

Main stage spool type	Available valve type	Spool
0		02-317225
1/11		02-317226 *
2		02-317237
3/31		02-317227 *
4		02-317231
6	A/B/C/D/N	02-317238
7		02-317228
8		02-317233
9		02-317250
33		02-317234
52/521		02-317235 *
56/561		02-321158 *

\* Spool assembly note  
 Assemble type 1 & 3 spools with narrow center land toward "A" end of valve. "A" end is defined as being closest to CYL. port "A".  
 Assemble type 11 & 31 spools with narrow center land toward CYL. port "B".  
 Assemble type 52 spool with narrow center land & type 56 spool with double lands toward CYL. port "B".  
 Assemble type 521 spool with narrow land & type 561 spool with double lands toward CYL. port "A".

◇ Spool types 4, 8, & 31 are not available on "A" offset valve models.  
 ► Spool types 4 & 8 are not available on "N" models with "A" or "W" pilot valves.  
 ▢ Spool types 31, 52, 521, 56, & 561 are not available on "D" pressure centered model valves.

Pilot attaching bolts			
Pilot type	H or S	A or W	
Pilot only	10358	1034	
Pilot / choke	207897	10938	
Pilot / reducer	207897	10940	
Pilot / choke / reducer	417423	238151	

Seal Kits	
Location	Kit Number
Mainstage	02-329888
Mainstage F3	02-329889
Mainstage F6	02-329890
With 'P' Port Check	02-329891
With 'P' Port Check F3	02-329892
With 'P' Port Check F6	02-329893
Pressure Centered	02-329894
Pressure Centered F3	02-329895
Pressure Centered F6	02-329896

Spring Options	
Part No.	Description
247287	K-0.3 bar (5 psi) spring
247288	Q-2.4 bar (35 psi) spring
276428	R-3.4 bar (50 psi) spring
432353	S-5.2 bar (75 psi) spring

**Arrangement for standard & check valve models.**

- ♣☆ 02-317247 Washer (Omit on A offset models)
- ♣☆ 02-317246 Spring (Omit on A offset models)
- ♣☆ 02-321196 "O" Ring (2 Req'd)
- ♣☆ 298171 Bolt (8 Req'd)  
Torque 205-230 N.m. (150-170 lb. ft.)
- ♣☆ 02-317242 Cover (2 Req'd)

**Arrangement for "D" pressure centered valve models.**

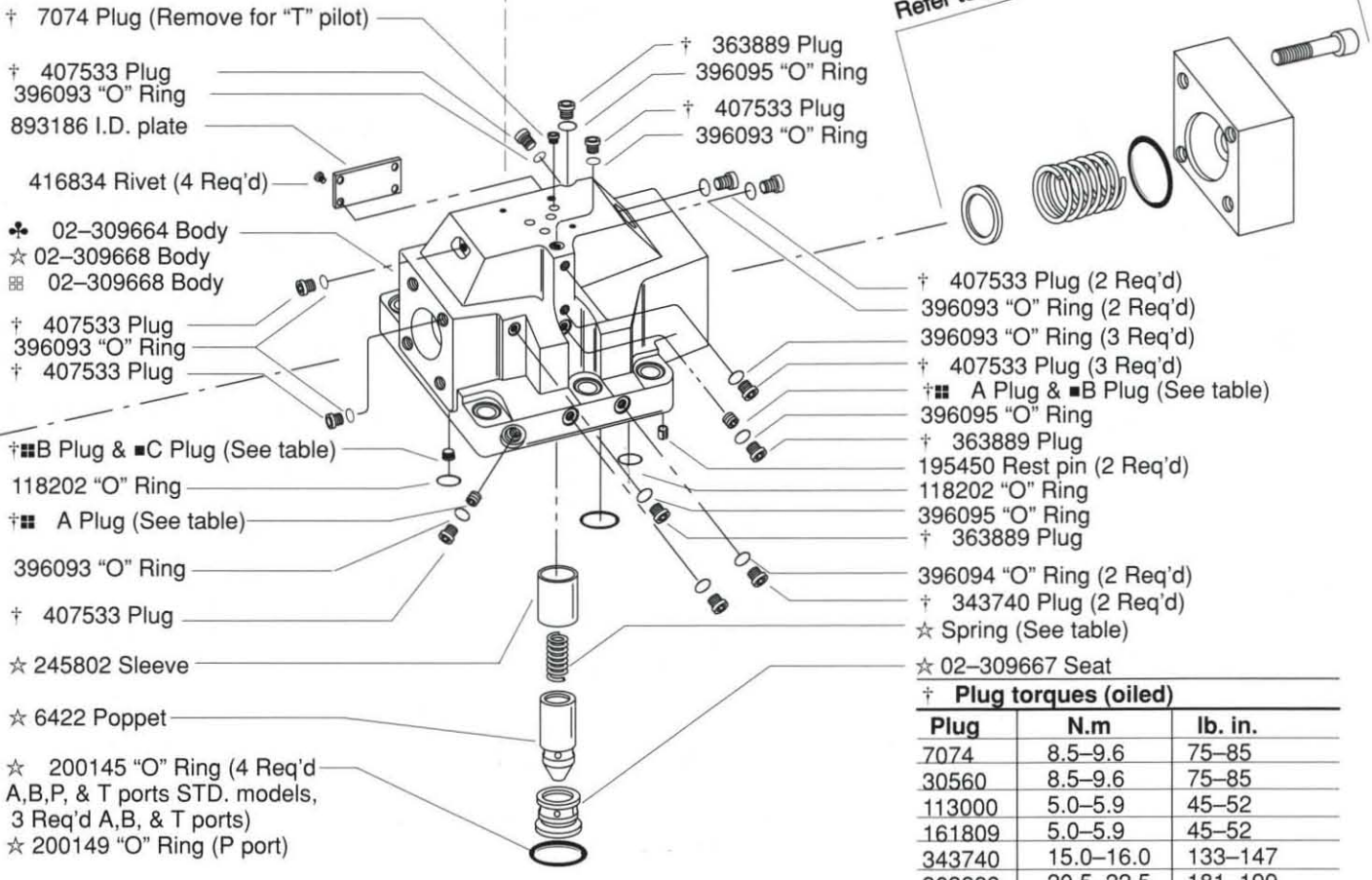
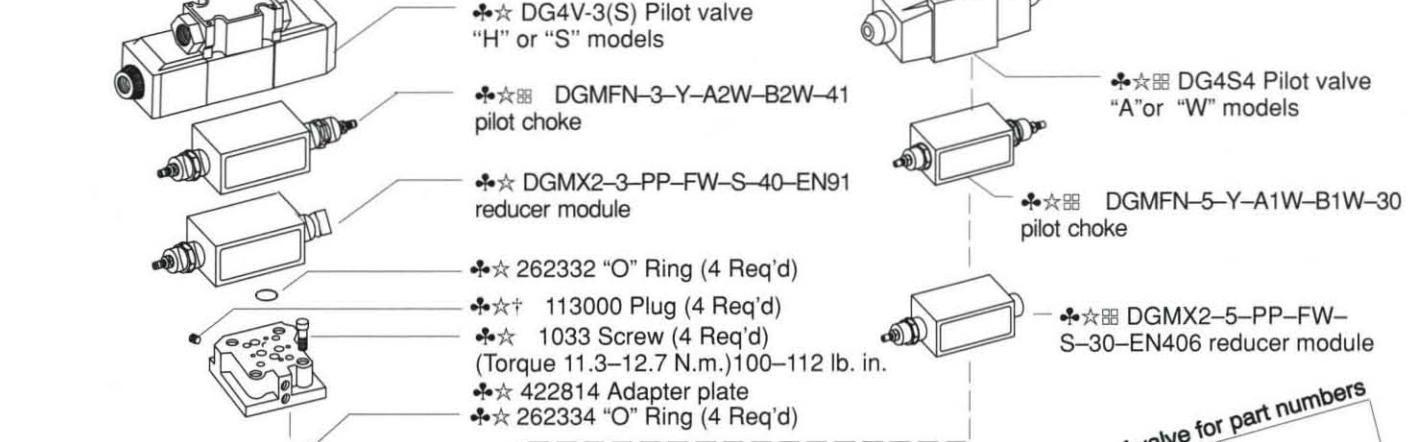
- ♣† 407533 Plug
- ♣ 396093 "O" Ring
- ♣ 298175 Bolt (4 Req'd)  
Torque 205-230 N.m. (150-170 lb. ft.)
- ♣ 689289 "O" Ring
- ♣ 288759 Piston
- ♣ 288760 Sleeve
- ♣ 02-317245 Spring
- ♣ 02-321196 "O" Ring (2 Req'd)
- ♣ 02-317252 Cover

♣☆ Spool (See table)

Note  
 Parts included in service kits are not sold separately.

- † Plug torques oiled (See table).
- ♣ Used on standard models.
- ☆ Used on check valve models.
- ♣ Used on pressure centered valve.
- Plug positions used on standard & check valve models only.
- ▣ Plug positions used on pressure centered valve models only.

This solenoid removed on right hand "A", & "B" valves.



■ Plug installation table (refer to model code breakdown page for more information)  
 DG5V-10-\*(R)-A/B/C/N-(L)-(X)-(E)-(T)-(K/Q/R/S)-10-(EN\*\*\*)

Model	"A" plug	"B" plug	"C" plug
-10		30560	
-E-10		7074	30560
-X-10			
-X-E-10			
-K/Q/R/S-10	161809		
-E-K/Q/R/S-10	113000	7074	30560
-X-K/Q/R/S-10			
-X-E-K/Q/R/S-10	113000		

■ Plug installation table (refer to model code breakdown page for more detail)  
 DG5V-10-\*(D)-(X)-(E)-10-(EN\*\*\*)

Model	"A" plug	"B" plug
D-10	226987	
D-E-10	7074	226987
DA-10	30560	
DA-E-10	7074	30560
DA-X-10		
DA-X-E-10	7074	
DB-10	224026	
DB-E-10	7074	224026

Note  
 SAE straight thread plugs used on exterior of valve.

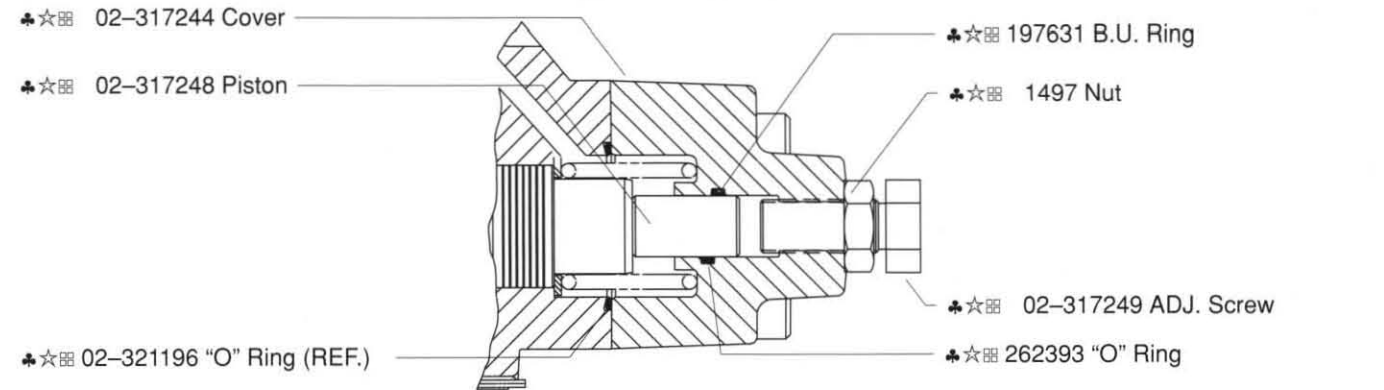
Note  
 All internal seals of the mainstage are F3 (Viton®). Mounting face seals are standard (Buna-N). F6 seal are special (Nitrile) and are used throughout the valve assembly.  
 © Viton is a registered trademark of E.I. DuPont

Valve model code	Main stage spool type	Pilot valve model code
DG5V-10-A/W-(R)-*A-	All except 4 & 8 4 & 8 only	DG4S4-012A-*
DG5V-10-A/W-(R)-*B-	All except 4 & 8 4 & 8 only	DG4S4-0128A-*
DG5V-10-A/W-(R)-*C-	All except 4 & 8 4 & 8 only	DG4S4-016B-*
DG5V-10-A/W-(R)-*D-	All except 4 & 8 0,1,2,3,4,6,8,9,11,33 4 & 8 only	DG4S4-016C-*
DG5V-10-A/W-(R)-*N-	All except 4 & 8	DG4S4-017C-*
DG5V-10-H/S-(R)-*A-	All except 4 & 8 4 & 8 only	DG4S4-0178C-*
DG5V-10-H/S-(R)-*B-	All except 4 & 8 4 & 8 only	DG4S4-012N-*
DG5V-10-H/S-(R)-*C-	All except 4 & 8 4 & 8 only	DG4V-3(S)-2A-*
DG5V-10-H/S-(R)-*D-	All except 4 & 8 4 & 8 only	DG4V-3(S)-2AL-VM-*
DG5V-10-H/S-(R)-*E-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6B-*
DG5V-10-H/S-(R)-*F-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6BL-VM-*
DG5V-10-H/S-(R)-*G-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6C-*
DG5V-10-H/S-(R)-*H-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6C-VM-*
DG5V-10-H/S-(R)-*I-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6N-*
DG5V-10-H/S-(R)-*J-	All except 4 & 8 4 & 8 only	DG4V-3(S)-6N-VM-*

**Spool Orientation Table**

P/N 02-317225 Type "0"		P/N 02-317250 Type "9"	
P/N 02-317226 Type "1"		P/N 02-317226 Type "11"	
P/N 02-317237 Type "2"		P/N 02-317227 Type "31"	
P/N 02-317227 Type "3"		P/N 02-317234 Type "33"	
P/N 02-317231 Type "4"		P/N 02-317235 Type "52"	
P/N 02-317238 Type "6"		P/N 02-317231 Type "521"	
P/N 02-317228 Type "7"		P/N 02-321158 Type "56"	
P/N 02-317233 Type "8"		P/N 02-321158 Type "561"	

**Stroke Adjustment Option**



## Model Code

(F\*) - DG5V -10- \*- (R) - (B) - \*\* (L) - (\*\*\*) - (X) - (\*) - (E) - (T) - (\*) - (V)M - (S\*) - \* \* \* \* (L) - (\*) - \*\* - (\*\*\*) - 10 - (EN\*\*\*)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<b>1 Special Seals</b> (Omit if not required) <b>F3</b> - Seals for fire resistant fluids <b>F6</b> - Seals for water glycol	<b>2 Directional Control Valve</b> <b>DG5V</b> - Subplate mounting; solenoid controlled; pilot operated. Pressure rating 350 bar (5000 psi) for P, A, & B ports.	<b>3 Valve Size</b> <b>10</b> - Valve size CETOP 10, NFPA D10	<b>4 Pilot Valve Type</b> <b>H</b> - CETOP 3 mounting pattern, High performance <b>S</b> - CETOP 3 mounting pattern, Std. performance <b>A</b> - CETOP 5 mounting pattern, Air gap <b>W</b> - CETOP 5 mounting pattern, Wet armature	<b>5 Reducer Module</b> (Omit if not required) <b>R</b> - A (air gap) and W (wet armature) piloted models when pilot pressure exceeds 210 bar (3000 psi)	<b>6 Gauge Ports</b> <b>Blank</b> - .4375-20 UNF-2B Thread <b>B</b> - 1/4 BSP Thread	<b>7 Spool Types</b> <b>0</b> - Open to T all ports <b>1</b> - Open P&A to T, closed B <b>2</b> - Closed to T all ports <b>3</b> - Closed P&B, open A to T <b>4</b> - Tandem P to T, closed crossover <b>6</b> - Closed P only, open A&B to T <b>7</b> - Open P to A&B, closed T <b>8</b> - Tandem P to T, open crossover <b>9</b> - Open to T all ports over tapers <b>11</b> - Open P&B to T, closed A <b>31</b> - Closed P&A, open B to T <b>33</b> - Closed P, open A&B to T over tapers <b>52</b> - Closed center, regen. by sol. 'A' <b>56</b> - A&B to T, P blocked, regen. by sol. 'A' <b>521</b> - Closed center, regen. by sol. 'B' <b>561</b> - A&B to T, P blocked, regen. by sol. 'B'	<b>8 Spool/Spring Arrangement</b> <b>A</b> - Spring offset <b>B</b> - Spring centered with solenoid 'A' removed <b>C</b> - Spring centered <b>D</b> - Pressure centered 210-350 bar (2000-3000 psi) <b>DA</b> - Pressure centered 20-70 bar (300-1000 psi) <b>DB</b> - Pressure centered 70-210 bar (1000-2000 psi) <b>N</b> - No-spring detented	<b>9 Left Hand Build</b> <b>L</b> - Single solenoid models only, omit if not required.	<b>10 Manual Override Options</b> CETOP 3 piloted models only, omit if not required. <b>Blank</b> - Plain override in solenoid ends only. <b>H</b> - Waterproof override in solenoid ends only. <b>H2</b> - Waterproof override in both ends of single solenoid. <b>P2</b> - Plain override in both ends of single solenoid. <b>Y</b> - Lockable manual override in solenoid ends only. <b>Z</b> - No override in either end.	<b>11 Fast Response</b> <b>X</b> - (Omit for standard internal pilot pressure models)	<b>12 Spool Control Modifications</b> (Omit if not required) <b>1</b> - Stroke adjustment (both ends) (available on B, C, & N models) <b>2</b> - Pilot choke adjustment (available on all models) <b>3</b> - Pilot choke and stroke adjustments (both ends) (available on B, C, & N models) <b>7</b> - Stroke adjustment on cylinder 'A' end only (available on A, B, C, & N models) <b>8</b> - Stroke adjustment on cylinder 'B' end only (available on AL, B, C, N, & D(*) models) <b>2-7</b> - If both are required (available on A, B, C, & N models) <b>2-8</b> - If both are required (available on AL, B, C, N, & D(*) models)	<b>13 External Pilot Pressure</b> <b>E</b> - External pilot pressure. Omit for internal pilot pressure models.	<b>14 Internal Pilot Drain</b> <b>T</b> - Internal pilot drain to 'T' port. Omit for internal pilot pressure models.	<b>15 Check Valve in Pressure Port</b> (Omit if not required) Not available for D(*) models. <b>K</b> - 0,3 bar (5 psi) check <b>Q</b> - 2,5 bar (35 psi) check <b>R</b> - 3,5 bar (50 psi) check <b>S</b> - 5, bar (75 psi) check													

## Model Code (continued)

(F\*) - DG5V -10- \*- (R) - (B) - \*\* (L) - (\*\*\*) - (X) - (\*) - (E) - (T) - (\*) - (V)M - (S\*) - \* \* \* \* (L) - (\*) - \*\* - (\*\*\*) - 10 - (EN\*\*\*)

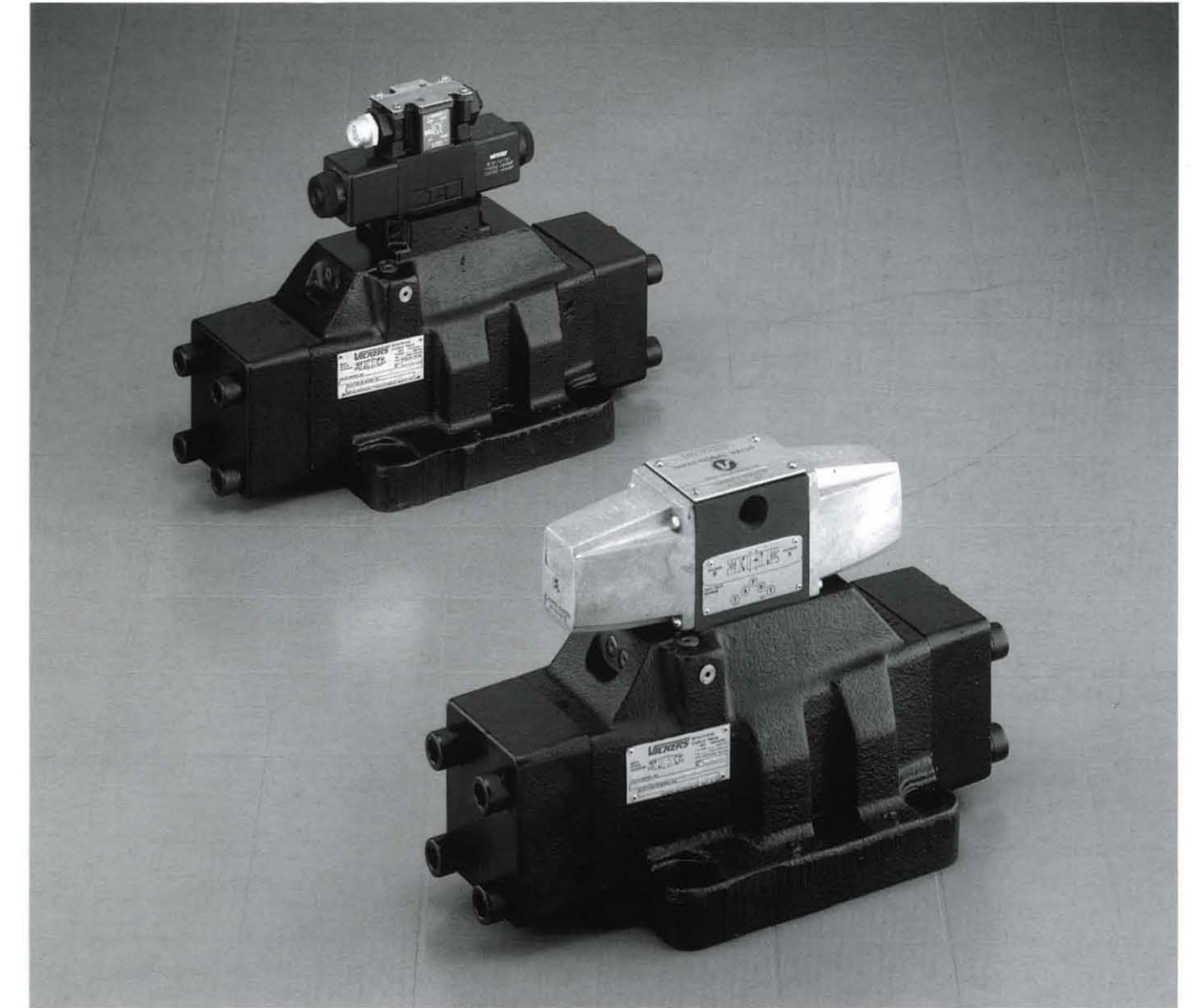
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<b>16 Solenoid Energization Identity</b> <b>Blank</b> - Standard arrangement for ANSI B93.9 (i.e. energize solenoid A to follow flow P to A). <b>V</b> - Solenoid identification determined by position of solenoid (i.e. solenoid A at port A end/solenoid B at port B end). <b>Note</b> 4 and 8 type spools are always V. Solenoid energization identity is independent of mainstage porting.	<b>17 Heading Electrical Flag Symbol</b> <b>M</b> - Features and options for pilot valve.	<b>18 Pilot Valve Monitoring Switch</b> (Omit if not required) <b>S</b> - Indicator switch (A & W piloted models only) <b>S3</b> - Limit switch normally open, wired to electrical connector with PA/PB/PA5 (H piloted models only) <b>S4</b> - Limit switch normally closed, wired to electrical connector with PA/PB/PA5 (H piloted models only) <b>S5</b> - Limit switch - FW, FJ (H piloted models only) <b>S6</b> - Position switch with U coils (H piloted models only)	<b>19 Coil Type</b> <b>F</b> - Flying lead (required for wiring housing option) <b>KU</b> - Top exit flying lead (H & S piloted models only) <b>P</b> - Plug in (H & S piloted models only) <b>SP1</b> - Single 6.3mm spade (H & S piloted models only) <b>SP2</b> - Dual 6.3mm spade (H & S piloted models only) <b>U</b> - ISO 4400 (DIN 43650) <b>X</b> - Explosion proof solenoids ('A' piloted models only) <b>X1</b> - Flameproof solenoids BASEEFA/CENELEC (S piloted models only) <b>X2</b> - Explosion proof solenoids CSA/UL (S piloted models only) <b>X3</b> - Explosion proof solenoids BASEEFA ExS (S piloted models only)	<b>20 Electrical Connections</b> (F type coils only, omit if not required) <b>PA</b> - Insta-plug, male receptacle only <b>PB</b> - Insta-plug, male and female receptacle <b>PA3</b> - 3-pin connector <b>PA5</b> - 5-pin connector <b>T</b> - Wired terminal block (wiring housing option also required)	<b>21 Wiring Housing</b> <b>Blank</b> - Optional for A & W piloted models only <b>W</b> - 1/2" NPT threaded connection <b>J</b> - 20mm threaded connection	<b>22 Electrical Options</b> (Omit if not required) U-type coils only <b>1</b> - Fitted connector <b>2</b> - Fitted connector and variable grommet <b>3</b> - Fitted connector with lights	<b>23 Solenoid Indicator Lights</b> (Omit if not required)	<b>24 Surge Suppressor/Damper</b> DC voltages only, omit if not required. For H, S, & W piloted models only. <b>D1</b> - Encapsulated diode (industrial applications) <b>D2</b> - Encapsulated diode (mobile applications) <b>D7</b> - Encapsulated tranzorb	<b>25 Coil Voltage Identification Letter</b>	<b>26 Pilot Valve Port Orifices</b> For H & S piloted models only, omit if not required.	<b>27 Design Number</b>	<b>28 Special Modifications</b> (Omit if not required)															

## Service Data

# VICKERS

## Pilot Operated Directional Valves

(F\*) - DG5V -10- \*- (R) - (B) - \*\* (L) - (\*\*\*) - (X) - (\*) - (E) - (T) - (\*) - (V)M - (S\*) - \* \* \* \* (L) - (\*) - \*\* - (\*\*\*) - 10 - (EN\*\*\*)



Vickers Incorporated  
A TRINOVA Company  
5445 Corporate Drive  
P.O. Box 302  
Troy, Michigan 48007-0302  
U.S.A.