

Directional Valves



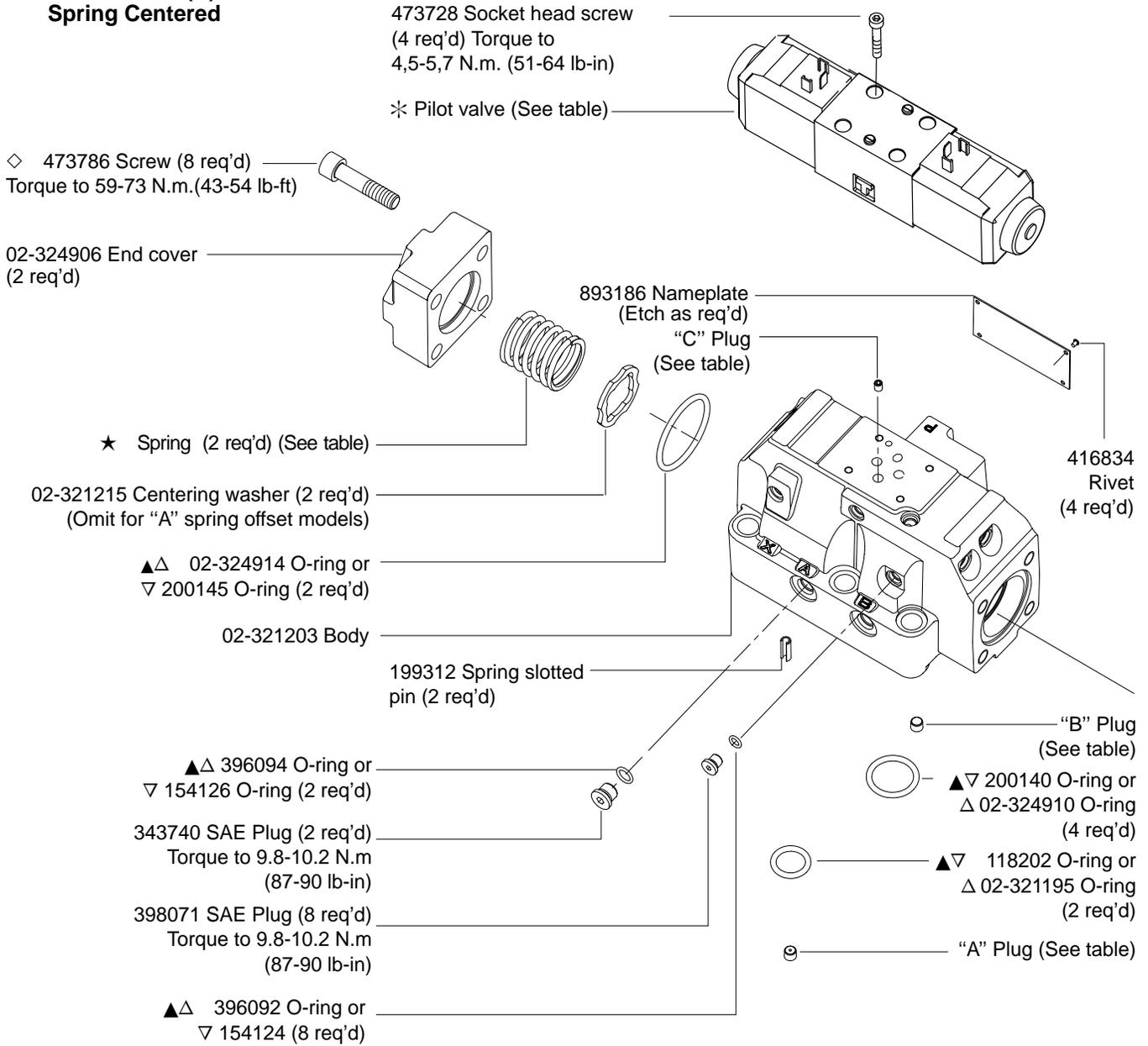
Pilot Operated Directional Valves

(F*) - DG5V - 8 - * - (R) - (B) - ** (L) - (***) - (X) - (*) - (E) - (T) - (*) - (VM) - (S*) - * * * * (L) - (*) - ** - (***) - 10 - (EN***)



Eaton Hydraulics, Incorporated
14615 Lone Oak Road
Eden Prairie, Minnesota 55344-2287

DG5V - 8 - S/H - *(C) - 10
Spring Centered



Plug/Orifice Options

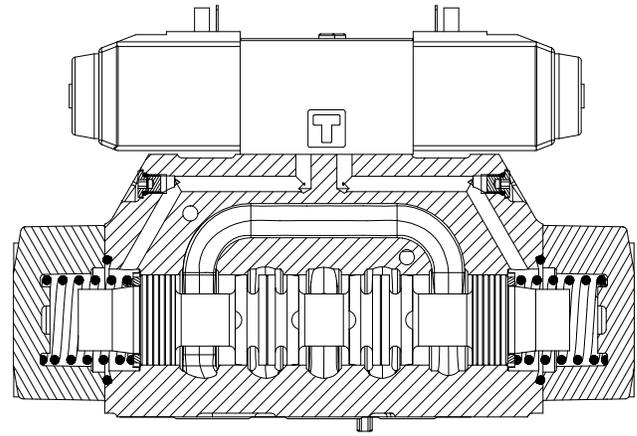
Model	"A" Plug	"B" Plug	"C" Plug ☒
DG5V-8-S/H-10	No plug required	237588	471119
DG5V-8-S/H-E-10	237588	113000	
DG5V-8-S/H-X-10	No plug required	No plug required	
DG5V-8-S/H-E-K/Q/R/S-10	237588	113000	
DG5V-8-S/H-X-E-K/Q/R/S-10	No plug required	No plug required	
DG5V-8-S/H-X-E-K/Q/R/S-10 (T Omitted)		No plug required	
DG5V-8-S/H-X-E-T-K/Q/R/S-10		113000	

☒ Socket head set screw

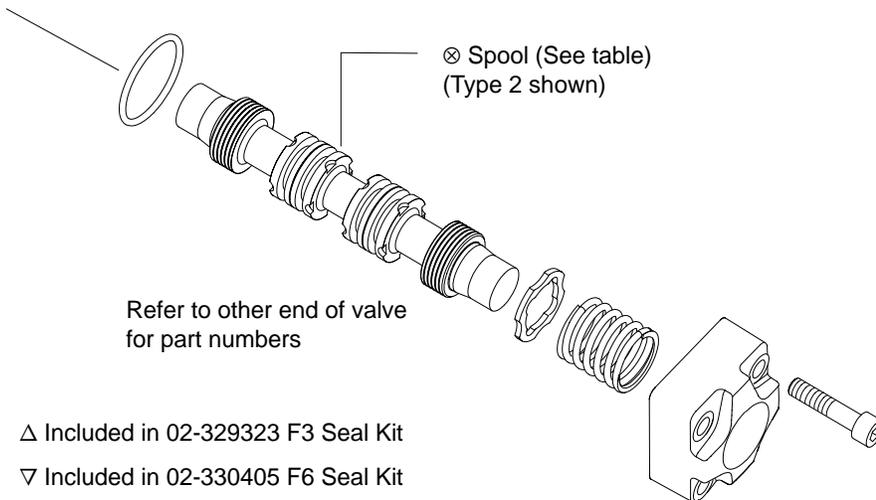
⊗ Spool Type	Part Number
0	02-324575
1	02-324576■
2	02-324577
3	02-324578■
4	02-324579
6	02-324580
7	02-324581
8	02-324582
9	02-324583
11	02-324576■
31	02-324578■
33	02-324584
52	02-324585■
521	02-324585■

■ Assemble with narrow center land towards "A" end of valve.

■ Assemble with narrow center land towards "B" end of valve.



Spring Centered Cross Sectional View



⊗ Spool (See table)
(Type 2 shown)

Refer to other end of valve
for part numbers

△ Included in 02-329323 F3 Seal Kit

▽ Included in 02-330405 F6 Seal Kit

▲ Included in 02-330404 Std. Seal Kit

● Included in 02-329322 Stroke Adj. Kit

◇ Included in 02-329325 Fastener Kit

◆ Not available for sale

Seal Kit Note:

All internal seals of the mainstage are F3 (Viton®). Mounting face seals are standard (Buna-N). F6 seals are special (Nitrile) and are used throughout the valve assembly.

® Viton is a registered trademark of E.I. DuPont

★ Centering Spring Options

Part No.	Description	Spool Types
783665	Centering Spring●	2,3,6,7,31, 33,52,521
02-321216		0,1,11,9
926840		4,8

● Omit centering springs for "A" Spring Offset models.

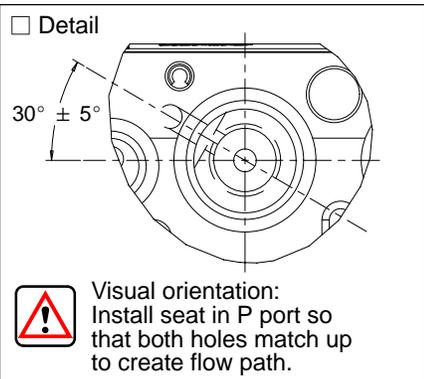
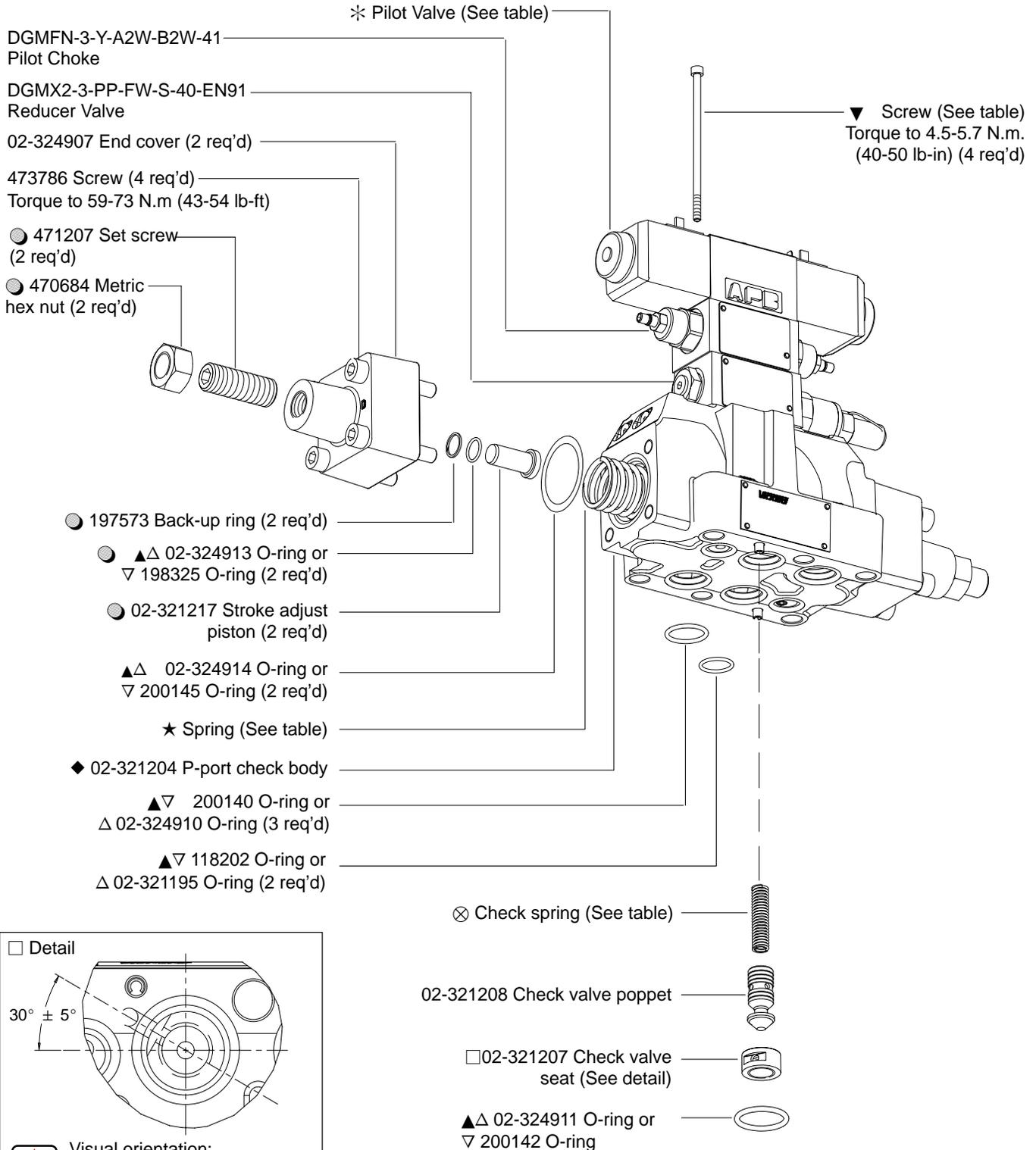
* Pilot Valve Options

Main Stage Spools DG5V-8-S/H-	Pilot Valve Models DG4V3(S)-
A--M* ⁻¹⁰	2A-M* ^{-6*}
4/8A-*-M* ⁻¹⁰	2AL-VM* ^{-6*}
4/8AL-*-M* ⁻¹⁰	2A-VM* ^{-6*}
B--M* ⁻¹⁰	6B-M* ^{-6*}
4/8B-*-M* ⁻¹⁰	6BL-VM* ^{-6*}
4/8BL-*-M* ⁻¹⁰	6B-VM* ^{-6*}
C--M* ⁻¹⁰	6C-M* ^{-6*}
4/8C-*-M* ⁻¹⁰	6C-VM* ^{-6*}
F--M* ⁻¹⁰	6F-M* ^{-6*}
4/8F-*-M* ⁻¹⁰	6FL-VM* ^{-6*}
4/8FL-*-M* ⁻¹⁰	6F-VM* ^{-6*}
N--M* ⁻¹⁰	6N-M* ^{-6*}
4/8N-*-M* ⁻¹⁰	6N-VM* ^{-6*}

**DG5V - 8 - S/H - *(C) -
1/2/3/7/8/27/28 - K/Q/R/S - 10
Spring Centered w/ Spool Control
& Check Valve Options**

▼ Mounting Bolt Options	
Bolt (4 req'd)	Model
417415	Reducer Module/ Pilot Choke
417411	Pilot Choke
417411	Reducer Module
Torque to 4.5–5.7 N.m (51–64 lb.in.)	

⊗ Check Spring Options	
Part No.	Description
02-321211	K -0,3 bar (5 psi) spring
02-321212	Q -2,4 bar (35 psi) spring
02-321213	R -3,4 bar (50 psi) spring
02-321214	S -5,2 bar (75 psi) spring



For common parts please refer
to Spring Centered layout

DG5V - 8 - S/H - *D - 10
Pressure Centered Models

398071 Plug
 Torque to 9.8-10.2 N.m.
 (87-90 lb-in)

▲▲ 396092 O-ring
 ▼ 154124 O-ring

473797 Screw (4 req'd)
 Torque to 59-73 N.m
 (43-54 lb-in)

02-324916 End cover

02-325778 Spring

02-324917 Piston sleeve

02-324918 Piston

▲▲ 02-324914 O-ring or
 ▼ 200145 O-ring (2 req'd)

◆ 02-321205 Pressure centered
 body (shown)
 ◆ 02-321206 Pressure centered
 body with check

* Pilot valve (See table)

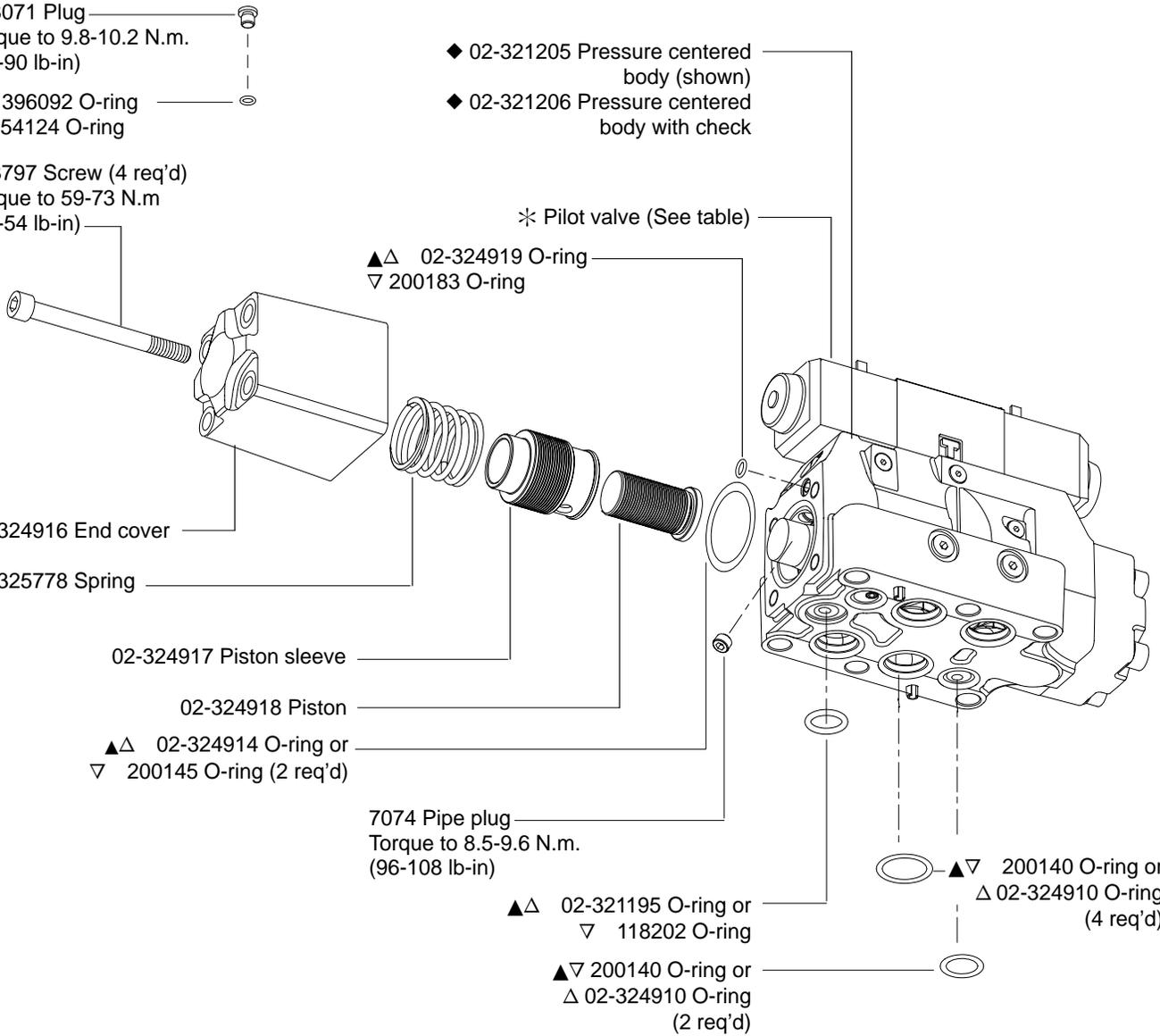
▲▲ 02-324919 O-ring
 ▼ 200183 O-ring

7074 Pipe plug
 Torque to 8.5-9.6 N.m.
 (96-108 lb-in)

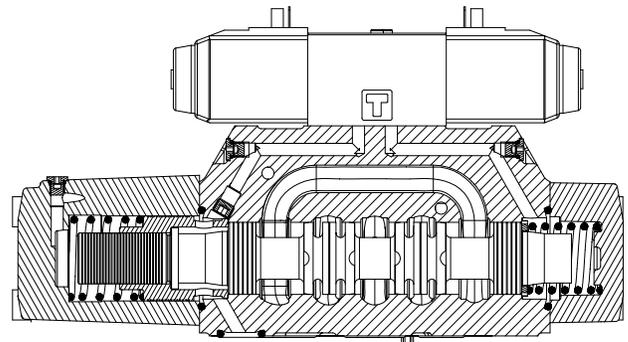
▲▲ 02-321195 O-ring or
 ▼ 118202 O-ring

▲▼ 200140 O-ring or
 ▲ 02-324910 O-ring
 (2 req'd)

▲▼ 200140 O-ring or
 ▲ 02-324910 O-ring
 (4 req'd)



For common parts please refer to
 Spring Centered layout



Pressure Centered Cross Sectional View
 (Stroke Adjustment on Cylinder "B" End Only)

Model Code

(F*) - DG5V - 8 - * - (R) - (B) - * * (L) - (**) - (X) - (*) - (E) - (T) - (*) -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

1 Special Seals

(Omit if not required)

F3 - Seals for fire resistant fluids

F6 - Seals for water glycol

2 Directional Control Valve

DG5V - Subplate mounting; solenoid controlled; pilot operated. Pressure rating 350 bar (5000 psi) for all ports.

3 Valve Size

8 - Valve size CETOP 8, NFPA D08

4 Pilot Valve Type

H - CETOP 3 High performance

S - CETOP 3 Standard performance

5 Reducer Module

(Omit if not required)

WARNING



When the standard performance pilot is selected, the reducer module is required to limit high drain line pressure transients generated during shifting.

6 Gauge Ports

Blank - .4375-20 UNF-2B Thread

B - 1/4 BSP Thread

7 Spool Types

0 - Open to T all ports

1 - Open P&A to T, closed B

2 - Closed to T all ports

3 - Closed P&B, open A to T

4 - Tandem P to T, closed crossover

6 - Closed P only, open A&B to T

7 - Open P to A&B, closed T

8 - Tandem P to T, open crossover

9 - Open to T all ports over tapers

11 - Open P&B to T, closed A

31 - Closed P&A, open B to T

33 - Closed P, open A&B to T over tapers

52 - Closed center, regen. by sol. 'A'

521 - Closed center, regen. by sol. 'B'

8 Spool/Spring Arrangement

A - Spring offset to 'A' port

B - Spring centered with solenoid 'A' removed

C - Spring centered

D - Pressure centered

F - Spring offset to 'A' port, shift to center

N - No-spring detented (pilot valve only)

9 Left Hand Build

L - Single solenoid models only, omit if not required.

10 Manual Override Options

CETOP 3 piloted models only, omit if not required.

Blank - Plain override in solenoid ends only

H - Waterproof override in solenoid ends only

H2 - Waterproof override in both ends of single solenoid

P2 - Plain override in both ends of single solenoid

Y - Lockable manual override in solenoid ends only (DC models only)

Z - No override in either end

11 Fast Response

X - Not available for pilot pressures above 210 bar (3000 psi). (Omit for standard internal pilot pressure models)

12 Spool Control Modifications

(Omit if not required)

1 - Stroke adjustment (both ends) (not available on D models)

2 - Pilot choke adjustment (available on all models)

3 - Pilot choke and stroke adjustments (both ends) (available on D models)

7 - Stroke adjusters on 'A' port end only (not available on D models)

8 - Stroke adjusters on 'B' port end only (available on all models)

27 - 2 and 7 combined (not available on D models)

28 - 2 and 8 combined (available on all models)

13 External Pilot Pressure

E - External pilot pressure. Omit for internal pilot pressure models.

14 Internal Pilot Drain

T - Internal pilot drain to 'T' port. Omit for internal pilot pressure models.

15 Check Valve in Pressure Port

Omit if not required.

K - 0,3 bar (5 psi) check

Q - 2,5 bar (35 psi) check

R - 3,5 bar (50 psi) check

S - 5,0 bar (75 psi) check

Model Code (continued)

(V) M - (S*) - * ** * * (L) - (*) - ** - (***) - 10 - (EN***)

16 17 18 19 20 21 22 23 24 25 26 27 28

16 Solenoid Energization Identity

Blank - Standard arrangement for ANSI B93.9 (i.e. energize solenoid A to follow flow P to A).

V - Solenoid identification determined by position of solenoid (i.e. solenoid A at port A end/solenoid B at port B end).

Note

4 and 8 type spools are always V. Solenoid energization identity is independent of mainstage porting.

17 Heading Electrical Flag Symbol

M - Features and options for pilot valve.

18 Pilot Valve Monitoring Switch

(Omit if not required)

S3- Limit switch normally open, wired to electrical connector with PA/PB/PA5 (H piloted models only)

S4- Limit switch normally closed, wired to electrical connector with PA/PB/PA5 (H piloted models only)

S5- Limit switch - FW, FJ (H piloted models only)

S6- Position switch with U coils (H piloted models only)

19 Coil Type

F - Flying lead (required for wiring housing option)

KU - Top exit flying lead

P - Plug in

SP1- Single 6.3mm spade

SP2- Dual 6.3mm spade

U - ISO 4400 (DIN 43650)

X1 - Flameproof solenoids BASEEFA/CENELEC (S piloted models only)

X2 - Explosion proof solenoids CSA/UL (S piloted models only)

X3 - Explosion proof solenoids BASEEFA ExS (S piloted models only)

20 Electrical Connections

(F type coils only, omit if not required)

PA - Insta-plug, male receptacle only

PB - Insta-plug, male and female receptacle

PA3- 3-pin connector

PA5- 5-pin connector

T - Wired terminal block (wiring housing option also required)

21 Wiring Housing

W - 1/2" NPT threaded connection

J - 20mm threaded connection

22 Electrical Options

(Omit if not required)

U-type coils only

1- Fitted connector

2- Fitted connector and variable grommet

3- Fitted connector with lights

23 Solenoid Indicator Lights

(Omit if not required)

24 Surge Suppressor/Damper

(DC voltages only, omit if not required)

D1- Encapsulated diode (industrial applications)

D2- Encapsulated diode (mobile applications)

D7- Encapsulated tranzorb

25 Coil Voltage Identification Letter

(Voltages available upon request)

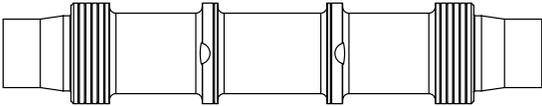
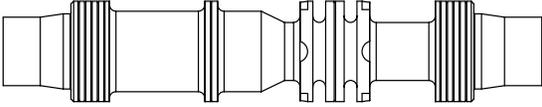
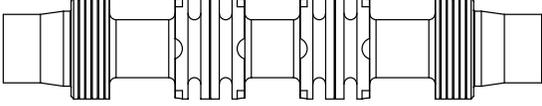
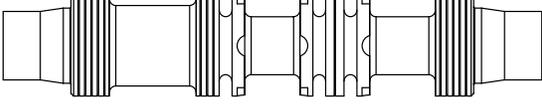
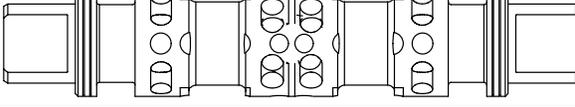
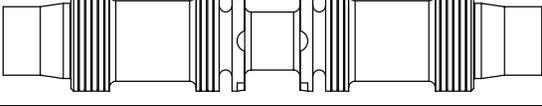
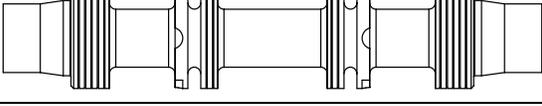
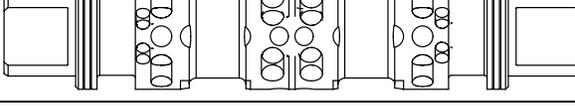
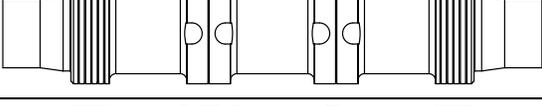
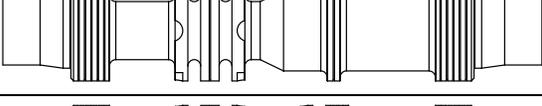
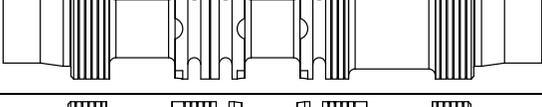
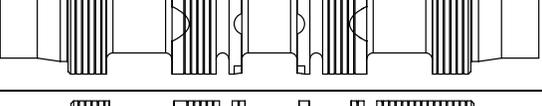
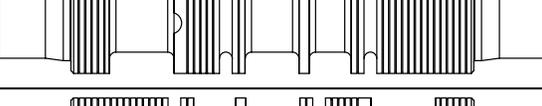
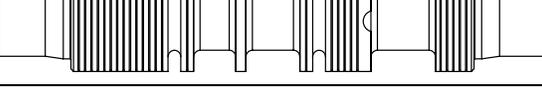
26 Pilot Valve Port Orifices

(Omit if not required)

27 Design Number

28 Special Modifications

(Omit if not required)

Part Number	Main Stage Spools	
02-324575 Type "0"		
02-324576 Type "1"	A Port End	 B Port End
02-324577 Type "2"		
02-324578 Type "3"	A Port End	 B Port End
02-324579 Type "4"		
02-324580 Type "6"		
02-324581 Type "7"		
02-324582 Type "8"		
02-324583 Type "9"		
02-324576 Type "11"	A Port End	 B Port End
02-324578 Type "31"	A Port End	 B Port End
02-324584 Type "33"		
02-324585 Type "52"	A Port End	 B Port End
02-324585 Type "521"	A Port End	 B Port End