PLEASE LEAVE WITH THE USER FOR FUTURE REFERENCE

BARBER WILSON

TRADITIONAL

TEMPERATURE STABILISED THERMOSTATIC SHOWER CONTROL. (WRc LISTING No 9701002)

INSTALLATION MAINTENANCE AND OPERATING GUIDE

OUR QUALITY CONTROL PROCEDURES ENDEVOUR TO ENSURE THAT THIS PACK IS COMPLETE. HOWEVER ,IF YOU FIND THAT ANY PARTS ARE MISSING (PLEASE CONTACT BARBER WILSONS & Co LTD) OR REQUIRE TECHNICAL INFORMATION (PLEASE CONTACT A & J GUMMERS LTD) :-

BARBER WILSONS & Co LTD
CRAWLEY ROAD ,
WESTBURY AVENUE,
WOOD GREEN,
LONDON,
N22 6AH.

TEL : 0208 888 3461
FAX : 0208 888 2041

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

TEL : 0121 706 2241
FAX : 0121 706 2960

780388/F

CONTENTS

		Page No
SECTION ONE	INTRODUCTION	1
SECTION TWO	INSTALLATION REQUIREMENTS	1,2,3
SECTION THREE	FITTING THE VALVE	4
	CONCEALED FITTING & PARTS LIST	5
SECTION FOUR	EXPOSED FITTING & ASSEMBLY SEQUENCE	6,7
	EXPOSED COPPER FITTING	7,8
SECTION FIVE	USER INSTRUCTIONS	9,10
SECTION SIX	TECHNICAL DATA	11
SECTION SEVEN	DIAGNOSTIC FLOW CHARTS	12

SECTION ONE
INTRODUCTION

Please read these instructions carefully, and insure that the shower valve is installed to local Water Authority regulations .If in doubt contact a registered plumber or the

Secrcretary,
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 responce to incoming temperatures to ensure the temperature remains substantially constant.

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 spanner faces if you are in doubt.Always handle tools and the valve carfully.

Immediately after installation , COVER UP the valve and accessories to avoide accidental damage from work being done elswhere 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 & contamination.

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.Faliure to follow these guidelines may result in poor performance.

2.2 The valve supplied with the hot inlet on the left and the 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).

Check valves are incorporated in the inlet adaptors .If these are not used on recessed installations in-line check valves should be fitted on hot and cold supplies.

2.3 This installation should meet the requirements of Water Bye-Laws.If in doubt contact your local water authority for advice or a registered member of the Institute of Plumbers , Tel No 01708 472791.
for a list of your nearest qualified plumbers.

Here are two Bye-Laws which we bring to your attention .

* All Shower Installations
Bye-laws 17 (2)b. The shower head of any shower hosepipe is connected by a fixed or sliding attachment so that it can only discharge water at a point not less than 25mm above the spill-over level of the relevant bath,shower tray or other fixed appliance.

* Showers connected to the mains cold supply mixed with stored hot water
Bye-Law 30 (2) cisterns storing water for domestic purposes.

Where the shower valve is supplied with hot water from a storage cistern and cold water from the mains supply pipe a cold storage cistern and that complies to Bye-law 30 (2) must be used.
Bye-law 30 (2) kits are available from plumbers merchants.

2.4 Before commencing it is advisable to install isolating valves on both hot and cold supplies for flushing out and servicing purposes .

2.5 We recommend fitting strainers to ensure no debris enters the mixing valve . Isolating valves which incorprate strainers are ideal for this purpose.

2.6 Before mounting the valve to the wall , the position for pipework should be decided.Three inlet positions,Top , Bottom and Rear are available by rotating the elbows in the valve body.(Top , Rear or Bottom) and then check the inlet centre distance.

2.7 If your inlet pipes are already in place and are 'cold on the left and 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 pipe work .You **must** ensure that your hot supply is connected to your inlet port marked 'H'.If you do need to turn the valve around you will then need to remove the lever assembly and engraved dial plate and turn these through 180 degrees such that they are again orientated correctly(i.e OFF and indicator arrow at the bottom).

COLD SUPPLY	HOT SUPPLY	FIT TO ELBOWS		COMMENTS
		COLD	HOT	
0.1 TO 1 BAR (1 TO 15 MTR HEAD)	GRAVITY 0.1 TO 0.5 BAR (1 TO 10 - 5 MTR HEAD)	NOTHING	NOTHING	MAX RATIO OF HOT-COLD PRESSURE 1:5/5:1
GRAVITY 1 TO 5 BAR (10 TO 50 MTR HEAD)	GRAVITY 0.5 BAR (5 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 (50 ml/min)	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 5 LITRE LIMITER *	
	ELECTRIC UNVENTED INTANTANEOUS HEATER **	YELLOW 5 LITRE LIMITER	NOTHING	
	SHOWER EG NORMAL ELECTRIC HEATER GAS OR ELECTRIC ANY VENTED (OPEN OUTLET)	DO NOT USE WITH MIXER VALVE THIS WOULD BE EXTREMLY DANGEROUS		

Table (fig 2.1) Flow limiter requirments 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.**
****IMPORTANT.It is a requirement of instantaneous Electric Water Heaters that a stable flow of water passes through the heater. This requirment 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 Inlet Adapter Assembly

SECTION THREE
FITTING THE VALVE

3.1 SURFACE MOUNTED (SHROUDED) VALVE

*Use the backplate as a template to mark the position of the fixing holes.

*Drill and plug the wall to suit the screws provided.

*Fit grubscrew (36) loosely to backplate and secure backplate to wall.

*Locate valve body into the backplate and lock with grubscrews.Fit outlet adaptor.

*Connect inlet pipes to valve with compression fittings.

CONCEALED MOUNTING.

IMPORTANT :

It is essential that when installing this concealed mixing valve that full access to the valve can be achieved for servicing purposes.It is advisable also to have isolating valves fitted on both supplies that are easily accessible for this purpose.

Rear access is always preferred wherever possible (eg. an airing cupboard or a panelled stud wall),as this would negate the need to disturb any tiling or decorative features at the front of the valve.

A removable access plate of 229.0mm (9") diameter is provided to allow full access and removal of the valve if necessary through the 150 mm hole,which is recommended - see drawing below.

CONCEALED FITTING & PARTS LIST

THERMOSTAT WITH CONCEALED UNIONS (22 mm) USE FILTER PART No 780621 + PLATE 780622

1 LEVER INSERT ASSY	780473
2 CERAMIC LEVER	780387
3 LEVER CAP	780475
4 HEAD COVER	680350
5 CIRCLIP	9355-16
6 HEAD	680302
7 LEVER ROD	780474
8 SPINDLE SCREW	780381
9 'O' RING	480008
10 SPINDLE	520099
11 'O' RING	9081-C17
12 P.T.F.E. WASHER 460188	
13 SPINDLE HOUSING	560529
14 'O' RING	480210
15 'O' RING	480212
16 ADJUSTING SCREW	560528
17 FELT WASHER	300220
18 ENGRAVED DIAL PLATE	150707
19 PAN HEAD SCREW	560315
20 'O' RING	480128
21 THERMOSTAT	740013
22 DISTRIBUTER AND	360120
PISTON ASSEMBLY	320039
	360068
	320043
23 'O' RING	480030
24 RETURN SPRING	360121
25 BODY	150501
26 BOTTOM CAP	560505
27 BACK PLATE	220017
28 'O' RING	480492
29 BLANKING PLUG	780447
30 INLET ADAPTER	780382
31 FLOW LIMITER	760090
YELLOW 5 LITRE	
32 FLOW LIMITER	760101
GREEN 7 LITRE	
33 15 mm FILTER	780621
34 CHECK VALVE	970010
35 WOODSCREW	560604
36 GRUB SCREW	540586
37 'O' RING	9138-E8
38 ALLEN KEY (2.5mm)	760072
39 FILTER PLATE (22mm)	780622
40 'O' RING	480117
41 WASHER	300315
42 ADAPTER	
43 RETAINING RING	780033
44 FILTER 780950	

EXPOSED THERMOSTATS

THERMOSTAT WITH STANDARD TAILS USE FILTER PART No 780950.

THERMOSTAT WITH EXPOSED COPPER(15mm) INLETS USE FILTER PART No 780621

FITTING INSTRUCTIONS FOR P533 SPECIAL (DIRECT SUPPLY)

COPPER TUBES SHOULD BE SET IN THE WALL AT 196mm CENTERS WITH THE TUBES APPROXIMATLY 20mm FROM THE WALL SURFACE.

THE VALVE IS SUPPLIED WITH ELBOW ADAPTERS FITTED, THESE WILL ACCEPT THE ELBOWS WHICH INCORPORATE CHECK VALVES.

BEFORE SCREWING THE ELBOW ADAPTERS INTO THE INLET ADAPTERS , FLOW LIMITERS IF REQUIRED MUST BE FITTED IN ACCORDANCE WITH THE INSTRUCTIONS ON PAGE 3 OF THE HAND BOOK . THE RETAINING RINGS 780033 BEING USED TO RETAIN THESE IN POSITION .

THE ELBOWS SHOULD BE SCREWED FULLY INTO THE ADAPTOR AND THEN BACKED OFF TO THE REQUIRED POSITION TO CO-INCIDE WITH THE CENTRES OF THE COPPER SUPPLY TUBES.

FINALLY, THE FLANGES CAN BE PUSHED BACKWARDS FLUSH WITH THE WALL SURFACE.

THESE ILLUSTRATIONS APPLY TO THE FOLLOWING :

TT5600Cu	5700Cu	5702Cu
5704Cu	6002Cu	6003Cu

TT5600Cu THERMOSTATIC SHOWER
FITTED TO 15mm COPPER INLETS

THERMOSTATIC SHOWER
FITTED FOR 15mm COPPER INLETS
RUNNING VERTICALLY

SECTION FIVE
USER INSTRUCTIONS

5.1 OPERATION

Turn the lever anti-clockwise ,almost immediatly full flow will be achieved.The temperature is controlled progressivly warmer as you continue to rotate the lever.The maximum temperature is factory set at 43 degrees celsius at the hot position,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 spindle screw of the lever. (it is not necessary to remove the lever.)

* Turn the control lever anti-clockwise to the maximum position.

* With the spindle screw (8) removed,water seepage through the end of the spindle is normal.

* Using a thin bladed screw driver 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).

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 page 12 of this booklet to identify the fault (please note that this chart is a general guide only).

* Should the valve require servicing the following procedure should be adopted

* Isolate hot and cold supplies.

* Remove spindle screw (8) and pull off control lever be sure to retain 'o' ring (9)

* Remove engraved dial plate and head cover for surface model or face plate, engraved dial plate and head cover for concealed model.

* Unscrew head (6) using spanner on large hexagon.

* Remove head as an assembly of parts (5,6&9-16)

* Remove circlip (5) and push out spindle assembly(10-16).

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

* Unscrew bottom cap(26) and remove together with spring (24) push out the piston assembly(22) from the top of the valve. Do not dismantle this assembly.

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 that contains all seals , from your local stockist or manufacturer).

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

5.5 RE-ASSEMBLY

* Replace the piston assembly (22) and ensure ease of movement when in place (piston should move with light finger pressure).

* Replace spring (24) and bottom cap (26) it is important that the bottom cap is screwed in gently until it bottoms onto the piston face . (do not use exessive force)

* The bottom cap should then be unscrewed 3/4 turn to give the correct gap between the piston and the bottom cap.

Add P.T.F.E 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 immediatly beneath the splines but locates on the next one down towards the threaded end.

* Screw the whole assembly into the valve body (25) and tighten.

* Replace head cover , engraved dial plate and lever , refer to maximum temperature setting on page 9 sect 5.2.

* After re-setting your desired maximum outlet temperature replace 'o' ring (9) and spindle screw (8).

5.6 PROBLEMS
In the event of a problem occurring during the 12 month warranty period , contact the Service Department at A&J Gummers on telephone 0121 706 2241 ,they will be pleased to advise your installation plumber accordingly.In the event of a call out being required from a Gummers approved engineer, a charge will be made only if the problem is installation related.

SECTION SIX
TECHNICAL DATA

INLETS :1/2" B.S.P. male swivel elbows

OUTLETS : Three types

1. 3/4" BSP Male with compression nut & ring for riser pipe(5600)
2. 3/4" BSP Male (5651)
3. 1/2" BSP Male (6003)

WIEGHT : 4 Kg

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

MAXIMUM PRESSURE DROP THROUGH FITTING FOR CORRECT MIXING : 5 bar (50 metre head)

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

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

FACTORY SET MAXIMUM BLEND TEMPERATURE : 43 Degrees Celsius (can be reset on site between 30 and 50 Deg C)

MAXIMUM HOT SUPPLY TEMPERATURE : 80 Degrees Celsius

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	14	18	27	34	41	48	55	61	76	90	102

Flow rates are in litres/min on equal pressure drops

DIAGNOSTIC FLOW CHART

BARBER WILSONS
AND COMPANY LTD
CRAWLEY ROAD ,
WESTBURY AVENUE ,
WOOD GREEN , LONDON N22 6AH
TEL : 0208 888 3461
FAX : 0208 888 2041