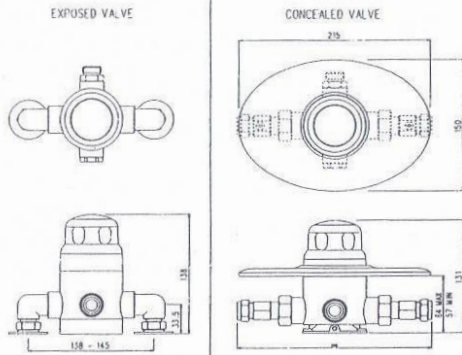


TS 1503 VALVE DIMENSIONS



A & J GUMMERS SERVICE POLICY.

In the event of a complaint occurring with this valve or any of our products, the following procedure should be adopted.

* Telephone the Customer Services Department on **0121-706-2241**.

* Ensure that you have available the following information: The model type, date of purchase, and the valve serial number.

* The Service Department will attempt to diagnose the cause of the fault and advise the required action necessary to rectify the fault.

* If a service call from a Service Agent is required either due to a direct request from yourself or due to the fault being unable to be diagnosed over the telephone you will be sent a Site Visit Request Form for your completion and return so that a service call can be actioned.

* For products that are outside the 12 month warranty period a fixed fee payment will be charged. This fee includes all parts used to rectify the complaint. The cost and acceptable methods of payment will be advised both over the telephone and on the Site Visit Request Form.

* Payment and the completed form must be received by us before a service call can be actioned.

* For products that are still within the 12 month warranty period no pre-payment is necessary. However, the completed Site Visit Request Form must be returned to us before a service call can be actioned.

* If the service call reveals that the reported fault is not product related then a fixed charge will be levied to cover engineers costs. This cost will be advised both over the telephone and on the Site Visit Request Form. Additional costs will be levied for parts used to rectify a non-product related fault.

CUSTOMER REFERENCE DATA.

Model type:.....
 Date of purchase:.....
 Installer:..... Tel:.....
 Serial no:.....

SIRrus



TS1503 'OPAC' SHOWER CONTROL

TEMPERATURE STABILISED THERMOSTATIC SHOWER CONTROL

Please Leave With The User

INSTALLATION MAINTENANCE AND OPERATING GUIDE

FOR CONCEALED AND EXPOSED INSTALLATION MODELS

OUR QUALITY CONTROL PROCEDURES ENDEAVOUR TO ENSURE THIS PACK IS COMPLETE. HOWEVER, IF YOU FIND ANY PARTS MISSING OR REQUIRE TECHNICAL INFORMATION, PLEASE CONTACT THE MANUFACTURER:-

A & J GUMMERS LTD,
 UNIT H REDFERN PARK WAY,
 TYSELEY,
 BIRMINGHAM
 B11 2DN

TEL NO: 0121 706 2241
 FAX NO: 0121 706 2960

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BACK COVER	VALVE DIMENSIONS, SERVICE POLICY	

SECTION ONE INTRODUCTION

Please read these instructions carefully, and ensure that the shower valve is installed to local Water Authority regulations. If in doubt, contact a registered plumber or the Secretary, Institute of Plumbing, 64, Station Lane, Hornchurch, Essex RM21 6NB. Telephone 01708-472791

This valve is thermostatic; it mixes hot and cold water to supply a shower. It automatically adjusts the mix in response to incoming temperatures to ensure that the temperature remains substantially constant.

It accepts 15mm o.d hot and cold pipes. The temperature can be controlled but the flow rate can only be adjusted on the concealed models.

IMPORTANT

The plating on the valve and accessories is EASILY DAMAGED. Ensure any spanners you use on nuts have smooth, clean faces and are of the correct size. Apply a layer of strong adhesive tape to the spanner faces if you are in doubt. Always handle tools and the valve carefully.

Immediately after installation, COVER UP the valve and accessories to avoid accidental damage from work being done elsewhere in the room. Plaster, grout, sealants and dust will cause permanent stains or scratches. Wrap a clean sheet, or better still, secure bubble pack around the items using adhesive tape to protect them against knocks and contamination.

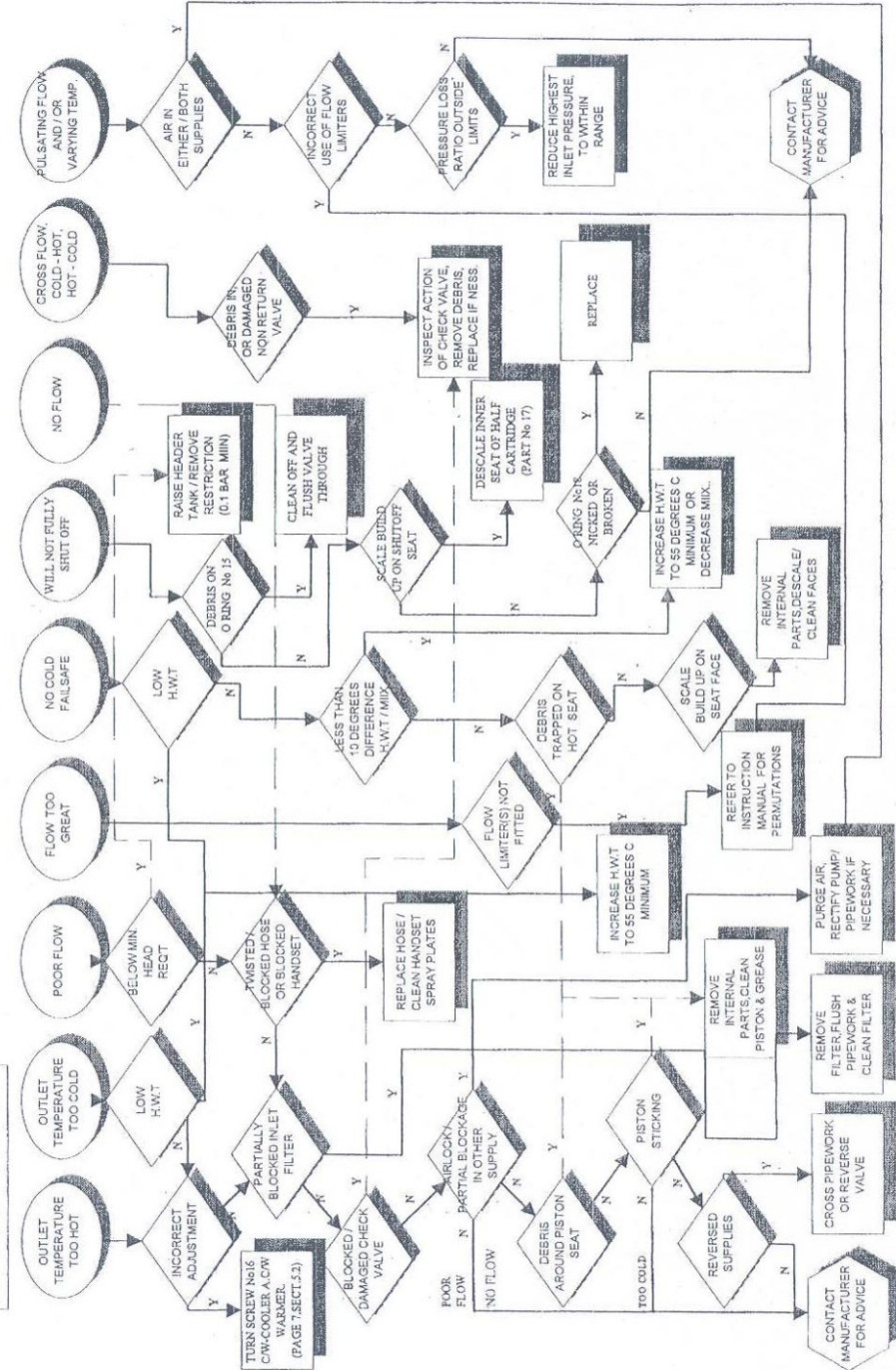
PARTS & SERVICE

Spare parts for this valve and all A & J Gummerts valves and ancillary products are available from our Sales Department on 0121-706 2241.

If you require technical advice or a service call, contact the Customer Service Department on 0121-706 2241. (See A & J Gummerts Service Policy on the rear cover of this booklet). A & J Gummerts also offer a factory repair service for your valve. Contact the Service Department for details.

SECTION SEVEN

DIAGNOSTIC FLOW CHART



SECTION SIX
TECHNICAL DATA

INLETS: 15mm compression with swivel elbows on exposed models, 15mm isolating valves on concealed valves.

OUTLETS: 1/2" B.S.P male iron/15mm compression adaptor.

WEIGHT: 2.3 kg

MINIMUM PRESSURE DROP THROUGH FITTING FOR CORRECT MIXING:
0.1 bar (1 meter head)

MAXIMUM PRESSURE DROP THROUGH FITTING FOR CORRECT MIXING:
5.0 bar (50 meter head)

MAXIMUM STATIC PRESSURE TO BE APPLIED TO FITTING:
10.0 BAR (100 meter head)

TEMPERATURE STABILITY WITH NORMAL VARIATION OF SUPPLY TEMPERATURE AND PRESSURES:
+/-2 Degrees Celcius from set temperature.

FACTORY SET MAXIMUM BLEND TEMPERATURE:
43 Degrees Celcius (can be re-set on site between 30 and 50 Deg. C)

MINIMUM TEMPERATURE DIFFERENTIAL BETWEEN HOT SUPPLY AND OUTLET TEMPERATURE: 10 Degrees Celcius
(eg Shower Temperature 43 Deg. C : Minimum Hot Supply 53 Deg. C.)

MAXIMUM HOT SUPPLY TEMPERATURE: 80 Degrees Celcius

PERFORMANCE: (Open outlet only. Does not allow for losses through pipes or fittings)

Pressure drop (bar)	0.1	0.2	0.4	0.6	0.8	1.0	1.5	2.0	3.0	4.0	5.0
Flow rate	8	12	17	22	26	29	36	42	52	60	66

Flow rates in litre/min. on equal pressure drops.

SECTION TWO
INSTALLATION REQUIREMENTS

2.1 To ensure the correct operation of this shower mixer valve it is important to fully understand your site installation.

This thermostatic valve will suit supplies of:

- HIGH PRESSURE
- LOW PRESSURE
- MAINS PRESSURE
- PUMPED PRESSURE
- UNEQUAL PRESSURE
- GRAVITY PRESSURE

Depending upon your hot and cold water supply system and/or pressure you may need to make alterations and/or fit flow limiters to the valve before installing it.

Table (fig 2.1) gives guidance on which, if any, limiters or adjustments are to be made to the valve. Failure to follow these guidelines may result in poor performance.

2.2 The valve is supplied with the hot inlet on the left and cold inlet on the right as viewed from the front. The outlet is then facing downwards. The hot supply must be connected to the inlet port marked 'H'.

The orientation of each inlet can be changed (see section 2.8).

2.3 This installation should meet the requirements of the Water Regulations. If in doubt contact your local water authority for advice or a registered member of the Institute of Plumbers, Tel: 01708-472791 for a list of your nearest qualified plumbers.

2.4 Before commencing it is advisable to install isolating valves on both hot and cold supplies for flushing out and servicing purposes, this is only needed on exposed valves due to the fact that concealed valves are supplied with them.

2.5 We recommend fitting strainers to ensure no debris enters the mixing valve. Isolating valves which incorporate strainers are ideal for this purpose, on concealed valves it is advisable to fit the filters provided.

2.6 A simple way of flushing both supply pipes is to fit the outlet adaptor (26) to both pipes and secure with compression nut (32) and olive (31), fit hose to adaptor and flush out pipes to waste.

2.7 Enclosed in your packaging are 2 off filters (37 or 51). These should be fitted to each inlet as shown in fig 2.2. However, for institutional installations we recommend the fitting of 'y' type strainers instead of these filters because of the more sensitive environment these valves will be expected to operate in.

COLD SUPPLY	HOT SUPPLY	FIT TO ELBOWS		COMMENTS
		COLD	HOT	
0.1 TO 1 BAR (1 TO 10 Mtr HEAD)	0.1 TO 1 BAR (1 TO 10 Mtr HEAD)	NOTHING	NOTHING	MAX RATIO OF HOT-COLD PRESSURE 1:5 / 5:1
1 TO 5 BAR (10 - 50 Mtr HEAD)	1 TO 5 BAR (10 - 50 Mtr HEAD)	GREEN 7 LITRE LIMITER	YELLOW 5 LITRE LIMITER	THIS ARRANGEMENT WILL ALSO SUIT PUMPED SYSTEMS #
MAINS (1.5 TO 10 BAR)	GRAVITY 0.1 TO 0.2 BAR (1 TO 2 Mtr HEAD)	WHITE ORIFICE (No washer required)	NOTHING	
	GRAVITY 0.2 TO 0.5 BAR (2 TO 5 Mtr HEAD)	GREEN 7 LITRE LIMITER	NOTHING	
	GRAVITY 0.5 BAR+ (5 Mtr HEAD)	GREEN 7 LITRE LIMITER	YELLOW 5 LITRE LIMITER	
	UNVENTED HOT WATER STORAGE SYSTEM (SHOWER COIL)			
	COMBI-BOILER/ INSTANTANEOUS GAS WATER HEATER.	GREEN 7 LITRE LIMITER	YELLOW *	ADJUST BOTTOM CAP ** (1/2 turn anti clockwise)
	ELECTRIC UNVENTED *** INSTANTANEOUS HEATER	YELLOW 5 LITRE LIMITER	NOTHING	ADJUST BOTTOM CAP ** (1/2 turn anti clockwise)
ANY VENTED (OPEN OUTLET) HEATER, GAS OR ELECTRIC, E.G. 'NORMAL' ELECTRIC SHOWER	DO NOT USE WITH MIXER VALVE- THIS WOULD BE EXTREMELY DANGEROUS			

Table (fig 2.1) Flow limiter requirements and valve adjustments for various hot/cold supplies.

This valve will perform satisfactorily without flow limiters although it is recommended that they are fitted for the purpose of economical water usage.

* With certain permutations of combi-boiler hot supply and mains cold supply it may not be necessary to fit the yellow 5 litre flow limiter.

** The bottom cap (36) is factory set at 3/4 turn from the fully closed position. Only adjust if instructed to do so in the table 2.1 or when fitting a replacement cartridge assembly. (see sect. 5)

*** 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 in the supply to the heater. It should be adjusted to give a flow temperature of 45-50 degrees C from the heater.

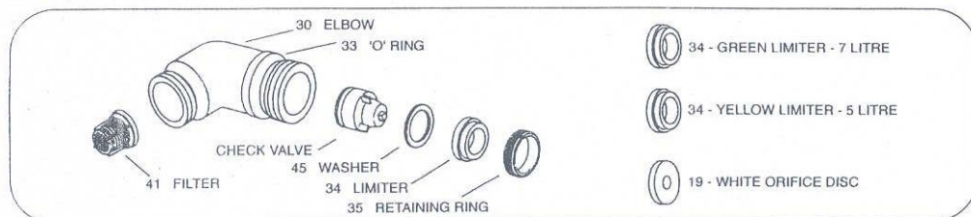


Fig 2.2 Elbow Assembly

* Remove head as an assembly of parts .
Place aside piston and distributor
assembly (22). Do not dismantle this assembly

* Unscrew half cartridge (17) (Note: do not
grip half cartridge in vice jaws or wrench jaws.
You can release the half cartridge by inserting
a flat tool such as a flat file through the
half cartridge slots and a spanner or a vice
on the large hexagon of the head driving one
against the other - the half cartridge is a
standard right hand thread).

* Remove circlip (5) and push out spindle
assembly.

* Remove all O rings and washer from
spindle assembly, unscrew spindle (left hand
thread) and remove adjusting screw (16)
from the spindle housing (13), noting
approximate number of turns to release.

5.4 CLEANING

* Soak all metal parts in descalent, wash off
in clean water.

* Examine all seals and replace if necessary.
(a maintenance kit is available which contains
all seals from your local stockist or
manufacturer).

* Use silicone based grease on all seals (light
smear only), and on the thread of the spindle
(10) and spindle housing (13).

5.5 RE-ASSEMBLY

* Add P.T.FE washer (12) to spindle (10)
from the splined end, then the O ring (11).
The spindle is then screwed into the spindle
housing (13). Locate this new assembly into
the head (6) and fit the circlip (5). Please note
that the circlip does not locate on the groove
immediately beneath the splines but locates on
the next one down towards the threaded end.

* Take the head assembly and screw onto
half cartridge (17).

* Place thermostat (21) into piston and
distributor assembly (22) and place return
spring (24) into the recess in the bottom of
the piston and distributor assembly (use a dab
of grease to retain it in place whilst installing
into the valve).

* Offer the piston assembly up to the head
assembly ensuring that the thermostat (21)
is located in the recess in the adjustment screw.

* Screw the whole assembly into the valve
body (25) and tighten. Do not adjust the
bottom cap (36) unless you are installing a
new cartridge. If this is the case, screw the
bottom cap fully clockwise until it stops, then
unscrew anti-clockwise 3/4 turn only. Then
refer to table 2.1 on page 3 to see if any
further adjustments are required for your
particular system.

* Replace sleeve (4), retaining ring (3) and
knob (2) and refer to Maximum
Temperature Setting on page 7 sect 5.2

* After re-setting your desired maximum
outlet temperature replace O ring (9),
and spindle screw (8). Finally replace
printed indice.

SECTION FIVE

USER INSTRUCTIONS

5.1 OPERATION TEMPERATURE

Turn the control knob / lever anti-clockwise , almost immediately full flow will be achieved. The temperature is controlled progressively warmer as you continue to rotate the knob/lever. The maximum temperature is factory set at 43 degrees celsius at the no. 9 position. (no. 6 position on the lever). However, this may require adjusting due to your site installation.

5.2 MAXIMUM TEMPERATURE SETTING

The maximum blend temperature should be limited to ensure that no undesirable temperature is obtained. If adjustment is necessary adopt the following procedure.

- * Remove the printed indice of the knob/lever. (it is not necessary to remove the knob/lever.)
- * Turn the control knob anti-clockwise to the maximum position.
- * Remove the spindle screw (8), water seepage through the end of the spindle is normal
- * Using a thin bladed screwdriver through the spindle (10) turn the adjusting screw (16) to alter the maximum temperature.
- * *Turn anti-clockwise for warmer temperature.*

* *Turn clockwise for cooler temperature*

* When the desired maximum temperature is obtained replace spindle screw (8) and indice.

INSTALLERS NOTE

THIS PROCEDURE SHOULD BE DEMONSTRATED TO THE END USER

5.3 SERVICING/MAINTENANCE

- * If your thermostatic mixer fails to operate correctly it could be the result of incorrect installation. Please refer to installation and site requirements.
- * If the valve has operated correctly for some time, but no longer performs acceptably, you may find it useful to firstly refer to the fault diagnosis flow chart on the inside back cover of this booklet to identify the fault. (please note that this flow chart is a general guide only).
- * Should the valve require servicing the following procedure should be adopted.
- * Isolate hot and cold supplies.
- * Prise out indice, remove spindle screw (8) and pull off control knob/. Be sure to retain O seals no's 7 & 9.
- * Remove concealing plate (39) for concealed model. Remove retaining ring (3) by pulling off sleeve (4).
- * Unscrew head (6) using spanner on large hexagon.

INLET POSITIONS

2.8 Before mounting the valve to the wall, the position for PIPEWORK should be decided.

Three inlet positions, Top, Bottom, and Rear are available simply by rotating the elbows in the valve body.

Set the elbows to the required orientation, (Top, Rear or Bottom) and then check the inlet centre distance.

With the elbows screwed fully against the valve body it is possible to unscrew the elbows a maximum of 1.1/2 turns to allow for tolerance.

2.9 If your inlet pipes are already in place and are 'cold on the left, hot on the right ', you can exchange the outlet fitting with the blanking plug. This will allow you to rotate the valve through 180 degrees to suit your existing pipework. You **must** ensure that your hot supply is connected to the inlet port marked 'H'.

If you do need to turn the valve around you will then need to remove the knob and sleeve assembly and turn these through 180 degrees such that they are again orientated correctly (ie. 'OFF' and Indicator Arrow at the top)

3.0 EXPOSED MOUNTING

Please refer to section 2 (page 2) to ensure the General Installation requirements are met.

Use the exposed backplate (41) as a template for the fixing holes.

Drill and plug wall to suit screws provided. Fit grubscrews (46) loosely to backplate and secure backplate to wall.

Locate the valve body to the wall and lock with grubscrew. Fit outlet adaptor (26) to valve exchange with outlet plug (29) for top outlet.

Connect inlet pipes to valve with compression fittings, please ensure the hot supply disconnected to the inlet port 'H'.

4.0 CONCEALED FIXING

Please refer to section 2 (page 2) to ensure the General Installation requirements are met.

It is essential that when installing a concealed mixing valve, full access can be achieved for servicing purposes Isolating adaptors are fitted as standard on concealed models these need to be fitted with the filters provided.

Rear access to the mixing valve is always preferred wherever possible (e.g. an airing cupboard or panel wall), as this removes the need to disturb any tiling or decorative features at the front of the valve. If this is not possible, removable access panel of 300mm square minimum fitted to a simple wooden framework could be installed to allow full access and removal of the valve if necessary.

Such a panel could, for example, be tiled over and secured with mirror screws in each corner and the screw capped. Removal of a valve installed in this manner would mean disturbing only a few tiles.

Once the valve is installed and tiling complete, ensuring both the inner seal (38) and outer seal (40) are affixed to the concealing surround (39) over the sleeve (4) firmly pressing against the wall.

PARTS LIST AND ASSEMBLY SEQUENCE

PARTS LIST

KEY No.	DESCRIPTION	PART No.	KEY No.	DESCRIPTION	PART No.
1	INDICE	7856DIWS	28	'O' RING	480017
2	TEMPERATURE KNOB	785602WS	29	OUTLET PLUG	780190
3	RETAINING RING	360073	30	ELBOW	150060
4	SLEEVE	785603W	31	COMPRESSION RING	9500-C2
5	CIRCLIP	9355-16	32	COMPRESSION NUT	9500-C1
6	HEAD	680333	33	'O' RING	480117
7	SPRING (LARGE)	360120	34	FLOW LIMITER (YELLOW)	760090
8	SPINDLE SCREW	560540	35	RETAINING RING	780033
9	'O' RING	480008	36	BOTTOM CAP	560514
10	SPINDLE	520005	37	FILTER	780621
11	'O' RING	9081-C17	38	CONCEALING PLATE INNER SEAL	780654W
12	P.T.F.E. WASHER	460188	39	CONCEALING PLATE	220171W
13	SPINDLE HOUSING	560529	40	CONCEALING PLATE OUTER SEAL	785612W
14	'O' RING	480210	41	BACKPLATE (EXPOSED)	220019
15	'O' RING	480212	42	CONCEALING BACKPLATE	220015
16	ADJUSTING SCREW	560528	43	ROUND HEAD SCREW	560609
17	HALF CARTRIDGE	320003	44	COUNTERSUNK SCREW	560604
18	'O' RING	480028	45	WALL COVER PLATE	220039
19	ORIFICE DISC	460192	46	RETAINING GRUB SCREW	540586
20	'O' RING	480190	47	FLOW LIMITER (GREEN)	760101
21	THERMOSTAT	740012	48	CHECK VALVE	970010
22	PLASTIC PISTON	320052	49	PLASTIC RETAINING COLLAR	780856
	PLASTIC DISTRIBUTOR	320053	50	ISOLATING ADAPTOR ASSY	970630
23	'O' RING	480241	51	FILTER	780320
24	SPRING	360121	52	INLET ADAPTOR	780384
25	BODY	150150S			
26	OUTLET ADAPTOR	9214-4			
27	WASHER	300315			

