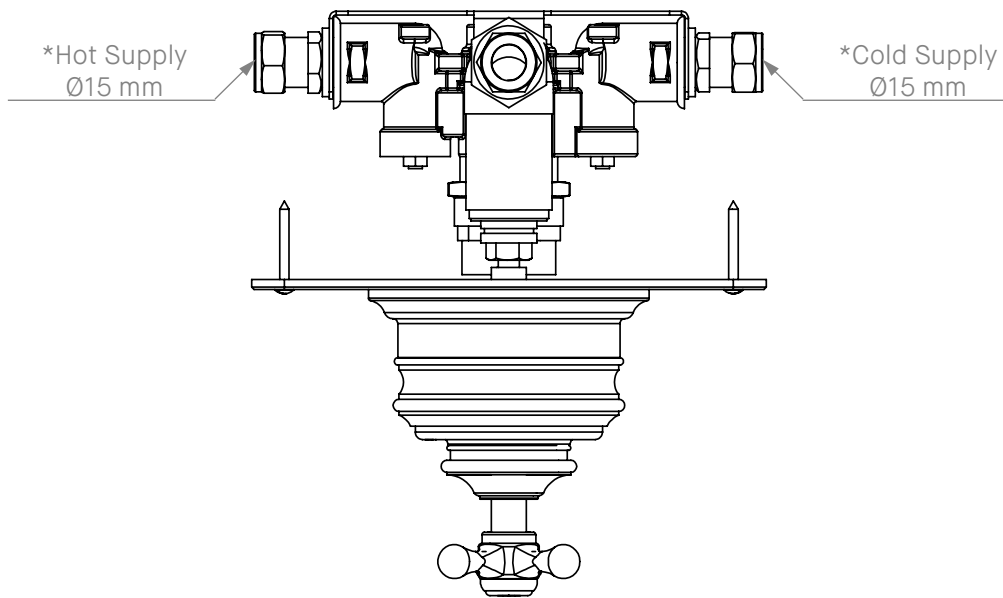
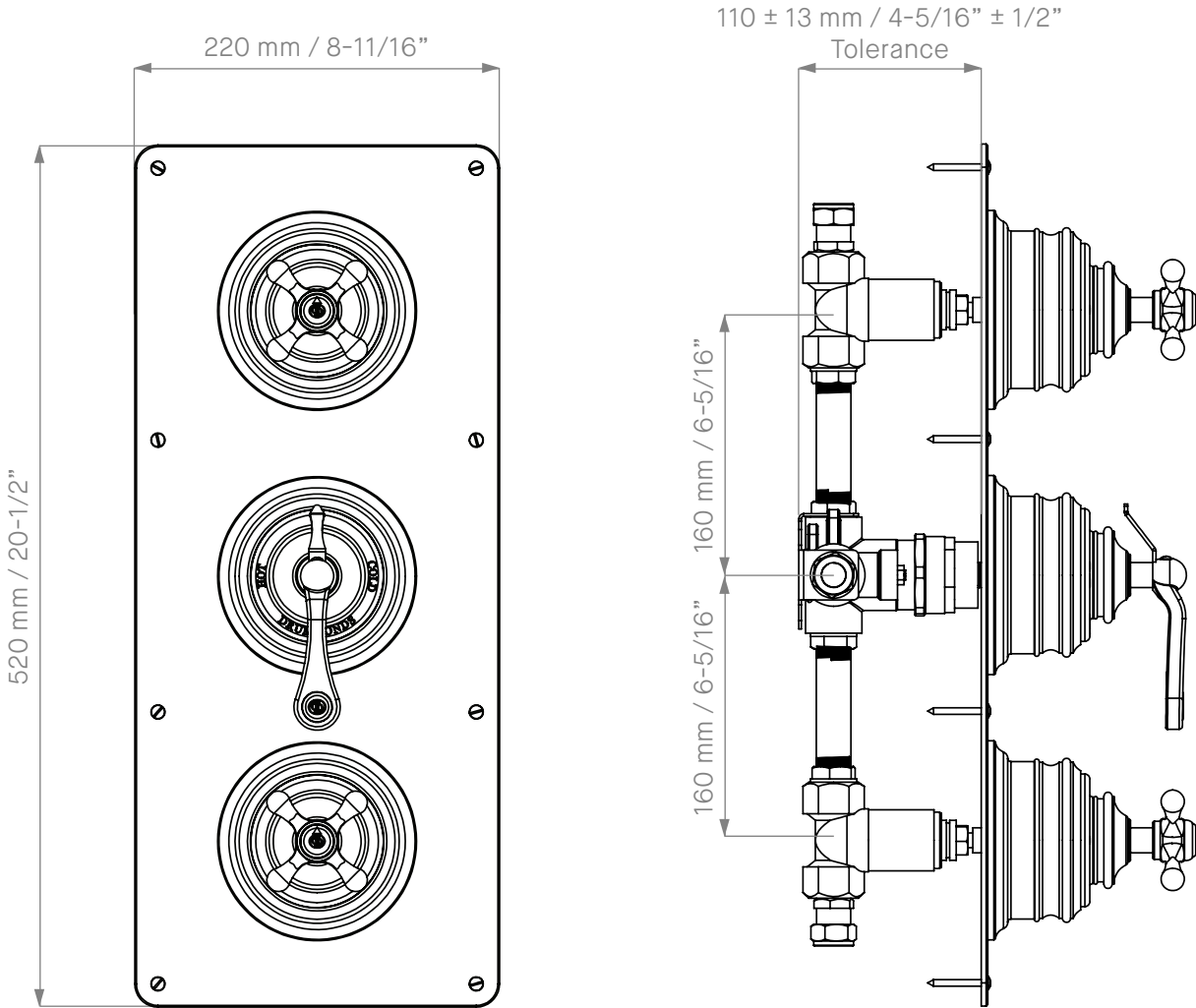


TECHNICAL DRAWING

DAD1978.01



* US adapters 1/2" NPT supplied

TAKING DELIVERY OF YOUR PRODUCTS

- Sign for delivery confirming the number of pallets/boxes received.
- Open boxes and crates checking that all components are included, in accordance with product drawing and delivery note.
- Check for any damage to the products that may have occurred during transportation.
- If there is any visible sign of damage to the crate/shipping packaging, please follow these steps:
 - I. Sign for the goods as damaged
 - II. Take pictures of the goods/damage whilst on the delivery vehicle and after unloading.
 - III. Please keep all packaging intact as this may be required for part of the claims process.
- In accordance with our terms and conditions, report in writing, any damage, or missing products within 3 working days of delivery.

PROTECTING YOUR PRODUCTS ON SITE

- Upon delivery of your order, please ensure that all items are inspected, clean and dry at normal room temperature before returning to original packaging, until installation.
- Please follow the care instructions if you need to clean the products, being careful not to use any abrasive or chemical cleaners.

PREPARING FOR INSTALLATION

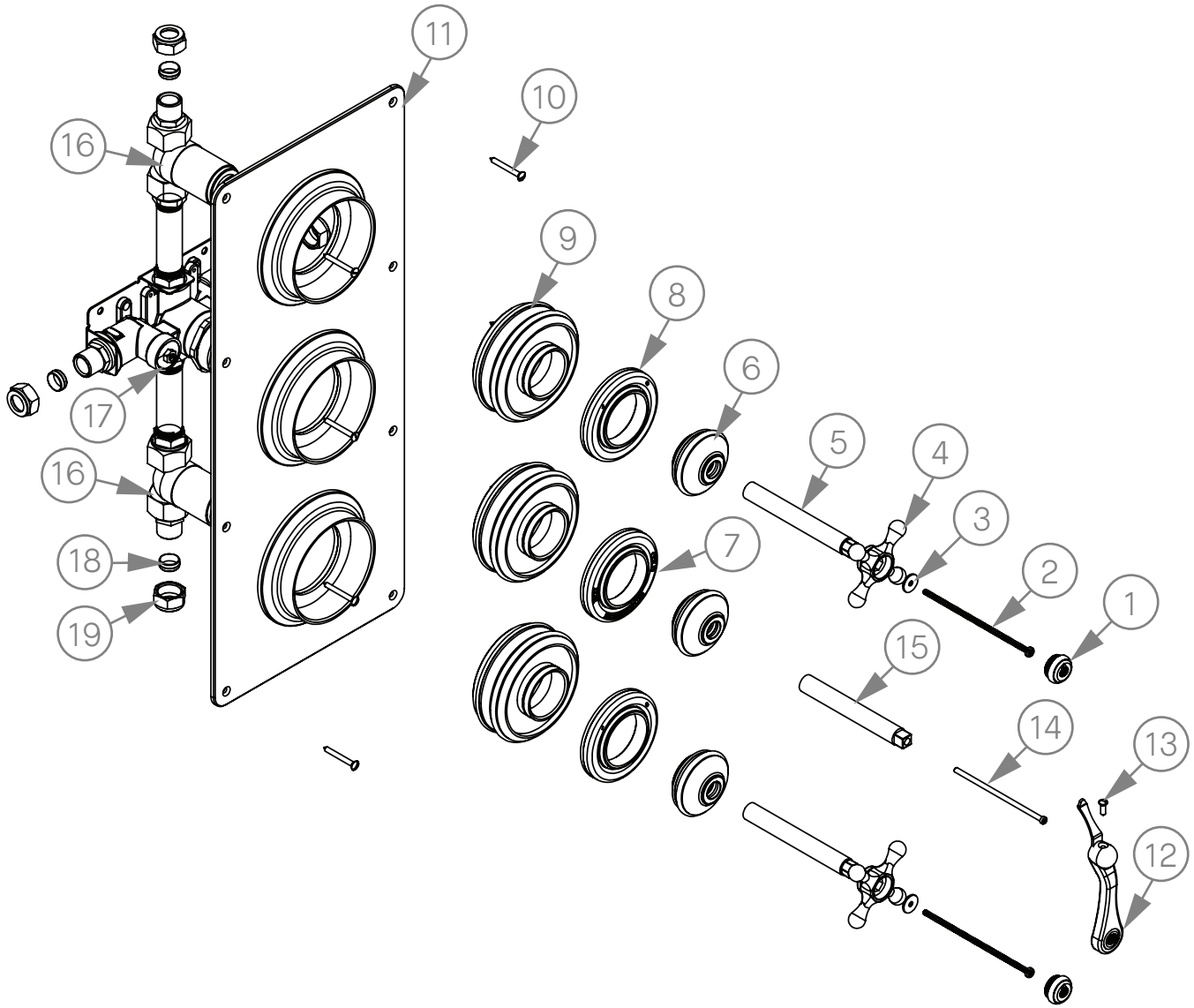
- All water fittings should be installed by a qualified plumbing engineer and comply with the current water regulations. Products and connections should remain accessible for routine maintenance. We recommend that isolation and non-return valves are fitted in all installations where appropriate.
- Please read and follow the installation instructions carefully for each product and check that you have all of the components and tools required to carry out correct installation.
- Polished and plated surfaces are particularly prone to damage from dirty and incorrect tools; spanners should be suitably lined to prevent damage to plated surfaces.
- When using a sealant, only a suitable neutral curing sealant should be used.
- After installation, please ensure that the product is operating correctly and is clean (in accordance with the Care & Maintenance instructions below) and protected until completion of all works in the property.
- To avoid damage to internal mechanisms and cartridges, flush your existing hot and cold water systems to ensure there is no debris or dirt in existing pipework, prior to commencing installation.
- For optimal performance, copper pipework should be used for all supply pipes to Drummonds' showers. It may be possible for flexible connections to be used, however this can reduce the flow rate and overall performance. Please see our flow rate and troubleshooting guides for more information.
- A build-up of limescale is inevitable on all water fittings and, for hard water areas, we recommend the fitting of a suitable water treatment device.

YOUR CHOSEN FINISH

- Finished in one of brassware finishes. We do not lacquer our brassware, allowing the live surface to age and wear naturally in the traditional way. The speed of change will be dependent on the environment (heat and moisture). Please see the 'Bespoke Special Finish' section on our website for more information.

BLOW OUT DRAWING

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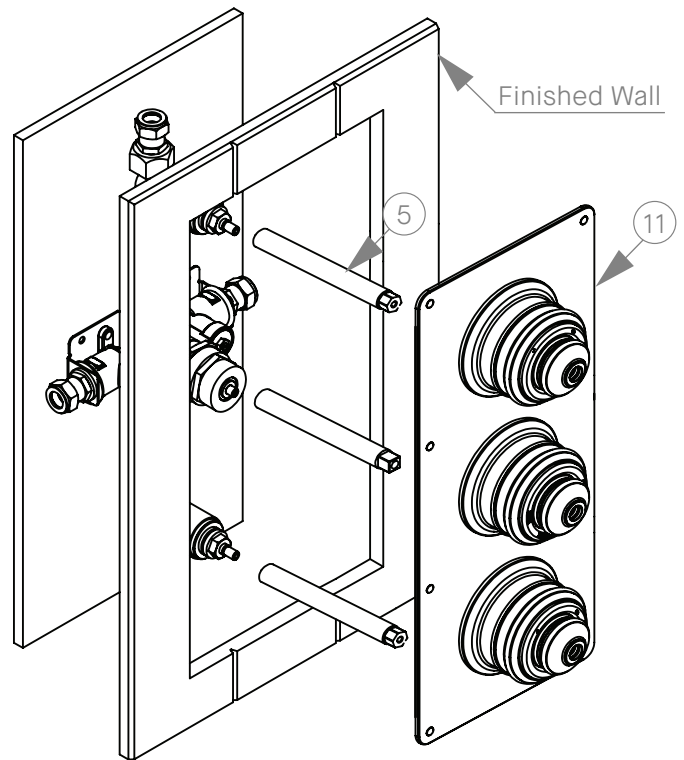
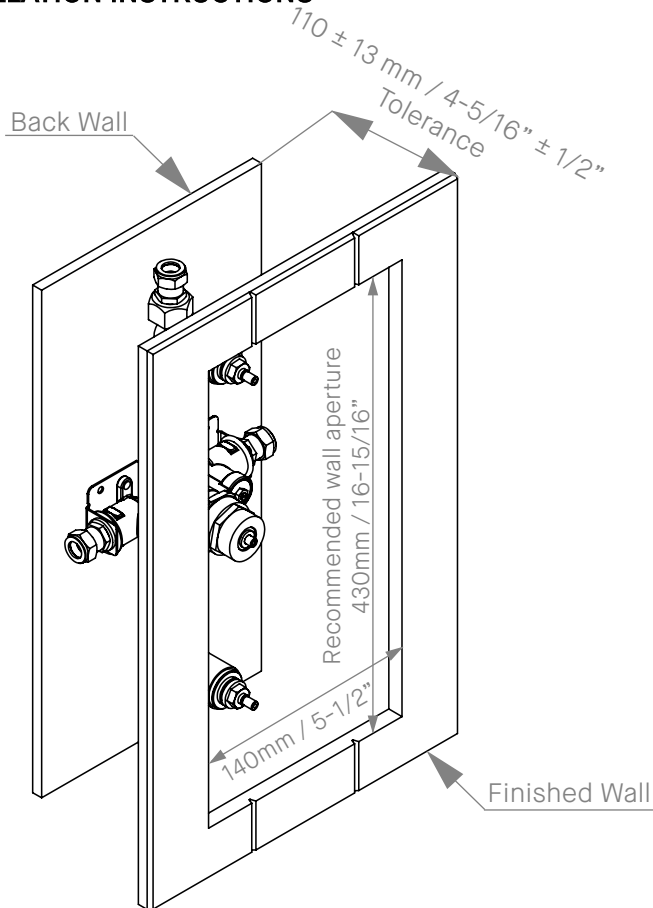


#	TRIM SET COMPONENTS	QTY	#	ROUGH IN COMPONENTS	QTY
1	Porcelain	2	16	On/Off Valve	2
2	On/Off Bolt M4x120	2	17	Thermo Valve	1
3	On/Off Washer	2	18	Olive*	1
4	On/Off Handle	2	19	Nut*	1
5	On/Off Tap Shaft	2			
6	Tap Shield	3			
7	Thermo Face Plate	1			
8	On/Off Face Plate	2			
9	Plate	3			
10	Screw 8x1 1/2"	8			
11	Mounting Plate	1			
12	Thermo Tap Handle	1			
13	Screw M4x10	1			
14	Thermo Bolt M4x105	1			
15	Thermo Tap Shaft	1			

* US adapters 1/2" NPT supplied

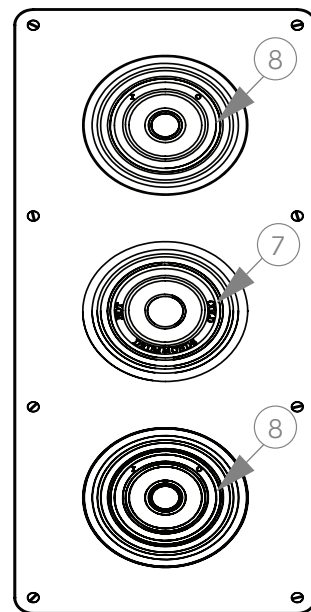
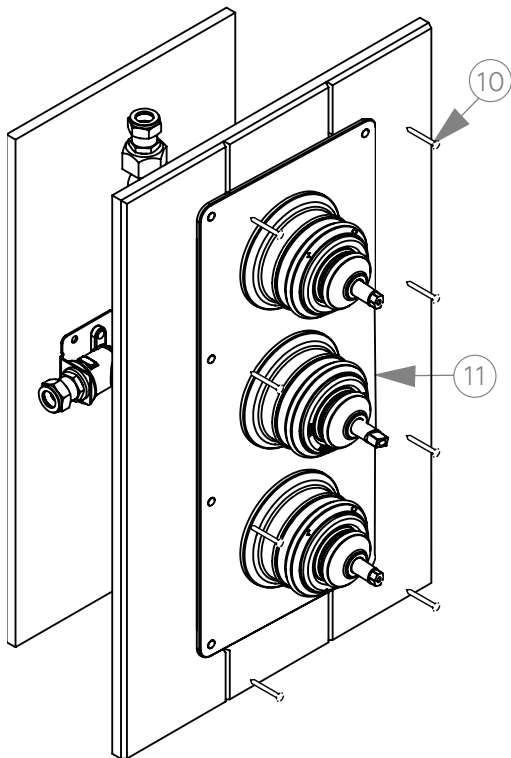
INSTALLATION INSTRUCTIONS

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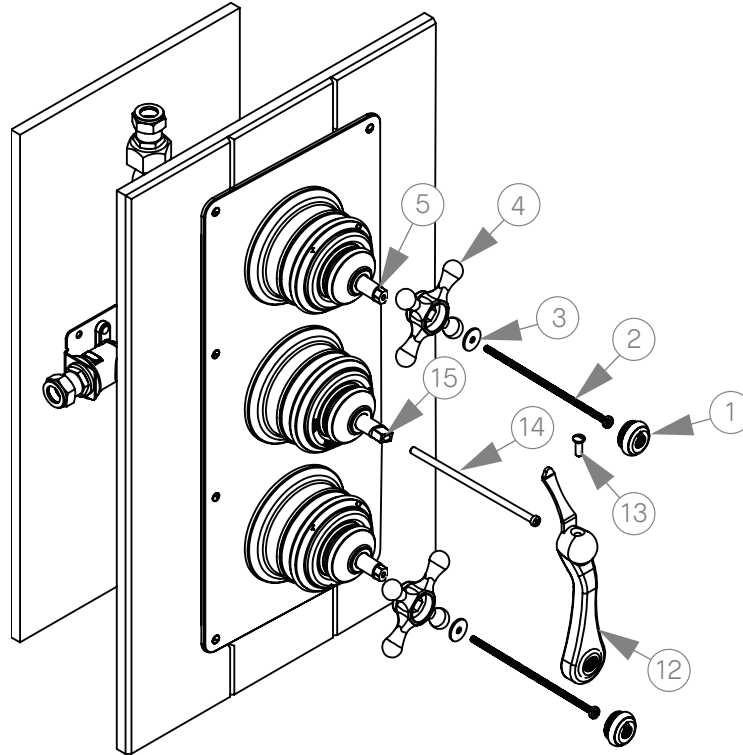
1. Level and secure rough in valve to the back wall and ensure the finished wall (including tiling) is within tolerance. Plumb in the valve, test and check for leaks (please ensure the isolation valves are fully open when testing).

2. Push on/off tap shafts (5) and thermo tap shaft (15) onto the rough in valves. Align the rear of mounting plate (11) to tap shafts and push against finished wall. Ensure that the mounting plate is level in position and mark positions for the screw holes. Remove mounting plate (11) to drill (do not drill through the plate).



3. Reposition mounting plate (11) against the finished wall and secure screws (10).

4. Check on/off face plates (8) and thermo face plate (7), if necessary, adjust and straighten positions.



5. Place on/off tap handles (4) onto on/off tap shafts (5), with on/off washers (3). Insert on/off bolts (2) through tap handles (4) and tighten . Check position and push porcelains (1) into tap handles (4). Insert thermo bolt (14) into thermo tap shaft (15) and tighten. Place thermo tap handle (12) onto tap shaft (15) and tighten screw (13) to complete.

Drummonds thermostatic shower valves are rated to TMV2 standard and have been tested against BS EN 1287 and BS EN 1111. They are designed to operate within a dynamic pressure range of 1.0 and 5.0 bar. In general, the higher the water pressure, the greater the flow of water through the valve.

Recommended Set Up:
Hot water feed between 60°C - 65°C
Cold water feed between 10°C - 15°C

For 2 and 3 way diverters, the following flow rates are based on the main outlet.
The secondary outlet will have a slightly lower flow rate.

Product Code	Dynamic Pressure (Bar)	Mixed Flow Rate (L/M)
Thermostatic Valve & On/Off:	0.5	9.26
	1.0	13.76
DAD168, DAD1687, DAD1690	1.5	17.27
DAD1860, DAD1862/DAD1863	2.0	19.88
DAD1868/DAD1869	2.5	22.48
DAD1930, DAD1931, DAD1935	3.0	24.66
DAD1944, DAD1945, DAD1948	3.5	26.68
DAD1971, DAD1978	4.0	28.71
DAD1974, DAD1976	4.5	30.46
	5.0	32.17

Flow rates have been measured in accordance with the recommended installation parameters, with a balanced dynamic pressure (bar) recorded at the shower valve inlet.

DYNAMIC V STATIC PRESSURE

Static pressure is the water pressure that exists at a fitting when no flow is taking place (tap is in closed position).

Dynamic pressure is measured with the valve open and the water flowing. As a result the Dynamic pressure will be a lower figure than the static pressure.

Whilst a tap is in the closed position, the static pressure may be 3 bar, however once the tap is open the pressure may drop to 0.8 bar or less, as the supply pressure fluctuates.

Ref. www.bathroom-academy.co.uk

NOTES:

- UK Handshowers are fitted with a 12 l/m flow restriction
- US Handshowers are fitted with a 1.8 g/m flow restriction
- US Shower Arms are fitted with a 2.0 g/m flow restriction

To achieve optimal performance from your shower rose, we would recommend the following minimum flow rates for each Drummonds shower rose. Please refer to the applicable flow rate information when considering your shower set up and valve combination.

12 L/M 3.17 US Gallons	18 L/M 4.75 US Gallons	24 L/M 6.34 US Gallons
DAD1914EC 200mm (8") Easy Clean DAD1914A 130mm (5") Shower Rose DAD1923 Adjustable Rose	DAD1903EC 300mm (12") Easy Clean DAD1914 200mm (8") Shower Rose DAD1925 200mm (8") Grand Rose DAD1920 Ceramic Tear Drop	DAD1903 300mm (12") Shower Rose DAD1926 300mm (12") Grand Rose

CARE AND MAINTENANCE

A Drummonds' Bathroom product is designed to give you years of faultless service and, if you follow the instructions below, will continue to look stunning for many years to come. All of Drummonds' Bathroom products are guaranteed for 1 year from the date of purchase against manufacturing defects. The guarantee does not cover faults caused by incorrect installation, neglect, misuse, wear & tear, inappropriate cleaning, or damage caused by the build-up of limescale. Please see Drummonds' T&Cs for further details of the product guarantee.

GENERAL USE

To help prevent limescale build up and water marks, all surfaces should be wiped dry after use. Only mild, nonabrasive cleaning products should be used followed by rinsing and drying with a soft cloth.

POLISHED BRASS PRODUCTS

All of Drummonds taps and fittings are made from 100% brass, which can be supplied in a polished finish that is not lacquered. Polished brass will tarnish very quickly, especially in the bathroom where it is exposed to moisture. If you wish to maintain a shiny brass finish, regular polishing with an appropriate metal polish such as Brasso will be required.

POLISHED CHROME AND NICKEL PRODUCTS

Wipe off any water marks after use with a soft cloth or towel. Clean on a regular basis with a mild non-abrasive bathroom cleaner, again taking care to dry the product with a soft cloth or towel. For stubborn stains, particularly in hard water areas, remove with Brasso. Nickel products will require periodic polishing with Brasso, otherwise they will develop an aged patina like silverware.

SHOWER HEADS AND ROSES

Clean and descale on a regular basis, paying particular attention to the holes in the shower head to ensure that they do not become blocked. Remove and clean the thermostatic cartridge on a periodic basis to prevent permanent damage from limescale.

CAST IRON BATHS AND SHOWER TRAYS

The interior of a Drummonds bath or shower tray is enamelled with dry frit vitreous enamel which is very hard wearing and durable. To maintain the soft shine on the surface of the enamel rinse the bath out after each use, making sure that you get rid of any gritty deposits, and then dry it with a soft cloth or towel. To remove marks or dirt use a non-abrasive bathroom cleaner which is safe for use on enamelled surfaces (please see the Vitreous Enamel Association website for guidance on suitable cleaners www.vea.org.uk). It is very important to ensure that a dripping, or leaking, tap is repaired immediately to prevent the enamel being permanently damaged.

BATH EXTERIOR

Caring for the exterior of your bath or shower tray is dependent on the finish of your bath:

- A raw, primed, or painted exterior does not require any maintenance, other than occasional cleaning to maintain the appearance. If the exterior becomes scratched, exposing the cast iron below, it must be treated immediately with a suitable rust inhibitor, followed by a metal primer and paint finish to seal the exterior.
- A polished or lacquered exterior is a beautiful finish, but it must be treated very carefully to avoid scratching especially when moving the bath into position. If the exterior does become scratched, please call Drummonds immediately so that we can advise on the best course of action. In general use, the polished exterior should simply be wiped down with a soft clean cloth. Never use any kind of bathroom cleaner on the exterior of your bath. Care should also be taken when cleaning the floor around the bath, particularly with a skirted bath, not to allow floor cleaner to splash or rub on the bath, as it may damage the lacquer which protects the bath from rusting.

CHINA SANITARYWARE

Clean on a regular basis with a mild, non-abrasive bathroom cleaner to prevent the buildup of dirt and limescale. Ensure that dripping taps are repaired quickly to avoid the surface of the China becoming stained.

MARBLE VANITY BASINS

A Drummonds' marble vanity basin is a natural product which is hand polished and sealed in the factory. Clean the surface of the marble after use with a soft cloth, making sure that you dry the surface to prevent watermarks from developing on the marble. We would recommend Lithofin Easy Care which is a daily cleaner/conditioner designed for natural stones. Under no circumstances use any kind of bathroom cleaner or limescale remover on the surface of the marble. To prevent staining, it is important to ensure that any cosmetics, including shampoo, are wiped off the surface immediately.

WOODEN LOO SEATS

Clean after use with a damp soft (non-abrasive) cloth and dry immediately. Never use a bathroom cleaner on your loo seat as this is likely to strip off the varnish invalidating the guarantee. Use a high-quality furniture wax polish occasionally such as Mylands Wax - Natural and apply in accordance with the manufacturers' instructions. Under no circumstance stand on your loo seat. Replace bumpers when perished as these can mark and stain the toilet seat.