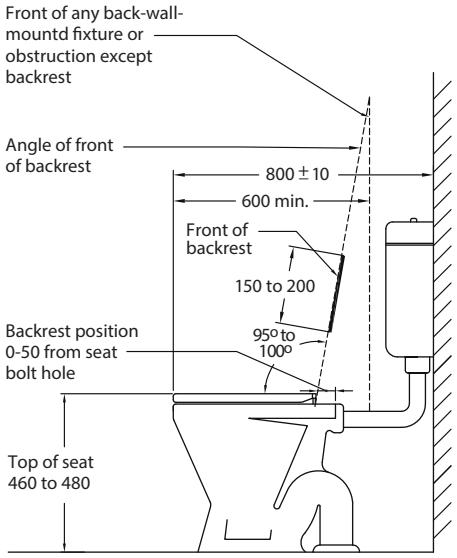
ACCESS AND MOBILITY

Suitable for installation to comply to Australian Standard AS 1428.1-2009 Design for access and mobility.



DIMENSIONS IN MILLIMETRES

CIRCULATION SPACE FOR WC PAN



DIMENSIONS IN MILLIMETRES

(IN PART) WATER CLOSET INSTALLATION

www.standards.org.au

All installations should be carried out by a qualified tradesman in compliance with the national Plumbing & Drainage Code and any State or Local Authority Regulations, in accordance with AS/NZS 3500 series of standards and AS/NZA 6400.

WARRANTY STATEMENT

Paco Jaanson backrest is guaranteed for 5 years from date of purchase subject to the following conditions:

1. Installation has been carried out by a licensed plumber in accordance with the plumbing code of Australia.
2. All maintenance and adjustments to the product after the installation have been carried out by a licensed plumber.
3. Only mild household detergents and soft (non-abrasive) cloth has been used to clean the product.
4. All goods of substandard quality manufacture will be credited or replaced by Paco Jaanson when advised within the warranty period, subject to prior inspection and agreement.
5. Proof of purchase is required for warranty claims.

FULL WARRANTY & CONDITIONS
www.pacojaanson.com.au

LIMITATIONS

To the extent permitted under the Trade Practices Act and other relevant legislation, Paco Jaanson's liability is limited to:

The cost of replacing the goods, or The cost of obtaining equivalent goods, or The cost of having the goods repaired. Paco Jaanson is not responsible for any lack of operation or performance of goods (or any loss or damage) where goods are used or adapted for a with other goods not supplied by Paco Jaanson. It is the responsibility of the customer and installer before installation to ensure are correct and free of obvious visible faults. Paco Jaanson is not responsible for the labour and rectification costs incurred in the above circumstance.

PRICING STRUCTURE

(All prices nominated are Excluding GST)

Retail Pricing:

BR1003

$270.00

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

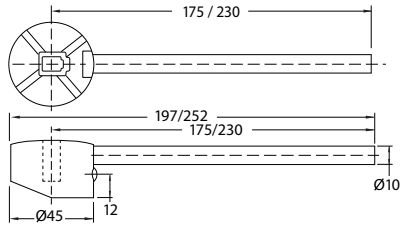
paco jaansōn

BENELLI CARE

Extended Basin Mixer Levers
Code: ALS-CREMED170 + ALS-CREMED230

Extended Sink Mixer Lever
Code: ALS-CREMED40

ALS-CREMED170/230 - Dimensions
45mm (w) x 197mm/252mm (d) x 24mm (h)



Suits

Rondo
Basin Mixer
ALS-ROB

Rondo
Wall Mixer
ALS-ROWMC

Toledo
Basin Mixer
ALS-TOB

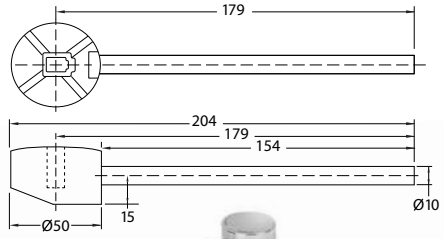
Toledo
Wall Mixer
ALS-TOWM

DESCRIPTION

The Paco Jaanson Care range is committed to providing innovative solutions formed through knowledge and insight to ensure critical living hubs like bathrooms are designed to fully consider the needs of users and their carer's, to maximise independence and a greater degree of user comfort, dignity, respect & safety.

Their aged care and disability solutions are adaptable and allow flexibility when renovations or redesign is being considered. Benelli puts the user first so you can choose Paco Jaanson with confidence.

ALS-CREMED40 - Dimensions
45mm (w) x 197mm (d) x 24mm (h)



Suits

Isis
Sink Mixer
ALS-ISSM

Features

Solid Brass Construction

Chrome Plated Finish

15 Years Limited Manufacturers Warranty

1 Year Limited Commercial Warranty

Suitable for installation to comply to Australian Standard AS 1428.1-2009 Amendment No.1 Design for access and mobility

PRICING STRUCTURE

Retail Pricing

ALS-CREMED170	ALS-CREMED230	ALS-CREMED40
$71.50 gst included	$71.50 gst included	$71.50 gst included

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

paco jaansōn

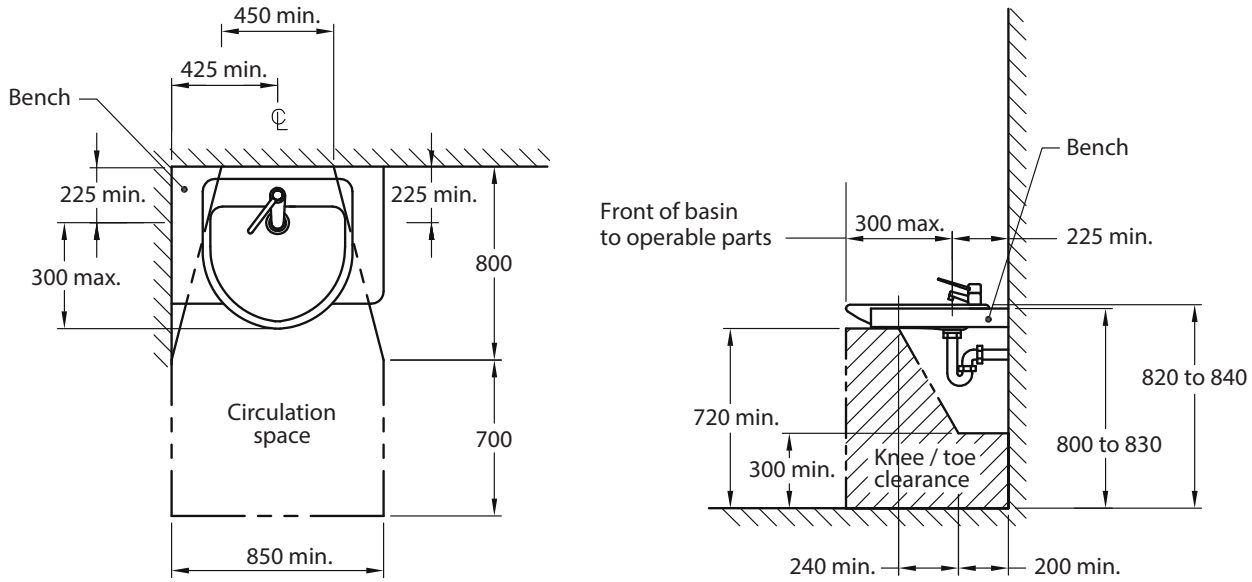
BENELLI CARE

Extended Basin Mixer Levers
Code: ALS-CREMED170 + ALS-CREMED230

Extended Sink Mixer Lever
Code: ALS-CREMED40

ACCESS AND MOBILITY

Suitable for installation to comply to Australian Standard
AS 1428.1-2009 Amendment No.1 Design for access and mobility



DIMENSIONS IN MILLIMETRES

WASHBASIN FOR ACCESSIBLE SOLE - OCCUPANCY UNIT

www.standards.org.au

All installations should be carried out by a qualified tradesman in compliance with the national Plumbing & Drainage Code and any State or Local Authority Regulations, in accordance with AS/NZS 3500 series of standards and AS/NZA 6400.

WARRANTY STATEMENT

Paco Jaanson extended mixer handles are guaranteed for 15 years from date of purchase subject to the following conditions:

1. Installation has been carried out by a licensed plumber in accordance with the plumbing code of Australia.
2. All maintenance and adjustments to the product after the installation have been carried out by a licensed plumber.
3. Only mild household detergents and soft (non-abrasive) cloth has been used to clean the product.
4. All goods of substandard quality manufacture (excluding imperfections permitted within AS1976 - vitreous china used in sanitary applications) will be credited or replaced by Paco Jaanson when advised within the warranty period, subject to prior inspection and agreement.
5. Proof of purchase is required for warranty claims.

FULL WARRANTY & CONDITIONS
www.pacojaanson.com.au

LIMITATIONS

To the extent permitted under the Trade Practices Act and other relevant legislation, Paco Jaanson's liability is limited to:
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Paco Jaanson is not responsible for the labour and rectification costs incurred in the above circumstance.

PRICING STRUCTURE

Retail Pricing

ALS-CREMED170	ALS-CREMED230	ALS-CREMED40
$71.50 gst included	$71.50 gst included	$71.50 gst included

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

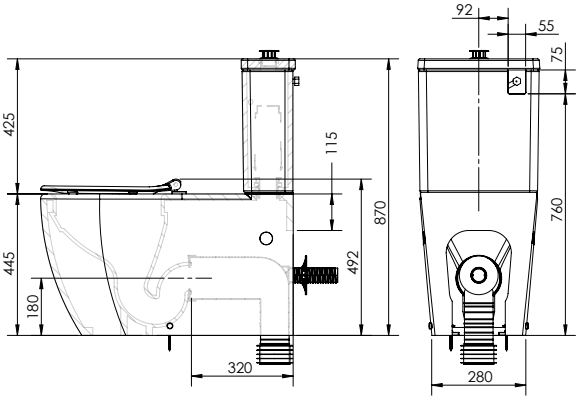
paco jaansōn

BATHROOM CARE

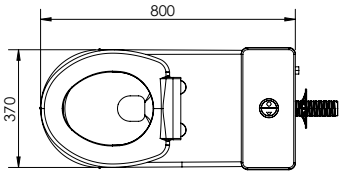
Rimless Toilet Suite (Rear or Bottom Inlets) with Raised Height Pan
Grey Single Flap Seat / Grey Raised Button

Featured with the Care Backrest (BR1003) not included

Dimensions
385mm (w) x 800mm (d) x 870mm (h)



REAR INLET CISTERN



DESCRIPTION

The Paco Jaanson Care range is committed to providing innovative solutions formed through knowledge and insight to ensure critical living hubs like bathrooms are designed to fully consider the needs of users and their carer's, to maximise independence and a greater degree of user comfort, dignity, respect & safety.

Their aged care and disability solutions are adaptable and allow flexibility when renovations or redesign is being considered. Benelli puts the user first so you can choose Paco Jaanson with confidence.

Features

Rimless pan hygienic flush

Vitreous china

4 Star - Wels 4.5/3 litres dual flush

S-trap 90-210mm with P-S002 Connector

P-trap 180mm

Grey soft close single flap seat

15 Years Limited Manufacturers Warranty

1 Year Limited Commercial Warranty

Also available: White seat / Chrome raised button HDC692-HEP-800-WWC
Blue seat / Blue raised button HDC692-HEP-800-WBB

Suitable for installation to comply
to Australian Standard AS 1428.1-2009
Design for access and mobility

Care Backrest (BR1003) optional extra $270.00 (Excludes Gst)

PRICING STRUCTURE

Code: (with Rear Inlet Cistern)
HDC692-HEP-800-WGG-R/I
$1,450.00 (Excludes Gst)

Code: (with Bottom Inlet Cistern)
HDC692-HEP-800-WGG-B/I
$1,450.00 (Excludes Gst)

PACO JAANSON BATHROOM INNOVATIONS

Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

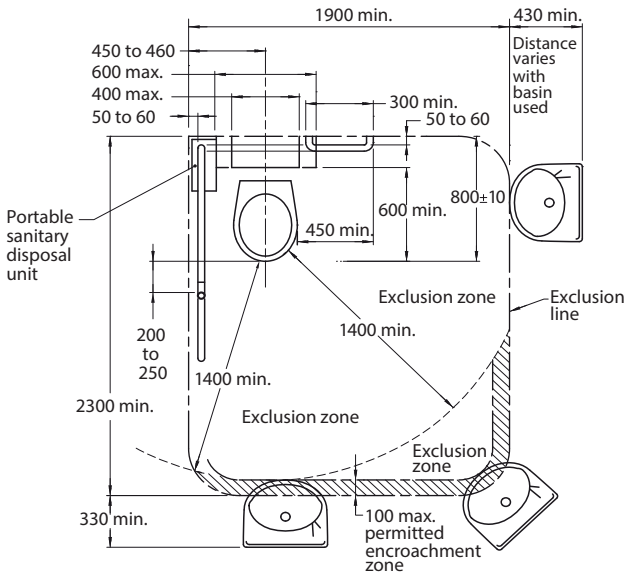
paco jaansōn

BATHROOM CARE

Rimless Toilet Suite (Rear or Bottom Inlets) with Raised Height Pan
Grey Single Flap Seat / Grey Raised Button

ACCESS AND MOBILITY

Suitable for installation to comply to Australian Standard
AS 1428.1-2009 Design for access and mobility.



DIMENSIONS IN MILLIMETRES
CIRCULATION SPACE FOR WC PAN
www.standards.org.au

All installations should be carried out by a qualified tradesman in compliance with the national Plumbing & Drainage Code and any State or Local Authority Regulations, in accordance with AS/NZS 3500 series of standards and AS/NZA 6400.

WARRANTY STATEMENT

Paco Jaanson vitreous china is guaranteed for 15 years (seat cover, accessories, valves, washers are guaranteed for 1 year) from date of purchase subject to the following conditions:

1. Installation has been carried out by a licensed plumber in accordance with the plumbing code of Australia.
2. All maintenance and adjustments to the product after the installation have been carried out by a licensed plumber.
3. Only mild household detergents and soft (non-abrasive) cloth has been used to clean the product.
4. All goods of substandard quality manufacture (excluding imperfections permitted within AS1976 - vitreous china used in sanitary applications) will be credited or replaced by Paco Jaanson when advised within the warranty period, subject to prior inspection and agreement.
5. Proof of purchase is required for warranty claims.

FULL WARRANTY & CONDITIONS
www.pacojaanson.com.au

LIMITATIONS

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Paco Jaanson is not responsible for the labour and rectification costs incurred in the above circumstance.

PRICING STRUCTURE

Code: (with Rear Inlet Cistern)
HDC692-HEP-800-WGG-R/I
$1,450.00 (Excludes Gst)

Code: (with Bottom Inlet Cistern)
HDC692-HEP-800-WGG-B/I
$1,450.00 (Excludes Gst)

PACO JAANSON BATHROOM INNOVATIONS

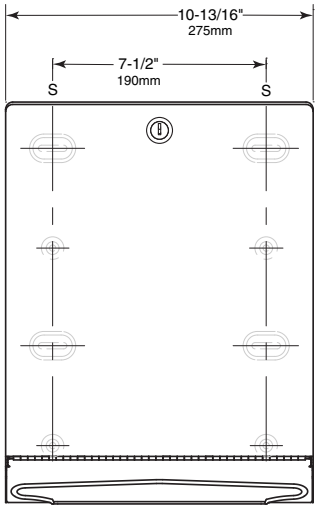
Telephone : 1800 006 260
Email - info@pacojaanson.com.au
www.pacojaanson.com.au

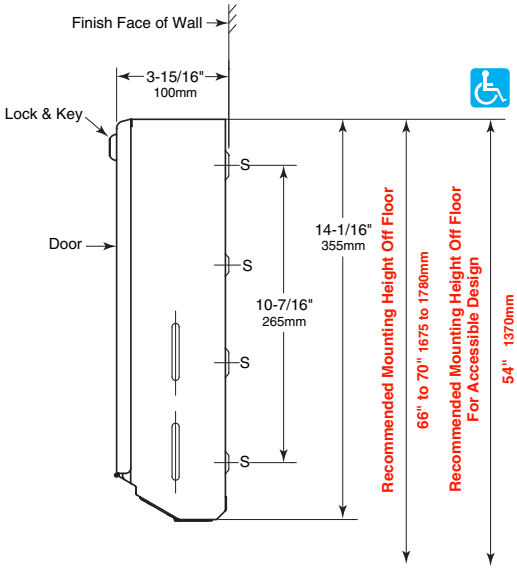
BOBRICK

Technical Data

ClassicSeries® SURFACE-MOUNTED PAPER TOWEL DISPENSER

B-262





MATERIALS:

Cabinet — 18-8, type-304, 22-gauge (0.8mm) stainless steel. All-welded construction. Exposed surfaces have satin finish. Towel tray has hemmed opening to dispense paper towels without tearing.

Door — 18-8, type-304, 22-gauge (0.8mm) stainless steel with satin finish. Secured to cabinet with a full-length stainless steel piano-hinge. Equipped with a tumbler lock keyed like other Bobrick washroom accessories.

Optional: Order Bobrick Part No. 262-130 TowelMate® available as an optional accessory. TowelMate accessory allows for paper towels to dispense one at a time without bulging, sagging or falling through the towel tray opening. TowelMate fits Gamco and most manufacturers' similar models.

OPERATION:

Unit dispenses C-fold and multifold paper towels 3-1/8" to 3-13/16" (79–97mm) deep. Slots in sides of cabinet indicate refill time. Capacity: 400 C-fold or 525 multifold paper towels. To dispense narrower towels 2-1/2" to 3-1/8" (64–79mm) deep, order optional TowelMate accessory Bobrick Part No. 262-130.

INSTALLATION:

Mount unit on wall with four #10 x 1-1/4" (4.8 x 32mm) sheet-metal screws (not furnished) at four of the eight mounting holes indicated by an *S* (top slots and bottom holes preferable). For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure with sheet-metal screws. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws, or provide 1/8" (3mm) toggle bolts or expansion bolts.

SPECIFICATION:

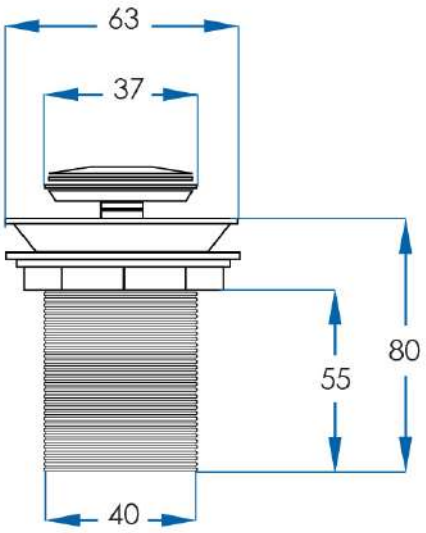
Surface-mounted paper towel dispenser shall be type-304 stainless steel with all-welded construction; exposed surfaces shall have satin finish. Door shall be secured to cabinet with a full-length stainless steel piano-hinge and equipped with a tumbler lock keyed like other Bobrick washroom accessories. Paper towel tray shall have hemmed opening to dispense paper towels without tearing. Unit shall be capable of dispensing 400 C-fold or 525 multifold paper towels measuring 3-1/8" to 3-13/16" (79 to 97mm) deep. Narrower paper towels 2-1/2" to 3-1/8" (65 to 79mm) deep may be efficiently dispensed with the use of an optional TowelMate accessory, Bobrick Part No. 262-130. TowelMate accessory allows for paper towels to dispense one at a time without bulging, sagging or falling through the towel tray opening.

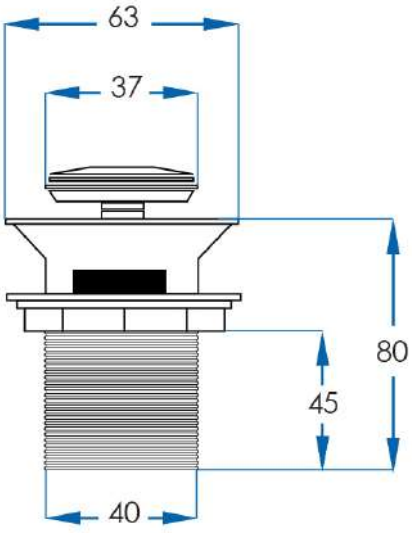
Surface-Mounted Paper Towel Dispenser shall be Model B-262 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

B-262 r06/30/15 Printed in U.S.A.

POP UP WASTES

5 YEAR WARRANTY





Basin Waste

Material Strong Brass Chrome Construction
Code PU3280-CH
Warranty 5 year replacement product or parts

Basin Waste with Overflow

Material Strong Brass Chrome Construction
Code PO3280 -CH
Warranty 5 year replacement product or parts

WaterMark
WMK26021
AS1589AIFL
ApprovalMark

CASA LUSSO

Available at hb Highgrove Bathrooms.com.au

Due to our policy of continuous development, all designs and measurements are intended only as a guide and are subject to change without notice. Being hand made products they are subject to a size variance E&OE. This brochure is representative of the actual products at time of printing. Please confirm all particulars before purchase. Casa Lusso recommends having the product on site before commencing rough in. For our own established efforts supporting environmental and health preservation all of our Vanities are made to the commercially recognised E1 Standard.

Recently Viewed Products

Be the first to review this product

SPIN

ROBE HOOK CHROME

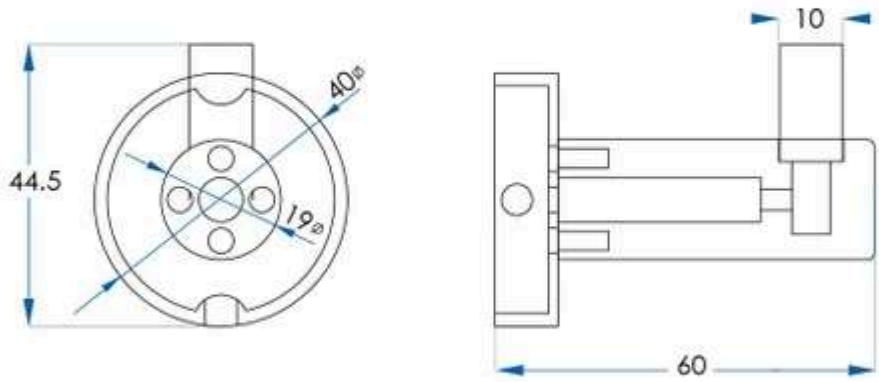
$22.00

Colour: Chrome

1

SEARCH

Recently Viewed Products



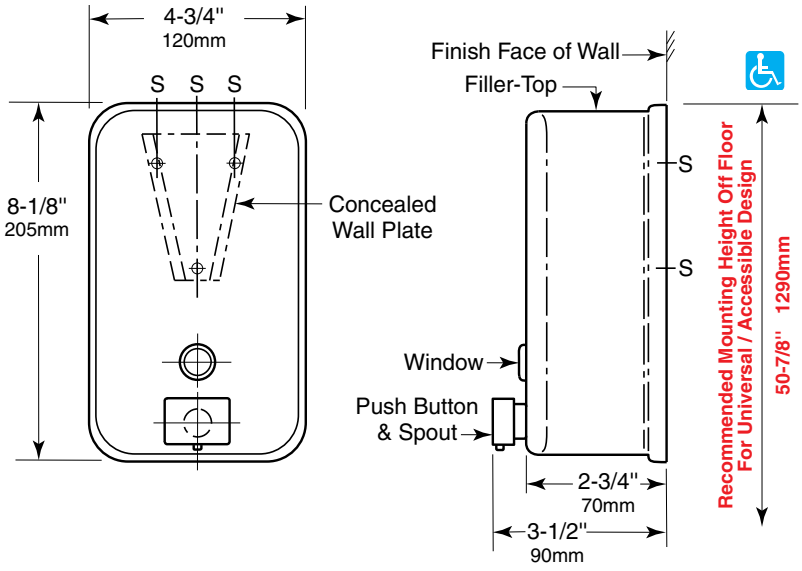
SEARCH

BOBRICK

Technical Data

ClassicSeries® SURFACE-MOUNTED SOAP DISPENSER

B-2111



MATERIALS:

Container — 18-8, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Body is drawn, one-piece, seamless construction. Back plate has mounting bracket attached. Furnished with concealed wall plate. Equipped with a clear acrylic refill-indicator window and a locked, hinged stainless steel lid for top filling. Capacity: 40-fl oz (1.2-L).

Valve — Black molded plastic push button and spout. Soap head-holding mushroom valve. Stainless steel spring. U-packing seal and duckbill. Antibacterial-soap-resistant plastic cylinder.

OPERATION:

Corrosion-resistant valve dispenses commercially marketed all-purpose hand soaps. To prevent corrosion of the tank, use only chloride-free pH-neutral liquid soaps. Valve is operable with one hand, without tight grasping, pinching, or twisting of the wrist, and with less than 5 pounds of force (22.2 N) to comply with accessible design guidelines (including ADAAG in the U.S.A.). Window indicates when refill is required. The locked, hinged lid opens for top filling only with special key provided. Concealed, vandal-resistant mounting.

INSTALLATION:

Secure wall plate to the wall with three sheet-metal screws, furnished by manufacturer, at points indicated by an *S*. Slide mounting bracket of container down onto wall plate and secure unit with furnished locking-screw. For plaster or dry wall construction, provide concealed backing to comply with local building codes and secure with sheet-metal screws furnished. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws furnished, or provide 1/8" (3mm) toggle bolts or expansion bolts.

Note: Surface-mount the dispenser plumb and true with valve 6" (150mm) to right or left of lavatory center. Provide 4" (100mm) minimum clearance from the lid to the underside of any horizontal projection. Push buttons should be located 44" (1120mm) maximum above the finish floor.

SPECIFICATION:

Surface-mounted soap dispenser shall be Type-304 stainless steel with satin-finish. Corrosion-resistant valve shall dispense commercially marketed all-purpose hand soaps, non-iodine based soaps and do not use alcohol based sanitisers. To prevent corrosion of the tank, use only chloride-free pH-neutral liquid soaps. Valve shall be operable with one hand and with less than 5 pounds of force (22.2 N) to comply with accessible design guidelines (including ADAAG in the U.S.A.). Container shall be equipped with a clear acrylic refill-indicator window; a locked, hinged stainless steel lid for top filling; and shall have a capacity of 40-fl oz (1.2-L). Unit shall have concealed, vandal-resistant mounting.

Surface-Mounted Soap Dispenser shall be Model B-2111 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

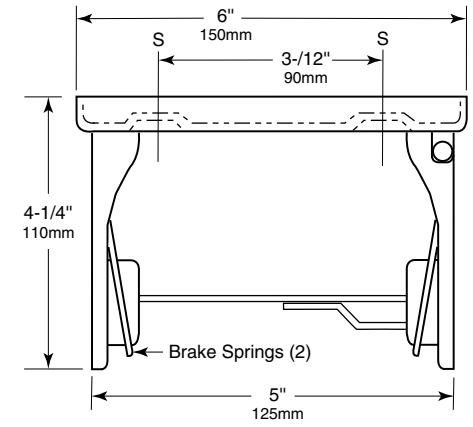
Revised 1/22/18 Printed in U.S.A.

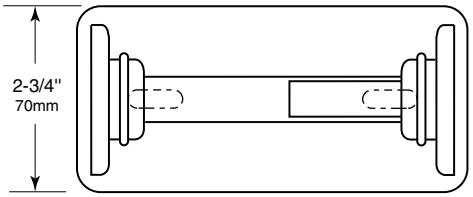
BOBRICK

Technical Data

SINGLE-ROLL TOILET TISSUE DISPENSER WITH CONTROLLED DELIVERY

B-264





MATERIALS:

Heavy-gauge chrome-plated steel with bright polished finish. Mounting bracket is 18-gauge (1.2mm). Equipped with a vandal-resistant self-locking m echanism and two heavy-duty brake springs.

OPERATION:

Heavy-duty brake springs provide controlled delivery. Toilet tissue roll will not spin freely. Eliminates waste. Accommodates one standard-core toilet tissue roll up to 4-1/2" (115mm) diameter. Toilet tissue roll cannot be removed from holder until empty.

Instructions for changing toilet tissue roll:

1. Remove brown core of depleted toilet tissue roll from dispenser.
2. Spread apart arms, releasing center support.
3. Place new toilet tissue roll on center support.
4. Spread apart arms and push toilet tissue roll with center support back into dispenser.
5. Dispenser is loaded.

INSTALLATION:

Mount unit on wall or toilet partition with two sheet-metal screws, furnished by manufacturer, at points indicated by an *S*.

For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws furnished. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws, or provide 1/8" (3mm) toggle bolts or expansion bolts.

For partitions with particle-board or other solid core, secure with sheet-metal screws, or provide through-bolts, nuts, and washers. For hollow-core metal partitions, provide solid backing into which sheet-metal screws can be secured.

SPECIFICATION:

Single-roll toilet tissue dispenser shall be heavy-gauge chrome-plated steel with bright polished finish. Unit shall be equipped with a vandal-resistant self-locking mechanism, provide controlled delivery operation, and accommodate one standard-core toilet tissue roll up to 4-1/2" (115mm) diameter.

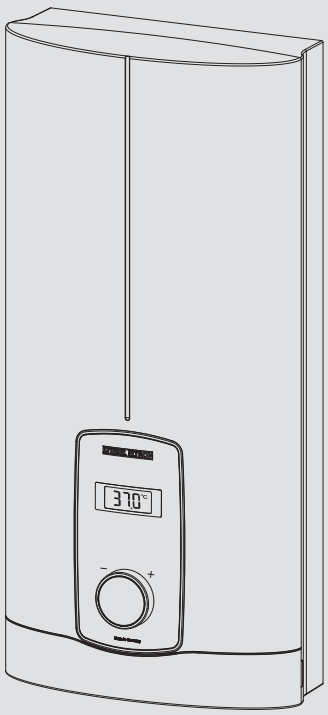
Single-Roll Toilet Tissue Dispenser shall be Model B-264 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; Bobrick Washroom Equipment Limited, United Kingdom.

Revised 06/30/15 Printed in U.S.A.

OPERATION AND INSTALLATION

Electronically controlled comfort instantaneous water heater

» DHB-E 13 LCD AU
» DHB-E 18 LCD AU
» DHB-E 27 LCD AU



STIEBEL ELTRON

SPECIAL INFORMATION

- The appliance may be used by children aged 3 and older and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks. Children must never play with the appliance. Cleaning and maintenance by the user may not be carried out by children unless they are supervised.
- If using preheated water, the tap can reach a temperature of up to 70 °C during operation. There is a risk of scalding at outlet temperatures in excess of 43 °C.
- The appliance is suitable for supplying a shower (shower operation). If the appliance is also or exclusively used for shower operation, the qualified contractor must adjust the temperature setting range to 43 °C using the internal anti-scalding protection on the appliance. When using preheated water, ensure that the inlet temperature does not exceed 55 °C.
- In Australia, the use of a temperature controller is required to meet the requirements of AS 3498 when showers, bathtubs or washbasins are supplied with water. The maximum temperature of 50 °C must not be exceeded.

- Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.
- The specified voltage must match the power supply.
- The appliance must be connected to the earth conductor.
- The appliance must be permanently connected to fixed wiring.
- Secure the appliance as described in chapter "Installation / Installation".
- Observe the maximum permissible pressure (see chapter "Installation / Specification / Data table").
- The specific water resistivity of the mains water supply must not be undershot (see chapter "Installation / Specification / Data table").
- Drain the appliance as described in chapter "Installation / Maintenance / Draining the appliance".

OPERATION

1. General information

The chapters "Special information" and "Operation" are intended for both users and qualified contractors.

The chapter "Installation" is intended for qualified contractors.

Note
Read these instructions carefully before using the appliance and retain them for future reference.
Pass on the instructions to a new user if required.

1.1 Safety instructions

1.1.1 Structure of safety instructions

KEYWORD Type of risk
Here, possible consequences are listed that may result from failure to observe the safety instructions.
▶ Steps to prevent the risk are listed.

1.1.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

1.1.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

1.2 Other symbols in this documentation

Note
General information is identified by the adjacent symbol.
▶ Read these texts carefully.

Symbol	Meaning
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

▶ This symbol indicates that you have to do something. The action you need to take is described step by step.

1.3 Units of measurement

Note
All measurements are given in mm unless stated otherwise.

2. Safety

2.1 Intended use

This appliance is suitable for heating domestic hot water or for reheating preheated water. The appliance can supply one or more draw-off points.

Water will not be reheated if the maximum inlet temperature for reheating is exceeded.

The appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in non-domestic environments, e.g. in small businesses, as long as it is used in the same way.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of the instructions for any accessories used is also part of the correct use of this appliance.

2.2 General safety instructions

CAUTION Burns
If using preheated water, the tap can reach a temperature of up to 70 °C during operation. There is a risk of scalding at outlet temperatures in excess of 43 °C.

CAUTION Burns
If operating with preheated water, e.g. from a solar thermal system, the DHW temperature may vary from the selected set temperature.

CAUTION Burns
If children or persons with limited physical, sensory or mental capabilities use the appliance, a permanent and unchangeable temperature limit is necessary. Ask a qualified contractor to set the internal anti-scalding protection.

WARNING Injury
The appliance may be used by children aged 3 and older and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the potential risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.

WARNING
For continued safety of this appliance it must be installed, operated and maintained in accordance with the manufacturer's instructions.

WARNING
This appliance may deliver water at high temperature. Refer to the plumbing code of Australia (PCA), local requirements and installation instructions to determine if additional delivery temperature control is required.

Material losses
The user should protect the appliance and its tap against frost.

2.3 Test symbols

See type plate on the appliance

3. Appliance description

The appliance switches on automatically as soon as you open the hot water valve on the tap. When you close the tap, the appliance switches off again automatically.

The appliance heats water as it flows through it. The set temperature is adjustable. Upwards of a certain flow rate, the control unit selects the required heating output, subject to the temperature selected and the cold water temperature.

The electronically controlled instantaneous water heater with automatic output matching maintains a consistent outlet temperature. It is irrespective of the inlet temperature, up to the maximum output of the appliance.

If the appliance is operated with preheated water and the inlet temperature exceeds the set temperature, the water is not heated further.

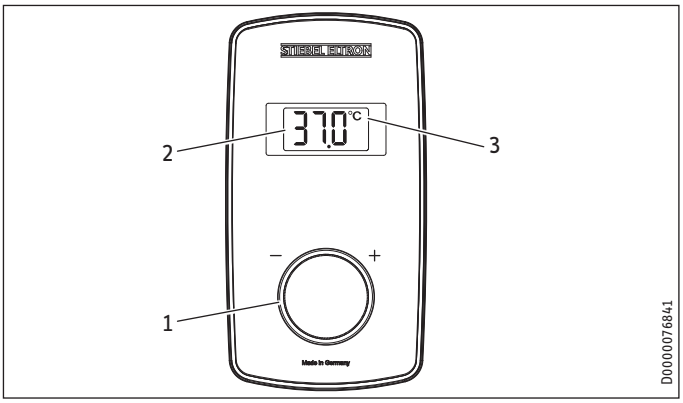
Heating system

The bare wire heating system is enclosed within a pressure-tested plastic jacket. The heating system with its stainless steel internal indirect coil is suitable for hard and soft water areas and is largely insusceptible to scale build-up. The heating system ensures rapid and efficient DHW provision.

Note
The appliance is equipped with an air detector that largely prevents damage to the heating system. If, during operation, air is drawn into the appliance, the appliance shuts down for one minute, thereby protecting the heating system.

4. Settings and displays

4.1 Selecting the set temperature



1 Temperature selector for adjusting set temperature (no end-stop): "OFF", 20 - 60 °C
2 Display
3 Temperature unit [°C/°F]

Temperature settings in steps

Temperature range	Step	Temperature range	Step
20 °C ... 60 °C	1 °C	68 °F ... 140 °F	1 °F

Selecting the temperature indicator

You can choose to display the temperature in °C or °F, as required.

▶ Turn the temperature selector anti-clockwise, past the OFF indicator and another five complete turns, until you find yourself in temperature unit selection mode. Then select the temperature unit using the temperature selector. After 30 seconds, the appliance exits selection mode automatically and the selected temperature unit is retained.

Note
If the outlet temperature is not high enough when the draw-off valve is fully open and the temperature selector is set to maximum, then more water is flowing through the appliance than can be heated by the heating system (appliance working at maximum output).
▶ Reduce the water volume until the preferred temperature delivery is achieved.

4.2 Recommended settings

Your instantaneous water heater offers maximum precision and maximum convenience in DHW provision. Should you nonetheless be operating the appliance with a thermostatic valve, we recommend that you:

▶ Adjust the set temperature on the appliance to over 50 °C. Then set the required set temperature on the thermostatic valve.

Saving energy

The following recommended settings will result in the lowest energy consumption:

- 38 °C for hand washbasins, showers, bath
- 55 °C for kitchen sinks

Temperature limit via internal anti-scalding protection (qualified contractor)

If required, the qualified contractor can set a permanent temperature limit, for example in nurseries, hospitals etc.

Limiting it in this way prevents water from flowing out of the appliance at temperatures which could cause injury.

Recommended setting for operation with a thermostatic valve and water preheated by solar energy

▶ Set the temperature at the instantaneous water heater to the maximum temperature.

Following an interruption to the water supply

Material losses
To ensure that the bare wire heating system is not damaged following an interruption to the water supply, the appliance must be restarted taking the following steps.
▶ Disconnect the appliance from the power supply by removing the fuses/tripping the MCBs.
▶ Open the tap for one minute until the appliance and its upstream cold water inlet line are free of air.
▶ Switch the power back ON.

5. Cleaning, care and maintenance

▶ Never use abrasive or corrosive cleaning agents. A damp cloth is sufficient for cleaning the appliance.

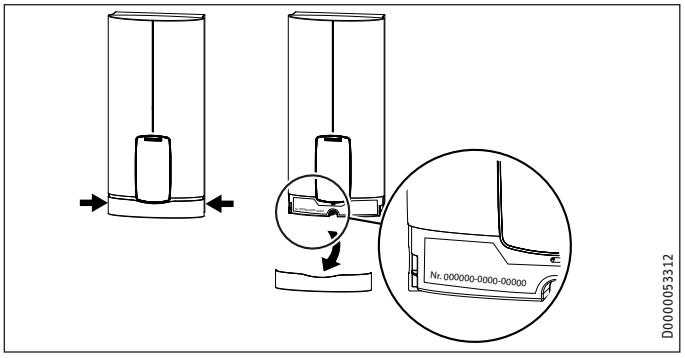
▶ Check the taps regularly. Limescale deposits at the tap outlets can be removed using commercially available descaling agents.

6. Troubleshooting

Problem	Cause	Remedy
The appliance will not start despite the DHW valve being fully open.	There is no power.	Check the fuses/MCBs in your fuse box/distribution board.
	The aerator in the tap or the shower head is scaled up or soiled.	Clean and/or descale the aerator or shower head.
	The water supply has been interrupted.	Vent the appliance and the cold water inlet line.
When hot water is being drawn off, cold water flows for a short period.	The air detector detects air in the water. It switches off the heating output briefly.	The appliance restarts automatically after 1 minute.
The required temperature cannot be set.	Internal anti-scalding protection is activated.	The internal anti-scalding protection can only be adjusted by the qualified contractor.

Note
Programming unit displays and selected settings are retained following a power failure.

If you cannot remedy the fault, contact your qualified contractor. To facilitate and speed up your request, provide the number from the type plate (000000-0000-000000).



INSTALLATION

7. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

7.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.

Material losses
Observe the maximum inlet temperature. Higher temperatures may damage the appliance. You can limit the maximum inlet temperature by installing a central thermostatic valve (see chapter "Appliance description / Accessories").

WARNING Electrocution
This appliance contains capacitors which are discharged when disconnected from the power supply. The capacitor discharge voltage may briefly exceed 60 V DC.

7.2 Shower operation

CAUTION Burns
- **The appliance is suitable for supplying a shower (shower operation). If the appliance is also or exclusively used for shower operation, the qualified contractor must adjust the temperature setting range to 43 °C using the internal anti-scalding protection on the appliance. When using preheated water, ensure that the inlet temperature does not exceed 55 °C.**
- **In Australia, the use of a temperature controller is required to meet the requirements of AS 3498 when showers, bathtubs or washbasins are supplied with water. The maximum temperature of 50 °C must not be exceeded.**

7.3 Instructions, standards and regulations

Note
Observe all applicable national and regional regulations and instructions.

Note
The installation of this appliance shall conform to the Plumbing Code of Australia (PCA), and the New Zealand Building Code.

- The IP 24 / IP 25 protection rating can only be ensured with a correctly fitted cable grommet.
- The specific electrical resistance of the water must not fall below that stated on the type plate. In a linked water network, factor in the lowest electrical resistance of the water. Your water supply utility will advise you of the specific electrical water resistance or conductivity.

8. Appliance description

8.1 Standard delivery

The following are delivered with the appliance:
- Wall mounting bracket
- Installation template
- 2 plugs
- 2 extensions
- 2 caps
- 2 tees
- 8 flat gaskets
- Strainer
- Plastic profile washer
- Plastic connection pieces / Installation aid
- Cap and back panel guides
- Jumper for internal anti-scalding protection

8.2 Accessories

Wireless remote control
- FFB 4 Set AP

9. Preparation

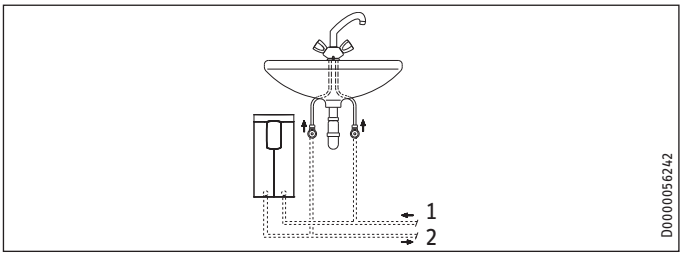
9.1 Installation location

Material losses
Install the appliance in a room free from the risk of frost.

▶ Always install the appliance vertically and near the draw-off point. For horizontal installation, see chapter "Alternative installation methods / Horizontal installation of the appliance".

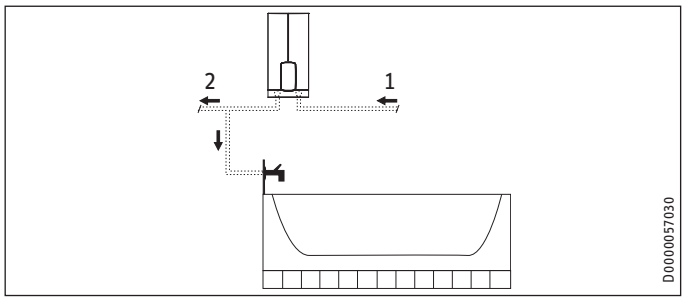
The appliance is suitable for undersink and oversink installation.

Undersink installation



1 Cold water inlet
2 DHW outlet

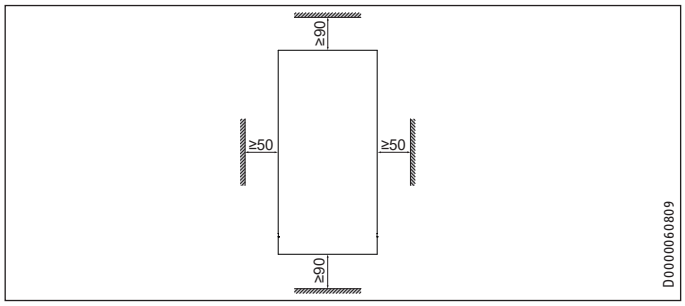
Oversink installation



1 Cold water inlet
2 DHW outlet

Note
▶ Mount the appliance on the wall. The wall must have sufficient load bearing capacity.

9.2 Minimum clearances



▶ Maintain the minimum clearances to ensure trouble-free operation of the appliance and facilitate maintenance work.

9.3 Water installation

▶ Flush the water line thoroughly.

Taps/valves

Use appropriate pressure taps. Open vented taps are not permissible.

Permissible water line materials

- Cold water inlet line:
  Pipes made from galvanised steel, stainless steel, copper or plastic
- DHW outlet line:
  Stainless steel pipe, copper pipe or plastic pipe

Material losses
If plastic pipework systems are used, take into account the maximum inlet temperature and the maximum permissible pressure.

Flow rate

▶ Ensure that the flow rate for switching on the appliance is achieved.

▶ Increase the water line pressure if the required flow rate is not achieved when the draw-off valve is fully open. If the flow rate is still not achieved, remove the flow limiter (see chapter "Installation / Installation / Removing the flow limiter").

10. Installation

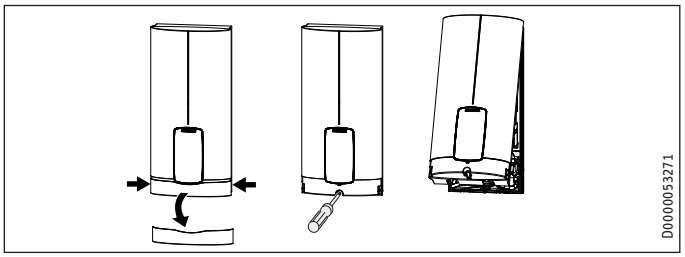
Factory settings	DHB-E 13 LCD AU	DHB-E 18 LCD AU	DHB-E 27 LCD AU
Internal anti-scalding protection	Tmax (= 60 °C)	Tmax (= 60 °C)	Tmax (= 60 °C)

Standard installation	DHB-E 13 LCD AU	DHB-E 18 LCD AU	DHB-E 27 LCD AU
Electrical connection from below on unfinished walls	x	x	x
Water connection, installation on finished walls	x	x	x

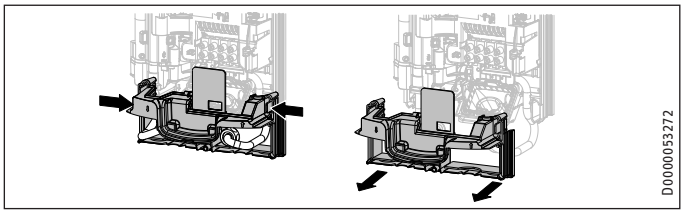
For further installation options, see chapter "Alternative installation methods".

10.1 Standard installation

Opening the appliance

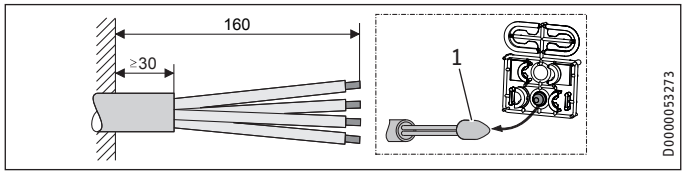


▶ Open the appliance by holding the fascia at the side and pulling forwards away from the appliance cover. Undo the screw. Pivot open the appliance cover.



▶ Remove the back panel by pressing the two locking tabs and pulling the lower section of the back panel forwards.

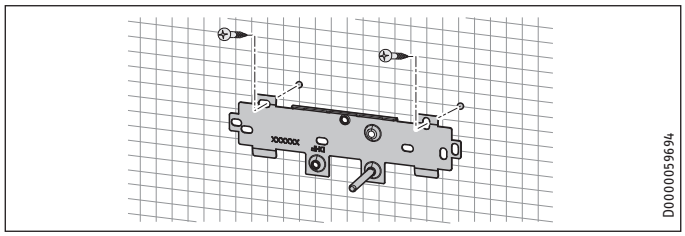
Preparing the power cable on unfinished walls, for connection from below



1 Cable entry installation aid

▶ Prepare the power cable.

Fitting the wall mounting bracket



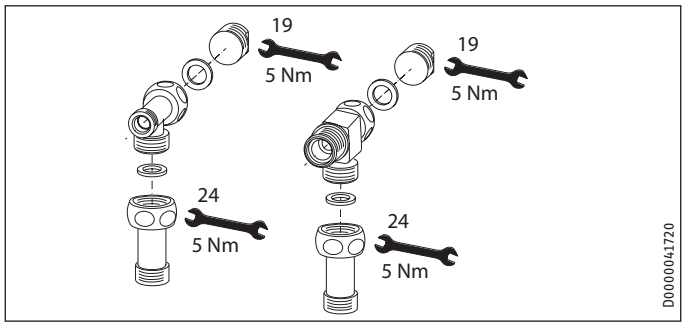
▶ Mark out the holes for drilling using the installation template. If the appliance is to be installed on finished walls, also mark out the fixing hole in the lower section of the template.

▶ Drill the holes and secure the wall mounting bracket at 2 points using suitable fixing materials (screws and rawl plugs are not part of the standard delivery).

▶ Fit the wall mounting bracket.

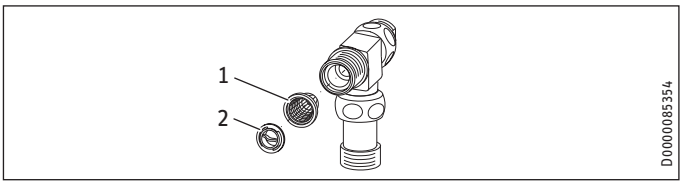
Preparing the water connection

Material losses
Carry out all water connection and installation work in accordance with regulations.



▶ Remove the caps from the tees.

▶ Fit the plugs and the extensions with gaskets.



1 Strainer
2 Plastic profile washer

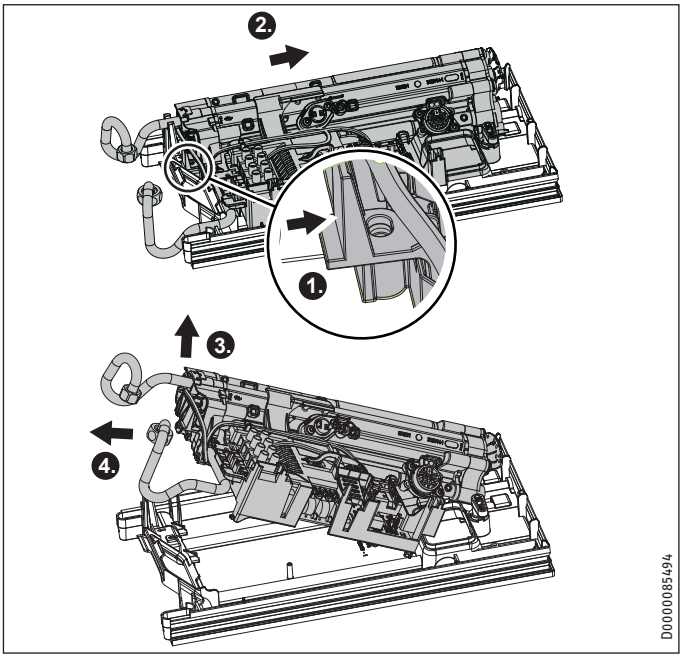
▶ Fit the strainer and the plastic profile washer in the tee for the cold water inlet.

Material losses
The strainer must be fitted for the appliance to function.
▶ When replacing the appliance, check that the strainer is present.

Removing the flow limiter

Note
If you are using a thermostatic valve, you must not remove the flow limiter.

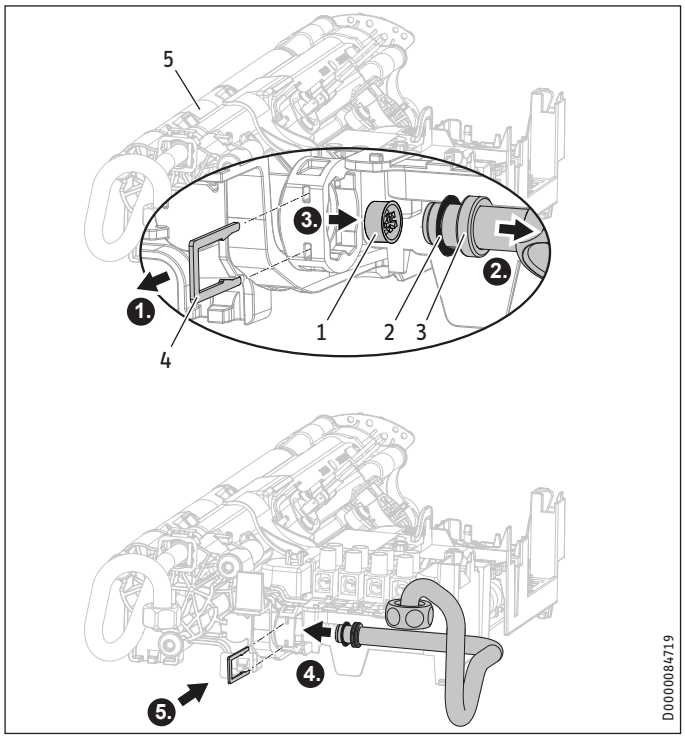
If the flow rate is too low, remove the flow limiter. To do this, remove the function module from the appliance back panel.



▶ Release the locking hook.

▶ Push the function module in the appliance back panel slightly towards the back.

▶ Remove the function module from the appliance back panel by pulling it slightly forwards and lifting it off.



1 Flow limiter
2 O-ring
3 Cold water pipe bend with recess for locking clip
4 Locking clip
5 Heater

- ▶ Remove the cold water pipe bend and the O-ring.
- ▶ Remove the flow limiter from the cold water inlet of the heater using a pointed object or suitable pliers.
- ▶ Refit the cold water pipe bend and the O-ring.

Material losses
The O-ring must be fitted to prevent the appliance from leaking.
- ▶ As part of installation, check that the O-ring is in place.

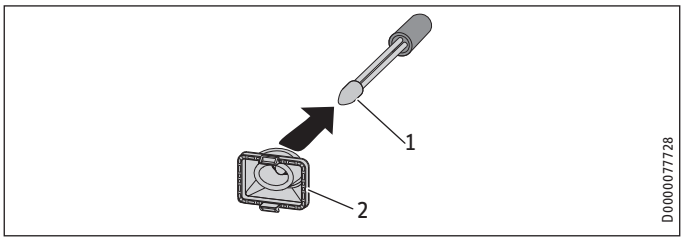
- ▶ Secure the cold water pipe bend with the locking clip.

Material losses
Ensure that the locking clip is located behind the recess in the pipe bend and fixes the bend in position.

- ▶ Mount the function module in reverse order in the appliance back panel until the function module clicks into place.

Installing the appliance

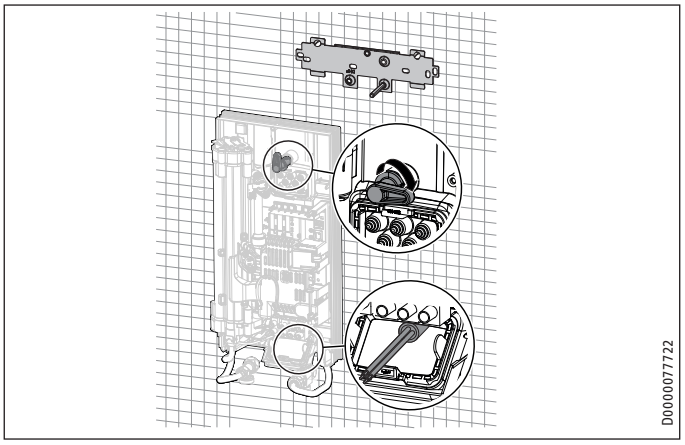
Note
If you are installing the appliance with flexible pipe connections, also secure the bottom of the back panel with a screw.



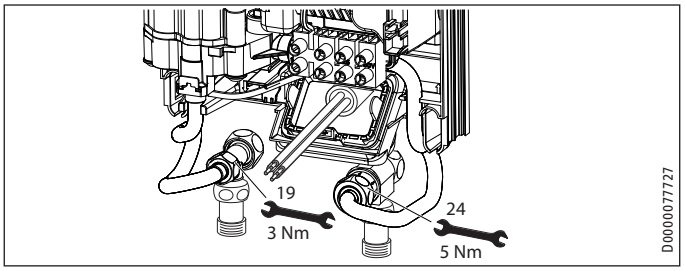
1 Cable entry installation aid
2 Cable grommet

Use the installation aid for easier wiring access through the cable grommet (see plastic parts set supplied).

- ▶ Remove the cable grommet from the back panel.
- ▶ Pull the cable grommet over the cable sheath of the power cable. For large cable cross-sections, enlarge the hole in the cable grommet if necessary.



- ▶ Remove the transport protection plugs from the appliance pipe connections.
- ▶ Bend the power cable 45° upwards.
- ▶ Route the power cable and cable grommet through the back panel from the rear.
- ▶ Install the appliance on the threaded studs of the wall mounting bracket.
- ▶ Press the back panel firmly into place, aligning it correctly.
- ▶ Lock the fixing toggle by turning it 90° clockwise.
- ▶ Pull the cable grommets into the back panel, until both locking tabs engage.



- ▶ Screw the pre-assembled parts with flat gaskets to the cold water and DHW pipes of the appliance.
- ▶ Fit the cold water inlet pipe and the DHW outlet pipe from the pipework with flat gaskets to the extensions from the appliance.

Making the electrical connection

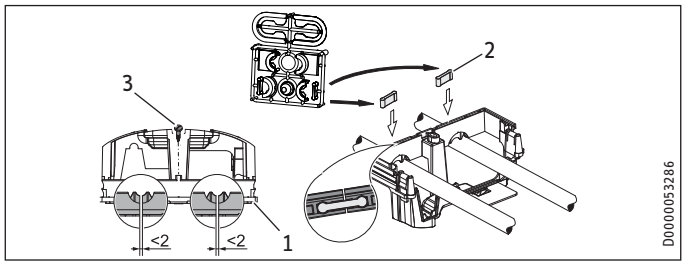
WARNING Electrocution
Carry out all electrical connection and installation work in accordance with relevant regulations.

WARNING Electrocution
The connection to the power supply must be in the form of a permanent connection in conjunction with the removable cable grommet. Ensure the appliance can be separated from the power supply by an isolator that disconnects all poles with at least 3 mm contact separation.

WARNING Electrocution
Ensure that the appliance is earthed.

Material losses
Observe the type plate. The specified rated voltage must match the mains voltage.

▶ Connect the power cable to the mains terminal.



1 Lower back panel section
2 Connection piece in the standard delivery
3 Screw

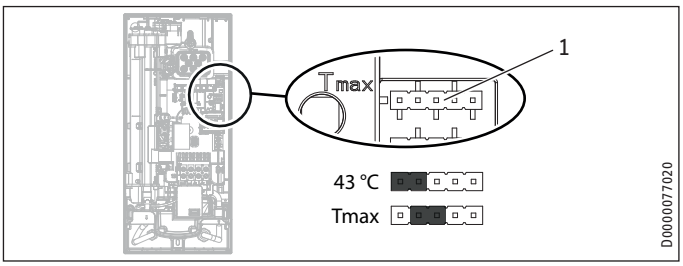
If using threaded fittings on finished walls, the lower back panel section can also be installed after fitting the taps/valves. To do this, carry out the following steps:

▶ Cut open the lower section of the back panel.
▶ Fit the lower section of the back panel by bending it out at the sides and guiding it over the pipes.
▶ Insert the connection pieces into the lower section of the back panel from behind.
▶ Click the lower section of the back panel into place.
▶ Secure the lower back panel section with a screw.

Material losses
The cover plate of the lower back panel section must not bend when installed.

11. Commissioning

11.1 Preparation



1 Jumper for anti-scalding protection setting

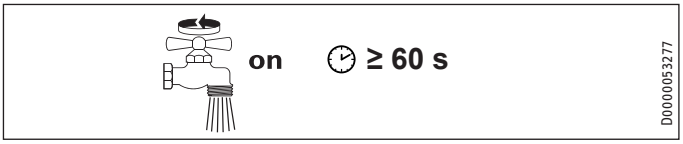
Internal anti-scalding protection via jumper slot

Jumper position	Description
43 °C	
Tmax	Factory setting (60 °C)
No jumper	Limited to 43 °C

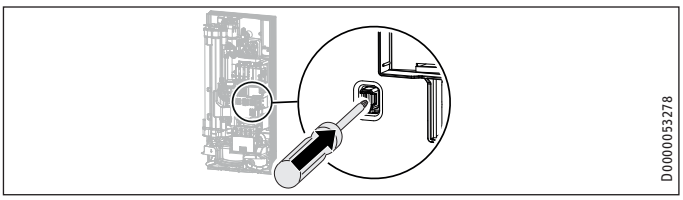
▶ Install the anti-scalding protection setting jumper in the required position on the upper pin strip.

CAUTION Burns
If the appliance is supplied with preheated water, the internal anti-scalding protection may be exceeded.
▶ In such cases, limit the temperature with an upstream central thermostatic valve.

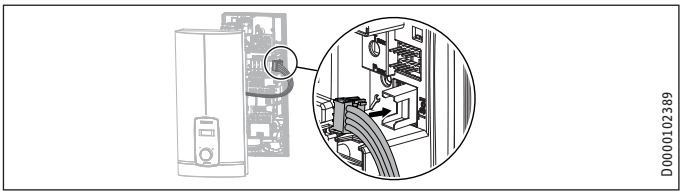
11.2 Initial start-up



▶ Open and close all connected draw-off valves several times, until all air has been purged from the pipework and the appliance.
▶ Carry out a tightness check.



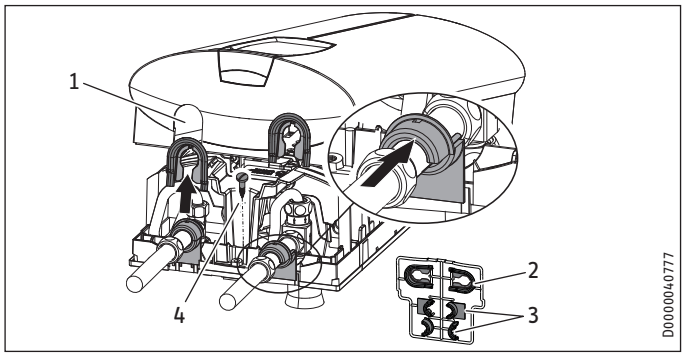
▶ Activate the safety switch by firmly pressing the reset button (the appliance is delivered with the safety switch disabled).



▶ Connect the programming unit connecting cable to the PCB.

Note
For undersink installation, the appliance cover should be turned round for easier operation; see chapter "Alternative installation methods / Pivoting appliance cover".

Fit the appliance cover



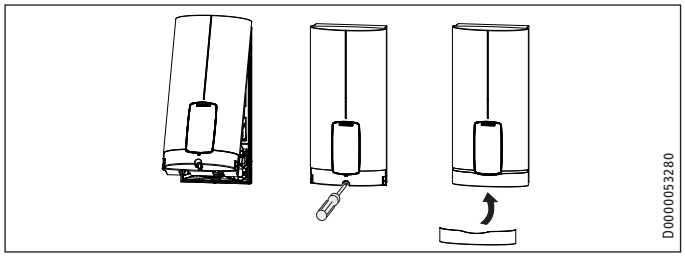
1 Pipe knock-out
2 Cover guides
3 Back panel guides
4 Fixing screw (not part of the standard delivery)

▶ Cleanly cut or break out the knock-out openings in the appliance cover. If necessary, use a file.

Material losses
If you cut open the wrong knock-out in the appliance cover by mistake, you must use a new appliance cover.

Note
You can compensate for a slight connection pipe offset using the tabs on the cover guides. If the connection pipes are offset, do not fit any back panel guides.

▶ When installing connection pipes without offset, break off the tabs on the cover guide pieces.
▶ Click the cover guides into place in the openings.
▶ Position the back panel guides on the extensions. Push them together. Then push the guide pieces against the back panel as far they will go.



▶ Pivot the appliance cover downwards. Check that the appliance cover is securely seated at both top and bottom.
▶ Secure the appliance cover with the screw.
▶ Fit the fascia to the appliance cover.

▶ Switch on the power supply.

11.2.1 Appliance handover

▶ Explain the appliance function to users and familiarise them with its operation.
▶ Make the user aware of potential dangers, especially the risk of scalding.
▶ Hand over the instructions.

11.3 Recommissioning

Material losses
To ensure that the bare wire heating system is not damaged following an interruption to the water supply, the appliance must be restarted taking the following steps.
▶ Disconnect the appliance from the power supply by removing the fuses/tripping the MCBs.
▶ Open the tap for a minimum of one minute until the appliance and its upstream cold water inlet line are free of air.
▶ Switch the power back ON.

12. Appliance shutdown

▶ Isolate all poles of the appliance from the power supply.
▶ Drain the appliance (see chapter "Installation / Maintenance / Draining the appliance").

13. Alternative installation methods

Overview of the alternative types of installation

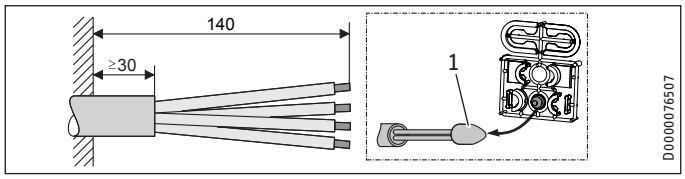
Electrical connection	IP rating
On unfinished walls, connected from above	IP 25
Unfinished walls, from below, short power cable	IP 25
Installation on finished walls	IP 24

Water connection	IP rating
Installation on unfinished walls	IP 25

Other	IP rating
Installation with offset tiles	IP 25
Pivoting appliance cover	IP 25
Horizontal installation of the appliance	IP 24

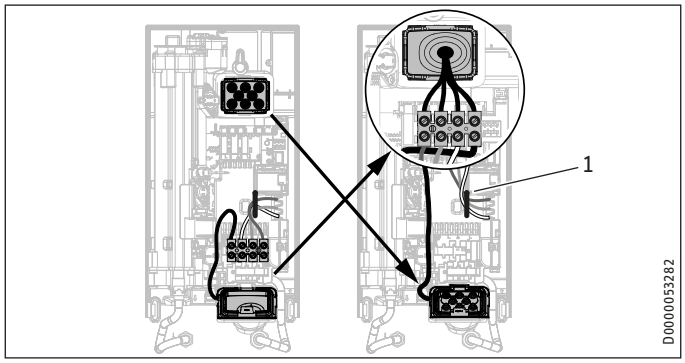
WARNING Electrocution
Before any work on the appliance, disconnect all poles from the power supply.

13.1 Electrical connection from above on unfinished walls



1 Cable entry installation aid

▶ Prepare the power cable.



1 Cable routing

▶ Reposition the mains terminal from the bottom to the top. To do this, undo the fixing screw. Turn the mains terminal with connecting cables 180° clockwise. Route the cable around the cable guide when doing so. Secure the mains terminal in place.

▶ Replace the cable grommets.

▶ Install the cable grommet downwards from above.

▶ Pull the cable grommet over the cable sheath of the power cable.

▶ Install the appliance on the threaded studs of the wall mounting bracket.

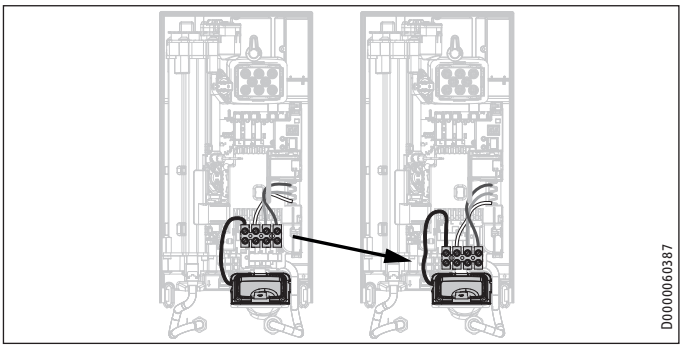
▶ Push the back panel firmly against the wall. Lock the fixing toggle by turning it 90° clockwise.

▶ Pull the cable grommets into the back panel, until both locking tabs engage.

▶ Connect the power cable to the mains terminal.

WARNING Electrocution
The connecting wires must not protrude beyond the level of the mains terminal.

13.2 Electrical connection on unfinished walls with short power cable

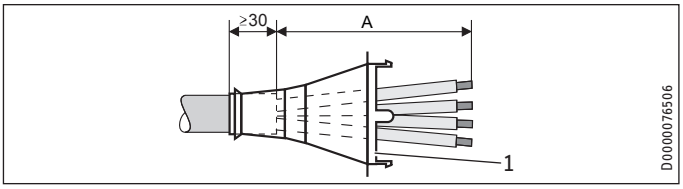


▶ Reposition the mains terminal further downwards. To do this, undo the fixing screw. Secure the mains terminal in place.

13.3 Electrical connection on finished walls

Note
This type of connection changes the IP rating of the appliance.

▶ Change the type plate. Cross out "IP 25" and mark the box "IP 24". Use a ballpoint pen to do this.



1 Cable grommet

Dimension A	Electrical connection on finished walls
160	Positioned in lower section of appliance
110	Positioned in upper section of appliance

▶ Prepare the power cable. Fit the cable grommet.

Material losses
If you break out the wrong knock-out in the back panel/appliance cover by mistake, you must use a new back panel/appliance cover.

▶ Cleanly cut and break out the required cable entries from the back panel and appliance cover (for the positions, see chapter "Specification / Dimensions and connections"). Deburr any sharp edges with a file.

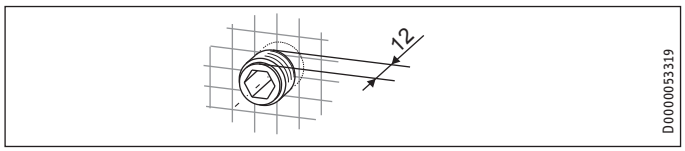
▶ Route the power cable through the cable grommet.

▶ Connect the power cable to the mains terminal.

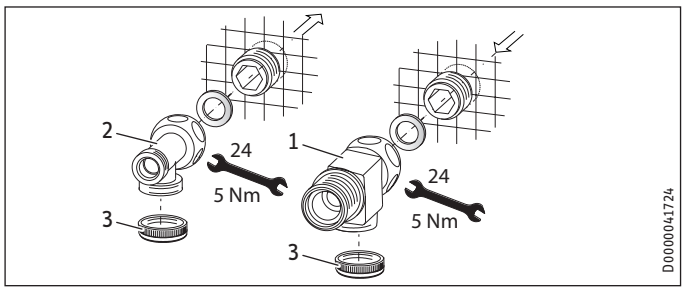
Note
If the appliance is rated IP 24, amend the appliance type plate.

▶ Cross out "IP 25" and mark the box "IP 24". Use a ballpoint pen to do this.

13.4 Water installation on unfinished walls

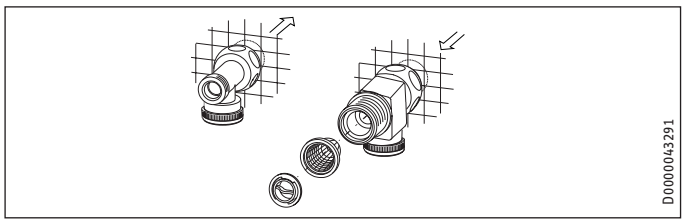


▶ Seal and screw in the twin connectors (not included in standard delivery).



1 Tee for cold water
2 Tee for domestic hot water
3 Cap

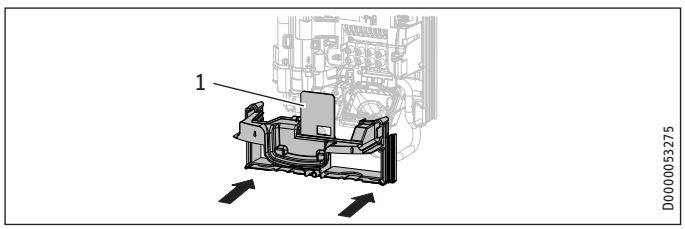
▶ Fit the water connections.



▶ Fit the strainer and the plastic profile washer in the tee for the cold water inlet.

Material losses
The strainer must be fitted for the appliance to function.
▶ When replacing the appliance, check that the strainer is present.

▶ Screw the connection pipes from the appliance to the tee.
▶ Open the shut-off valve in the cold water inlet line.



1 Diffuser on lower back panel

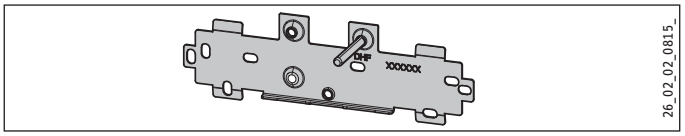
▶ Fit the lower back panel section into the back panel. Check that both locking tabs are engaged.
▶ Align the mounted appliance by undoing the fixing toggle, aligning the power supply and back panel, and then re-tightening the fixing toggle. If the back panel does not sit flush against the wall, you can secure the appliance at the bottom with an additional screw.

Material losses
The cover plate of the lower back panel section must not bend when installed.

13.5 Wall mounting bracket when replacing appliance

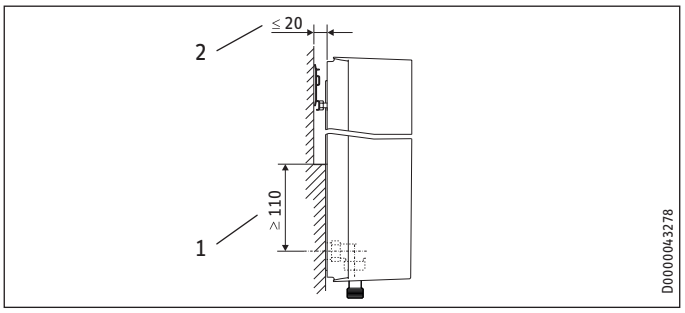
An existing STIEBEL ELTRON wall mounting bracket may be used when replacing appliances (except for DHF instantaneous water heater), as long as the fixing screw is in the lower right position.

Replacing a DHF instantaneous water heater



▶ Reposition the fixing screw on the wall mounting bracket (the securing screw has a self-tapping thread).
▶ Rotate the wall mounting bracket 180° and mount it on the wall (the DHF logo is then turned towards the reader).

13.6 Installation with offset tiles

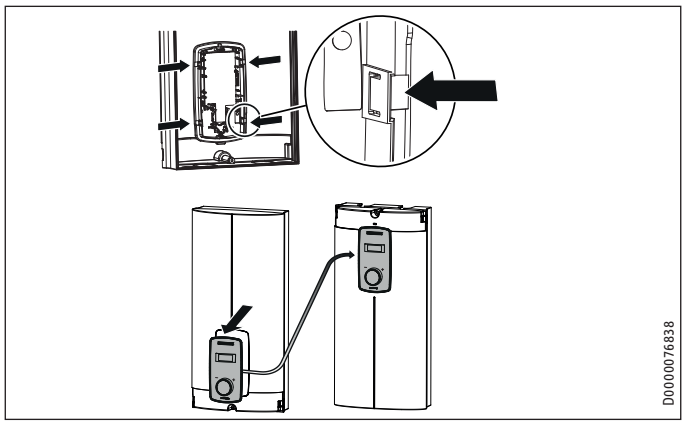


1 Minimum contact area of the appliance
2 Maximum tile offset

▶ Adjust the wall clearance. Lock the back panel in place using the fixing toggle (turn 90° clockwise).

13.7 Pivoting appliance cover

The appliance cover should be turned round for undersink installation.



- ▶ Remove the programming unit from the appliance cover by pressing the locking hooks and removing the programming unit.
- ▶ Turn the appliance cover (not the appliance) and refit the programming unit. Push the programming unit home in parallel until all locking tabs engage. When engaging the locking tabs, apply counter pressure by pushing against the appliance cover from the inside.

WARNING Electrocution
All 4 locking tabs on the programming unit must click into place. The locking tabs must be complete and undamaged. If the programming unit is not inserted correctly, protection of users against contact with live components cannot be ensured.

- ▶ Insert the connecting cable plug of the programming unit into the PCB (see chapter "Commissioning / Initial start-up").
- ▶ Hook the appliance cover in at the bottom. Pivot the appliance cover up to the back panel.
- ▶ Secure the appliance cover.
- ▶ Fit the cover on to the appliance cover.

13.8 Operation with preheated water

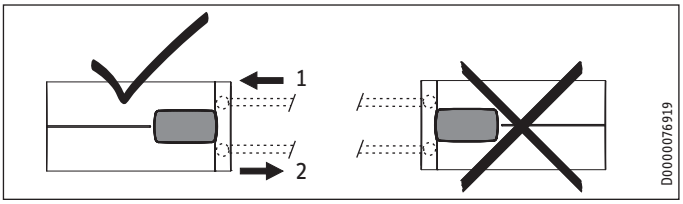
You can restrict the maximum inlet temperature by installing a central thermostatic valve.

13.9 Horizontal installation of the appliance

Note
For the horizontal installation alternative, please note the following points:
- Installation is only permissible with direct wall mounting.
- The installation versions "Installation with offset tiles" and "Rotated appliance cover" are not permissible.
- This type of connection changes the IP rating of the appliance. Cross out "IP 25" on the type plate and mark the box "IP 24". Use a ballpoint pen to do this.

Horizontal installation

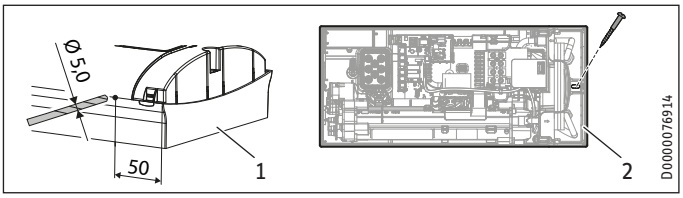
The appliance can also be mounted horizontally on the wall (turned 90° to the left, with the water connections on the right). The installation, water and electrical connections are described in chapters "Standard installation" and "Installation alternatives".



1 Cold water inlet
2 DHW outlet

Preparation

The appliance cover must be provided with a condensate drain opening of min. Ø 5.0 mm to max. Ø 6.0 mm at the marked position.



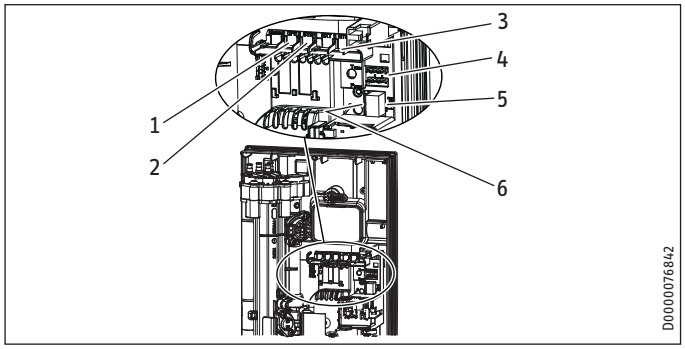
1 Appliance cover with opening for condensate drain
2 Back panel with additional fixing screw

- ▶ Drill a hole from the outside through the dismantled appliance cover at the marked point. Alternatively, you can punch a hole in the appliance cover from the inside at the marked point. In this case, you must then enlarge the hole to the required diameter from the outside. Deburr any sharp edges with a file.
- ▶ Secure the appliance back panel with an additional screw.

Material losses
An appliance cover with an existing condensate drain opening must no longer be used for vertical installation of the appliance.

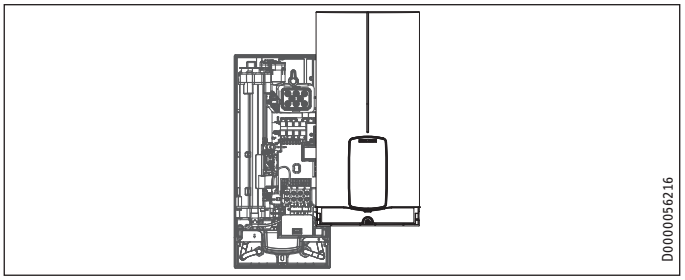
14. Service information

Overview of connections



1 Flow sensor
2 High limit safety cut-out, automatic reset
3 NTC sensor
4 Pin strip for anti-scalding protection
5 Programming unit plug-in position
6 Diagnostic traffic light

Appliance cover retainer



15. Troubleshooting

WARNING Electrocution
To test the appliance, it must be connected to the power supply.

Note
When testing the appliance using the diagnostic traffic lights, water must be flowing.

Indicator options for diagnostic traffic light (LED)		
●○○	Red	Illuminates in the event of a fault
○●○	Yellow	Illuminates in heating mode/flashes when output restriction reached
○○●	Green	Flashing: Appliance connected to power supply

Diagnostic traffic lights (draw-off mode)	Fault	Cause	Remedy
No LED illuminates	Appliance does not heat up	One or more mains power phases missing	Check fuses/MCBs in distribution board
		Faulty PCB	Replacing the function module
Green flashing, yellow off, red off	No DHW	Appliance starting flow rate not reached; shower head/aerator scaled up	Descale/replace the shower head/aerator
		Appliance starting flow rate not reached; strainer in cold water inlet dirty	Cleaning the strainer
		Flow meter not attached	Check plug-in connection; correct if necessary
		Flow meter faulty or dirty	Replacing the flow meter
		Faulty PCB	Replacing the function module
Green flashing, yellow on, red off	No display	Loose connecting cable between PCB and programming unit	Check plug-in connections; correct if necessary
		Faulty connecting cable between PCB and programming unit	Check connecting cable; replace if necessary
		Programming unit faulty	Replacing the programming unit
		Faulty PCB	Replacing the function module
Green flashing, yellow on, red off	No DHW; outlet temperature does not match set value	Tap faulty	Replace tap
		Faulty outlet sensor	Replace the outlet sensor
		Heating system faulty	Replacing the function module
		Faulty PCB	Replacing the function module
Green flashing, yellow flashing, red off	No DHW; outlet temperature does not match set value	Appliance is operating at its output limit	Reduce flow rate; install flow limiter
		Appliance is operating at its output limit	Check jumper position for connected load
		Heating system faulty	Replacing the function module

Diagnostic traffic lights (draw-off mode)	Fault	Cause	Remedy
Green flashing, yellow off, red on	No DHW; outlet temperature does not match set value	One or more mains power phases missing	Check fuses/MCBs in distribution board
		Air detection has responded	Continue draw-off for >1 min
		Safety switch not activated during "Commissioning"	Activate safety switch by pressing the reset button firmly
		Safety switch triggered by high limit safety cut-out	Check high limit safety cut-out (plug-in connection, connecting cable); activate safety switch
		Safety switch responds again after high limit safety cut-out has been checked; high limit safety cut-out faulty	Replace high limit safety cut-out; activate safety switch and draw off water at the maximum set value for >1 min
		Safety switch responds again; PCB faulty	Replacing the function module
		Short circuit in outlet sensor	Check outlet sensor; replace if necessary
		Faulty PCB	Replacing the function module

16. Maintenance

WARNING Electrocution
Before any work on the appliance, disconnect all poles from the power supply.
This appliance contains capacitors which are discharged when disconnected from the power supply. The capacitor discharge voltage may briefly exceed 60 V DC.

Draining the appliance

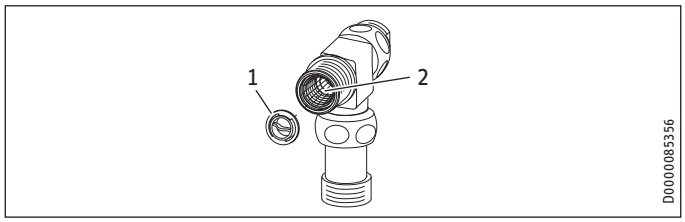
The appliance can be drained for maintenance work.

WARNING Burns
Hot water may escape when you drain the appliance.

- ▶ Close the shut-off valve in the cold water inlet line.
- ▶ Open all draw-off valves.
- ▶ Undo the pipe connections from the appliance.
- ▶ Store the dismantled appliance in a room free from the risk of frost, as water residues remaining inside the appliance can freeze and cause damage.

Cleaning the strainer

If dirty, clean the strainer in the threaded cold water fitting. Close the shut-off valve in the cold water inlet line before removing, cleaning and refitting the strainer.

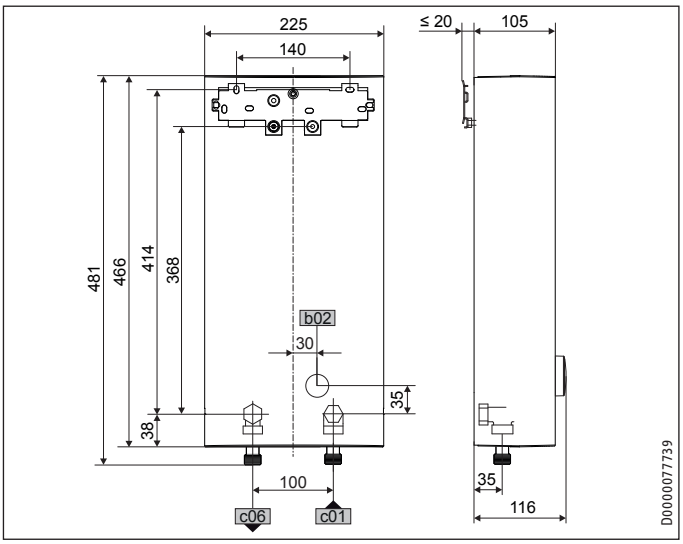


1 Plastic profile washer
2 Strainer

- ▶ Remove the plastic profile washer.
- ▶ Remove the strainer and clean the components.
- ▶ Fit the strainer and the plastic profile washer.

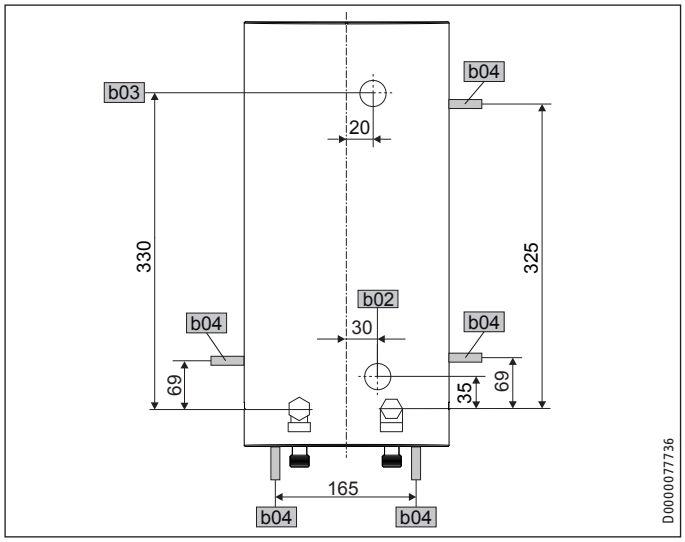
17. Specification

17.1 Dimensions and connections



			DHB-E LCD AU
b02	Entry electrical cables l	On unfinished walls	
c01	Cold water inlet	Male thread	G 1/2 A
c06	DHW outlet	Male thread	G 1/2 A

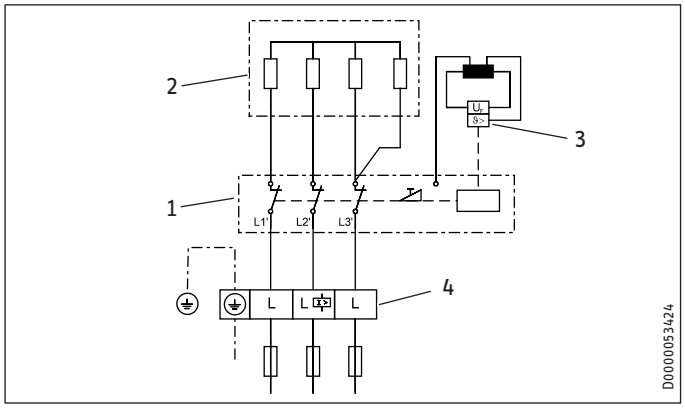
Alternative connection options



			DHB-E LCD AU
b02	Entry electrical cables I	On unfinished walls	
b03	Entry electrical cables II	On unfinished walls	
b04	Entry electrical cables III	On finished walls	

17.2 Wiring diagram

3/PE ~ 380-415 V



1 Power PCB with integral safety switch
2 Bare wire heating system
3 High limit safety cut-out
4 Mains terminal

17.3 Domestic hot water output

The DHW output is subject to the connected power supply, the appliance's connected load and the cold water inlet temperature. The rated voltage and rated output can be found on the type plate.

Connected load in kW			38 °C DHW output in l/min.			
Rated voltage			Cold water inlet temperature			
380 V	400 V	415 V	5 °C	10 °C	15 °C	20 °C
DHB-E 13 LCD AU						
12.2			5.3	6.2	7.6	9.7
	13.5		5.8	6.9	8.4	10.7
		14.5	6.3	7.4	9.0	11.5
DHB-E 18 LCD AU						
16.2			7.0	8.3	10.1	12.9
	18		7.8	9.2	11.2	14.3
		19.4	8.4	9.9	12.0	15.4
DHB-E 27 LCD AU						
23.5			10.2	12.0	14.6	18.7
	26		11.3	13.3	16.1	20.6
		28	12.1	14.3	17.4	22.2

Connected load in kW			50 °C DHW output in l/min.			
Rated voltage			Cold water inlet temperature			
380 V	400 V	415 V	5 °C	10 °C	15 °C	20 °C
DHB-E 13 LCD AU						
12.2			3.9	4.4	5.0	5.8
	13.5		4.3	4.8	5.5	6.4
		14.5	4.6	5.2	5.9	6.9
DHB-E 18 LCD AU						
16.2			5.1	5.8	6.6	7.7
	18		5.7	6.4	7.3	8.6
		19.4	6.2	6.9	7.9	9.2
DHB-E 27 LCD AU						
23.5			7.5	8.4	9.6	11.2
	26		8.3	9.3	10.6	12.4
		28	8.9	10.0	11.4	13.3

17.4 Application areas / Conversion table

Specific electrical resistance and specific electrical conductivity

Standard specification at 15 °C			20 °C			25 °C		
Resistance ρ ≥	Conductivity σ ≤		Resistance ρ ≥	Conductivity σ ≤		Resistance ρ ≥	Conductivity σ ≤	
Ω cm	mS/m	µS/cm	Ω cm	mS/m	µS/cm	Ω cm	mS/m	µS/cm
900	111	1111	800	125	1250	735	136	1361

17.5 Pressure drop

Taps/valves

Tap pressure drop at a flow rate of 10 l/min		
Mono lever mixer tap, approx.	MPa	0.04 - 0.08
Thermostatic valve, approx.	MPa	0.03 - 0.05
Shower head, approx.	MPa	0.03 - 0.15

Sizing the pipework

When calculating the size of the pipework, an appliance pressure drop of 0.1 MPa is recommended.

17.6 Fault conditions

In the event of a fault, loads up to 80 °C at a pressure of 1.0 MPa can occur very briefly in the installation.

17.7 Data table

		DHB-E 13 LCD AU			DHB-E 18 LCD AU			DHB-E 27 LCD AU		
				236747			236748			236749
Electrical data										
Rated voltage	V	380	400	415	380	400	415	380	400	415
Rated output	kW	12.2	13.5	14.5	16.2	18	19.4	23.5	26	28
Rated current	A	18.5	19.5	20	24.7	26	27	35.6	37.7	38.9
Fuses	A	20	20	20	25	25	32	40	40	40
Frequency	Hz	50/60	50/60	50/-	50/60	50/60	50/-	50/-	50/-	50/-
Phases				3/PE			3/PE			3/PE
Specific resistance ρ15 ≥	Ω cm			900			900			900
Specific conductivity σ15 ≤	µS/cm			1111			1111			1111
Max. mains impedance	Ω	0.459	0.436	0.42	0.331	0.315	0.304	0.221	0.21	
Versions										
Heating system heat generator				Bare wire			Bare wire			Bare wire
Adjustable connected load				-			-			-
Temperature setting range	°C			Off, 20-60			Off, 20-60			Off, 20-60
Protection class				1			1			1
Insulating block				Plastic			Plastic			Plastic
Cover and back panel				Plastic			Plastic			Plastic
IP rating				IP25			IP25			IP25
Colour				White			White			White
Connections										
Water connection				G 1/2 A			G 1/2 A			G 1/2 A
Application limits										
Max. permissible pressure	MPa			1			1			1
Max. inlet temperature for reheating	°C			55			55			55
Values										
Max. inlet temperature (e.g. pasteurisation)	°C			70			70			70
ON	l/min			>2.5			>2.5			>2.5
Flow rate limit at	l/min			8			9			9
Flow rate at 28 K	l/min			7.4 at 415 V			9.9 at 415 V			14.3 at 415 V
Flow rate at 50 K	l/min			4.2 at 415 V			5.6 at 415 V			8.0 at 415 V
Pressure drop for flow rate at 50 K (without flow limiter)	MPa			0.04			0.06			0.14
Pressure drop for flow rate at 50 K (with flow limiter)	MPa			0.07			0.12			0.22
Hydraulic data										
Nominal capacity	l			0.4			0.4			0.4
Dimensions										
Height	mm			466			466			466
Width	mm			225			225			225
Depth	mm			116			116			116
Weights										
Weight	kg			2.9			2.9			2.9

Note
The appliance conforms to IEC 61000-3-12.

Information on the appliance software

Stiebel Eltron appliances may contain software of external suppliers (third party suppliers) which may be partly also be subject to an Open Source license. Some Open Source licenses are subject to the obligation to state the software, its authors as well as the licenses that apply to the software and to additionally provide the software as a source code or to offer to provide the source code. Stiebel Eltron therefore provides further information regarding third supplier software that it uses under the link https://www.stiebel-eltron.com/en/info/Licenses.html and also offers the source code there, if applicable. The software is provided only for compliance with the obligations under the Open Source licenses.

Environment and recycling

- Dispose of the appliances and materials after use in accordance with national regulations.

- If a crossed-out waste bin is pictured on the appliance, take the appliance to your local waste and recycling centre or nearest retail take-back point for reuse and recycling.

This document is made of recyclable paper.

- Dispose of the document at the end of the appliance's life cycle in accordance with national regulations.

Who gives the warranty

1. The warranty is given by Stiebel Eltron (Aust) Pty Ltd (A.B.N. 82 066 271 083) of 294 Salmon Street, Port Melbourne, Victoria, 3207 ("we", "us" or "our").

The warranty

2. This warranty applies to the Stiebel Eltron Water Heaters - WaterMark Approved (the "unit") listed within this operating and installation guide manufactured after 1 May 2015.
3. Subject to the warranty exclusions we will repair or replace, at our absolute discretion, a faulty component in your unit free of charge if it fails to operate in accordance with its specifications during the warranty period.
4. If we repair or replace a faulty component to your unit under this warranty, the warranty period is not extended from the time of the repair or replacement.
5. The warranty period commences on the date of completion of the installation of the unit. Where the date of completion of installation is not known, then the warranty period will commence 2 months after the date of manufacture.
6. The warranty period for a unit used for domestic purposes is shown in the table below. Domestic purposes means that the unit is used in a domestic dwelling.

Component	Warranty period
All components	7 years from the date of completion of the installation of the unit.

7. The warranty period for a unit used for commercial purposes is shown in the table below. Commercial purposes means that the unit is used for a non-domestic purpose and includes but not limited to being used in a motel, hotel, mining camp or nursing home.

Component	Warranty period
All components	1 year from the date of completion of the installation of the unit.

Your entitlement to make a warranty claim

8. You are entitled to make a warranty claim if:

8.1. you own the unit or if you have the owner's consent to represent the owner of the unit;

8.2. you contact us within a reasonable time of discovering the problem with the unit;

How you make a warranty claim

9. To make a warranty claim you must provide us with the following information:

9.1. The model number of the unit;

9.2. A description of the problem with the unit;

9.3. The name, address and contact details (such as phone number and e-mail address) of the owner;

9.4. The address where the unit is installed and the location (e.g. in laundry);

9.5. The serial number of the unit;

9.6. The date of purchase of the unit and the name of the seller of the unit;

9.7. The date of installation of the unit;

9.8. A copy of the certificate of compliance when the unit was installed.

10. The contact details for you to make your warranty claim are:

Name:	Stiebel Eltron (Aust) Pty Ltd
Address:	294 Salmon Street, Port Melbourne, Victoria, 3207
Telephone:	1800 153 351 (8.00 am to 5.00 pm AEST Monday to Friday)
Contact person:	Customer Service Representative
E-mail:	service@stiebel-eltron.com.au

11. We will arrange a suitable time with you to inspect and test the unit.

Warranty exclusions

12. We may reject your warranty claim if:

12.1. The unit was not installed by registered and qualified tradespeople.

12.2. The unit was not installed and commissioned:
- (a) in Australia;
- (b) in accordance with the Operating and Installation Guide; and
- (c) in accordance with the relevant statutory and local requirements of the State or Territory in which the unit is installed.

12.3. The unit has not been operated or maintained in accordance with the Operating and Installation Guide.

12.4. The unit does not bear its original Serial Number for Rating Label.

12.5. The unit was damaged by any or any combination of the following:
- (a) normal fair wear and tear;
- (b) connection to an incorrect water supply;
- (c) connection to water from a bore, dam or swimming pool;
- (d) connection to an incorrect power supply;
- (e) connection to faulty equipment, such as damaged valves;
- (f) foreign matter in the water supply, such as sludge or sediment;
- (g) corrosive elements in the water supply;
- (h) accidental damage;
- (i) act of God, including damage by flood, storm, fire, lightning strike and the like;
- (j) excessive water pressure, negative water pressure (partial vacuum) or water pressure pulsation;
- (k) ingress of vermin.

12.6. The unit was damaged before it was installed e.g. it was damaged in transit.

12.7. An unauthorised person has modified, serviced, repaired or attempted to repair the unit without our consent.

12.8. Non genuine parts other than those manufactured or approved by us have been used on the unit.

13. We may charge you:

13.1. for any additional transport costs if the unit is installed more than 30 kilometres from our closest authorised service technician.

13.2. for the extra time it takes our authorised service technician to access the unit for inspection and testing if it is not sited in accordance with the Operating and Installation Guide and not readily accessible for inspection.

13.3. for any extra costs of our authorised service technician to make the unit safe for inspection.

14. You must ensure that access to the unit by our authorised service technician is safe and free from obstruction.
15. Our authorised service technician may refuse to inspect and test the unit until you provide safe and free access to it, at your cost.
16. If we reject your warranty claim in accordance with clause 12, we may charge you for our authorised service technician's labour costs to inspect and test the unit.
17. In order to properly test the unit we may remove it to another location for testing.

Australian Consumer Law

18. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
19. The Stiebel Eltron warranty for the unit is in addition to any rights and remedies you may have under the Australian Consumer Law.

D0000053038

Comfort through Technology

STIEBEL ELTRON International GmbH
Dr.-Stiebel-Straße 33 | 37603 Holzminden | Germany
info@stiebel-eltron.com | www.stiebel-eltron.com

4 017213 282266

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PAP

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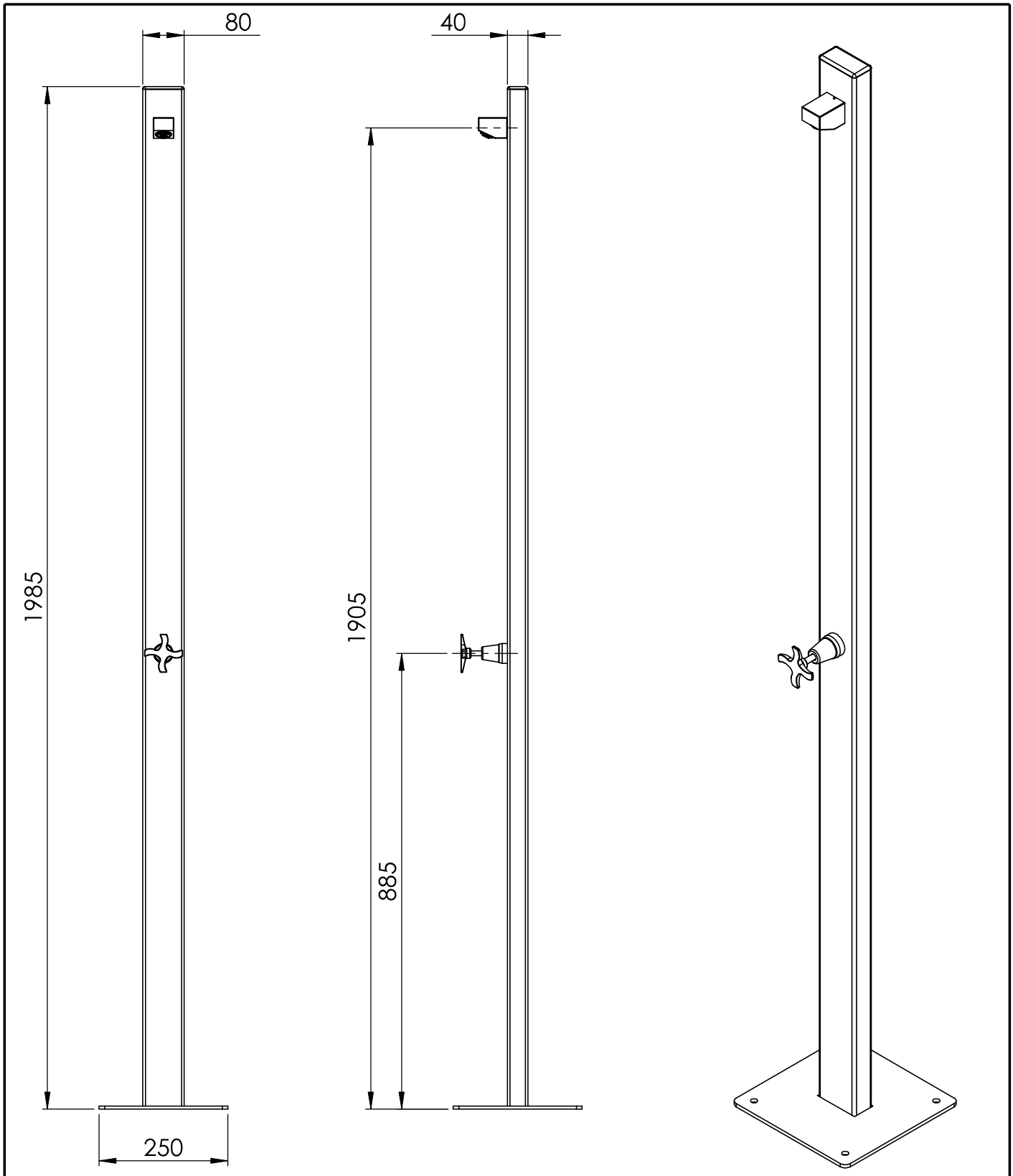
A 328226-45503-9853
B 328227-45503-9853



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:	FINISH: Powdercoat		DEBUR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION	
				© Rainware Pty Ltd 2012		
	NAME	SIGNATURE	DATE	TITLE: Aussie Premium 2500		
DRAWN	Stevan Balfour		9/11/2012			
CHK'D						
APPV'D						
MFG	RAINWARE Pty Ltd					
Q.A				MATERIAL: T5 Marine Grade Aluminium	DWG NO.	A4
				WEIGHT:	SCALE: Not To Scale	SHEET 1 OF 1

rainware
OUTDOOR SHOWERS

Rainware Pty Ltd

ABN: 96 640 055 079 ACN: 134 925 705

Free Standing Pool Showers Installation Instructions

1. Select a position for your Pool Shower away from powerlines & power points. Shower Height is 2 mtrs.

2. Run plumbing underground using ½" poly or copper tube, bring plumbing pipe or pipes out of the ground approximately 2" (50mm) in the centre of the position of the shower. If shower position is beside a wall please position pipe work 200mm away from the wall to allow for the shower to be cleaned.
(The shower has a 250mm round or square base) If using a Hot & Cold Water shower the Hot water should be tempered to max.55 deg (Council Regulations) the showers **do not** have a tempering device.

3. Concrete or pave a level area approximately 400mm or bigger for the shower to be secured to.
(Note: Pavers should be bedded in cement to add weight and stability)
Pipes should have lagging or protection from concrete (some plumbers use a short piece of 100mm DWV or Sewer pipe to protect the pipes).
Flush pipes with water to remove any dirt or pipe filings, these will affect performance of your shower.

Note: Inline stop cocks or isolating valves should be installed before the shower to assist in repair if ever required, this is not compulsory however recommended.

4. Cut the pipes to the desired length staggering the Hot & Cold pipes to make it easier to connect to flexi-connectors. Using compression fittings (1/2" C x MI Union) for copper or Tita fittings (1/2"P x MI Connector) for poly connect pipe work to the ½" FI Flexi-connectors hanging out of the base of the shower.
Note: Hot & Cold are marked with Red Tape (Hot) and Blue Tape (Cold)

5. When tightening to flexi-connectors no thread tape is required. Hand tighten then nip (½ turn) with spanner. Hoses will push inside shower when in upright position. Turn shower on to check for leaks!

6. Position shower in your preferred direction, mark & drill holes using a 10mm Masonry drill. To take out looseness or unevenness in shower, use silicone between shower base and concrete or paving. Tap in dynabolts supplied with a hammer gently and tighten with spanner.

7. Clean your new Pool Shower with a Hillmark Steelkleen stainless steel wipe. These wipes are designed to remove finger prints and water marks, and prevent brown staining. Should light scratching occur, use a Scotch Brite green pot scourer and rub up & down the shower, in the direction of the grain (not across the grain). Please be aware we use structural stainless steel and sometimes there are flaws or scratches in the tube. We do our best to try to remove these before manufacture.

8. For easy maintenance of your Pool Shower, wipe over regularly with Hillmark Steelkleen spray (purchased through most supermarkets)..

If a brown staining occurs:
We use 316 Stainless Steel which does not rust. If brown teastaining does occur, use a Scotch Brite and liquid dishwashing detergent as per instruction no.7 then rinse with clean water. With tapware & rose, closely determine the direction of the grain & apply detergent with Scotchbrite **gently with the grain** until all tea stain is removed.
Regular applications of Steelkleen helps prevent staining & keeps your shower looking good.

9. Thankyou for purchasing a Rainware Pool Shower. Your shower is now ready to use.

Please note: If shower is installed within 1200mm (4') of the pool water please connect earth wire supplied. A qualified electrician must do connection as per AS3000 Electrical Code.

Warning: If the shower is in direct sunlight this could cause the water held in the shower or garden hose connecting the shower to heat up and cause scalding. Please ensure before using the shower to let water run for a few moments to washout any overheated water.

Rainware Pty Ltd: Phone 0754 926 200
Mobile 0411 660 933
Fax 0754 926 788
Email: admin@rainware.com.au

APPENDIX 2

Queensland Government

Form 9— Registration & report on inspection and testing of backflow prevention devices, registered air gaps and registered break tank

Version 1 – July / 2019

GENERAL NOTES: This form is to be used for the purposes of sections 102(2) and 103(3) of the Plumbing and Drainage Regulation 2019 (PDR). Completion of all applicable sections is mandatory. This form must be submitted to local government within 10 business days after inspecting or testing the device.

1. Description of land

The description must identify all land the subject of the application. The lot and plan details (e.g. SP/RP) are shown on title documents or a rate notice.

Street address (include number, street, suburb/locality and postcode)

8 Jubilee Av, Broadbeach

Lot and plan:

Shop/tenancy number *(if applicable)*

Storey/level *(if applicable)*

Local government area

2. Type of notice

☐ Installation/registration ☑ First test (new device) ☐ Standard test

☐ Decommission and removal

3. Hazard level

☑ High ☐ Medium ☐ Low

4. Backflow prevention device and test results

ID Number means the number allocated to the device by the local government or otherwise the manufacturers serial number.

Type of protection

☑ Containment ☐ Zone ☐ Individual

Type of device

☑ Double check valve
☐ Reduced pressure zone device
☐ Registered break tank
☐ Pressure type vacuum breaker
☐ Registered air gap (testable)
☐ Single check valve (testable)

Location of device (eg Under stairs on North side of building serving fire hose reel)

Basement 1

Mains Pressure: 490 kPa

Time of Test: 11 ☐ am/pm

Main Device

Make and Type	Size	Model Number	ID Number
Valuchea	50mm	DC03	10820432

Check Valve #1	Check Valve #2	Differential Pressure
14 kPa	16 kPa	kPa
☑ Upstream isolating valve tight	☑ Downstream isolating valve tight	

By-Pass Test Results (if applicable)

Make and Type	Size	Model Number	ID Number

Check Valve #1	Check Valve #2	Differential Pressure
kPa	kPa	kPa
☐ Upstream isolating valve tight	☐ Downstream isolating valve tight	

Test Remarks

passed.

5. Air gap

Type of Air Gap

☐ Registered air gap ☐ Registered break tank

Size of inlet orifice

ID number

Air gap sizing

Total height spill level plus air gap

6. Test kit

Test kit serial number: E1551-1-19

Date test kit last verified: 31/10/2023

7. Owner/occupier contact details

Owner / Occupier Name

Postal Address (include number, street, suburb/locality and postcode)

Contact phone number

Email address

8. Authorised tester details

Authorised testers name: Andrew Papotto

Authorised testers phone number: 1800 367 727

Occupational licence number: 26739

Contractor licence number (if applicable): 1214559

Date of test

Authorised testers Email: Andrew@qcp.net.au

9. Contractor licence

If the 'responsible person' is not the contractor for the work, the contractor's details must be provided here.

Full name of company *(or individual if not a company)*: QLD Coastal Plumbing Services

Contractor licence number: 1214559

Phone number: 1800367 727

Email address: info@qcp.net.au

10. Authorised tester's completion/results

If the test and/or commissioning does not comply with the code requirements a detailed description must be provided.

I have tested the above device/s in accordance with AS 2845.3:2010

Appendix: (to be nominated by the tester)

☐ Appendix A: Registered air gaps and registered break tanks
☐ Appendix C: Pressure-type vacuum-breaker
☐ Appendix D: Reduced-pressure-zone backflow prevention device
☑ Appendix E: Double check-valves
☐ Appendix F: Reduced-pressure-detector assembly
☐ Appendix G: Double check detector assembly backflow prevention device
☐ Appendix H: Single check valve testable device
☐ Appendix I: Single check-valve detector assemblies

☑ **Pass** ☐ **Fail**

11. Declaration

I hereby state that that the information provided in this form is a true and accurate record.

Signature

Date: 23/8/24

PRIVACY NOTICE: The information on this form is collected as required under the *Plumbing and Drainage Act 2018* (PDA) by local governments. This information may be stored in the local government database and will be used for purposes related to deciding an application and monitoring compliance under the PDA. Your personal information will be disclosed to the financial institution which handles the local government's financial transactions and may be disclosed to other local government agencies, local government authorities, the Queensland Building and Construction Commission and third parties for purposes relating to administering and monitoring compliance with the PDA. Personal information will otherwise only be disclosed to third parties with your consent or in accordance with the *Information Privacy Act 2009*.

RTI: The information collected on this form will be retained as required by the *Public Records Act 2002* and other relevant Acts and regulations and is subject to the Right to Information regime established by the *Right to Information Act 2009*.

Queensland Government

Form 9— Registration & report on inspection and testing of backflow prevention devices, registered air gaps and registered break tank

Version 1 – July / 2019

GENERAL NOTES: This form is to be used for the purposes of sections 102(2) and 103(3) of the Plumbing and Drainage Regulation 2019 (PDR). Completion of all applicable sections is mandatory. This form must be submitted to local government within 10 business days after inspecting or testing the device.

1. Description of land

The description must identify all land the subject of the application. The lot and plan details (e.g. SP/RP) are shown on title documents or a rate notice.

Street address (include number, street, suburb/locality and postcode)

8 Jubilee Av
Broadbeach

Lot and plan:

Shop/tenancy number (if applicable)

Storey/level (if applicable)

Local government area

2. Type of notice

☐ Installation/registration ☐ First test (new device) ☐ Standard test

☐ Decommission and removal

3. Hazard level

☑ High ☐ Medium ☐ Low

4. Backflow prevention device and test results

ID Number means the number allocated to the device by the local government or otherwise the manufacturers serial number.

Type of protection

☐ Containment ☐ Zone ☑ Individual

Type of device

☐ Double check valve
☑ Reduced pressure zone device
☐ Registered break tank
☐ Pressure type vacuum breaker
☐ Registered air gap (testable)
☐ Single check valve (testable)

Location of device (eg Under stairs on North side of building serving fire hose reel)

Basement

Mains Pressure: 490 kPa

Time of Test: 10 ☑ am/pm

Main Device

Make and Type	Size	Model Number	ID Number
Zurn Wilkins	40mm	375RP	AKE3786

Check Valve #1	Check Valve #2	Differential Pressure
22 kPa	14 kPa	14 kPa
☑ Upstream isolating valve tight	☑ Downstream isolating valve tight	

By-Pass Test Results (if applicable)

Make and Type	Size	Model Number	ID Number

Check Valve #1	Check Valve #2	Differential Pressure
kPa	kPa	kPa
☐ Upstream isolating valve tight	☐ Downstream isolating valve tight	

Test Remarks

passed

5. Air gap

Type of Air Gap

☐ Registered air gap ☐ Registered break tank

Size of inlet orifice

ID number

Air gap sizing

Total height spill level plus air gap

6. Test kit

Test kit serial number: E1551-1-19

Date test kit last verified: 31/10/2023

7. Owner/occupier contact details

Owner / Occupier Name

Postal Address (include number, street, suburb/locality and postcode)

Contact phone number

Email address

8. Authorised tester details

Authorised testers name: Andrew Papotto

Authorised testers phone number: 1800 367 727

Occupational licence number: 26739

Contractor licence number (if applicable): 1214559

Date of test

Authorised testers Email: Andrew@qcp.net.au

9. Contractor licence

If the 'responsible person' is not the contractor for the work, the contractor's details must be provided here.

Full name of company *(or individual if not a company)*: QLD Coastal Plumbing Services

Contractor licence number: 1214559

Phone number: 1800367 727

Email address: info@qcp.net.au

10. Authorised tester's completion/results

If the test and/or commissioning does not comply with the code requirements a detailed description must be provided.

I have tested the above device/s in accordance with AS 2845.3:2010

Appendix: (to be nominated by the tester)

☑ Appendix A: Registered air gaps and registered break tanks
☐ Appendix C: Pressure-type vacuum-breaker
☐ Appendix D: Reduced-pressure-zone backflow prevention device
☐ Appendix E: Double check-valves
☐ Appendix F: Reduced-pressure-detector assembly
☐ Appendix G: Double check detector assembly backflow prevention device
☐ Appendix H: Single check valve testable device
☐ Appendix I: Single check-valve detector assemblies

☑ **Pass** ☐ **Fail**

11. Declaration

I hereby state that that the information provided in this form is a true and accurate record.

Signature

Date: 23/8/24

PRIVACY NOTICE: The information on this form is collected as required under the *Plumbing and Drainage Act 2018* (PDA) by local governments. This information may be stored in the local government database and will be used for purposes related to deciding an application and monitoring compliance under the PDA. Your personal information will be disclosed to the financial institution which handles the local government's financial transactions and may be disclosed to other local government agencies, local government authorities, the Queensland Building and Construction Commission and third parties for purposes relating to administering and monitoring compliance with the PDA. Personal information will otherwise only be disclosed to third parties with your consent or in accordance with the *Information Privacy Act 2009*.

RTI: The information collected on this form will be retained as required by the *Public Records Act 2002* and other relevant Acts and regulations and is subject to the Right to Information regime established by the *Right to Information Act 2009*.

Queensland Government

Form 9— Registration & report on inspection and testing of backflow prevention devices, registered air gaps and registered break tank

Version 1 – July / 2019

GENERAL NOTES: This form is to be used for the purposes of sections 102(2) and 103(3) of the Plumbing and Drainage Regulation 2019 (PDR). Completion of all applicable sections is mandatory. This form must be submitted to local government within 10 business days after inspecting or testing the device.

1. Description of land

The description must identify all land the subject of the application. The lot and plan details (e.g. SP/RP) are shown on title documents or a rate notice.

Street address (include number, street, suburb/locality and postcode)

8 Jubilee Ave
Broadbeach

Lot and plan:

Shop/tenancy number *(if applicable)*

Storey/level *(if applicable)*

Local government area

2. Type of notice

☐ Installation/registration ☐ First test (new device) ☐ Standard test

☐ Decommission and removal

3. Hazard level

☐ High ☑ Medium ☐ Low

4. Backflow prevention device and test results

ID Number means the number allocated to the device by the local government or otherwise the manufacturers serial number.

Type of protection

☑ Containment ☐ Zone ☐ Individual

Type of device

☐ Double check valve
☐ Reduced pressure zone device
☐ Registered break tank
☐ Pressure type vacuum breaker
☐ Registered air gap (testable)
☑ Single check valve (testable)

Location of device (eg Under stairs on North side of building serving fire hose reel)

Basement 1

Mains Pressure: 505 kPa

Time of Test: 11:30 (am)/pm

Main Device

Make and Type	Size	Model Number	ID Number
WATTS	100mm	SCVT	AN0024

Check Valve #1 | Check Valve #2 | Differential Pressure

28 kPa ☑ Upstream isolating valve tight

30 kPa ☑ Downstream isolating valve tight

kPa

By-Pass Test Results (if applicable)

Make and Type	Size	Model Number	ID Number

Check Valve #1 | Check Valve #2 | Differential Pressure

kPa ☐ Upstream isolating valve tight

kPa ☐ Downstream isolating valve tight

kPa

Test Remarks

5. Air gap

Type of Air Gap

☐ Registered air gap ☐ Registered break tank

Size of inlet orifice	
ID number	
Air gap sizing	
Total height spill level plus air gap	

6. Test kit

Test kit serial number	Date test kit last verified
E155-1-19	31/10/2023

7. Owner/occupier contact details

Owner / Occupier Name

Postal Address (include number, street, suburb/locality and postcode)

Contact phone number	Email address

8. Authorised tester details

Authorised testers name	Authorised testers phone number
Andrew Papotto	1800 367 727
Occupational licence number	**Contractor licence number (if applicable)**
26739	1214559
Date of test	**Authorised testers Email**
	andrew@qcp.net.au.

9. Contractor licence

If the 'responsible person' is not the contractor for the work, the contractor's details must be provided here.

Full name of company *(or individual if not a company)*

QLD Coastal Plumbing Services.

Contractor licence number

1214559

Phone number	Email address
1800 367 727	info@qcp.net.au.

10. Authorised tester's completion/results

If the test and/or commissioning does not comply with the code requirements a detailed description must be provided.

I have tested the above device/s in accordance with AS 2845.3:2010

Appendix: (to be nominated by the tester)

- ☐ Appendix A: Registered air gaps and registered break tanks
- ☐ Appendix C: Pressure-type vacuum-breaker
- ☐ Appendix D: Reduced-pressure-zone backflow prevention device
- ☐ Appendix E: Double check-valves
- ☐ Appendix F: Reduced-pressure-detector assembly
- ☐ Appendix G: Double check detector assembly backflow prevention device
- ☑ Appendix H: Single check valve testable device
- ☐ Appendix I: Single check-valve detector assemblies

☑ **Pass** ☐ **Fail**

11. Declaration

I hereby state that that the information provided in this form is a true and accurate record.

Signature	Date
	18/09/2024

PRIVACY NOTICE: The information on this form is collected as required under the *Plumbing and Drainage Act 2018* (PDA) by local governments. This information may be stored in the local government database and will be used for purposes related to deciding an application and monitoring compliance under the PDA. Your personal information will be disclosed to the financial institution which handles the local government's financial transactions and may be disclosed to other local government agencies, local government authorities, the Queensland Building and Construction Commission and third parties for purposes relating to administering and monitoring compliance with the PDA. Personal information will otherwise only be disclosed to third parties with your consent or in accordance with the *Information Privacy Act 2009*.

RTI: The information collected on this form will be retained as required by the *Public Records Act 2002* and other relevant Acts and regulations and is subject to the Right to Information regime established by the *Right to Information Act 2009*.

Form 12 Aspect Inspection Certificate (Appointed Competent Person)

Queensland Government

This form is to be used for the purposes of sections 74 and 77 of the Building Regulation 2021 (appointed competent person statement that an aspect of work has been completed and complies with the building development approval).

Information about how to complete this form is in the Appendix at the end of the form.

1. Indicate the aspect of the building work

Examples of aspects of the stage of building work (and not limited to the examples provided below):

waterproofing, tiling, glazing, energy efficiency, emergency lights, exit signs, smoke detection, air-conditioning.

Aspect of building work (indicate the aspect)
Hydraulic Services – Stormwater

2. Property description

The description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address	8 Jubilee Ave		
		Suburb/locality	Broadbeach
State	QLD	Postcode	4218

Lot and plan details *(attach list if necessary)*
8 SP304483
Local government area the land is situated in
Council of the City of Gold Coast

3. Building/structure description

Building/structure description
Multi-unit residential

Class of building/structure
2, 7a, 10b

4. Description of the extent of aspect/s certified

Clearly describe the extent of work covered by this certificate, i.e. all structural aspects of the steel roof beams and location i.e. what floors the work was on, the parts of a room.

Stormwater Installation Includes –

- Fastflow Stormwater system
- Gravity System
- Gross pollutant trap
- Pump station

5. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

BCA 2019 Amendment 1 Vol 1
AS/NZ300.3

6. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Hydraulic Drawings – H000 – H402

7. Building certifier reference number and building development approval number

Building certifier's name *(in full)*	Mark McDonald		
Building certifier reference number	QLD220365	Development approval number	

8. Details of appointed competent person

Name *(in full)*	Andrew Papotto		
Company name *(if applicable)*	QLD Coastal Plumbing		
Contact person	Andrew Papotto		
Business phone number	1800367727	Mobile	0419790726
Email address	Andrew@qcp.net.au		
Postal address	PO box 479 Miami		
		Suburb/locality	
State	QLD	Postcode	4220
Licence class or registration type *(if applicable)*	Plumbing & Drainage		
Licence class or registration number *(if applicable)*	26739		
Date request to inspect received from building certifier	14/08/2024		

9. Signature of appointed competent person

Signature		Date	14/08/2024

LOCAL GOVERNMENT USE ONLY

Date received	Click or tap to enter a date.	Reference number/s	

Appendix – explanatory information

IMPORTANT NOTE: a competent person who knowingly or reasonably suspects the information they are giving to the building certifier is false or misleading, including the information contained in this certificate (Form 12), commits an offence and is liable to a maximum penalty of 100 penalty units.

When is this certificate needed? (sections 10 of the *Building Act 1975* (Building Act) and 75 of Building Regulation 2021 (BR 2021))

When performing a building certification function, a building certifier may accept and rely on ***an aspect inspection certificate*** from an appointed competent person to satisfy themselves that an aspect of work has been completed and complies with the building development approval.

For a single detached class 1a building a building certifier can only accept this form for an aspect of work that is for

- boundary clearance if the appointed competent person is a cadastral surveyor, and,
- the reinforcement of footing systems if the appointed competent person is the appropriate registered professional engineer.

For further information about inspections for detached class 1a and 10 buildings or structures, refer to **Guideline for inspections of class 1 and 10 buildings and structures.**

Who can sign this certificate (Form 12)? (Part 9, Division 2, Section 74 of the BR 2021)

A person assessed and appointed as a competent person (inspections) must complete the approved form (Form 12) and give it to the building certifier after they (1) inspect the aspect of work; and (2) are satisfied the aspect of work has been completed and complies with the building development approval.

Competent person (section 10 Part 6 of the BR 2021)

A building certifier must assess and decide to appoint an individual as a competent person before they can, as a competent person, give inspection help or design-specification help. The building certifier is required to keep detailed records about what was considered when appointing a competent person.

A competent person cannot give inspection help to a building certifier until they have been appointed by the building certifier. For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

Inspection help (section 34 of the BR 2021)

A building certifier must be satisfied that an individual is competent to give the type of inspection help having regard to the individual's experience, qualifications and skills and if required by law to hold a licence or registration, that the individual is appropriately registered or licensed.

For further information about conducting inspections for class 2 to 9 buildings, refer to the **Guideline for inspection of class 2 to 9 buildings.**

How to complete this form

Section 1 – Aspect of building work

An aspect of building work means a component of a stage of the building work, for example water proofing. A stage of assessable building work (requires a building development approval) is a stage of the work, prescribed by regulation, that may be inspected, or stated in a building development approval by the relevant building certifier.

Section 2 – Property description

The property description must identify all the land the subject of the application. The lot and plan details (e.g. SP/RP) can be found on title documents or a rates notice. If the plan is not registered by title, provide previous lot and plan details.

Section 3 – Building / structure description

Describe the type of building or structures and provide the classification determined under the National Construction Code (NCC). The NCC can be accessed at the Australian Building Codes Board's website.

Section 4 – Describe the extent or location of the aspect work inspected.

Clearly describe the extent of work covered by this certificate, i.e. all structural aspects of the steel roof beams and location i.e. what floors the work was on, the parts of a room.

Sections 5 – Basis for the certification and section 6 Reference documentation (section 77 of BR 2021)

The appointed competent person (inspections) must state the basis for giving the certificate (Form 12) including the extent to which the competent person has relied on tests, specifications, rules, standards, codes of practice or other publications to make their decision that the aspect of work has been completed and complies with the building development approval.

Under the regulation (section 76) the appointed competent person (inspections) may accept and rely on a certificate (Form 12) from another appointed competent person (inspections) without inspecting the work. Although this can only be done if the inspection was carried out in accordance with best industry practice.

Other relevant inspection / aspect forms

Aspect work – assessable building work: Form 43 – Aspect certificate (completed by a QBCC licensee) for aspect work for a single detached class 1a building and class 10 buildings and structures.

Aspect work not subject to a building development approval - accepted development (self-assessable): Form 30 – (completed by a QBCC licensee) given to either the builder or building owner of the building, stating the subject aspect work complies with the relevant provisions, standards and codes.

Stages of work: Form 16 – Inspection certificate (completed by a building certifier or competent person) for a stage of work.

Building design – specification: Form 15 – Compliance certificate for building design or specification (completed by the appointed competent person (design – specification)) - for an aspect of stating a building design – specification will, if installed or carried out to the detail under this Form will comply with the building assessment provisions.

For all other building forms and guidelines visit the Business Queensland website.

PRIVACY NOTICE

The Department of Energy and Public Works is collecting personal information as required under the *Building Act 1975*. This information may be stored by the Department, and will be used for administration, compliance, statistical research and evaluation of building laws. Your personal information will be disclosed to other government agencies, local government authorities and third parties for purposes relating to administering and monitoring compliance with the *Building Act 1975*. Personal information will otherwise only be disclosed to third parties with your consent or unless authorised or required by law.

Form 12 Aspect Inspection Certificate (Appointed Competent Person)

Queensland Government

This form is to be used for the purposes of sections 74 and 77 of the Building Regulation 2021 (appointed competent person statement that an aspect of work has been completed and complies with the building development approval).

Information about how to complete this form is in the Appendix at the end of the form.

1. Indicate the aspect of the building work

Examples of aspects of the stage of building work (and not limited to the examples provided below):

waterproofing, tiling, glazing, energy efficiency, emergency lights, exit signs, smoke detection, air-conditioning.

Aspect of building work (indicate the aspect)
Certify Installation of Fire Rated Penetrations

2. Property description

The description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address	8 Jubilee Avenue		
		Suburb/locality	Broadbeach
State	QLD	Postcode	4218

Lot and plan details *(attach list if necessary)*
Lot 8 on SP304483
Local government area the land is situated in
Gold Coast City Council

3. Building/structure description

Building/structure description
Multi-unit residential
Class of building/structure
Class 2, 7a, 10b

4. Description of the extent of aspect/s certified

Clearly describe the extent of work covered by this certificate, i.e. all structural aspects of the steel roof beams and location i.e. what floors the work was on, the parts of a room.

Installation of passive fire systems as per below Register

5. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

AS1530.4-2014, AS 4072.1-2005
NCC (BCA) 2019 Volume 1, Amendment 1 – Part C3.15
Installed as per manufactures installation guidelines
Test reports as registered

6. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Approved documents as listed in the Development Approval for Building Works associated with the Development
QLD Costal Plumbing – Malo Fire Penetration Register and Location Plans

7. Building certifier reference number and building development approval number

Building certifier's name *(in full)*	Mark McDonald		
Building certifier reference number	QLD220365	Development approval number	

8. Details of appointed competent person

Name *(in full)*	Craig Ian McLennan		
Company name *(if applicable)*	N/A		
Contact person	As above		
Business phone number	N/A	Mobile	0424 400 089
Email address	craig@ceasefirecertification.com.au		
Postal address	122 Cracknell Road		
		Suburb/locality	Tarragindi
State	QLD	Postcode	4121
Licence class or registration type *(if applicable)*	Passive Fire Protection – Fire Collars, Penetrations & Joint Sealing		
Licence class or registration number *(if applicable)*	QBCC 1182454		
Date request to inspect received from building certifier	Click or tap to enter a date.		

9. Signature of appointed competent person

Signature		Date	20/08/2024

LOCAL GOVERNMENT USE ONLY

Date received	Click or tap to enter a date.	Reference number/s	

Appendix – explanatory information

IMPORTANT NOTE: a competent person who knowingly or reasonably suspects the information they are giving to the building certifier is false or misleading, including the information contained in this certificate (Form 12), commits an offence and is liable to a maximum penalty of 100 penalty units.

When is this certificate needed? (sections 10 of the *Building Act 1975* (Building Act) and 75 of Building Regulation 2021 (BR 2021))

When performing a building certification function, a building certifier may accept and rely on ***an aspect inspection certificate*** from an appointed competent person to satisfy themselves that an aspect of work has been completed and complies with the building development approval.

For a single detached class 1a building a building certifier can only accept this form for an aspect of work that is for

- boundary clearance if the appointed competent person is a cadastral surveyor, and,
- the reinforcement of footing systems if the appointed competent person is the appropriate registered professional engineer.

For further information about inspections for detached class 1a and 10 buildings or structures, refer to **Guideline for inspections of class 1 and 10 buildings and structures.**

Who can sign this certificate (Form 12)? (Part 9, Division 2, Section 74 of the BR 2021)

A person assessed and appointed as a competent person (inspections) must complete the approved form (Form 12) and give it to the building certifier after they (1) inspect the aspect of work; and (2) are satisfied the aspect of work has been completed and complies with the building development approval.

Competent person (section 10 Part 6 of the BR 2021)

A building certifier must assess and decide to appoint an individual as a competent person before they can, as a competent person, give inspection help or design-specification help. The building certifier is required to keep detailed records about what was considered when appointing a competent person.

A competent person cannot give inspection help to a building certifier until they have been appointed by the building certifier. For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

Inspection help (section 34 of the BR 2021)

A building certifier must be satisfied that an individual is competent to give the type of inspection help having regard to the individual's experience, qualifications and skills and if required by law to hold a licence or registration, that the individual is appropriately registered or licensed.

For further information about conducting inspections for class 2 to 9 buildings, refer to the **Guideline for inspection of class 2 to 9 buildings.**

How to complete this form

Section 1 – Aspect of building work

An aspect of building work means a component of a stage of the building work, for example water proofing. A stage of assessable building work (requires a building development approval) is a stage of the work, prescribed by regulation, that may be inspected, or stated in a building development approval by the relevant building certifier.

Section 2 – Property description

The property description must identify all the land the subject of the application. The lot and plan details (e.g. SP/RP) can be found on title documents or a rates notice. If the plan is not registered by title, provide previous lot and plan details.

Section 3 – Building / structure description

Describe the type of building or structures and provide the classification determined under the National Construction Code (NCC). The NCC can be accessed at the Australian Building Codes Board's website.

Section 4 – Describe the extent or location of the aspect work inspected.

Clearly describe the extent of work covered by this certificate, i.e. all structural aspects of the steel roof beams and location i.e. what floors the work was on, the parts of a room.

Sections 5 – Basis for the certification and section 6 Reference documentation (section 77 of BR 2021)

The appointed competent person (inspections) must state the basis for giving the certificate (Form 12) including the extent to which the competent person has relied on tests, specifications, rules, standards, codes of practice or other publications to make their decision that the aspect of work has been completed and complies with the building development approval.

Under the regulation (section 76) the appointed competent person (inspections) may accept and rely on a certificate (Form 12) from another appointed competent person (inspections) without inspecting the work. Although this can only be done if the inspection was carried out in accordance with best industry practice.

Other relevant inspection / aspect forms

Aspect work – assessable building work: Form 43 – Aspect certificate (completed by a QBCC licensee) for aspect work for a single detached class 1a building and class 10 buildings and structures.

Aspect work not subject to a building development approval - accepted development (self-assessable): Form 30 – (completed by a QBCC licensee) given to either the builder or building owner of the building, stating the subject aspect work complies with the relevant provisions, standards and codes.

Stages of work: Form 16 – Inspection certificate (completed by a building certifier or competent person) for a stage of work.

Building design – specification: Form 15 – Compliance certificate for building design or specification (completed by the appointed competent person (design – specification)) - for an aspect of stating a building design – specification will, if installed or carried out to the detail under this Form will comply with the building assessment provisions.

For all other building forms and guidelines visit the Business Queensland website.

PRIVACY NOTICE

The Department of Energy and Public Works is collecting personal information as required under the *Building Act 1975*. This information may be stored by the Department, and will be used for administration, compliance, statistical research and evaluation of building laws. Your personal information will be disclosed to other government agencies, local government authorities and third parties for purposes relating to administering and monitoring compliance with the *Building Act 1975*. Personal information will otherwise only be disclosed to third parties with your consent or unless authorised or required by law.

Form 15 Compliance certificate for building design or specification

Queensland Government

This form is the approved form that must be used in accordance with section 10 of the *Building Act 1975* and sections 73 and 77 of the Building Regulation 2021 (Design-specification certificate) stating that an aspect of building work or specification will, if installed or carried out as stated in this form, comply with the building assessment provisions.

Additional explanatory information is included in the Appendix at the end of this form.

1. Property description

This section need only be completed if details of street address and property description are applicable.

E.g. in the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

Where applicable, the description must identify all land the subject of the application.

The lot and plan details (e.g. SP/RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address *(include number, street, suburb/locality and postcode)*

8 Jubilee Avenue

Broadbeach State QLD Postcode 4218

Lot and plan details *(attach list if necessary)*

Lot 8 on SP304483

Local government area the land is situated in

Council of the City of Gold Coast

2. Description of aspect/s certified

Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.

Hydraulic services design including:
Roof water
Stormwater Drainage

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications were relied upon.

The documentation listed in item 4 has been designed in accordance with the following:
AS 3500-2018 Parts 0, 1 & 3
National Construction Code (NCC) Series Volumes 1 & 3
Queensland Development Code (QDC)
Qld Plumbing and Drainage Act 2018
Qld Standard Plumbing and Drainage Regulation 2019

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

SJM Hydraulics Project Number SJM22205
Design Drawings H000, H100, H200, H201, H202, H203, H204, H205, H206, H207
H300, H301, H302, H303, H304, H305, H306, H400, H401, H402

5. Building certifier reference number and building development application number

Building certifier reference number
QLD220365

Building development application number *(if available)*

6. Appointed competent person details

Under Part 6 of the Building Regulation 2021 a person must be assessed as a competent for the type of work (design-specification) by the relevant building certifier.

Name *(in full)*
Jacob Maguire

Company name *(if applicable)*
SJM Hydraulics Pty Ltd

Contact person
Jacob Maguire

Business phone number
07 5562 0341

Mobile number
0413 029 082

Email address
mail@sjmhydraulics.com.au

Postal address
PO Box 3449

Robina Town Centre State QLD Postcode 4230

Licence class or registration type *(if applicable)*
QBCC

Licence or registration number *(if applicable)*
1268850 (SJM Hydraulics Pty Ltd) 1260844 (Jacob Maguire)

7. Signature of appointed competent person

This certificate must be signed by the individual assessed and appointed by the building certifier as competent to give design-specification help.

Signature 

Date
14/08/2024

LOCAL GOVERNMENT USE ONLY

Date received		**Reference number/s**	

Appendix – explanatory information

IMPORTANT NOTE: it is an offence for a competent person to give a building certifier a document, including this form, that the person knows or reasonably suspects, is false or misleading.

Who can complete this certificate? (section 10 of the *Building Act 1975* (Building Act) and sections 73 and 77 of Building Regulation 2021 (BR 2021))
A building certifier can accept from a competent person (design-specification) a certificate stating that the competent person has assessed the building design or specification for the aspect of building work, and it will, if installed or carried out under the certificate, comply with the building assessment provisions, including any relevant standards and codes.

Schedule 10 of the BR 2021 defines *building design or specification* as any material, system, method of building or other thing related to the design of or specifications for building work.

When completing the certificate, a competent person is required under section 77 of the BR 2021 to include the basis for giving the certificate and state the extent to which the competent person has relied on tests, specifications, rules, standards, codes of practice or other publications.

What is the purpose of this form? (section 10 of the Building Act and sections 73 and 77 of the BR 2021)
The information in this form informs the building certifier's decision making when they are assessing a building development application, issuing the building development approval for the building work the subject of the certificate (form) and when amending the building development approval due to the receipt of updated aspect information such as glazing or truss specifications or revised excavation drawings.

Can a manufacturer or supplier give this Form 15?
A building certifier can accept this form from a manufacturer or supplier who the certifier has decided is a competent person (design-specification).

A manufacturer or supplier of building materials can give this form if they have undertaken the design component for the product. For example a window manufacturer who designs, constructs and supplies the windows to industry could give this form.

Competent person (section 10 of the Building Act 1975 and Part 6 of the BR 2021)
A building certifier must assess and decide to appoint an individual as a competent person before they can accept design-specification help.

When deciding whether a person can be a competent person, the building certifier must assess the person having regard to their experience, qualifications and skills and ensure the person holds a licence or registration if required.

The building certifier is required to keep detailed records about what was considered when appointing a competent person.

For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

What is required if a manufacturer or supplier did not do the design work for the product?
A manufacturer or supplier who is not part of the design process may give the construction contractor, builder, competent person or the building certifier evidence of suitability such as a product technical statement under Part A5 of the Building Code of Australia (BCA), for an aspect or material stating that it is compliant with the relevant reference documents in the BCA i.e. the applicable Australian Standard/s.

What if there is not enough space for all the supporting material/documents?
Items 2, 3 and 4 requires the competent person to clearly identify the extent of the assessment that was undertaken for aspect/s of work identified in this form.

For instance, there is provision for material such as specifications, standards, codes or other relevant publications to be referenced in the form. However, if the space in the form is not sufficient to accommodate all of this material, you can create and refer to additional material in an addendum or attachment to the form.

The form is also available in a Microsoft Word version, that you can download and edit to include additional material in the relevant parts of the form. Note that editing the form in the Microsoft Word version may cause the relevant boxes to expand and increase the length of the document. This is acceptable and does not change the approved form, provided the section text (description on the left-hand side of the page) is not altered.

Appointed competent person (design or specification) – (sections 34 and 36 of the BR 2021)
A building certifier must assess and decide to appoint an individual as a competent person before they can, as a competent person, give design-specification help. The building certifier is required to keep detailed records about what was considered when appointing a competent person.

A building certifier must be satisfied that an individual is competent to give the type of help having regard to the individual's experience, qualifications and skills and if required by law to hold a licence or registration, that the individual is appropriately registered or licensed.

An individual is appointed as competent to give design-specification help on or from a particular day.

For further information about assessment of someone as a competent person refer to the **Guideline for the assessment of competent persons.**

PRIVACY NOTICE

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Form 71—fire hydrant and sprinkler system commissioning

Version 1 – July 2014

This form is to be used for the purposes of commissioning water based fire safety installations, as required by the Queensland Development Code – Mandatory Part (MP) 6.1, which is a building assessment provision under the *Building Act 1975*, section 30. This form is also to be used in accordance with the 'Fire hydrant and sprinkler system commissioning and periodic maintenance procedure', defined in MP 6.1 as the 'Relevant procedure'. Please note that this form does not comprise all testing requirements for commissioning—this form is only for collecting results of testing for some sections of the Australian Standards referred to and in each case, further testing is required

Part A—Test details								
Site name								
Site address	8 Jubilee Avenue - Broadbeach							
Client	Auscoast							
Testing details	**Test Date:**	Tuesday, 27 August 2024			**Commissioning test**			
					Fire Hydrant	☒		
	Time of test:	10:00am			Fire Sprinkler	☐		
					Combined	☐		

Part B—Hydrant hydrostatic test						**PASS**	☐	**FAIL**	☐
Refer to the required pressure specification for either commissioning or periodic testing (as applicable) as per AS2419.1									
Boost pressure		kPa	**Test pressure**		kPa				
Duration of test		mins	**End of test pressure**		kPa	**Loss (if any):**	0	l/min	

Part C—Hydrant test equipment/pressure gauges

If using more devices, provide details in the Notes section below or complete another form. The correction factor must be kPa or a percentage.

Flow measuring device	Orifice Part C not required for orifice testing		Mechanical ☐		Electro magnetic ☐			
	Device 1	Gauge 1	Device 2	Gauge 2	Device 3	Gauge 3	Device 4	Gauge 4
Serial number	AFST03	31372	AFST05	31373	AFST08	31360	AFST07	31361
Date calibrated	**19/09/2023**	**21/02/2024**	**10/07/2023**	**21/02/2024**	**07/10/2023**	**19/02/2024**	**19/09/2023**	**19/02/2024**
Correction certificate	✓	✓	✓	✓	✓	✓	✓	✓
65/100/150 mm face	-	✓	-	100mm	-	100mm	-	100mm
Digital reader	✓	100mm	✓	✓	✓	✓	✓	x
Increments (kPa)	l/s	✓	l/s	1kPa	l/s	1kPa	l/s	10kPa

Part D—Hydrant system flow test						**PASS**	☒	**FAIL**	☐
This part relates to section 10.3 of AS2419.1 If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the hydrant system flow test.									
Hydrant 1 location	SHH located on the top level in fire stairs				Hydrant 3 location				
Hydrant 2 location	SHH located on the second top level in fire stairs				Hydrant 4 location				
System requirements		l/s @		kPa	Static pressure		kPa		

Dry Fire System – No Flow Requirements

Part E—Pump appliance booster test					PASS	☒	FAIL	☐

This part relates to sections 10.4 and 10.5 of AS2419.1 If pressure/flow rates do not meet the fire system design criteria and there are no on-site problems, contact the relevant water service provider to ascertain if there are any problems with the water system network. In the table below, please record the pressure readings obtained during the pump appliance booster test.

Hydrant locations	See Part D – Hydrant system flow test for test hydrant locations & number of flowing hydrants				Height of highest hydrant above booster		+24m
System requirements	20	l/s @	700	kPa	Static pressure at booster	700	kPa
Pump inlet pressure	500			kPa	Booster supply pressure	530	kPa
Boost pressure	1100			kPa	Calculated frictional loss	95	kPa

Part F—Sprinkler hydrostatic test	PASS	☐	FAIL	☐

N/A

Part G—Sprinkler system flow test	PASS	☐	FAIL	☐

N/A

Part H—Compliance

Critical defects identified	Yes	☐	Give owner/occupier a critical defect notice
	No	☒	No action required in relation to critical defects at this time
Repairs/corrective actions taken	Yes	☐	Attach details (including action and date taken) as part of Licensee's report
	No	☒	No action required in relation to repairs/corrective actions at this time
System	**Pass**	☒	**Submit Form 71 to Owner / Occupier**
	Fail	☐	Submit Form 71 to Owner / Occupier

Part I—Signature

By signing this Form 71, I confirm that the information contained herein is correct to the best of my knowledge given the information available and that this Form 71 has been completed in accordance with the relevant standards, codes and regulations.

Licensee Name	Bruce Dan M.App.Sc – Fire & Risk Engineering	Licence no. (BSA/PIC) 739305	Licensee Signature	For and on behalf of AFST Pty Ltd

Comments

Dry fire system Required flow and pressure is 0 L/s @ 0 kPa (unassisted) and 20L/s @ 700 kPa (boosted).

Street Hydrant test

PART E – Street Hydrant flow test was conducted at 16 Jubilee Avenue to ensure that it can provided 20 l/s 200kPa for the dry hydrant system supply.

Flow Rate	Hydrant Pressure
0l/s	750kPa
10l/s	700kPa
20l/s	550kPa

Note: Building owners/occupiers are responsible for ensuring their buildings continuously meet fire safety standards. Where a building owner/occupier becomes aware that their building does not meet the minimum requirements for water pressure required by any standard applicable under the Queensland Development Code Mandatory Part 6.1 (Maintenance of fire safety installations) the building owner/occupier should contact the Queensland Fire and Emergency Service.

Definitions *"Commissioning test"* is a test that is required upon completion of a new system or an extension to an existing system. *"Running test"* means a two inch waste test installed at the sprinkler control valve on older systems

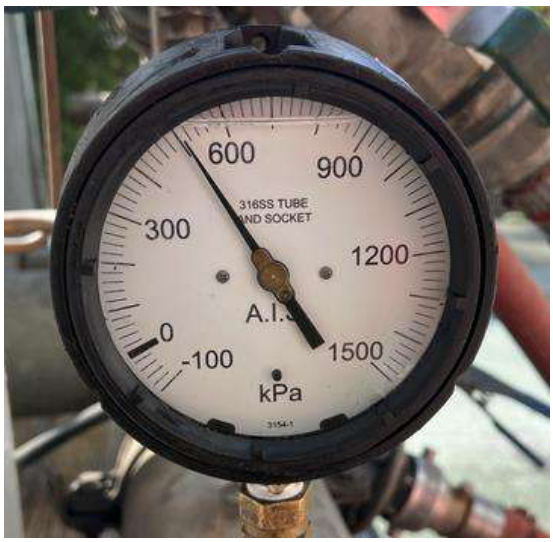
Privacy: The information on this form is collected for purposes related to monitoring compliance under the *Plumbing and Drainage Act 2002*, the *Building Act 1975* and the *Building Fire Safety Regulation 2008* ("legislation"). This information may be stored in the department's database and may be used for statistical research, information provision and evaluation of Plumbing Industry Council and state government services. Your personal information may be disclosed to other government agencies, local government authorities and third parties for purposes related to this application. Except for these circumstances, personal information will only be disclosed to third parties with your consent or in accordance with the *Information Privacy Act 2009*.

RTI: The information collected on this form will be retained as required by the *Public Records Act 2002* and other relevant Acts and regulations, and is subject to the Right to Information regime established by the *Right to Information Act 2009*. If you have any further questions regarding your privacy, please email Building Codes Queensland on buildingcodes@qld.gov.au

PART E – Pumper Appliance Test Rig connected to brigade booster assembly

PART E – Boost pressure required at Pumper Appliance to achieve 700kPa at most hydraulically disadvantaged hydrant.

PART E – Mains pressure at Pumper Appliance when drawing 20l/s for boost test



ALINE OPERATIONAL TEST REPORT

SITE: 8 Jubilee Ave, Broadbeach | 8 JUBILEE AVENUE UNITS

ASSET: Stormwater DSPS/AL5500/415V/FBMS/GR 582900C

SERIAL:

SERVICE CALL: 126724

SITE DETAILS

Service Call Number	126724 Installation/Commissioning - 8 Jubilee Ave, Broadbeach QLD 4218, Australia 15038
Sales Order Number	1280552
Site Address	8 Jubilee Ave, Broadbeach | 8 JUBILEE AVENUE UNITS
Client	QLD Coastal Plumbing Pty Ltd - AGA
Contact Name	Steward Galea
Contact Number	Ryan - 0433593374
Date	12/09/2024
Technician's Name	Tom Flatman
Start time for this system	12:46:00 PM

CHECKLIST

Checklist	
Confirm system is standing on bricks (if applicable) and secured	Yes
Confirm Air relief holes in riser above impeller (submersible systems)	Yes
Confirm all unions tight	Yes
Confirm Pump fitted with chain for lifting	Yes
Confirm Low float set above pump inlet	Yes
Confirm Floats clear of obstruction	Yes
Confirm Pump and float cables secured and accessible at top of pit	Yes
Confirm Floats lifted to confirm correct operation	Yes
Visual inspection for leaks	Complete
Confirm Auto/Off/Manual works correctly from the control panel (if applicable)	Yes
Confirm System alarms activate when required (if applicable)	Yes
Confirm Rotation of Pumps correct	Yes
Confirm Pit free of debris and mud build-up	Yes

OBSERVATIONS

Observations	
Discharge Height - metres	Unknown
Flow appears su cient for the type of pump installed	Yes

COMMENTS

Comments	

COMMENTS

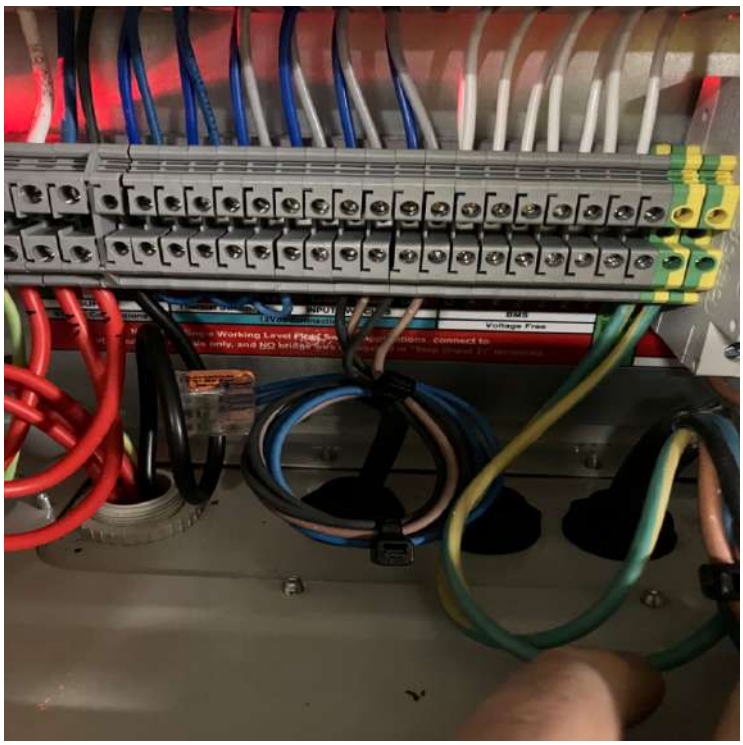
General Comments

REQUIRED PHOTOS

Required Photos

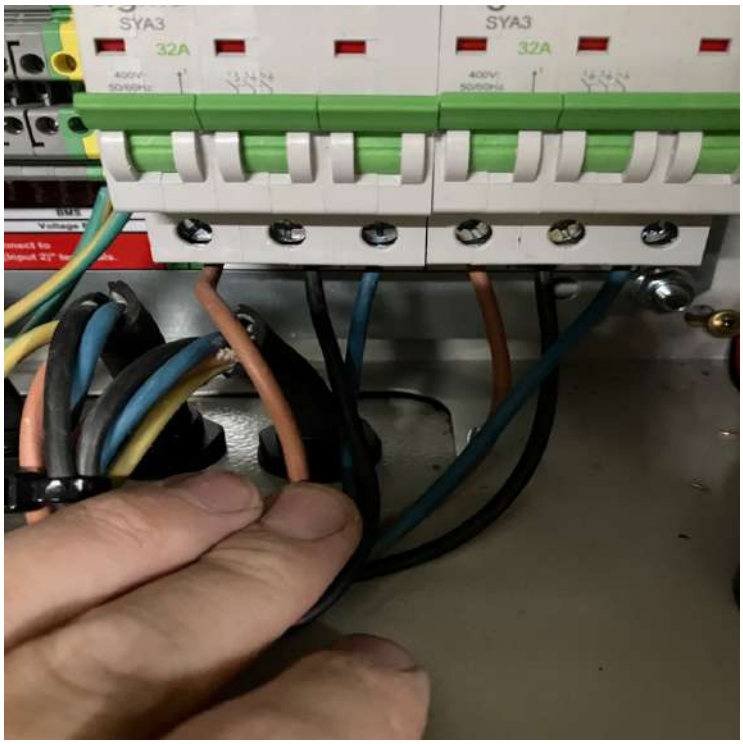
Float Switch Positions

Float switch wiring for future reference



REQUIRED PHOTOS

Pump wiring for future reference



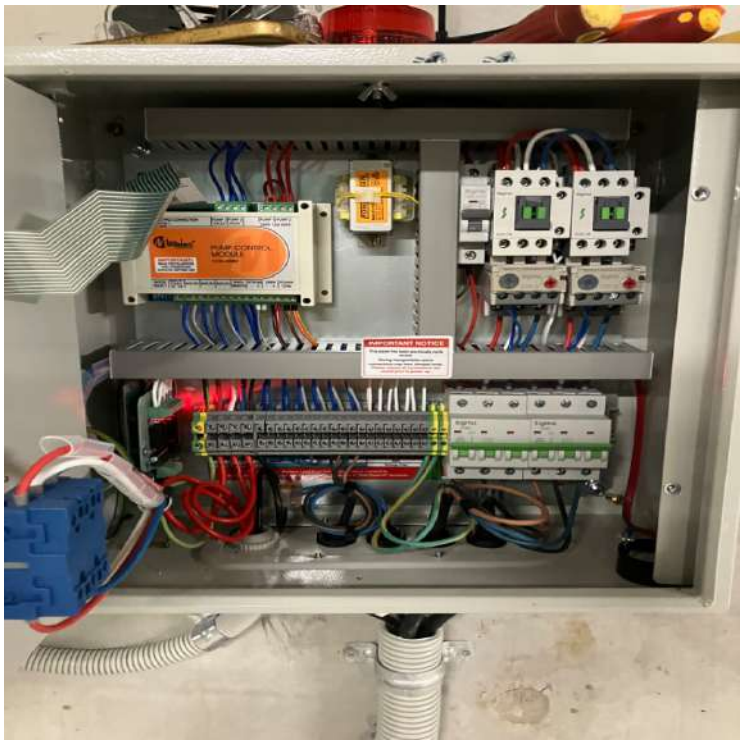
Panel as we left it (showing on/off)

ADDITIONAL PHOTOS

Additional Photos

ADDITIONAL PHOTOS

Additional Photos 1



Additional Photos 2

ADDITIONAL PHOTOS

Additional Photos 3	
Additional Photos 4	
Additional Photos 5	
Additional Photos 6	
Additional Photos 7	
Additional Photos 8	
Additional Photos 9	
Additional Photos 10	

SIGN OFF

Finish Time	12:48:00 PM
Aline Tech Signature	

8 Jubilee ave
Broadbeach

Unit Details	Serial No	Meter Read	KL Display in Loggers @ Commission	Panel	Port No	Date	Time	Scale	Div
UNIT 1	23W066767		0.79	1	1	12/08/2024	13:05:39	1	200
UNIT 2	23W066766		2.8	0	16	12/08/2024	13:05:39	1	200
UNIT 3	23W066765		0.35	0	15	12/08/2024	13:05:39	1	200
UNIT 4	23W066781		0.26	0	14	12/08/2024	13:05:39	1	200
UNIT 5	23W066764		2.02	0	13	12/08/2024	13:05:39	1	200
UNIT 6	23W066763		1.51	0	12	12/08/2024	13:05:39	1	200
UNIT 7	23W036196		0.76	0	11	12/08/2024	13:05:39	1	200
UNIT 8	23W036197		0.22	0	10	12/08/2024	13:05:39	1	200
UNIT 9	23W036220		0.23	0	9	12/08/2024	13:05:39	1	200
UNIT 10	23W036219		1.55	0	8	12/08/2024	13:05:39	1	200
UNIT 11	23W036139		0.43	0	7	12/08/2024	13:05:39	1	200
UNIT 12	23W036263		0.24	0	6	12/08/2024	13:05:39	1	200
UNIT 13	23W036265		2.49	0	5	12/08/2024	13:05:39	1	200
UNIT 14	23W036264		0.39	0	4	12/08/2024	13:05:39	1	200
UNIT 15	23W036211		0.05	0	3	12/08/2024	13:05:39	1	200
UNIT 16	23W036213		0.1	0	2	12/08/2024	13:05:39	1	200
COMM R	23W036212		0.28	0	1	12/08/2024	13:05:39	1	200
COMM G	23X008722		0.82	1	2	12/08/2024	13:05:39	1	200
COMM B	23E001878		0.36	1	3	12/08/2024	13:05:39	1	200