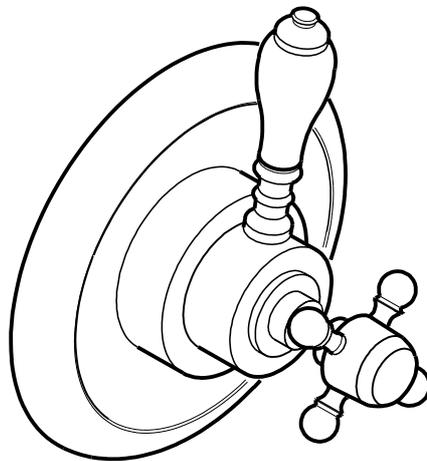
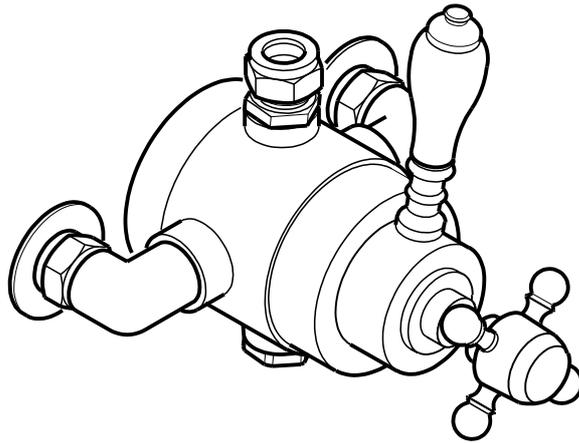


Duellé

THERMOSTATIC



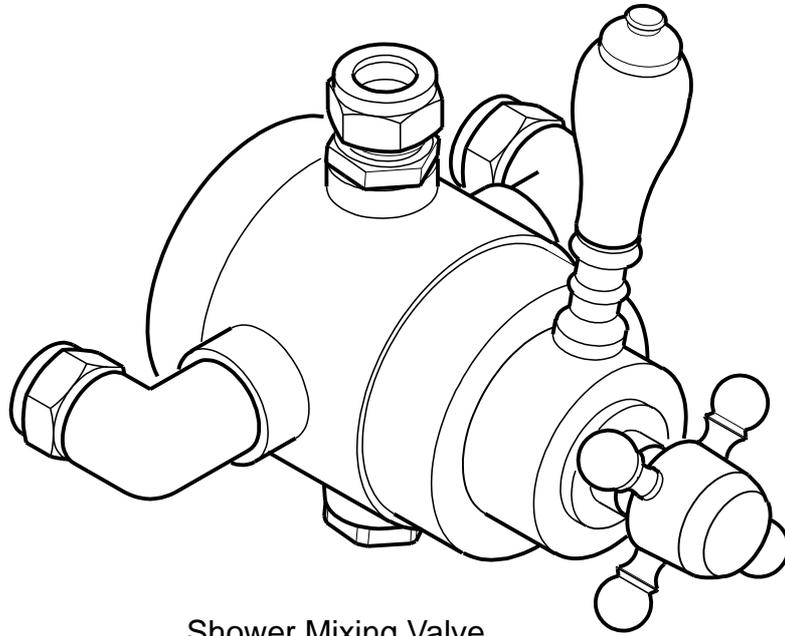
Renaissance

Installation, Operating and
Maintenance Guide

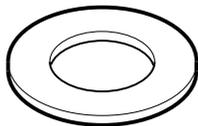
Part no. 800040-B

Contents

Duellé Exposed



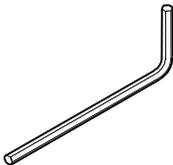
Shower Mixing Valve



Wall Cover Plate (x2)



Strainer (x2)



Hexagon Key



Fixing Screw (x2)



Wall Plug (x2)



Green Limiter - 7 litre



Retainer (x2)



Yellow Limiter - 5 litre



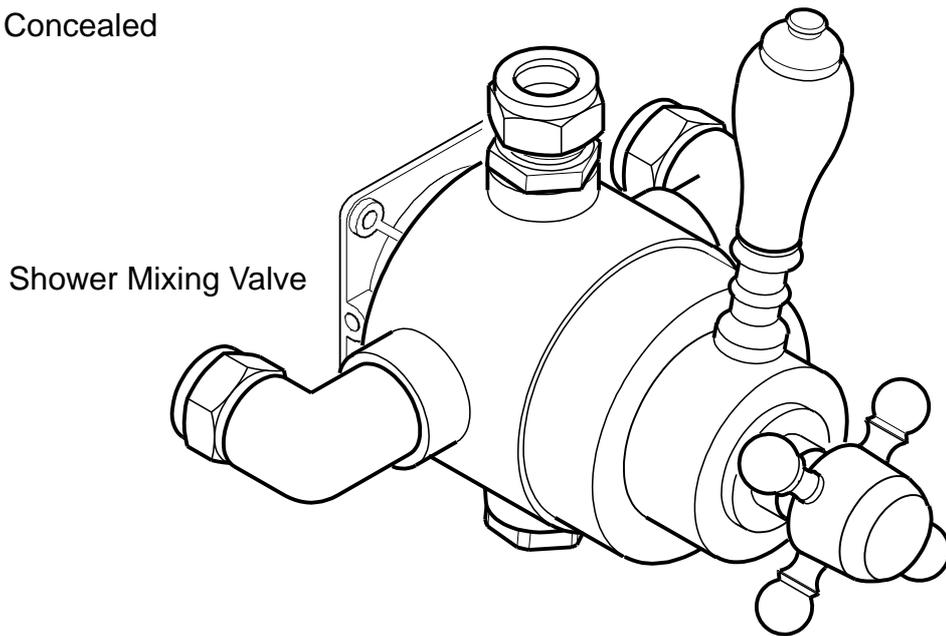
Washer (x2)



Orifice disc

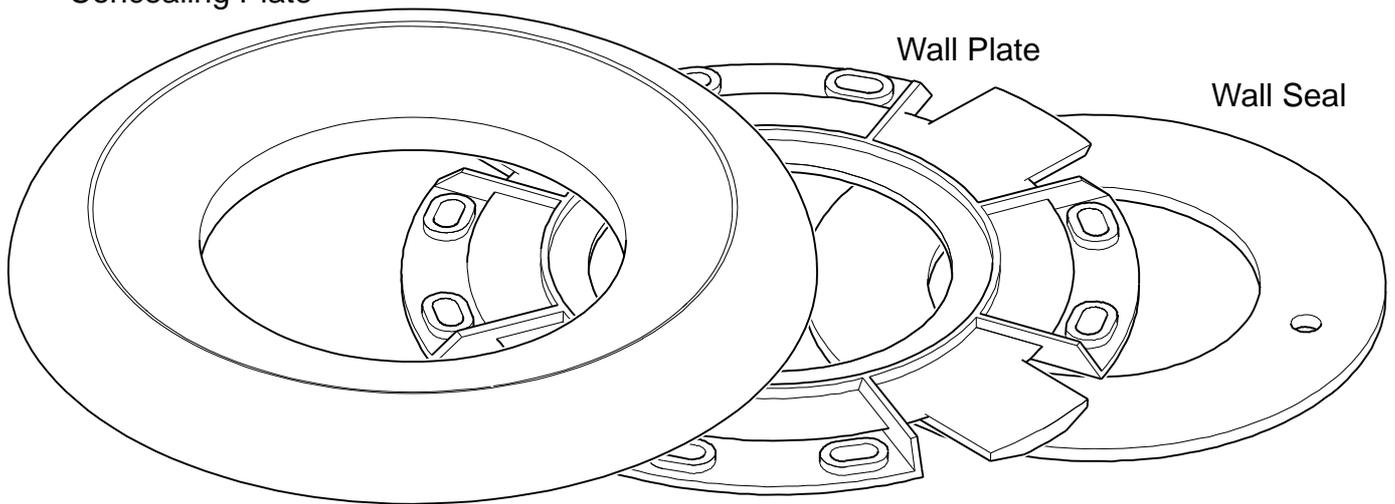
Contents

Duellé Concealed



Shower Mixing Valve

Concealing Plate

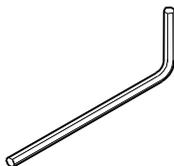


Wall Plate

Wall Seal



Strainer (x2)



Hexagon Key



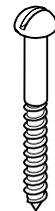
Green Limiter - 7 litre



Yellow Limiter - 5 litre



Orifice disc



Fixing Screw (x8)



Wall Plug (x8)



Retainer (x2)



Washer (x2)

Introduction

When A & J Gummers began production in 1861, 'Victorian' was up to the minute design. During 150 years of unbroken production, the company has constantly expanded the boundaries of water technology to become one of the leading British shower manufacturers.

Technological evolution from Gummers means that all the Renaissance range will work with most plumbing systems, including unbalanced pressures, combi boilers/high pressure systems and low pressure systems, in certain low pressure systems it is recommended that a pump is fitted to ensure maximum satisfaction can be achieved.

Hiding behind this elegant Renaissance design, are the most up to date, thermostatic and ceramic disc technologies. The fusion of old and new enables a warming beauty that flows from within, to be enjoyed by the youngest to the oldest safely.

In short, by looking to the past for inspiration we have developed a range for your future aspirations.

Description

The multi-functional Duellé thermostatic available as exposed or concealed fitting, in a choice of chrome or antique gold. With separate controls for temperature and flow gives the user total control.

The Duellé ½" thermostatic dual lever mixer incorporates a wax temperature sensing capsule which provides almost immediate response to pressure and temperature changes of the incoming water supplies to maintain the selected temperature.

The mixer has hot and cold inlet connections, with integral checkvalves fitted and a top or bottom outlet option for rigid or flexible shower fittings.

Designation

Thermostatic mixing valve ½" (DN15*), without diverter, visible and concealed, moveable or fixed outlet, shower, vertical mounting.

* **Note!** DN15 is the Australian nominal size designation, adaptors are available to convert inlets or outlet to comply with AS 3688.

Specification

General

The installation, commissioning and maintenance must be carried out in accordance with instructions supplied and be installed by qualified and competent persons.

Installations must comply with all Local and National Water Authority Regulations, and Building and Plumbing Regulations.

Temperature Control

Minimum cold water supply temperature: **5°C**

Maximum cold water supply temperature: **20°C**

Maximum hot water supply temperature: **85°C**

(a temperature of 60-65°C is recommended for ablutionary installations)

Note! A suitable hot water temperature control device should be installed to reduce temperatures exceeding the above maximum hot water supply temperature.

Minimum temperature differential between hot supply and outlet temperature: **10°C**

(eg. shower temperature 43°C: minimum hot supply 53°C)

Factory pre-set temperature: **43°C**

Thermostatic control range: **38-45°C**

Operating pressures

Minimum dynamic pressure (gravity): **0.1 bar** (10 kPa) or 1 metre head of water

Maximum dynamic pressure (mains): **6.0 bar** (600 kPa)

Maximum static pressure: **10 bar** (1000 kPa)

Maximum pressure differential: **5:1** (either supply) eg. Cold 1 bar (100 kPa): Hot 0.2 bar (20 kPa)

For optimum performance, supply pressures should be **equal**.

Note! A suitable pressure control device should be installed to reduce supply pressures exceeding the above maximum pressure specification (see **Compatible Systems**).

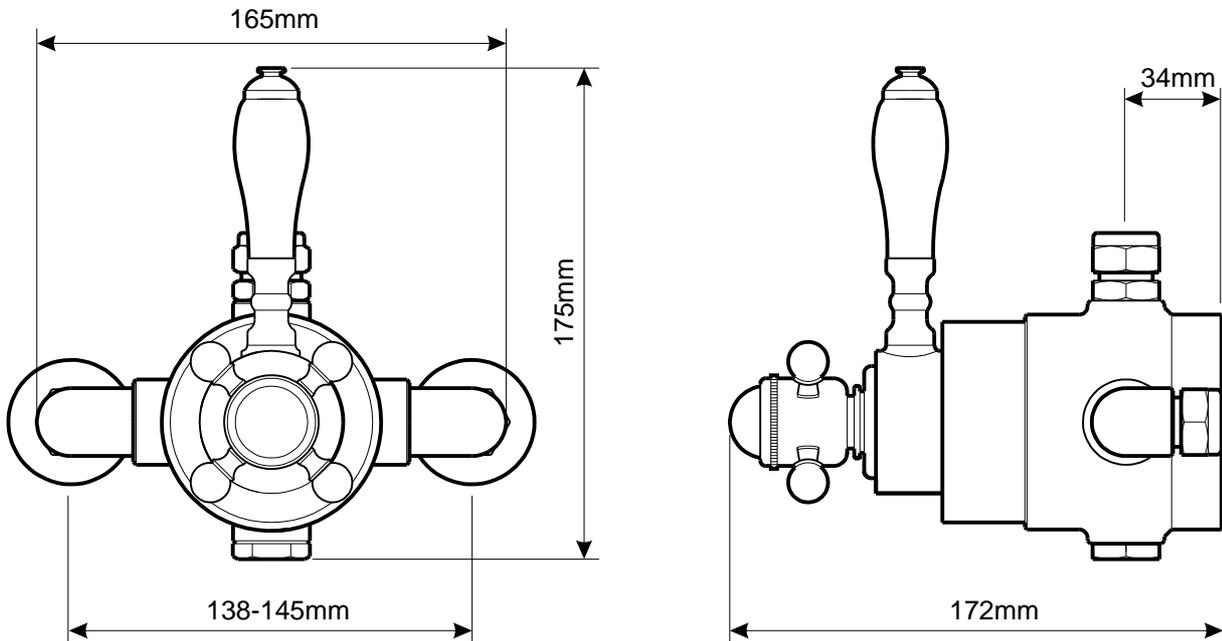
Flow Performance

Flow rates are open outlet with equal pressures

Pressure Loss (bar)	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.5	2.0
Pressure Loss (kPa)	10	20	30	40	60	80	100	150	200
Flow Rate (litres/minute)	11	16	18	20	25	29	33	40	46

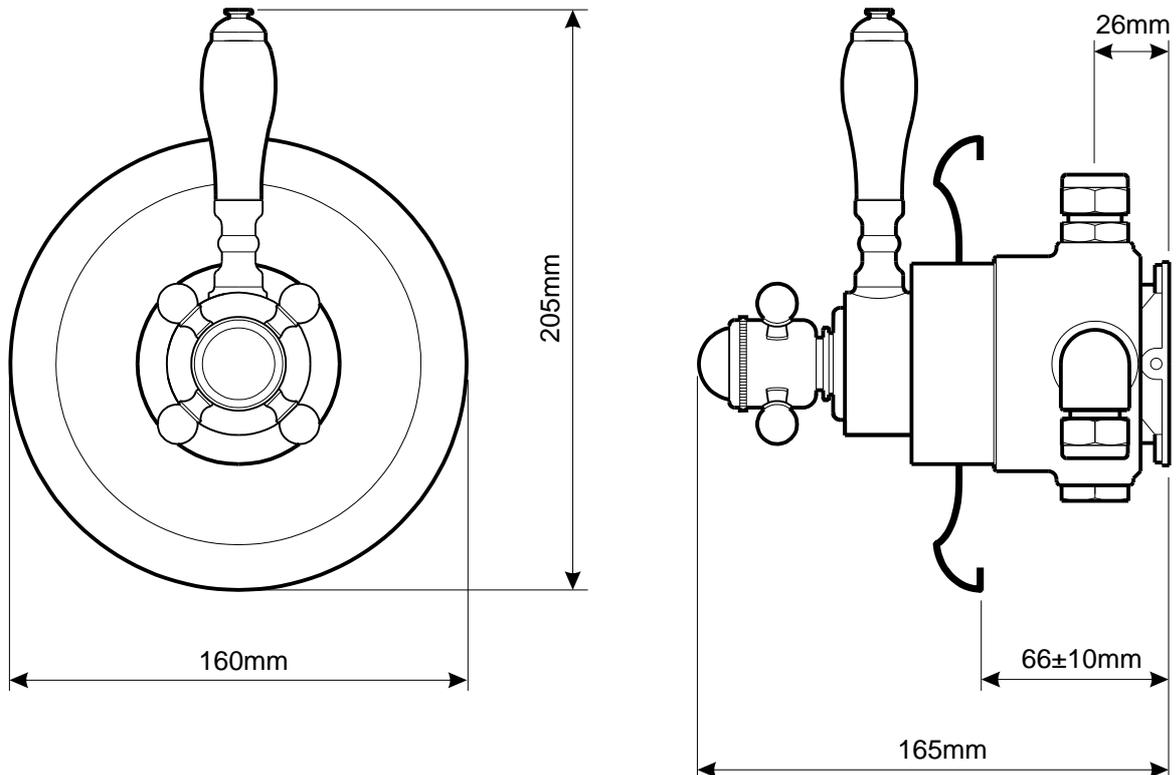
Dimensions

Duellé Exposed



Connections: G $\frac{1}{2}$ B supplied with 15mm compression fitting

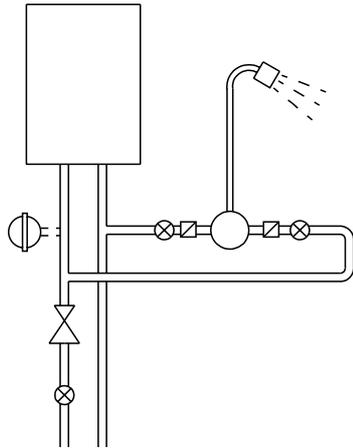
Duellé Concealed



Connections: G $\frac{1}{2}$ B supplied with 15mm compression fitting

Compatible Systems

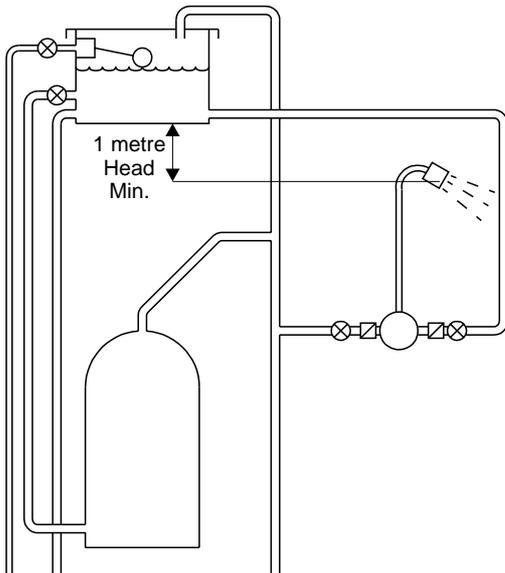
Instantaneous heated system



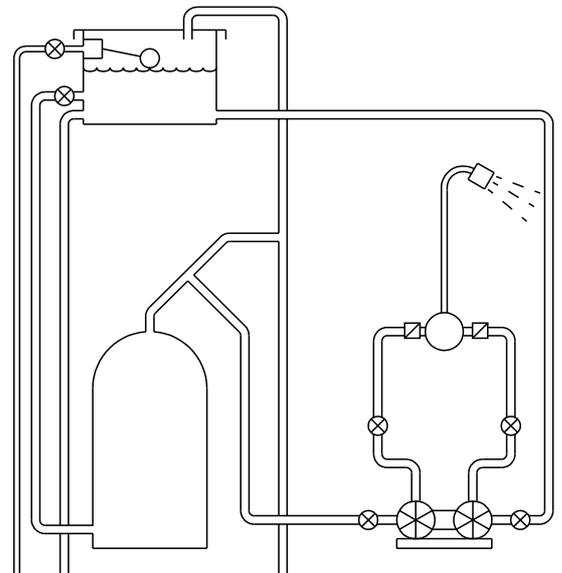
Key

-  Shower inc. non-return valves
-  Isolating valve
-  Tempering valve
-  Pressure regulating valve
-  Strainer
-  Expansion vessel (optional)

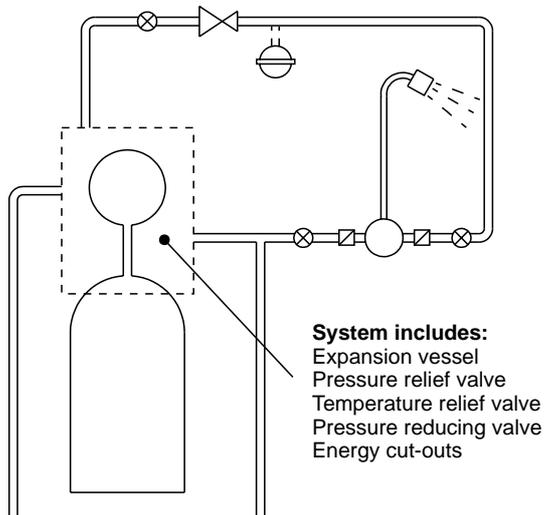
Gravity fed system



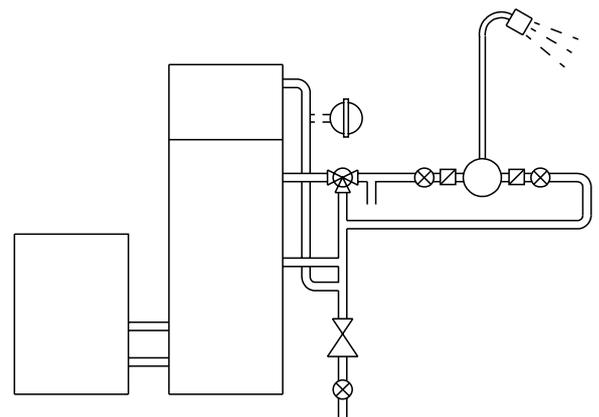
Pumped system



Unvented mains pressure system



Mains pressurised hot water system



Application Selection Table

For optimum performance from the thermostatic mixing valve, use the table to match the supply system to the mixing valve. The table gives recommendations for flow limiter selection and bottom cap adjustment.

Supply System		Flow Limiter		Comments
Cold Supply	Hot Supply	Cold	Hot	
0.1 to 1.0 bar	0.1 to 1.0 bar	No	No	Maximum pressure loss ratio 5:1
1 to 5 bar or Pumped	1 to 5 bar or Pumped	Green (7 litre)	Yellow (5 litre)	# Use arrangement for pumped system
Mains 1.5 to 10 bar	Gravity 0.1 to 0.2 bar	White Disc	No	
	Gravity 0.2 to 0.5 bar	Green (7 litre)	No	
	Gravity above 0.5 bar	Green (7 litre)	Yellow (5 litre)	
	Unvented Mains Pressurised			
	Instantaneous Gas Water Heater	Green (7 litre)	*Yellow (5 litre)	
**Instantaneous Electric Water Heater	Green (7 litre)	No		

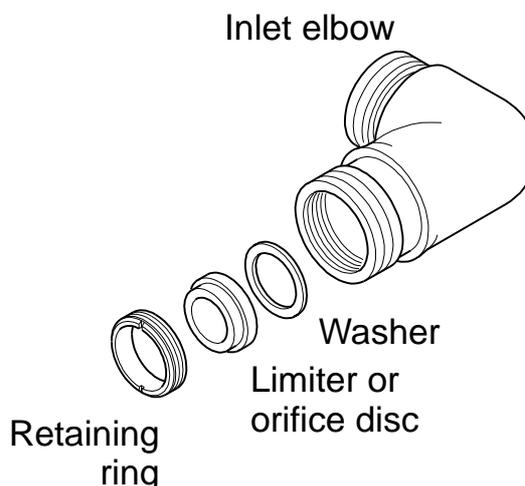
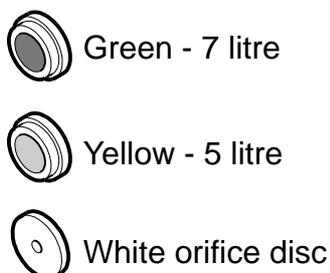
Limiters can be fitted if water economy is required.

* Yellow (5 litre) limiter may not be necessary on some gas heaters.

** **IMPORTANT!** -It is a requirement of Instantaneous Electric Water Heaters that a stable flow of water passes through the heater.

This requirement can be satisfied by using a flow stabiliser fitted prior to the heater and should be adjusted to give a temperature of between 45-50°C from the heater.

Fitting limiter or orifice disc



Installation

The installation, commissioning and maintenance must be carried out in accordance with instructions supplied and be installed by qualified and competent persons. Installations must comply with all Local and National Water Authority Regulations, and Building and Plumbing Regulations.

Exposed Model

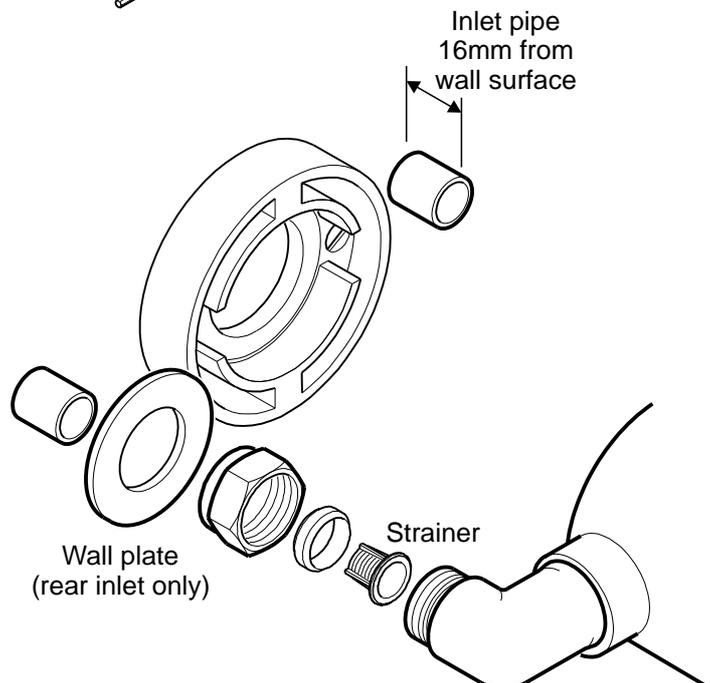
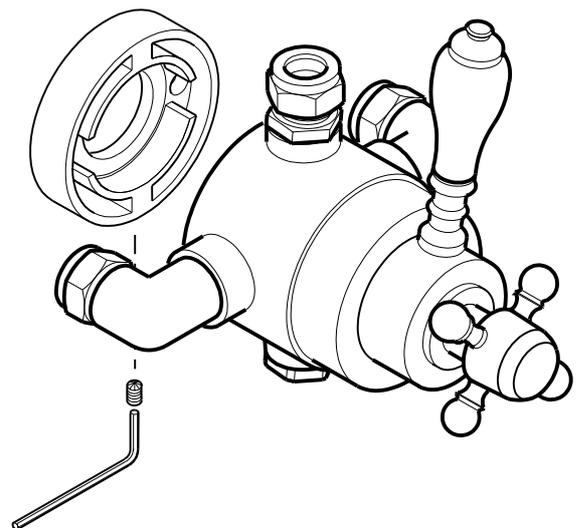
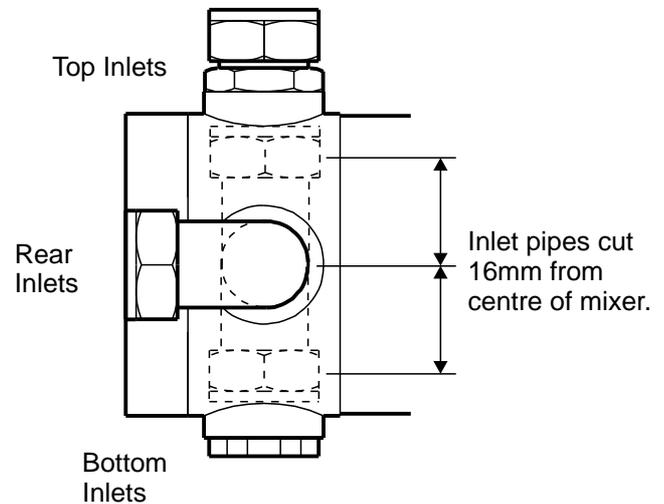
1. Determine the routes of the hot and cold supply pipework. The mixer can be fed from the top, rear or bottom. See Dimensions for pipe inlet centres.
2. Install supply pipework. Accessible isolating valves are recommended for maintenance.

Note! Try fit of mixing valve to pipework, each inlet elbow can be unscrewed 1½ turns to allow for adjustment and location.

3. Remove the wall bracket from the rear of the mixer by loosening retaining on the underside of mixer with the hexagon key.
4. Use the wall bracket to mark hole positions. Drill wall and insert suitable wall plugs for fixing screws.
5. Fit bracket to wall using fixing screws. Ensure retaining hole for grub screw is at the bottom.

Important! Ensure supply pipework is flushed to clear debris before connecting mixer. **Do not** use sealing compounds on connections.

6. Offer mixing valve to pipework and tighten the wall bracket retaining screw.
7. Make connections to inlet supplies. Ensure inlet strainers supplied are fitted.
8. Fit shower kit, see separate installation guide.



Installation

Concealed Model

1. Determine the routes of the pipework. The mixer can be fed from the top or bottom. See Dimensions for pipe inlet centres.
2. Channel wall to correct depth to accept mixer, the depth for mixer is 80mm to **finished** wall surface.
3. Install supply and outlet pipework, the outlet may be a fixed shower head or a wall outlet elbow (see shower kit).

Note! Try fit of mixing valve to pipework, each inlet elbow can be unscrewed 1½ turns to allow for adjustment and location.

3. Remove the wall bracket from the rear of the mixer by loosening retaining on the underside of mixer with the hexagon key.
4. Use the wall bracket to mark hole positions. Drill wall and insert suitable wall plugs for fixing screws.
5. Fit bracket to wall using fixing screws.

Important! Ensure supply pipework is flushed to clear debris before connecting mixer.

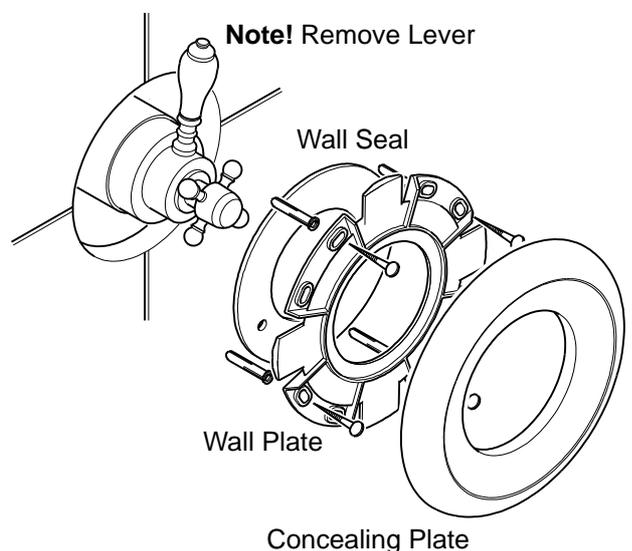
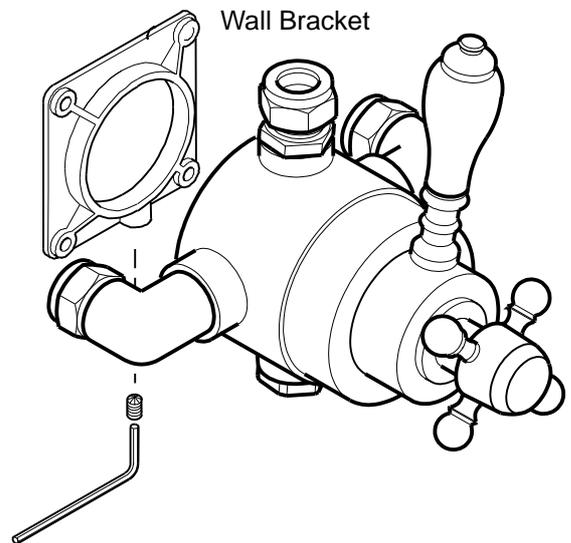
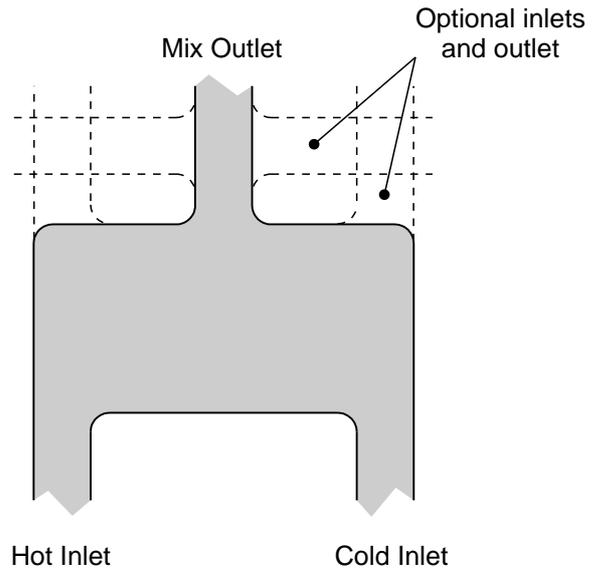
6. Offer mixing valve to pipework and tighten the wall bracket retaining screw.
7. Make connections to inlet supplies. Ensure inlet strainers are fitted. Make connection to outlet pipework and shower fitting.

Important! Serviceable access to the unit should be provided for future adjustment and maintenance.

8. Finish wall surface, mark fixing holes on wall plate, drill and fit suitable wall plugs.

Note! The flow control lever will need to be removed to fit plate.

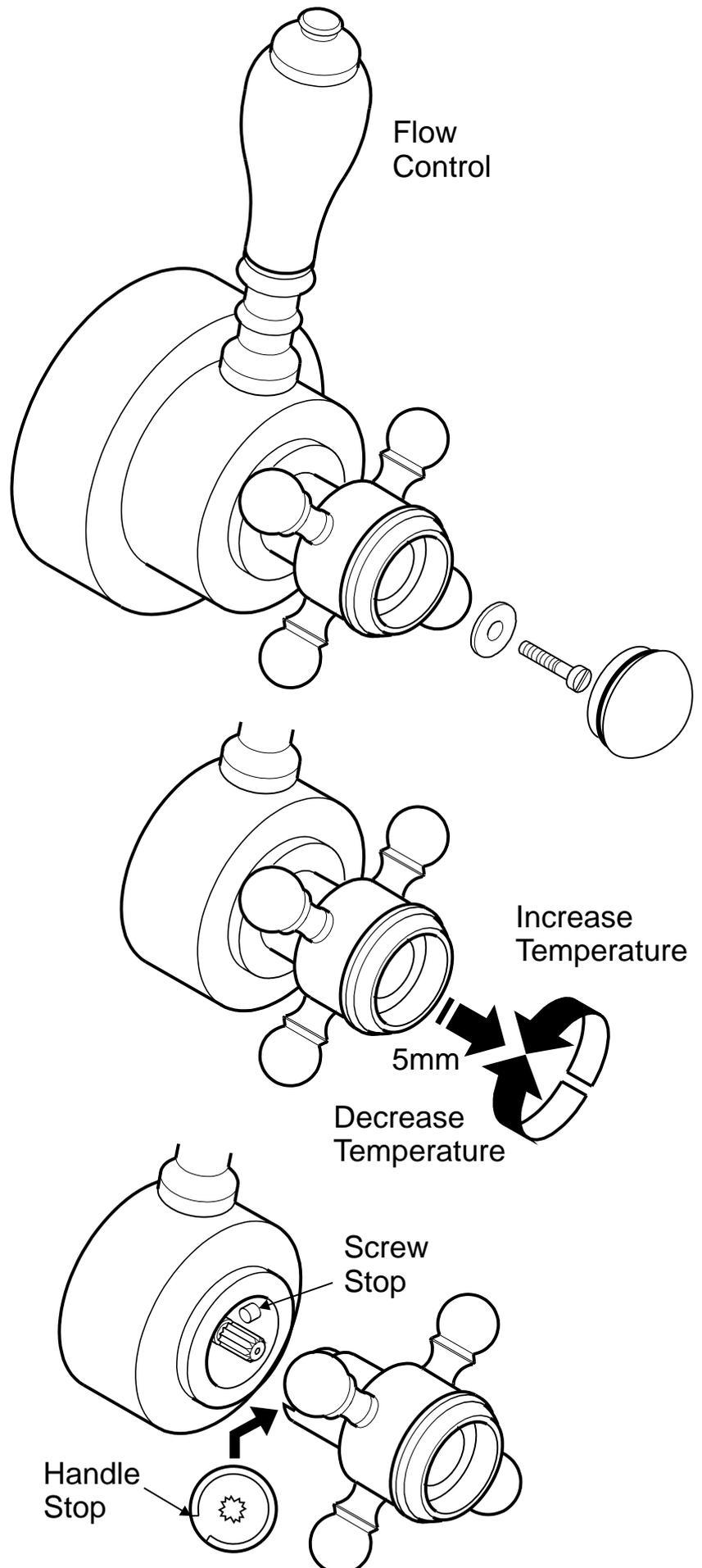
9. Fix fit wall seal, wall plate to wall. Fit the concealing plate to wall plate, the plate has to be rotated 45° from slots to fix in position.



Commissioning

Maximum Temperature Stop

1. Remove the centre indice to reveal retaining screw and washer.
2. Remove the retaining screw using a suitable screwdriver.
3. Turn the flow control fully anticlockwise to the maximum flow position.
4. Turn the temperature handle to the maximum hot position.
5. To adjust temperature, pull the handle out 5mm, to override stop.
6. To increase temperature turn anticlockwise. To decrease temperature turn clockwise.
7. Carefully remove the handle once the desired temperature is set.
8. Refit handle stop against the internal screw stop to set maximum temperature.
9. Turn off shower. Refit screw, washer and indice.
10. To check thermostatic response, run the shower and isolate the cold water supply. The outlet flow should cease within a few seconds.

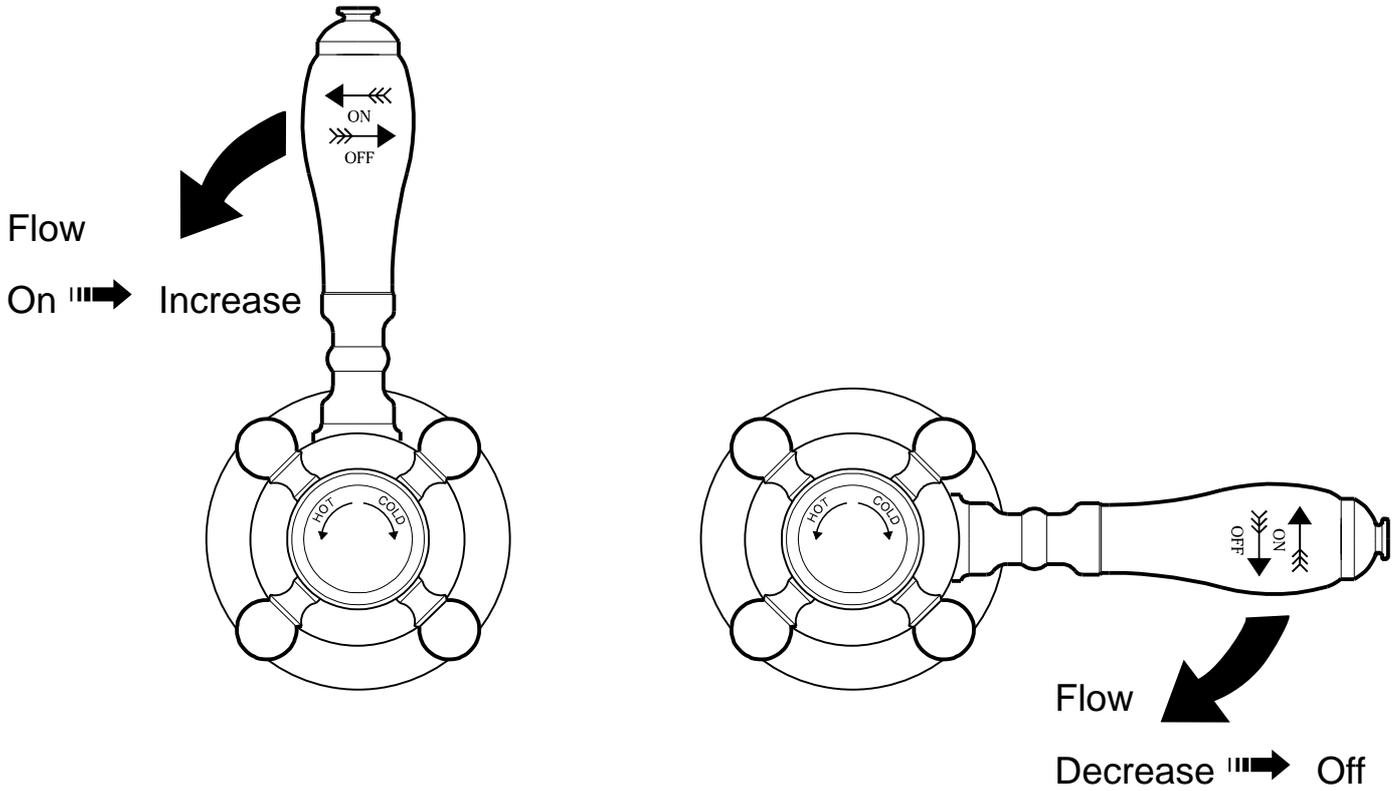


Operation

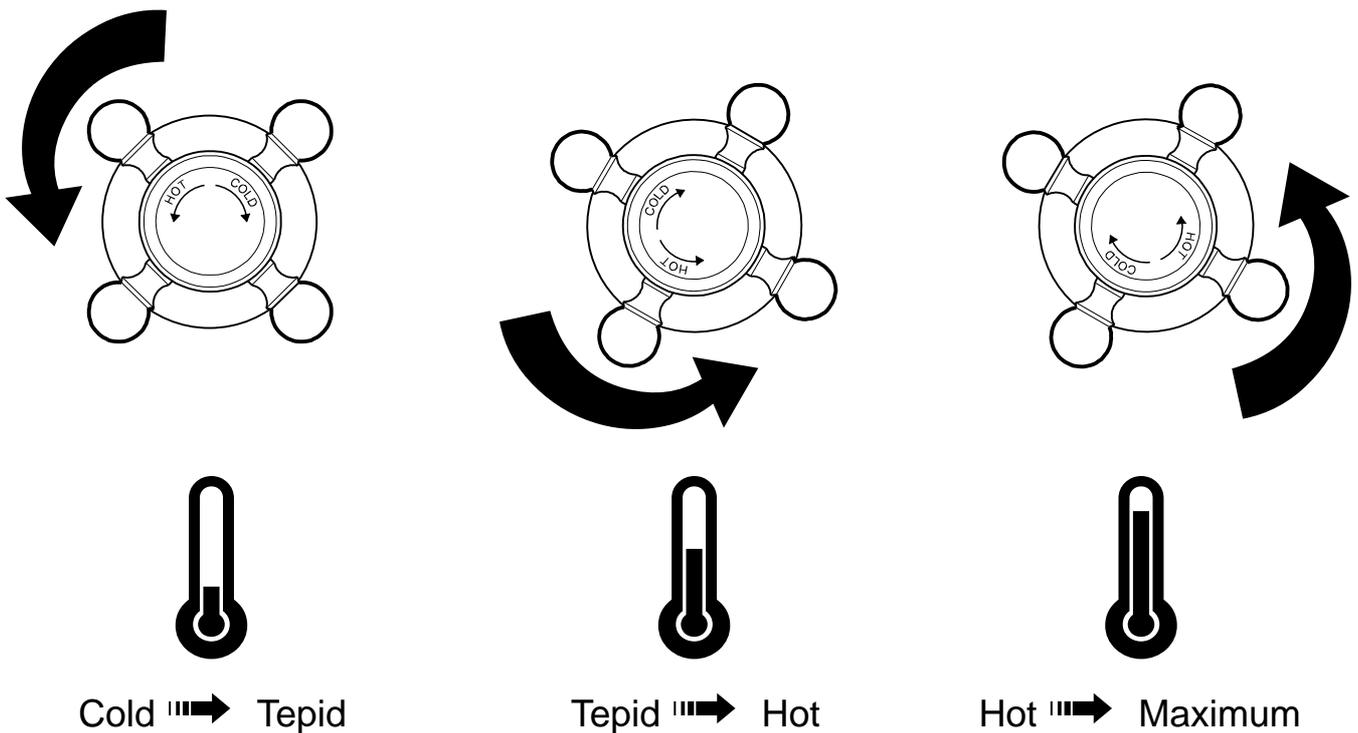
Shower Control

The shower is dual control operation. The on-off and flow can be controlled by the outer lever. The temperature is controlled separately using the inner crutch handle. The sequences are outlined below:

On-Off Flow Control



Temperature Control



Fault Finder

Duellé

Fault	Cause	Rectification
No or reduced flow and/or fluctuating temperature.	<ul style="list-style-type: none"> - Shower head blocked. - Isolating valve partially closed. - Instantaneous boiler cycling on and off as flow rate/pressure too low. - Shut-off setting incorrect. - Gravity head of water below minimum required. - Blockage in supplies/mixing valve. - Other draw offs in use causing pressure or temperature changes. - Supply pressures unequal. - Flow limiters incorrectly fitted. - Air lock in system. - Shower cross circulating. 	<ul style="list-style-type: none"> - Clear debris from shower head. - Open valve. - Adjust bottom cap setting. Check boiler settings are correct. Contact boiler manufacturer. - Turn off shower until flow ceases, reposition lever - Raise tank or fit pump. - Dismantle and check for debris. Flush supplies before refitting. - Do not use other draw offs whilst showering. - See maximum pressure differential in Specifications. - Check Application Selection. - Check System Requirements for correct installation method. - Check non return valves and condition of seals.
Maximum outlet temperature too hot or too cold.	<ul style="list-style-type: none"> - Maximum temperature incorrectly set. 	<ul style="list-style-type: none"> - Reset maximum temperature. Refer to Instructions.
Maximum temperature too cold or runs cold after a short time (maximum temperature set or fully adjusted).	<ul style="list-style-type: none"> - Hot water is less than 10°C above the outlet temperature required. - Insufficient hot water supply or storage (running out of hot water). - Instantaneous boiler not igniting as water flow rate/pressure too low. 	<ul style="list-style-type: none"> - Adjust tank temperature to 60-65°C. Ensure hot water is up to temperature. - Check tank or heater capacities. Low capacity equals shorter showering time. - Increase flow through system. Increase pressure in system. Check for blockages. Contact boiler manufacturer.
Outlet flow too much.	<ul style="list-style-type: none"> - Flow limiters incorrectly fitted. 	<ul style="list-style-type: none"> - Check Application Selection.
Only hot or cold water at outlet	<ul style="list-style-type: none"> - Inlet supplies reversed/backwards. - Inlet supplies blocked. 	<ul style="list-style-type: none"> - Ensure supplies are connected correctly to hot and cold inlets. - Clean out debris.
Shower will not shut off or leaking from body.	<ul style="list-style-type: none"> - Seal damage or wear. - Scale build up inside mixer. - Inlet pressures above maximum recommendations. 	<ul style="list-style-type: none"> - Renew all seals. - Dismantle and check for debris. - Ensure supply pressures are within Specification. Fit pressure regulating valve if necessary.
No thermostatic fail safe.	<ul style="list-style-type: none"> - Inlet temperatures not within specification. - Piston assembly jammed. - Thermostat failure. - Debris trapped in mechanism. - Inlet supplies reversed. 	<ul style="list-style-type: none"> - Check inlet temperatures, hot supply should be 10°C higher than shower outlet temperature. - Dismantle and check for debris. - Replace thermostat. - Dismantle and check for debris. - Ensure supplies are connected correctly to hot and cold inlets.

Care and Maintenance

Duellé

Cleaning

Many household cleaners contain abrasive and chemical substances, and **should not** be used for cleaning plated or plastic fittings.

These finishes should be cleaned using a mild washing up detergent or soap solution, rinsed with clean water and wiped dry with a soft cloth.

Routine Maintenance

The frequency and extent of attention required will vary according to prevailing site and operational conditions, however a 12 monthly maintenance schedule is recommended.

If the shower mixer has operated satisfactorily for some time, but performance has been degraded, please check the **Fault Finder** section to identify the problem.

Maintenance Check list

- ✓ Worn or damaged seals and washers
- ✓ Damaged seal faces
- ✓ Thread wear
- ✓ Incorrect adjustment
- ✓ Component failure
- ✓ Debris or limescale build-up

Service Guide

1. Isolate hot and cold supplies.
2. Remove ceramic indice from the control knob.
3. Remove retaining screw from centre, remove control knob, lever and sleeve.
4. Using a spanner 45mm A/F on the flats of the head (2), unscrew anticlockwise and remove.

5. Access to the thermostat (10), piston assembly (11) and return spring (12), once the head assembly has been removed.

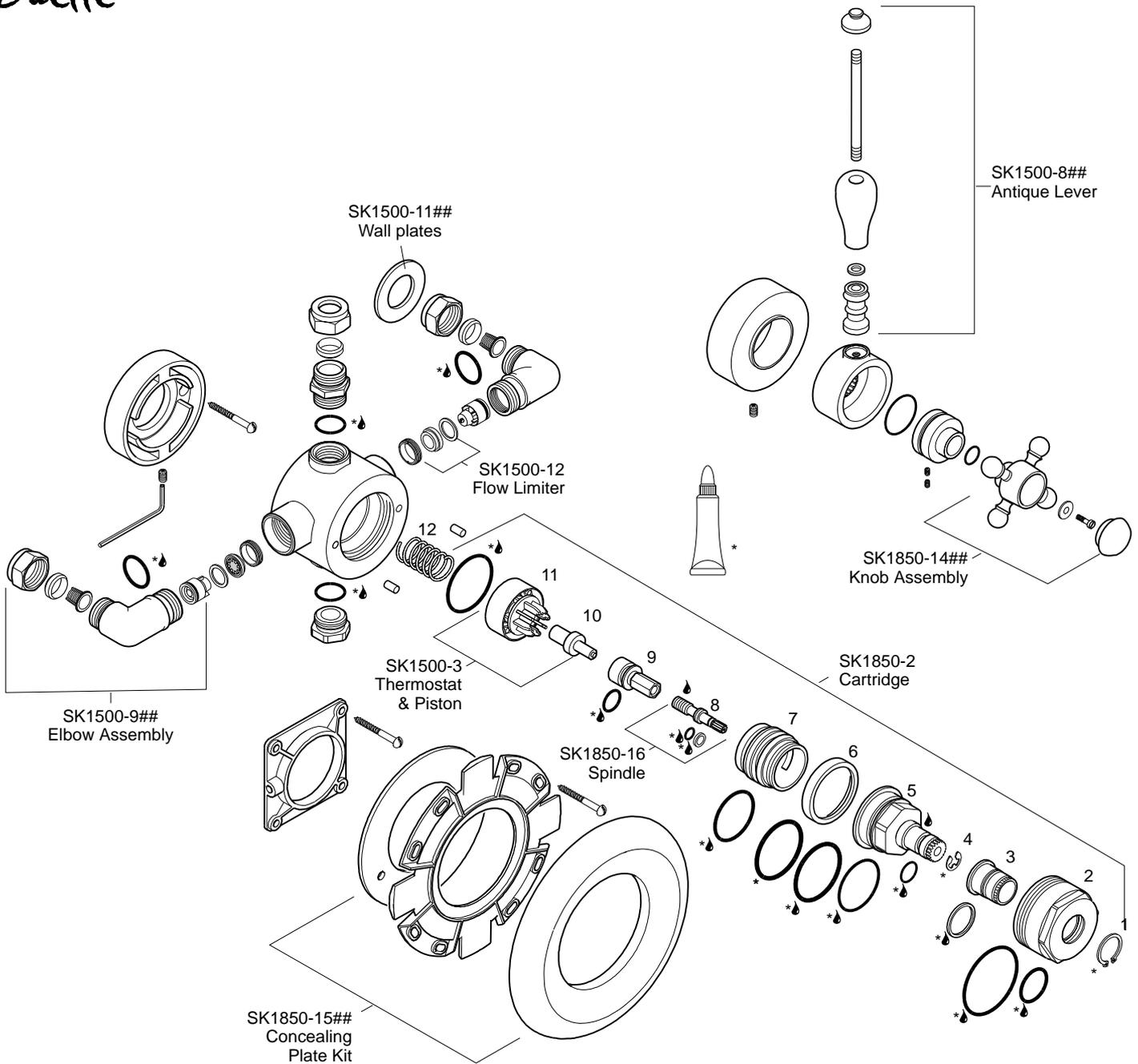
Disassemble Head

6. Remove circlip (4) and push spindle (8) downward.
 7. Remove spindle from spindle housing (9).
 8. Turn flow nut (3) clockwise until the valve head assembly can be removed.
 9. Using suitable circlip pliers remove circlip (1) and remove the flow nut (3).
 10. Using a suitable flat tool, at least 4mm thick, inserted thru slots in half cartridge (7) and a spanner 32mm A/F on flow adjust head (5), unscrew items (5,6,7).
 11. Remove all seals and washers and soak metal components in a kettle descalent, following descalent manufacturers instructions.
 12. Replace worn or damaged seals or washers.
 13. Ensure seals are fitted to their respective components. Grease seals and components marked thus  .
- Note!** Half cartridge (7) must be assembled to flow adjust head (5) using anaerobic thread retainer suitable for potable water.
14. Reassemble the components. Assembly is reversal of the dismantling sequence.

Important! To set the flow control correctly, remove the temperature control. Open valve until water flows, turn lever off until flow is completely shut off. Remove lever and re-fit in the vertical or 12 o'clock position. Refer to Commissioning section to re-set temperature.

Spare Parts

Duellé



* Items included in Seal Kit: **SK1850-1**

Denotes finish: CP (chrome)
GP (gold)

☼ Denotes: grease component

Product Support

Guarantee

This product is guaranteed against faulty materials and workmanship for 12 months from date of purchase. For the guarantee to be valid, the unit must be installed by a competent person, in accordance with the instruction booklet.

Any part found to be defective during the guarantee period, will (at our option) be repaired or replaced, free of charge, provided the unit has been installed, and properly used in accordance with the instruction booklet.

This guarantee does not affect your statutory rights.

Service Policy (Available in UK and ROI only)

In the event of a product or component fault, firstly follow the fault finding procedure to ensure the difficulty can be resolved.

If the fault can not be identified using the procedure, call the installer to check installation is correct.

Failing this, please contact the Customer Service Department on telephone number below.

Have following information prepared, to help identify the product:
Model type, Date of purchase, unit serial number (if available).

The Customer Service Department will attempt to diagnose the cause of the fault and advise the necessary action to resolve the problem over the phone.

If the fault can not be resolved and a service call is required, a Site Visit Request form will be sent to you to complete and return.

Where applicable a fixed fee payment for parts and/or labour will be levied. The cost incurred and payment methods will be advised over the phone and on the Site Visit Request form.

A completed form, along with payment (if applicable) must be received before the Service Callout can be arranged.

If the problem is not product related or is a component not of our manufacture, a fixed fee will be made to cover Site Visit costs. Additional costs for parts used to rectify the non-product related problem may be imposed.

During the visit, yourself or a responsible person should be present at all times. Charges will be made if the Service Engineer or Agent can not gain site access at the prearranged time.

Ensure water and/or electricity supplies have adequate isolation to the unit. If the unit is concealed, serviceable access should be maintained. If servicing difficulties arise from not making the provisions detailed, additional time related costs or a recall charge will be imposed.

Service Department

 **0121 706 2241**

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England

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Web page: www.gummers.co.uk



The company reserve the right to alter product specifications without prior notice.