

5800 IOM

# Installation Instructions & Maintenance Document

# **SERIES 5800**

## COMPACT GLOBE CONTROL VALVES



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## PRODUCT OVERVIEW

This document covers the installation, operation and maintenance of the Series 5800 Compact Globe Control Valves presented in the "Series 5800 Product Specification", including the 5840 Two-Way Single Seat Unbalanced Valve with Cage Retained Seat and the 5843 Two-Way Single Seat Cage Balanced Valve with Cage Retained Seat. Warren Controls Series 5800 Compact Globe Control Valves feature rugged high efficiency bodies of steel or stainless steel, with cage-retained seats for ease of maintenance, and a variety of trim materials and port sizes. The equal percentage and linear plugs provide excellent

modulating control of a wide variety of fluids. The Series 5800 is ideally suited where value and long life are important objectives for applications including but not limited to the Chemical, Food & Beverage, General Service, Marine, Pulp & Paper, Refining, District Energy and Pharmaceutical Industries with temperatures from -20 to 800°F, severe service, dirty fluids, high pressure drops, and corrosive fluids.

## GENERAL INFORMATION

The instructions given herein cover generally the operation and maintenance of subject equipment. Should any questions arise which may not be answered specifically by these instructions, they should be referred to Warren Controls Inc. for further detailed information and technical assistance. This manual cannot possibly cover every situation connected with the operation, adjustment, inspection, test, overhaul and maintenance of the equipment furnished. Every effort is made to prepare the text of this manual so that engineering and design data is transformed into the most easily understood wording. Warren Controls Inc., in furnishing this equipment and this manual, must presume that the operation and maintenance personnel

assigned there to have sufficient technical knowledge and experience to apply sound safety and operational practices which may not be covered herein. In applications where Warren Controls Inc. furnished equipment is to be integrated with a process or other machinery, these instructions should be thoroughly reviewed to determine the proper integration of the equipment into the overall plant operational procedures. Warren Controls does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for proper selection, use, and maintenance of any Warren Controls product remains solely with the purchaser and end-user.

# VALVE IDENTIFICATION

To use these instructions it is necessary to identify the configuration of the valve. Factory assembled control valves have a nameplate mounted on the actuator. The valve's part number (P/N) is present on the plate. The part number represents the configuration of the control valve. To identify the valve's type, size, actuator, accessories, and other characteristics decode the part number using configuration table. If the information is incomplete, incorrect, or not present contact the factory with the valve serial number listed on the plate. (See [Information Present on Control Valves](#) section for location of part number, serial number, and other important information on valve.)

## VALVE BODY

Model	Valve Type	Size	Body Mat'l.	End Conn.	Trim Style	Trim Material	Trim Cv	Packing Type	Bonnet Construction	
<b>58N</b> 1/2"-2" Bodies Diaphragm: 49" or 84" Cylinder: 4" or 6"	<b>40</b> Single Seat, 2-Way, Unbalanced w/Cage Retained Seat	<b>050</b> 1/2" inch	<b>W</b> WCB	<b>F</b> 150 lb. Flanged	<b>E</b> Equal %	<b>S</b> 316 Stainless Steel*	<b>F</b> Full Port	<b>T</b> Teflon	<b>S</b> Peek Bearings	
		<b>075</b> 3/4 inch	<b>F</b> CF8M		<b>L</b> Linear		<b>1</b> 1st Port Reduction	<b>G</b> Graphite	<b>8</b> Z PEEK Bearings	
		<b>100</b> 1 inch		<b>G</b> 300 lb. Flanged	<b>M</b> Mod Lin	<b>T</b> TFE Soft Seats	<b>2</b> 2nd Port Reduction	<b>V</b> Vacuum Service	<b>G</b> Graphalloy Bearings w/ Ext Bonnet	
		<b>150</b> 1-1/2 inch			<i>NOTE: Type 48 Mod Lin only.</i>	<b>P</b> PEEK Soft Seats	<b>3</b> 3rd Port Reduction		<b>L</b> Nickel Based Graphalloy w/ Ext Bonnet	
<b>58H</b> 2.5"-4" Bodies Diaphragm: 84" or 115" Cylinder: 6" or 8"	<b>43</b> Single Seat, 2-Way, Cage Balanced w/ Cage, Retained Seat	<b>200</b> 2 inch		<b>S</b> NPT Screwed		<b>6</b> Alloy 6 Wrapped 316SS	<b>4</b> 4th Port Reduction		<b>7</b> Oxidation Resistant Graphalloy Bearings w/ Ext Bonnet	
		<b>250</b> 2-1/2 inch		<b>W</b> Socket Weld		<b>7</b> 400 Stainless Steel				
		<b>300</b> 3 inch			<i>NOTE: S and W only available in 1/2" - 2" sizes.</i>		<b>8</b> Alloy 6 Wrapped 400SS	<i>NOTE: Check factory for availability of reduced trims.</i>	<b>TS</b> Teflon Packing, PEEK Bearings	<b>GS</b> Graphite Packing, PEEK Bearings
		<b>400</b> 4 inch					<i>*Type 48, 316 SS Trim uses a harder Nitronic 60 seat.</i>		<b>VS</b> Teflon Packing, PEEK Bearings, Vacuum Service	<b>LS</b> EPDM Packing, PEEK Bearings
	<b>48</b> Single Seat, 2-Way, Low Flow Unbalanced w/Cage Retained Seat (1/2" - 1" sizes only)							<b>T8</b> Teflon Packing, Z PEEK Bearings	<b>G8</b> Graphite Packing, Z PEEK Bearings	
								<b>V8</b> Teflon Packing, Z PEEK Bearings, Vacuum Service	<b>L8</b> EPDM Packing, 7 PEEK Bearings	
								<b>GG</b> Graphite Packing and Gaskets, Copper Based Graphalloy Bearings, Extension Bonnet	<b>GL</b> Graphite Packing and Gaskets, Nickel Based Graphalloy Bearings, Extension Bonnet	
								<b>G7</b> Graphite Packing and Gaskets, Oxidation Resistant Graphalloy Bearings, Extension Bonnet		

## APPLICATION SELECTION TIPS

### PACKING

- Use Teflon for most fluids below 450°F except water.
- Use EPDM Packing for water service only. Do not use on oils, hydrocarbons and acids.
- Use Graphite Packing for fluids above 450°F.

### BONNET CONSTRUCTION

- Use PEEK Bearings for most applications below 450°F that are not steam.
- Use Z PEEK for steam applications below 450°F.
- Use Graphalloy Bearings w/ext. bonnet above 450°F. See page 9 for further selection criteria on Graphalloy Type.

### ACID SERVICE

For Acid Service, special rulon bearings are required. Consult Factory.

ACTUATOR				ACCESSORIES				
Actuator Series	Action	Spring Range	Hand-wheel	Positioners, I/P's & Limit Switches	X digit spec.	Air Filter Regulators	ASCO Solenoids	Special Options
<b>00</b> None	<b>0</b> None	<b>0</b> None or Cylinder	<b>0</b> None	<b>0000</b> None	<b>F</b> Full Range Signal, 3-15 PSI or 4-20mA (Factory Default)	<b>0</b> None	<b>0</b> None	<b>0</b> None
<b>DIAPHRAGMS:</b>	<b>R</b> Reverse		<b>R</b> Reverse	<b>POSITIONERS:</b>	<b>L</b> Low of Split Range, 3-9 PSI or 4-12mA	<b>A</b> Type 300 0-30 PSI	<b>120 Vac Coils:</b>	<b>S</b> Special Opt's or Set-Up
<b>49</b> DL49 (49 Sq. In.)	Stem Fail Down	<b>L</b> Low 3-9 psi	<b>D</b> Direct	<b>2xP</b> BLX Pneumatic	<b>H</b> High of Split Range, 9-15 PSI or -20mA	<b>B</b> Type 300 0-60 PSI	<b>A</b> 8320G184 3-Way Brass	<b>T</b> SS Tubing
<b>4X</b> DL49XR		49D; 84; & 115	<i>Note: DL84; DL84XR; DL115 &amp; DL115XR only- Must match action.</i>	<b>2xE</b> BLX ElectroPneumatic	<b>4th digit spec.</b>	<b>C</b> Type 300 0-120 PSI	<b>B</b> 8320G202 3-Way SS	<b>G</b> SS Tagging
<b>84</b> DL84 (84 Sq. In.)	<b>D</b> Direct			<b>2xI</b> BLX ElectroPneu. Intrn. Safe	<b>0</b> No Additions	<b>D</b> Type 350SS 0-100 PSI	<b>J</b> 8342G1 4-Way Brass	<b>B</b> SS Tubing and Tagging
<b>8X</b> DL84XR (84 Ext. Rng.) for 58N only	Stem Fail Up	<b>F</b> Full 3-15 psi 84; 115 5-14 psi 49R 4-13 psi 49D		<b>2xX</b> BLX ElectroPneu. Exp. Proof	<b>L</b> w/Mech. Lmt Swtch's		<b>K</b> 8342G701 4-Way SS	
<b>15</b> DL115 (115 Sq. In.)				<b>2xF</b> BLX ElectroPneu. Fail Freeze	<b>F</b> w/4-20 Feedback		<b>L</b> EF8320G184 3-Way EXP Br.	
<b>5X</b> DL115XR				<b>76P</b> Moore760 Pneumatic	<b>B</b> w/Swtch's & Feedbck		<b>M</b> EF8320G202 3-Way EXP SS	
<b>CYLINDERS:</b>				<b>76E</b> Moore 760 Electro-Pneumatic	<i>NOTE : L,F,B not available for 2xI, 2xK.</i>		<b>V</b> EF8342G1 4-Way EXP Br.	
<b>C1</b> 4" Spring Fail		<b>H</b> High 9-15 psi 85; 115 10-14 psi 49R 8-12 psi 49D		<b>TOZO</b> ABB TZIDC 4-20mA *	<b>4th digit spec.</b>		<b>W</b> EF8342G701 4-Way EXP SS	
<b>C2</b> 6" Spring Fail				<b>THN</b> ABB TZIDC 4-20mA w/HART Intrn. Safe & Non-Incend *	<b>Individual Options</b>		<b>24 Vdc Coils:</b>	
<b>C3</b> 8" Spring Fail		<b>X</b> Xtra-High DL49XR, DL84XR & DL115XR*		<b>TPN</b> ABB TZIDC PROFIBUS PA Intrn. Safe & Non-Incend.	<b>0</b> No Additions		<b>Y</b> EF8320G184 Explosion Proof 3-Way Brass	
<i>NOTE:</i>				<b>TFN</b> ABB TZIDC FOUNDATION Fieldbus Intrn. Safe & Non-Incend.	<b>F</b> w/4-20 Feedback Module (4-20mA w/HART Models ONLY)		<b>Z</b> 8320G184 3-Way Brass	
<i>4X, 5X &amp; 8X Only in Xtra-High Spring Range, Reverse Acting</i>				<b>THX</b> ABB TZIDC 4-20mA w/HART Exp. Proof *	<b>K</b> w/Digital Position Feedback Module (4-20mA w/HART Models ONLY)		<b>4</b> EF8320G202 24VDC Coil 3-Way EXP SS	
				<b>TPX</b> ABB TZIDC PROFIBUS PA Exp. Proof	<b>L</b> w/24VDC/AC Micro-Switch's (Exp. Proof Models ONLY)		<b>24 Vac Coils:</b>	
				<b>TFX</b> ABB TZIDC FOUNDATION Fieldbus Exp. Proof	<b>P</b> w/Proximity Switch's NC		<b>3</b> 8320G184 24 VAC Coil 3-Way Brass	
				<b>PROXIMITY SWITCHES:</b>	<b>Option Combinations</b> (For 4-20mA w/HART Models ONLY)			
				<b>PX11</b> Mark 1 Series-2 ea. SPDT	<b>A = F &amp; K</b>			
				<b>PX12</b> Mark 1 Series-2 ea. SPDT w/2k Pot.	<b>B = F &amp; L</b> (Exp. Proof Mod. ONLY)			
				<b>PX13</b> Mark 1 Series-2 ea. SPDT w/4-20 Feedback	<b>C = F &amp; P</b>			
				<b>PX14</b> Mark 1 Series-4 ea. SPDT	<b>E = K &amp; L</b> (Exp. Proof Mod. ONLY)			
				<b>PX15</b> Mark 1 Series-6 ea. SPDT	<b>G = K &amp; P</b>			
				<b>I/P's - Use with Diaphragm Only</b>	<b>J = F &amp; K &amp; L</b> (Exp. Proof Mod. ONLY)			
				<b>MAP1</b> Type 500X I/P, 3-9 PSI	<b>M = F &amp; K &amp; P</b>			
				<b>MAP2</b> Type 500X I/P, 9-15 PSI	<i>See Actuators, Positioners, &amp; Accessories • Section of Product Specification for details.</i>			
				<b>MAP3</b> Type 500X I/P, 3-15 PSI				
				<b>MAP4</b> Type 500X I/P, 1-17 PSI				
				<b>MAP5</b> Type 500X I/P, 6-30 PSI				
				<b>MAP6</b> Type 550X I/P, 0-30 PSI				
				<b>MAP7</b> Type 550X I/P, 0-60 PSI-for 15 or 5X Only				
				<b>MAP9</b> Type 950X I/P, 3-15 EXP				

**FAILURE MODES:**

MODE	ACTUATOR ACTION
Closed	Reverse
Open	Direct

Available with Split Ranges, Select "S" in Special Options

‡ For positioner code 2xF\_, the BLX Positioner with the Fail Freeze module, check first with the factory for approval due to space considerations on certain valve assembly combinations.

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**Note:**

Standard pneumatic tubing is copper. SS tubing "T" is optional.

SS tagging "G" (Two lines, 24 characters/line) is optional.

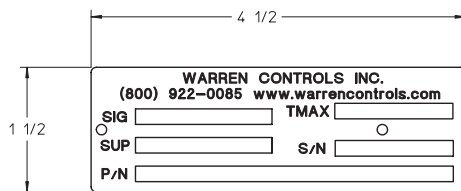
SS tubing and tagging together "B" is optional.

## INFORMATION PRESENT ON CONTROL VALVES

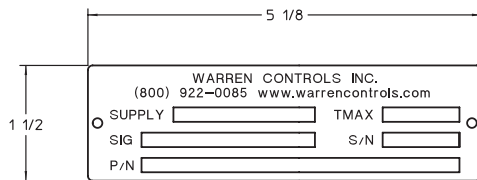
There is a great deal of information present on each control valve ranging in importance from the part number and serial number to the color of the paint and casting numbers. This information is important for identifying the valve, installing it correctly, and obtaining parts. Examples of the current factory nameplates and flow arrow plates used on Series 5800 control valves are shown here. The ac-

companying table identifies the information present and where to find it on the control valve. There may also be other casting numbers and foundry marks present that do not provide useful information. Customer specific tagging may also present. The plates used, and information present, on Warren Controls other product lines or older valves may be different, contact the factory for details.

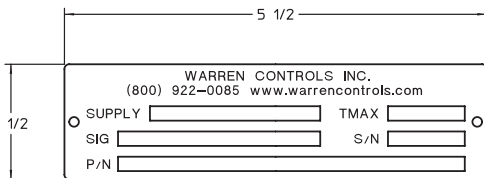
### ACTUATOR NAMEPLATES



DL49

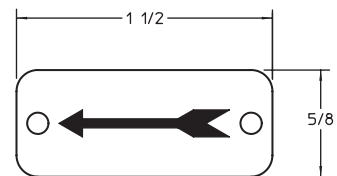


DL84



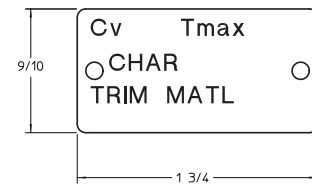
DL115 & CL

### FLOW ARROW PLATES




2-WAY FLOW

### VBA NAMEPLATES



INDUSTRIAL VBA

# INFORMATION PRESENT ON CONTROL VALVE

PART NUMBER & SERIAL NUMBER			
Information	Symbol(s)	Location	Notes
Part number (Configuration)	<b>P/N</b>	On actuator	• On <b>Actuator Nameplate</b> attached to actuator.
Serial number	<b>S/N</b>	On actuator and valve body	• On <b>Actuator Nameplate</b> attached to actuator. • Sales order number only stamped on flat boss on valve body between end connections 5800).* * Number stamped using approximately 1/8 inch tall characters
FLOW DIRECTION(S)			
Information	Symbol(s)	Location	Notes
Flow direction through valve		On valve body	• On <b>Flow Arrow Plate</b> attached to valve body bonnet flange between the end connections.*
INPUT SIGNAL, SUPPLY & SERVICE			
Information	Symbol(s)	Location	Notes
Input signal	<b>SIG</b>	On actuator	• On <b>Actuator Nameplate</b> attached to leg(s) of actuator.
Supply pressure	<b>SUP or SUPPLY</b>	On actuator	• On <b>Actuator Nameplate</b> attached to leg(s) of actuator.
VALVE ATTRIBUTES			
Information	Symbol(s)	Location	Notes
Maximum temperature rating of valve body	<b>TMAX or Tmax</b>	On actuator and valve body	• On <b>Actuator Nameplate</b> attached to leg(s) of actuator. • On <b>Industrial VBA Nameplate</b> attached to valve body bonnet flange between the end connections on side opposite flow arrow plate.
Trim Cv (flow coefficient)	<b>Cv</b>	On valve body	• On <b>Industrial VBA Nameplate</b> attached to valve body bonnet flange between the end connections on side opposite flow arrow plate.
Trim style (Characteristic)	<b>CHAR</b>	On valve body	• On <b>Industrial VBA Nameplate</b> attached to valve body bonnet flange between the end connections on side opposite flow arrow plate.
Trim material	<b>TRIM MATL</b>	On valve body	• On <b>Industrial VBA Nameplate</b> attached to valve body bonnet flange between the end connections on side opposite flow arrow plate.
Valve body material		On valve body	• If WCB is cast on the valve, and or the factory applied paint is gray, the valve body material is steel. If CF8M is cast on the valve the valve body material is 316 stainless steel.

# BODY STYLE VERSUS APPLICATION

## 2-WAY VALVES

(Control of Liquids, Gases, and Steam)

### 5840 2-Way Single Seat Unbalanced Valve with Cage Retained Seat

The 5840 Valve is particularly effective for the control of liquids, gases, and steam. It is a suitable solution for applications with dirty fluids and high pressure drops. ANSI Class IV and VI shut-off.

<b>Sizes:</b>	1/2, 3/4, 1, 1-1/2, 2, 2-1/2, 3, 4 inch
<b>Body:</b>	WCB Steel or CF8M Stainless Steel 300 NPT or 300 Socketweld (1/2 thru 2), 150LB Flange or 300LB Flange (1/2 thru 4)
<b>Trim:</b>	EQ% or Linear, 316 Stainless Steel, TFE, PEEK, or Alloy 6 Wrapped 316 SS, 400 Stainless Steel, Alloy 6 Wrapped 400 SS
<b>Shut-off:</b>	ANSI Class IV (Stainless Steel and Alloy 6 Trim), ANSI Class VI (TFE and PEEK Trim)
<b>Packing &amp; Bonnet:</b>	TFE V-Ring, Spring Loaded, w/ PEEK Bearings (+32 to 450°F), TFE V-Ring, Spring Loaded, w/ Z PEEK Bearings (+32 to 450°F), Adjustable Graphite w/ PEEK Bearings (+32 to 450°F), Adjustable Graphite w/ Z PEEK Bearings (+32 to 450°F), Adjustable Graphite w/ Graphite Gaskets & Alloy 6 Bearings (+32 to 550°F), Adjustable Graphite w/Graphite Gaskets, Graphalloy Bearings & Extension Bonnet (+32 to 750F for NON-Oxidizing Media ONLY) Adjustable Graphite w/ Graphite Gaskets, Alloy 6 Bearings & Extension Bonnet (+32 to 800°F), Suitable for Oxidizing Media <b>Note: PEEK Bearings are best suited for chemical applications. Z-PEEK Bearings are best suited for water and steam applications.</b>
<b>Temperature:</b>	+32 to 450°F (TFE or PEEK Trim) +32 to 800°F (Stainless Steel or Alloy 6 Trim)
<b>Rangeability:</b>	50:1



### 5843 2-Way Single Seat Caged Balanced Valve with Cage Retained Seat

The 5843 is a balanced valve that is an effective solution for the control of liquids, gases, and steam at higher pressures. It requires less force to operate than unbalanced valves so smaller actuators can be used. Its single seat o-ring seal design facilitates ANSI Class IV shut-off. It is limited to cleaner fluids.

<b>Sizes:</b>	2-1/2, 3, 4 inch
<b>Body:</b>	WCB Steel, CF8M Stainless Steel 150LB Flange or 300LB Flange
<b>Trim:</b>	EQ% or Linear, 316 Stainless Steel, 400 Stainless Steel, Alloy 6 Wrapped 400 SS
<b>Shut-off:</b>	ANSI Class IV (Fluoraz Seal) ANSI Class III (Metal Seal)
<b>Packing &amp; Seal Bonnet:</b>	TFE V-Ring, Spring Loaded, w/ PEEK Bearings and Fluoraz (+32 to 450°F), TFE V-Ring, Spring Loaded, w/ Z PEEK Bearings and Fluoraz Seal (+32 to 450°F), Adjustable Graphite w/ PEEK Bearings and Fluoraz Seal (+32 to 450°F), Adjustable Graphite w/ Z PEEK Bearings and Fluoraz Seal (+32 to 450°F), Adjustable Graphite w/ Graphite Gaskets & Alloy 6 Bearings and Fluoraz Seal (+32 to 450°F), Adjustable Graphite w/ Graphite Gaskets, Graphalloy Bearings Metal Seal & Extension Bonnet (+32 to 750F for NON-Oxidizing Media ONLY) Adjustable Graphite w/ Graphite Gaskets, Alloy 6 Bearings Metal Seal, & Extension Bonnet (+32 to 800°F) <b>Note: PEEK Bearings are best suited for chemical applications. Z-PEEK Bearings are best suited for water and steam applications.</b>
<b>Temperature:</b>	+32 to 800°F (Stainless Steel or Alloy 6 Trim)
<b>Rangeability:</b>	50:1





# 5848 2-Way Single Seat Low-Flow Unbalanced Valve with Cage Retained Seat

The 5848 Valve is particularly effective for the control of clean, very low flow liquids, gases, and steam. ANSI Class IV and VI leakage ratings standard.

**See Table on page 40 for Fluid Temperature Limits**

<b>Sizes:</b>	1/2, 3/4, 1 inch
<b>Body:</b>	WCB Steel or CF8M Stainless Steel 300 NPT, 300 Socketweld, 150LB Flange or 300LB Flange
<b>Trim:</b>	Modified Linear: 316 Stainless Steel; TFE or PEEK
<b>Leakage Rating:</b>	ANSI Class IV (Stainless Steel Trim), ANSI Class VI (TFE and PEEK Trim)
<b>Packing, Type &amp; Bonnet Construction:</b>	<b>LS</b> EPDM Lip w/ PEEK Bearings <b>L8</b> EPDM Lip w/ Z PEEK Bearings <b>TS</b> TFE V-Ring, Spring Loaded, w/ PEEK Bearings <b>T8</b> TFE V-Ring, Spring Loaded, w/ Z PEEK Bearings <b>GS</b> Adjustable Graphite w/ PEEK Bearings <b>G8</b> Adjustable Graphite w/ Z PEEK Bearings <b>GG</b> Adjustable Graphite w/ Graphite Gaskets, <b>Copper Based</b> Graphalloy Bearings & Extension Bonnet (For <i>NON-Oxidizing Media ONLY, Best Suited for Hot Water and Steam</i> ) <b>GL</b> Adjustable Graphite w/ Graphite Gaskets, <b>Nickel Based</b> Graphalloy Bearings & Extension Bonnet (For <i>NON-Oxidizing Media ONLY, Best Suited for Heat Transfer Oils</i> ) <b>G7</b> Adjustable Graphite w/ Graphite Gaskets, <b>Oxidation Resistant</b> Graphalloy Bearings & Extension Bonnet (For <i>Oxidizing Media ONLY</i> ) <b>Note: PEEK Bearings are best suited for water and chemical applications. Z-PEEK Bearings are best suited for steam applications.</b>
<b>Rangeability:</b>	40:1 for Cv 0.75 30:1 for Cv 0.50 20:1 for Cv 0.25



Flow direction is reversed when used with Cylinder Actuator Failed Closed

ALLOWABLE SEAT LEAKAGE CLASSES				
Leakage Class	Maximum Seat Leakage	Test Fluid	Test Pressure	Relative Seat Tightness
Class II	0.5% of rated CV	Water	45 to 60 PSI	1
Class III	0.1% of rated CV	Water	45 to 60 PSI	5
Class IV**	0.01% of rated CV	Water	45 to 60 PSI	50
Class V	0.0005 ml /min/inch of trim size/ ΔP(PSI)	Water	Max Operating ΔP	300,000
Class VI**	Class VI about 0.9 ml/min *	Air	50 PSI	600,000

\* Leakage rate varies by valve size, Refer to the ANSI/FCI Standard 70.2.

\*\*Class IV and V are the ONLY leakage classes available within the 5800 Series.

Flow direction is reversed when used with Cylinder Actuator

BODY PRESSURE-TEMPERATURE RATINGS:				
Temperature (F)	150 FLG Steel	300 NPT, SWE, or FLG Steel	150 FLG St Steel	300 NPT, SWE, or FLG St Steel
+32° To 100°F	285	740	275	720
150°	272	710	255	670
175°	266	695	245	645
200°	260	680	235	620
225°	252	673	230	605
250°	245	667	225	590
275°	237	661	220	575
300°	230	655	215	560
325°	222	650	210	548
350°	215	645	205	537
375°	207	640	200	526
400°	200	635	195	515
450°	185	620	182	497
500°	170	605	170	480
550°	155	587	155	465
600°	140	570	140	450
650°	125	550	125	440
700°	110	530	110	435
750°	95	505	95	425
800°	80	410	80	420

Pressure ratings are PSIG

For applications below 32° consult factory

**Body Pressure** — Temperature Ratings conform to ANSI based on body/flange rating and body material. As the fluid temperature increases, the maximum allowable internal pressure decreases. Verify maximum pressures and temperatures prior to selecting body material and body/flange rating.

TRIM MATERIALS	FLOWING DIFFERENTIAL PRESSURE LIMIT
316 Stainless Steel	100 PSID
TFE	15 PSID
PEEK	100 PSID
400 Stainless Steel	200 PSID
Alloy 6	300 PSID

**NOTE:** Approaching limits for continuous use will reduce trim life. For continuous use, stay within half of rated maximum.

**NOTE ON BEARINGS:** PEEK Bearings should not be used for temperatures above 450°F or flowing differential pressure above 300 PSIG.

## DIMENSIONS & WEIGHTS

DIMENSION (IN)		VALVE SIZE (IN)							
5840		1/2	3/4	1	1-1/2	2	2-1/2	3	4
A	300THD	7-1/2	7-5/8	7-3/4	9-1/4	10-1/2	NA	NA	NA
	300SWE	7-1/2	7-5/8	7-3/4	9-1/4	10-1/2	NA	NA	NA
	150FLG	7-1/4	7-1/4	7-1/4	8-3/4	10	10-7/8	11-3/4	13-7/8
	300FLG	7-1/2	7-5/8	7-3/4	9-1/4	10-1/2	11-1/2	12-1/2	14-1/2
B		2	2-3/8	2-1/2	3-1/4	3-3/8	4	4-3/8	5-1/4
C	Standard	5	5	5	4-7/8	4-7/8	7	7	7
	Extension Bonnet	10	10	10	9-7/8	9-7/8	14	14	14

VALVE SIZE (IN)	WEIGHT (LB)							
	Standard				With Extension Bonnet			
	300THD	300SWE	150FLG	300FLG	300THD	300SWE	150FLG	300FLG
1/2	23	23	25	27	27	27	29	31
3/4	23	23	26	30	27	27	30	34
1	24	24	25	29	29	29	29	33
1-1/2	31	31	33	39	35	37	37	43
2	36	36	40	44	40	44	44	48
2-1/2	NA	NA	64	74	NA	74	74	84
3	NA	NA	77	90	NA	87	87	100
3	NA	NA	120	140	NA	130	130	150

Consult factory for drawings, weights, and dimensions of configurations not shown.

Actual shipping weights may vary.

DIMENSION (IN)		VALVE SIZE (IN)		
5843		2-1/2	3	4
A	150FLG	10-7/8	11-3/4	13-3/8
	300FLG	11-1/2	12-1/2	14-1/2
B		4	4-3/8	5-1/4
C	Standard	7	7	7
	Extension Bonnet	14	14	14

VALVE SIZE (IN)	WEIGHT (LB)			
	Standard		With Extension Bonnet	
	150FLG	300FLG	150FLG	300FLG
2-1/2	65	75	75	85
3	79	92	89	102
4	123	143	133	153

Face to face dimensions for NPT & SWE conform to ANSI/ISA S75.03 300# (sizes 1/2 and 3/4 inch) and S75.12 Short 300# (Sizes 1 thru 2 inch) 150 & 300FLG conform to ANSI/ISA S75.03

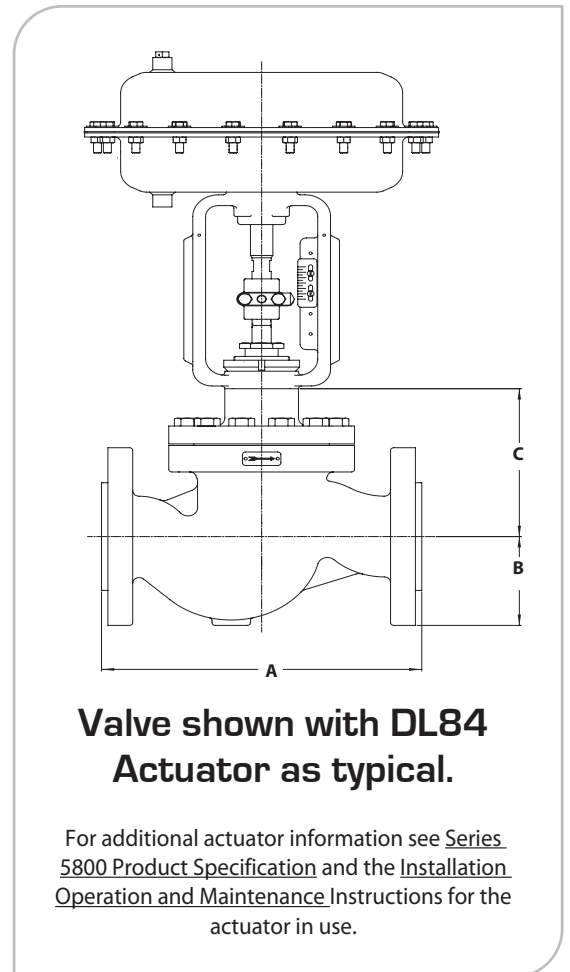
NA = Not Available

DIMENSION (IN)		VALVE SIZE (IN)		
5848		1/2	3/4	1
A	300THD	7-1/2	7-5/8	7-3/4
	300SWE	7-1/2	7-5/8	7-3/4
	150FLG	7-1/4	7-1/4	7-1/4
	300FLG	7-1/2	7-5/8	7-3/4
B		2	2-3/8	2-1/2
C	Standard	5	5	5
	Extension Bonnet	10	10	10

VALVE SIZE (IN)	WEIGHT (LB)							
	Standard				With Extension Bonnet			
	300THD	300SWE	150FLG	300FLG	300THD	300SWE	150FLG	300FLG
1/2	23	23	25	27	27	27	29	31
3/4	23	23	26	30	27	27	30	34
1	24	24	25	29	29	29	29	33

Consult factory for drawings, weights, and dimensions of configurations not shown.

Actual shipping weights may vary.



**Valve shown with DL84 Actuator as typical.**

For additional actuator information see [Series 5800 Product Specification](#) and the [Installation, Operation and Maintenance Instructions](#) for the actuator in use.





Check valve for any damage due to improper storage or transportation. Immediately notify your sales organization of any damaged goods upon receipt. Do not attempt to move or disturb the valve further so photos may be taken. If the shipping container is noticeably damaged refuse receipt, as the shipping company should be held liable until a shipping representative is available to take photos.

**See also separate actuator and accessory instructions for additional installation guidelines.**

- Be sure that the flow medium, ambient temperature and the selected location will not exceed the maximum temperature of the valve, actuator, or accessories. Information can be found in the product specifications and on the nameplate(s) regarding these limits (See [Information Present on Control Valves](#) section for location of important information on valve).
- Follow good piping practices. Install a bypass around the valve. Install stop valves in inlet and outlet piping to provide means to isolate valve.
- A straight run of pipe is recommended for 10 pipe diameters upstream of the valve and 20 pipe diameters downstream of the valve.
- Protect valve and downstream equipment with a self-cleaning strainer.
- Provide proper inlet and outlet drainage in steam service to prevent water hammer or possible erosion in equipment.
- Install gauges in inlet and outlet piping to provide means for checking adjustment and operation.
- For maximum efficiency and minimum wear install valve in vertical position with the stem pointing upward.
- Actuators mounted in any position other than vertical must be supported independent of the valve. **DO NOT MOUNT DL115 ACTUATORS IN THE HORIZONTAL POSITION.**
- Be sure to leave clearance to allow for actuator removal (See [Dimensions & Weights](#) of Product Specification section for actuator removal clearance).
- Before installing, be sure valve and piping are clean inside and free of scale, chips, welding spatter, and foreign material. Thoroughly blow out or flush pipe lines.
- The valve must be installed with the fluid flowing in the correct direction(s). For proper operation in all applications, control valves must be piped according to the corresponding flow arrows, inlet markings, and port markings present on each valve (See [Information Present on Control Valves](#) section for location of important information on valve).
- Pipes must be aligned squarely with the valve at each connection.
- If the valve has screwed ends, do not apply pipe dope to the threads of the valve body or to the first two threads of the pipe.
- If the valve has flanged ends, tighten flange bolts evenly to prevent excessive stress and the possibility of cracking.

## INSTALLATION (CONT.)

- If the valve has welded ends, prevent plug and cage distortion by keeping excess heat from the body.
- The valve, actuator, and accessories (if so equipped) are assembled, tested, and calibrated at the factory. The actuator nameplate specifies set-up parameters used (See [Information Present on Control Valves](#) section for location of important information on valve). Do not exceed the supply pressure listed on the actuator nameplate or you will damage the valve and void the warranty.
- Supply air, or voltage instrument signal, and accessories should be connected to ports or terminals as indicated on the control valve.
- Final tuning may be required under actual operating conditions.
- On critical or dangerous equipment, provide suitable safety and emergency systems to protect personnel and property from injury due to a valve malfunction. If the valve handles flammable, toxic, corrosive or explosive fluids, provide for safety in the event of valve leakage or malfunction.
- Do not obscure flow arrow plates or nameplates with paint. If flow arrow plates or nameplates will be covered with insulation, it is recommended the information on the plates be transcribed on the outside of the insulation in the same location as the plate.

## OPERATION

- Close inlet and outlet stop valves.
- Check that valve responds through rated travel in relation to changes in input signal. Rated travel is shown by position of travel indicator on valve stem relative to travel indicator on yoke.
- For valves fitted with a handwheel, manually operate valve with no air applied, using handwheel through rated travel to check freedom of movement. Return handwheel to its standby position.
- Place valve in operation.

**Series 5800 Compact Globe Control Valves** are for the most part maintenance free when properly selected and installed. Rebuilding of these valves should not be necessary under normal operating conditions. For best operation follow installation guidelines (See Installation section); maintain the fluid pressure, temperature, flow, flowing differential pressure, and shut-off differential pressure within the limits of the valve (See Series 5800 Product Specification for details). In installations where high vibration exists, pneumatic and/or electrical connections should periodically be checked for integrity. In water or water and glycol applications, good water quality must be maintained or the service life of the valve may be reduced

(See Water Quality Guidelines). The valve stem must be kept free of debris, deposits, dirt, dust, and scratches or the packing parts may be damaged resulting in a packing leak. Control valve hunting will cause excessive stroking of the valve stem and result in premature failure of the packing seal. The system must be stabilized to prevent hunting to ensure reasonable packing life and optimal control performance. Oversizing of a control valve will result in an unstable condition, which can cause noise, vibration, and premature trim and packing seal failure. The use of Warren Controls ValveWorks sizing program will facilitate the selection of the optimum valve.

**Series 5800 Compact Globe Control Valves** have adjustable packing. If a packing leak is observed tighten the packing nut  $\frac{1}{4}$  turn and observe. If the leak continues tighten the packing nut another  $\frac{1}{4}$  turn and observe. Repeat as necessary. If the

leak continues and the packing nut cannot be tightened further with reasonable force replace the packing and if necessary the stem and plug assembly.

## PACKING ADJUSTMENT

Damaged or worn parts can decrease performance and shorten valve life.

Damaged or worn packing parts including the packing, bearings, spring, and other bonnet parts can cause a packing leak resulting in damage to the actuator, accessories, and surrounding equipment. Damaged or worn packing parts can also cause increased hysteresis resulting in poor control.

Damaged or worn trim parts including the plug, seat ring, stem, cage, o-ring, piston ring, cage spring, seat gasket, and bearing can cause increased hysteresis, poor control, excessive internal leakage, and poor shut-off. Damaged or worn trim parts can also cause damage to the packing parts resulting in a packing leak

## PARTS/ OVERHAUL

Damaged or worn body gaskets or o-ring seals can cause external leakage resulting in damage to the actuator, accessories, and surrounding equipment.

Should parts become worn or damaged, parts kits are available. Repack Kits are available to replace the packing. Repack/ Inspection Kits are available to allow the valve to be opened for inspection of its internal parts. Rebuild/Repack Kits are available to completely rebuild/ overhaul the valve. Parts kits come with complete step-by-step instructions. Each kit has its own part number. Please provide the valve's serial number to ensure getting the correct kit part number and correct parts.



**DO NOT ATTEMPT TO SERVICE WITHOUT A REPACK/INSPECTION KIT & SUPPLEMENTAL INSTRUCTIONS.**

## PARTS KITS

### FOR TS, T8, & V8 PACKING TYPE & BONNET CONSTRUCTION REPACK KITS INCLUDE

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
2	1	PACKING NUT	9	1	PACKING SPRING
3	2	STEM WIPER	11	1	PACKING BOX RING
5	1	PACKING RETAINER	13	1	WIPER RETAINER
6	1	SLEEVE BEARING		1	TUBE STEM LUBE
7	1	V-RING PACKING SET		1	TUBE COPPER ANTI SEIZE COMPOUND
8	1	PACKING WASHER			

### FOR GS, G8, GX, & GG PACKING TYPE & BONNET CONSTRUCTION REPACK KITS INCLUDE

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
2	1	PACKING NUT	26	1	PACKING RING (Valve sizes 1/2 thru 2 inch)
3	2	STEM WIPER (GS, G8)	26	1	PACKING RING (Valve sizes 2-1/2 thru 4 inch)
5	1	PACKING RETAINER (GS, G8)	27	1	PACKING RING (Valve sizes 2-1/2 thru 4 inch)
6	1	SLEEVE BEARING (GS, G8)	35	1	RETAINER WASHER (GG Valve sizes 1/2 thru 2 inch)
11	1	PACKING BOX RING	36	1	UPPER BEARING AND RETAINER ASSY (GG)
13	1	WIPER RETAINER (GS, G8)			TUBE STEM LUBE (GS, G8)
23		BEARING (GH, GX)			TUBE COPPER ANTI SEIZE COMPOUND
24	AR	PACKING CARTRIDGE (Valve sizes 1/2 thru 2 inch)			TUBE NICKEL ANTI SEIZE COMPOUND (GH, GG)
25	1	SPACER			

### 5840 REPACK/INSPECTYION KITS INCLUDE

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
14	1	BONNET GASKET	21	1	SEAT GASKET
15	2	CAGE SPRING		1	REPACK KIT

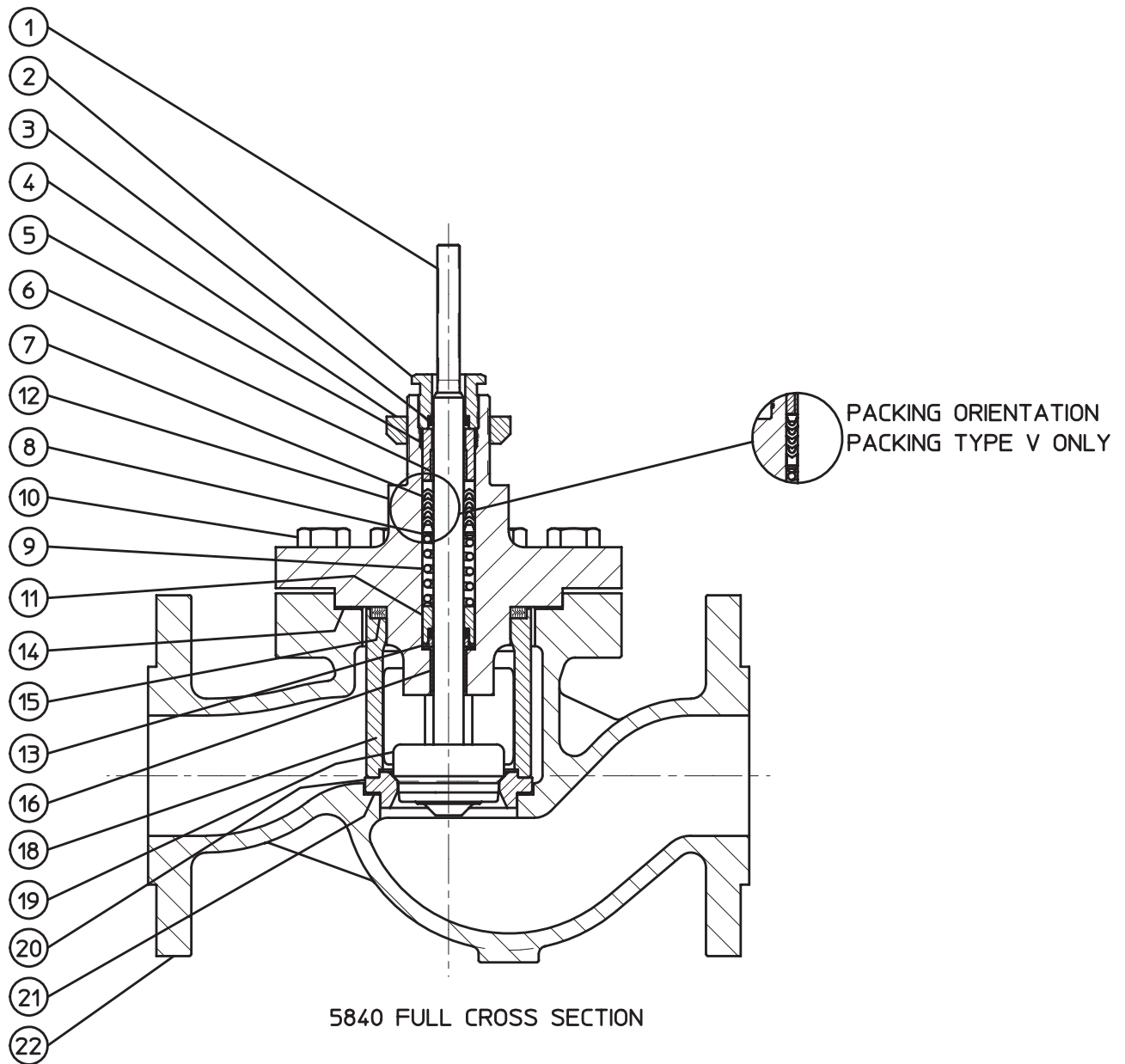
### 5840 REPACK/INSPECTYION KITS INCLUDE

ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
14	1	BONNET GASKET	21	1	SEAT GASKET
15	1	CAGE SPRING		1	TUBE O-RING LUBE All Packing Type & Bonnet Constructions EXCEPT (GX, GG)
17	1	O-RING All Packing Type & Gonnet Con- structions EXCEPT (GX, GG)		1	REPACK KIT
17	1	PISTON RING Packing Type & Gonnet Constructions EXCEPT (GX, GG)			

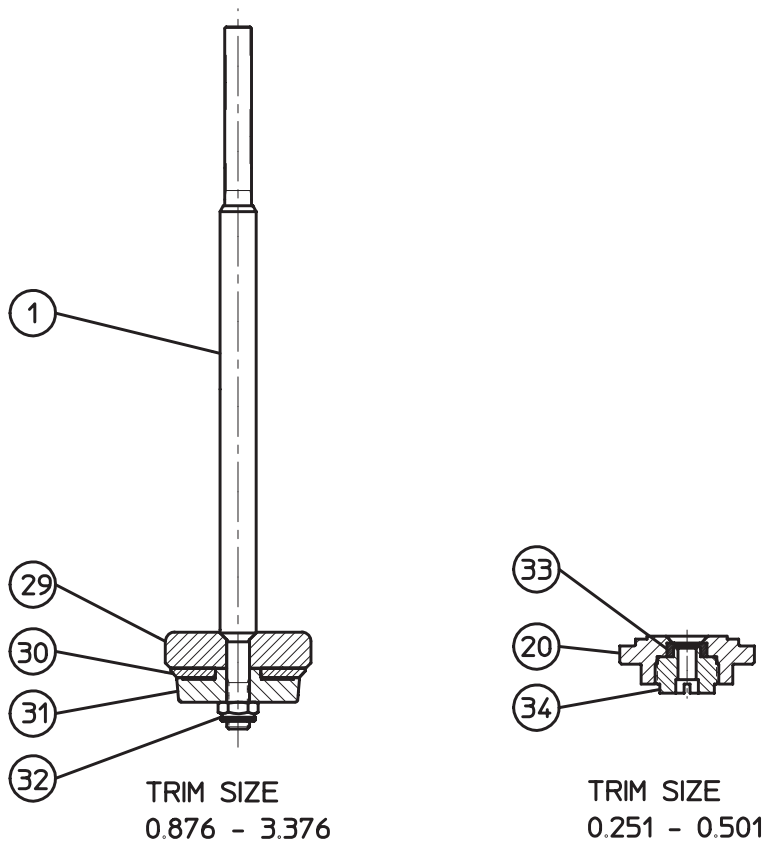
## PARTS KITS

5840 REBUILD/REPACK KITS INCLUDE					
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	VALVE STEM	28	1	RETAINING RING (Packing Type & Construction (GX, GG)
14	1	BONNET GASKET	29	1	DISC HOLDER Trim Material T & P Trim size 0.876 - 3.376
15	1	CAGE SPRING	30	1	DISC Trim Material T & P Trim size 0.876 - 3.3760
16	1	FLANGED BEARING (All Packing Type & Bonnet Constructions EXCEPT GX, GG)	31	1	DISC RETAINER Trim Material T & P Trim size 0.876 - 3.3760
19		PLUG	32	1	SELF-LOCKING NUT Trim Material T & P Trim size 0.876 - 3.3760
20	1	SEAT RING	33	1	INSERT Trim Material T & P Trim size 0.251 - 0.501
21	1	SEAT GASKET	34	1	RETAINER Trim Material T & P Trim size 0.251 - 0.501
23	1	BEARING Packing Type & Bonnet Construction (GX, GG)		1	REPACK KIT

5843 REBUILD/REPACK KITS INCLUDE					
ITEM	QTY	DESCRIPTION	ITEM	QTY	DESCRIPTION
1	1	VALVE STEM	19	1	PLUG
14	1	BONNET GASKET	20	1	SEAT RING
15	1	CAGE SPRING	21	1	SEAT GASKET
16	1	FLANGED BEARING	23	1	BEARING Packing Type & Bonnet Construction (GX, GG)
17	1	O-RING All Packing Type & Bonnet Constructions EXCEPT (GX, GG)	28	1	RETAINING RING Packing Type & Bonnet Construction (GX, GG)
17	1	PISTON RING Packing Type & Bonnet Constructions EXCEPT (GX, GG)		1	TUBE O-RING LUBE All Packing Type & Bonnet Constructions EXCEPT (GX, GG)
18	1	CAGE			REPACK KIT



BODY MATERIALS CODE W & F  
 TRIM MATERIALS CODE S, 6, 7, 8  
 PACKING TYPE & BONNET CONSTRUCTION CODES TS, VS, T8, V8



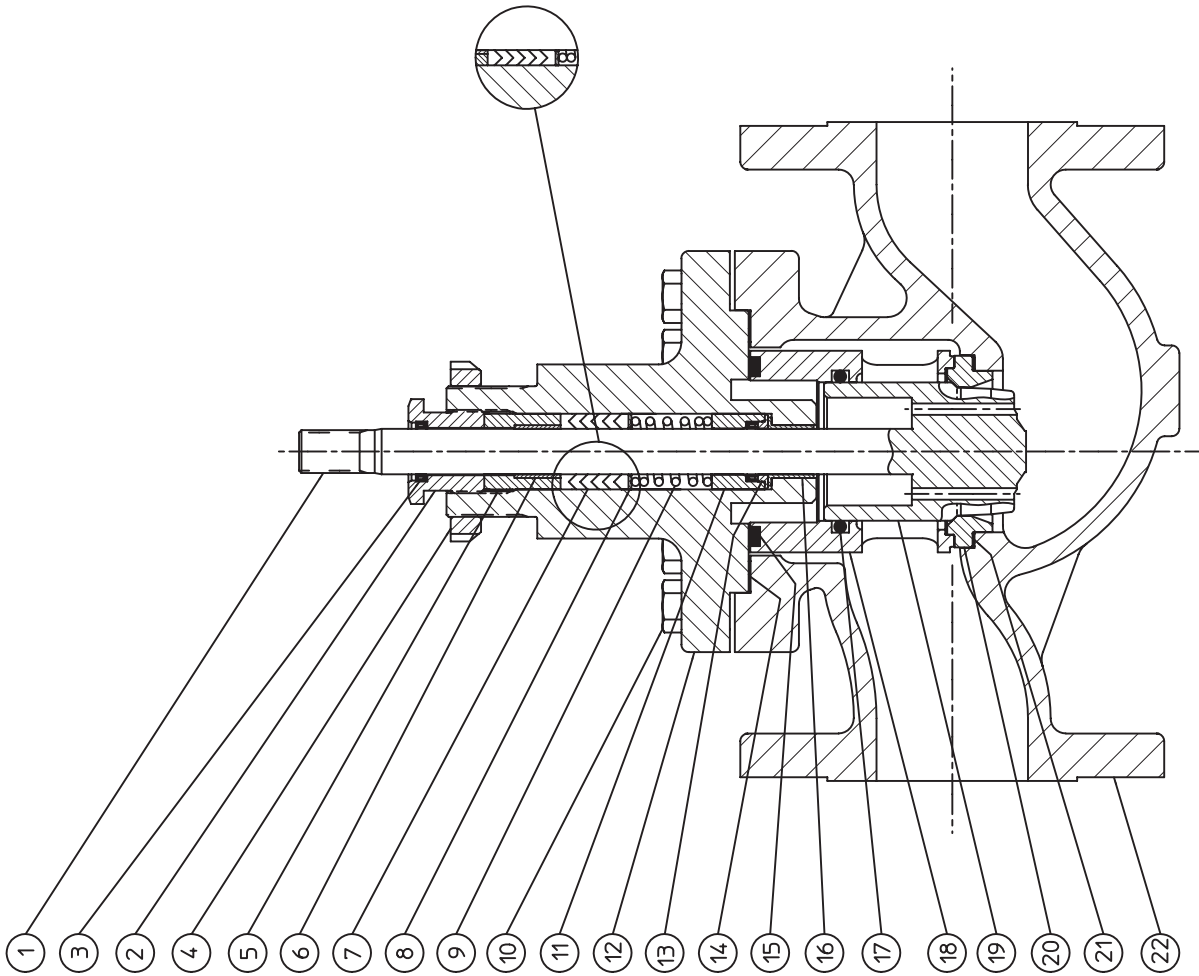
TRIM MATERIALS CODES T & P



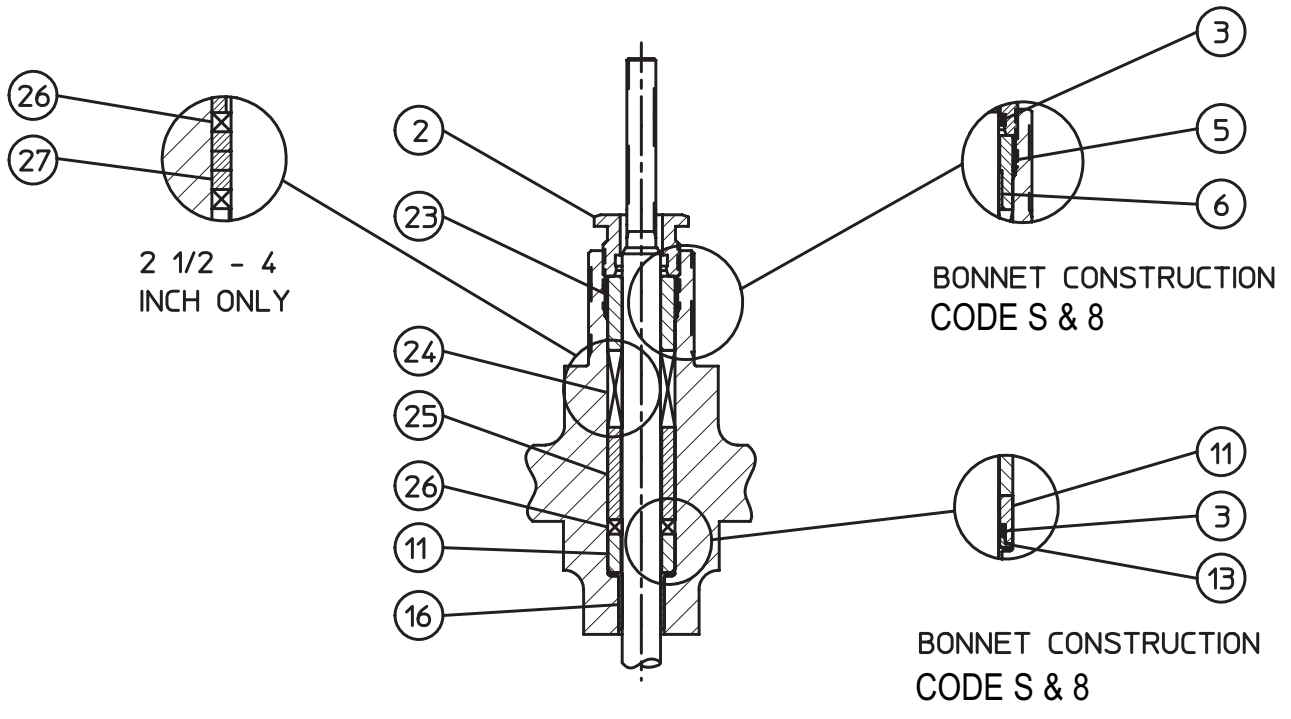
BODY MATERIALS CODE W & F  
 TRIM MATERIALS CODE S, 7, 8  
 PACKING TYPE & BONNET CONSTRUCTION CODES TS, VS, T8, V8

PACKING ORIENTATION  
 PACKING TYPE V ONLY

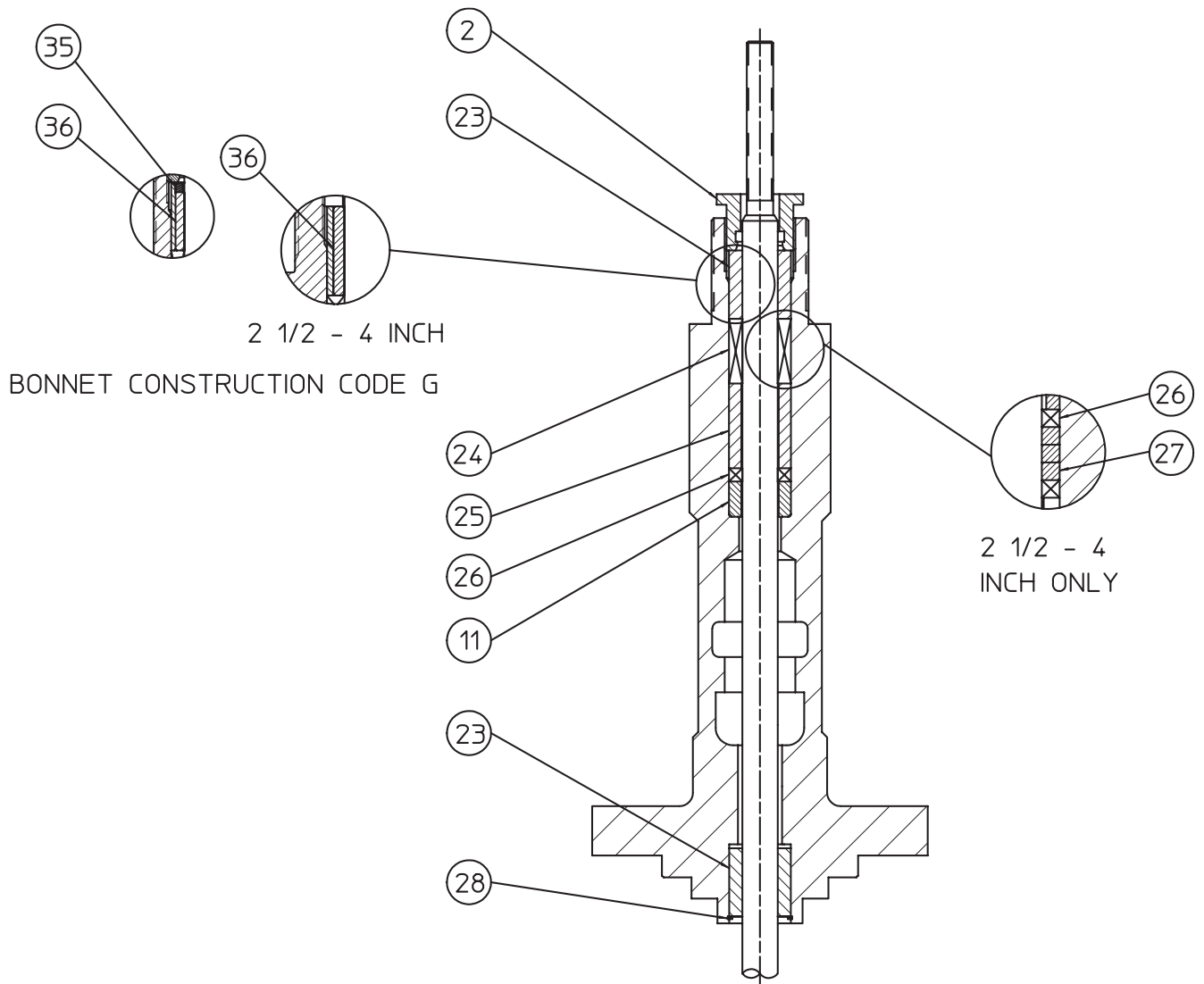
PISTON SEAL ORIENTATION  
 3 AND 4 INCH 5843 VALVE BODY ASSEMBLIES



5843 FULL CROSS SECTION



PACKING TYPE AND BONNET CONSTRUCTION  
CODES GS, GH & G8



PACKING TYPE &  
BONNET CONSTRUCTION CODE GX & GG

## BODY MATERIALS

### CODE W *WCB BODY*

ITEM	PART NOMENCLATURE	MATERIALS
4	YOKE LOCKNUT	PLEATED STEEL
10	HEX HEAD CAPSCREW	ALLOY STEEL GR B7
12	BONNET	STEEL A216 WCB
22	VALVE BODY	STEEL A216 WCB

### CODE F *CF8M BODY*

ITEM	PART NOMENCLATURE	MATERIALS
4	YOKE LOCKNUT	300 SERIES SST
10	HEX HEAD CAPSCREW	SST GR B8M CLASS 2
12	BONNET	SST A351 CF8M
22	VALVE BODY	SST A351 CF8M

## TRIM MATERIALS

### CODE S *316 STAINLESS STEEL TRIM*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
19	PLUG	316 SST
20	SEAT RING	316 SST

### CODE T *TFE SOFT SEATS*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
20	SEAT RING	316 SST
29	DISC HOLDER	316 SST
30	DISC	REINFORCED PTFE
31	DISC RETAINER	316 SST
32	SELF-LOCKING NUT	18-8 SST
33	INSERT	REINFORCED PTFE
34	RETAINER	316 SST

### CODE P *PEEK SOFT SEATS*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
20	SEAT RING	316 SST
29	DISC HOLDER	316 SST
30	DISC	REINFORCED PEEK
31	DISC RETAINER	316 SST
32	SELF-LOCKING NUT	18-8 SST
33	INSERT	REINFORCED PEEK
34	RETAINER	316 SST

### CODE 6 *ALLOY 6 WRAPPED 316 STAINLESS STEEL TRIM*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
19	PLUG	316 SST/ALLOY 6 INLAY
20	SEAT RING	316 SST/ALLOY 6 INLAY

### CODE 7 *400 STAINLESS STEEL TRIM*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
19	PLUG	400 SST
20	SEAT RING	400 SST

### CODE 6 *ALLOY 6 WRAPPED 316 STAINLESS STEEL TRIM*

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
19	PLUG	400 SST/ALLOY 6 INLAY
20	SEAT RING	316 SST/ALLOY 6 INLAY

## PACKING TYPE

### CODE T *TEFLON V-RING PACKING & V TEFLON V-RING PACKING VACUUM SERVICE*

ITEM	PART NOMENCLATURE	MATERIALS
7	V-RING PACKING SET	PTFE
8	LOAD WASHER	316 SST
9	PACKING SPRING	316 SST

# 5840 CONSTRUCTION DETAILS (CONT.)

## CODE G GRAPHITE PACKING

ITEM	PART NOMENCLATURE	MATERIALS
24	PACKING CARTRIDGE	DIE-FORMED GRAPHITE
25	SPACER	316 SST
26	PACKING RING	BRAIDED GRAPHITE
27	PACKING RING	DIE-FORMED GRAPHITE

## BONNET CONSTRUCTION

### CODE S PEEK BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
3	STEM WIPER	GRAPHITE FILLED TFE/SST
5	PACKING RETAINER	316 SST
6	SLEEVE BEARING	REINFORCED PEEK
11	BOX RING	316 SST
13	WIPER RETAINER	316 SST
14	BONNET GASKET	NONASBESTOS
15	CAGE SPRING	316 SST/PTFE
16	FLANGED BEARING	REINFORCED PEEK
21	SEAT GASKET	NONASBESTOS

### CODE 8 Z PEEK BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
3	STEM WIPER	GRAPHITE FILLED TFE/SST
5	PACKING RETAINER	316 SST
6	SLEEVE BEARING	REINFORCED PEEK
11	BOX RING	316 SST
13	WIPER RETAINER	316 SST
14	BONNET GASKET	NONASBESTOS
15	CAGE SPRING	316 SST/PTFE
16	FLANGED BEARING	Z PLASTIC (PEEK BASE)
21	SEAT GASKET	NONASBESTOS

## CODE H ALLOY 6B BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/GRAPHITE
16	FLANGED BEARING	ALLOY 6B
21	SEAT GASKET	GRAPHITE
23	BEARING	ALLOY 6B
26	PACKING RING	BRAIDED GRAPHITE

### CODE X ALLOY 6B BEARINGS W/ EXTENSION BONNET

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
12	EXTENSION BONNET	AS SPECIFIED
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/ GRAPHITE
16	FLANGED BEARING	ALLOY 6B
21	SEAT GASKET	GRAPHITE
23	BEARING	ALLOY 6B
26	PACKING RING	BRAIDED GRAPHITE
28	RETAINING RING	316 SST

### CODE G GRAPHALLOY BEARINGS W/ EXTENSION BONNET

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
12	EXTENSION BONNET	AS SPECIFIED
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/ GRAPHITE
16	FLANGED BEARING	ALLOY 6B
21	SEAT GASKET	GRAPHITE
23	BEARING	GRAPHALLOY
26	PACKING RING	BRAIDED GRAPHITE
28	RETAINING RING	316 SST
35	RETAINER WASHER	316 SST
36	UPPER BEARING AND RETAINER SUBASSY	316 SST/ GRAPHALLOY

## BODY MATERIALS

### CODE W WCB BODY

ITEM	PART NOMENCLATURE	MATERIALS
4	YOKE LOCKNUT	PLEATED STEEL
10	HEX HEAD CAPSCREW	ALLOY STEEL GR B7
12	BONNET	STEEL A216 WCB
22	VALVE BODY	STEEL A216 WCB

### CODE F CF8M BODY

ITEM	PART NOMENCLATURE	MATERIALS
4	YOKE LOCKNUT	300 SERIES SST
10	HEX HEAD CAPSCREW	SST GR B8M CLASS 2
12	BONNET	SST A351 CF8M
22	VALVE BODY	SST A351 CF8M

## PACKING TYPE

### CODE T TEFLON V-RING PACKING & V TEFLON V-RING PACKING VACUUM SERVICE

ITEM	PART NOMENCLATURE	MATERIALS
7	V-RING PACKING SET	PTFE
8	LOAD WASHER	316 SST
9	PACKING SPRING	316 SST

### CODE G GRAPHITE PACKING

ITEM	PART NOMENCLATURE	MATERIALS
24	PACKING CARTRIDGE	DIE-FORMED GRAPHITE
25	SPACER	316 SST
26	PACKING RING	BRAIDED GRAPHITE
27	PACKING RING	DIE-FORMED GRAPHITE

## TRIM MATERIALS

### CODE S 316 STAINLESS STEEL TRIM

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	316 SST
19	PLUG	316 SST
20	SEAT RING	316 SST

### CODE 7 400 STAINLESS STEEL TRIM

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	400 SST
19	PLUG	400 SST
20	SEAT RING	400 SST

### CODE 8 ALLOY 6 WRAPPED 400 STAINLESS STEEL TRIM

ITEM	PART NOMENCLATURE	MATERIALS
1	VALVE STEM	316 SST
18	CAGE	400 SST
19	PLUG	400 SST SST/ALLOY 6 INLAY
20	SEAT RING	316 SST SST/ALLOY 6 INLAY

# 5843 CONSTRUCTION DETAILS (Cont.)

## BONNET CONSTRUCTION

### CODE S PEEK BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
3	STEM WIPER	GRAPHITE FILLED TFE/ SST
5	PACKING RETAINER	316 SST
6	SLEEVE BEARING	REINFORCED PEEK
11	BOX RING	316 SST
13	WIPER RETAINER	316 SST
14	BONNET GASKET	NONASBESTOS
15	CAGE SPRING	316 SST/ PTFE
16	FLANGED BEARING	REINFORCED PEEK
17	O-RING	FLUORAZ
21	SEAT GASKET	NONASBESTOS

### CODE 8 ZPEEK BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
3	STEM WIPER	GRAPHITE FILLED TFE/ SST
5	PACKING RETAINER	316 SST
6	SLEEVE BEARING	REINFORCED PEEK
11	BOX RING	316 SST
13	WIPER RETAINER	316 SST
14	BONNET GASKET	NONASBESTOS
15	CAGE SPRING	316 SST/ PTFE
16	FLANGED BEARING	Z PLASTIC (PEEK BASE)
17	O-RING	FLUORAZ
21	SEAT GASKET	NONASBESTOS

### CODE H ALLOY 6B BEARINGS

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/GRAPHITE
16	FLANGED BEARING	ALLOY 6B
17	O-RING	FLUORAZ
21	SEAT GASKET	GRAPHITE
23	BEARING	ALLOY 6B
26	PACKING RING	BRAIDED GRAPHITE

### CODE X ALLOY 6B BEARINGS W/ EXTENSION BONNET

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
12	EXTENSION BONNET	AS SPECIFIED
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/ GRAPHITE
16	FLANGED BEARING	ALLOY 6B
17	PISTON RING	UNS S21800
21	SEAT GASKET	GRAPHITE
23	BEARING	ALLOY 6B
26	PACKING RING	BRAIDED GRAPHITE
28	RETAINING RING	316 SST

### CODE G GRAPHALLOY BEARINGS W/ EXTENSION BONNET

ITEM	PART NOMENCLATURE	MATERIALS
2	PACKING NUT	316 SST
11	BOX RING	316 SST
12	EXTENSION BONNET	AS SPECIFIED
14	BONNET GASKET	GRAPHITE
15	CAGE SPRING	INCONEL/ GRAPHITE
16	FLANGED BEARING	ALLOY 6B
17	PISTON RING	UNS S21800
21	SEAT GASKET	GRAPHITE
23	BEARING	ALLOY 6B
26	PACKING RING	BRAIDED GRAPHITE
28	RETAINING RING	316 SST
35	RETAINER WASHER	316 SST
36	UPPER BEARING AND RETAINER SUBASSY	316 SST/ GRAPHALLOY



**NOTES:**



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