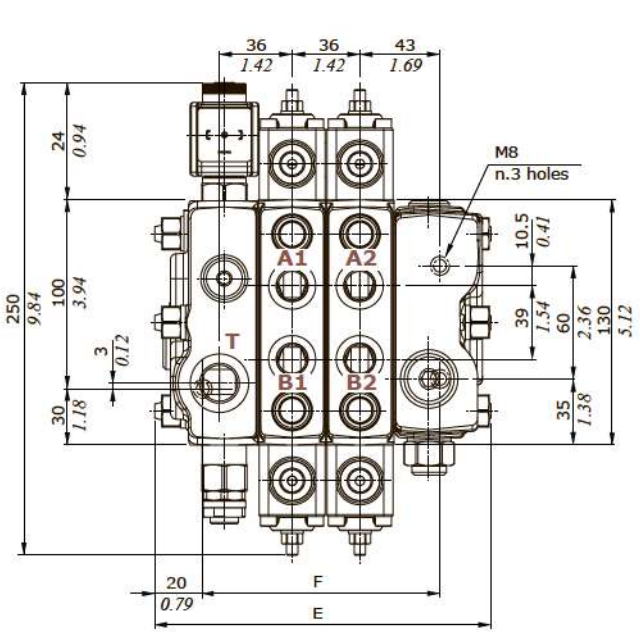
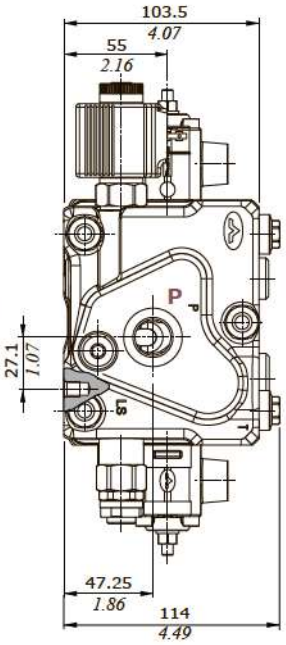
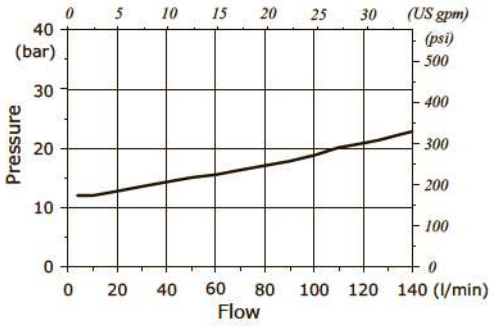
## Dimensional data and performance



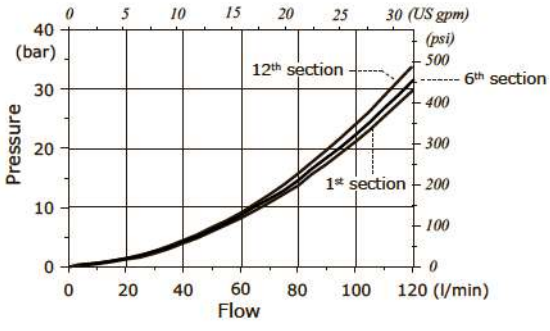




| TYPE | E | | F | |
|---|---|---|---|---|
| | mm | *in* | mm | *in* |
| **DPX100/1** | 144 | *5.67* | 90.5 | *3.56* |
| **DPX100/2** | 180 | *7.09* | 126.5 | *4.98* |
| **DPX100/3** | 216 | *8.50* | 162.5 | *6.40* |
| **DPX100/4** | 252 | *9.92* | 198.5 | *7.81* |
| **DPX100/5** | 288 | *11.34* | 234.5 | *9.23* |
| **DPX100/6** | 324 | *12.76* | 270.5 | *10.65* |
| **DPX100/7** | 360 | *14.17* | 306.5 | *12.07* |
| **DPX100/8** | 396 | *15.59* | 342.5 | *13.48* |
| **DPX100/9** | 432 | *17.01* | 378.5 | *14.90* |
| **DPX100/10** | 468 | *18.43* | 414.5 | *16.32* |
| **DPX100/11** | 504 | *18.43* | 450.5 | *17.74* |
| **DPX100/12** | 540 | *18.43* | 486.5 | *19.15* |

**P⇒T Pressure drop inlet compensator (margin pressure)**




**A(B)⇒T pressure drop (standard spool @ max.stroke)**



## Dimensional data and performance

### High Flow (HF) DPX100 valve configuration

It needs to flow up to 120 l/min *(32 US gpm)* , the DPX100 valve can be configured with up to 4 HF (High Flow) working sections.
In addition to an entirely for Standard flow or High Flow configuration, a mixed configuration – Standard/HF – is available by combining only the sections needed (the number of HF sections is always limited to 4).
In this case, for hydraulic requirements, the HF sections must be positioned just downstream to the inlet.
HF sections are suitable for use both in Standard Pressure and High Pressure (HP) valves.
The inlet flow rate must not be less than 140 l/min *(37 US gpm)*.

**Example of entirely High Flow (HF) valve configuration, for Standard Pressure**

**DPX100HF/4/AM1(TGW5-300/ELN)/P-101(120/120)-8IMNF3.U3(100)/P-101(120/120)-8IMNF3.U3(100)/**

Std pressure open center inlet section
Std pressure closed center inlet section
HF working sections

**P-101(120/120)-8IMNF3.U3(100)/P-101(120/120)-8IMNF3.U3(100)/RF-12VDC-FPM**

Standard pressure outlet section

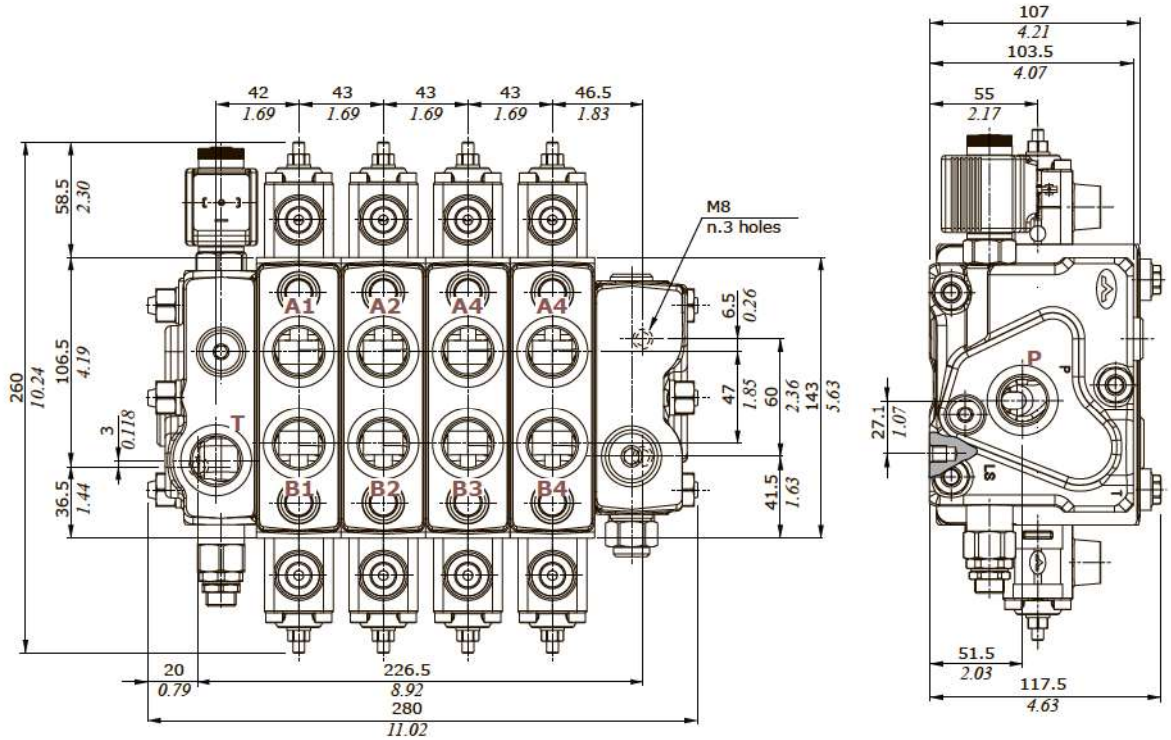
**Example of entirely High Flow (HF) valve configuration, for High Pressure (HP)**

**DPX100HP/2/AM1(TGW5-300/ELN)/HF-P-101(120/120)-8IMNF3.U3(320)/HF-P-101(120/120)-8IMNF3.**

HP open center inlet section
Std pressure closed center inlet section
HF working sections

**U3(320)/HF-P-101(120/120)-8IMNF3.U3(320)/HF-P-101(120/120)-8IMNF3.U3(320)/RF-12VDC-FPM**

Standard pressure outlet section



## High Flow (HF) DPX100 valve configuration

**Example of mixed - Standard/HF - valve configuration**

**DPX100/4/AM1(TGW5-300/ELN)/HF-P-101(120/120)-8IMNF3.U3(100)/HF-P-101(120/120)-8IMNF3.U3(100)/**

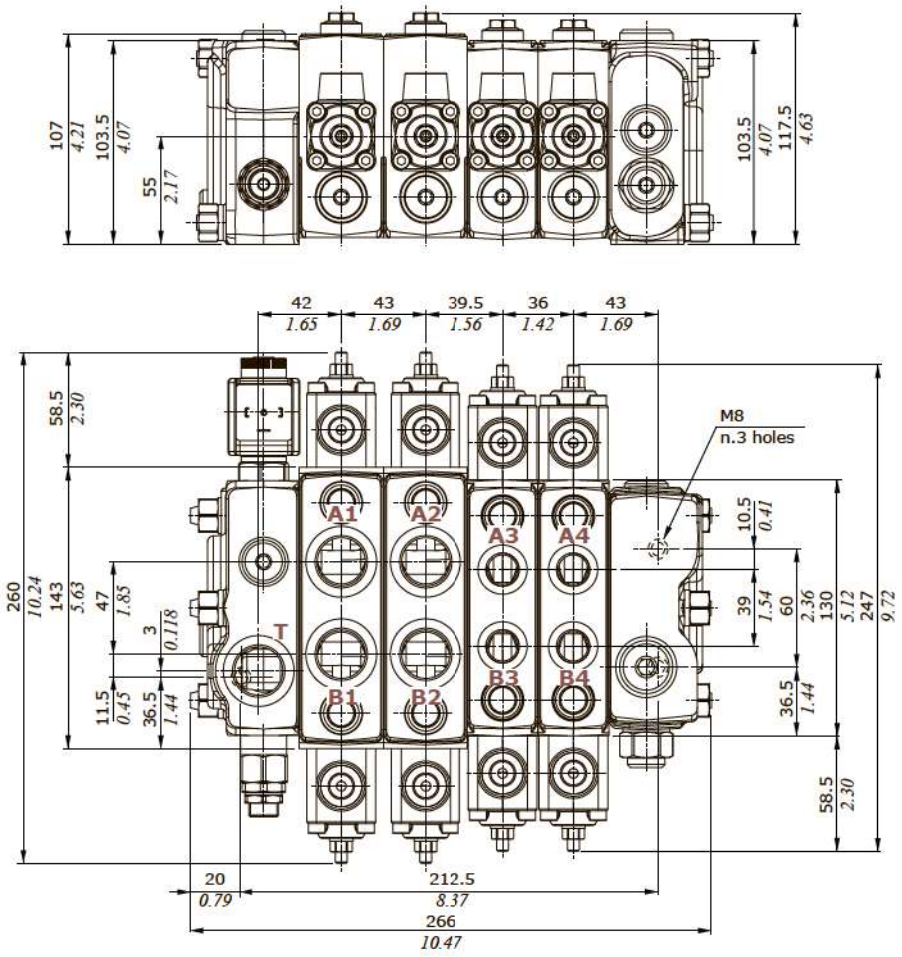
Std pressure open center inlet section
Std pressure closed center inlet section

HF working sections

**P-101(80/80)-8IMNF3.U3(100)/P-101(80/80)-8IMNF3.U3(100)/RF-BSP34(PTA1B1A2B2)38(A3B4A4B4)-12VDC-FPM**

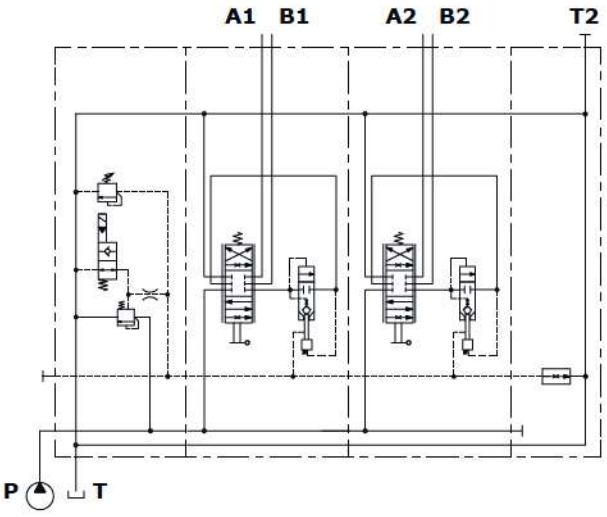
Standard setting working sections

Standard pressure outlet section

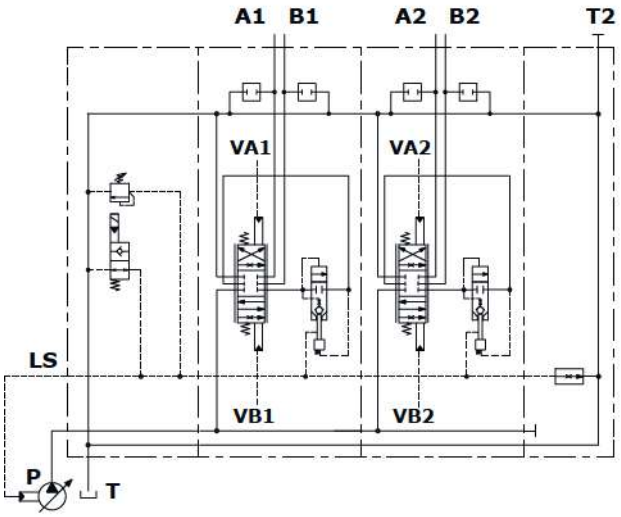


## Hydraulic circuit

### Configuration example with mechanical and hydraulic controls

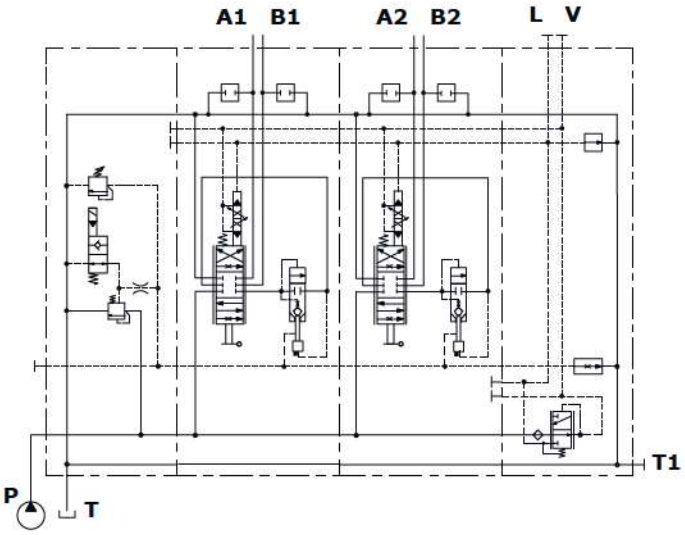



Open center circuit and lever control, with unloader valve, without port valve arrangement

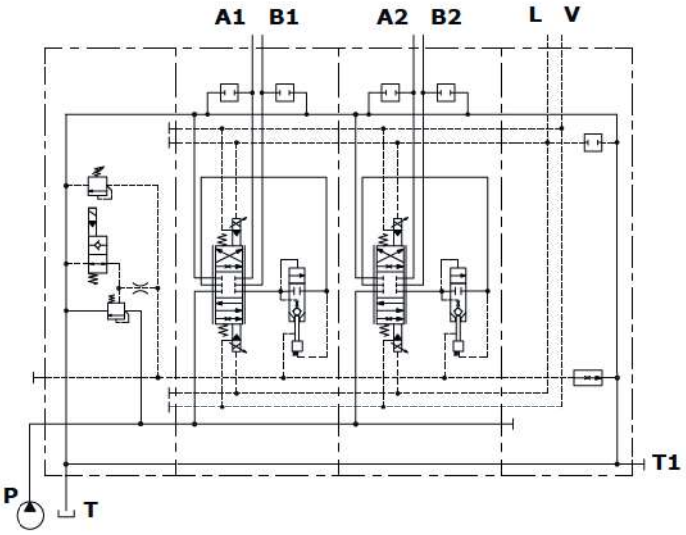



Closed center circuit and proportional hydraulic control, with unloader valve and port valve arrangement

### Configuration example with electrohydraulic controls




Open center circuit and one-side proportional electrohydraulic control with lever, with unloader valve, port valve arrangement and pressure reducing valve, internal pilot and drain




Open center circuit and two-side proportional electrohydraulic control, with unloader valve and port valve arrangement, without pressure reducing valve, external pilot and drain

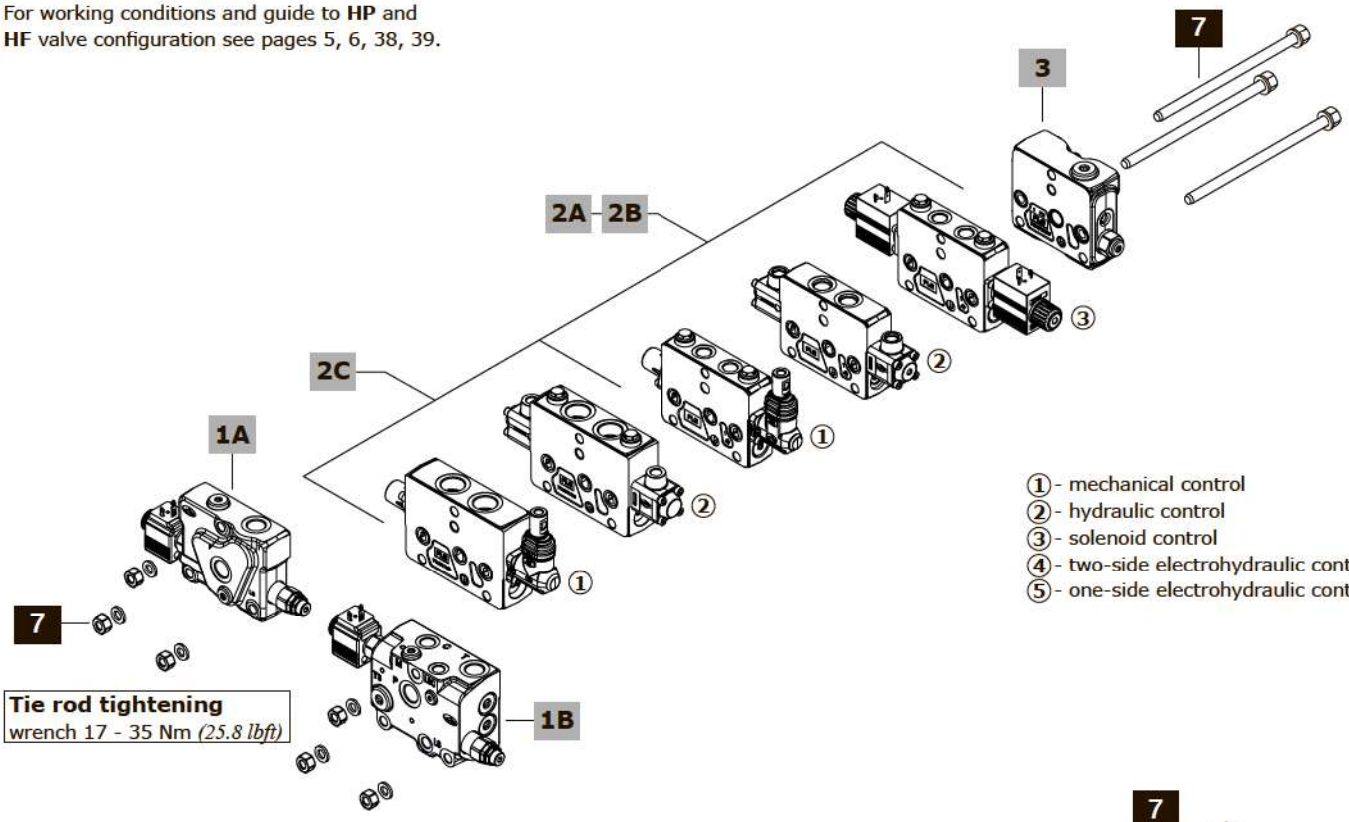
## Complete section ordering codes

Nr. of working sections

**DPX100/3/AM1(TGW3-175/ELN)/HF-Q-101(80/80)-8L/HP-Q-E101(80/80)-8IMN/P-S102(60/60)-8ES3.U3T/RF-..-12VDC-FPM**

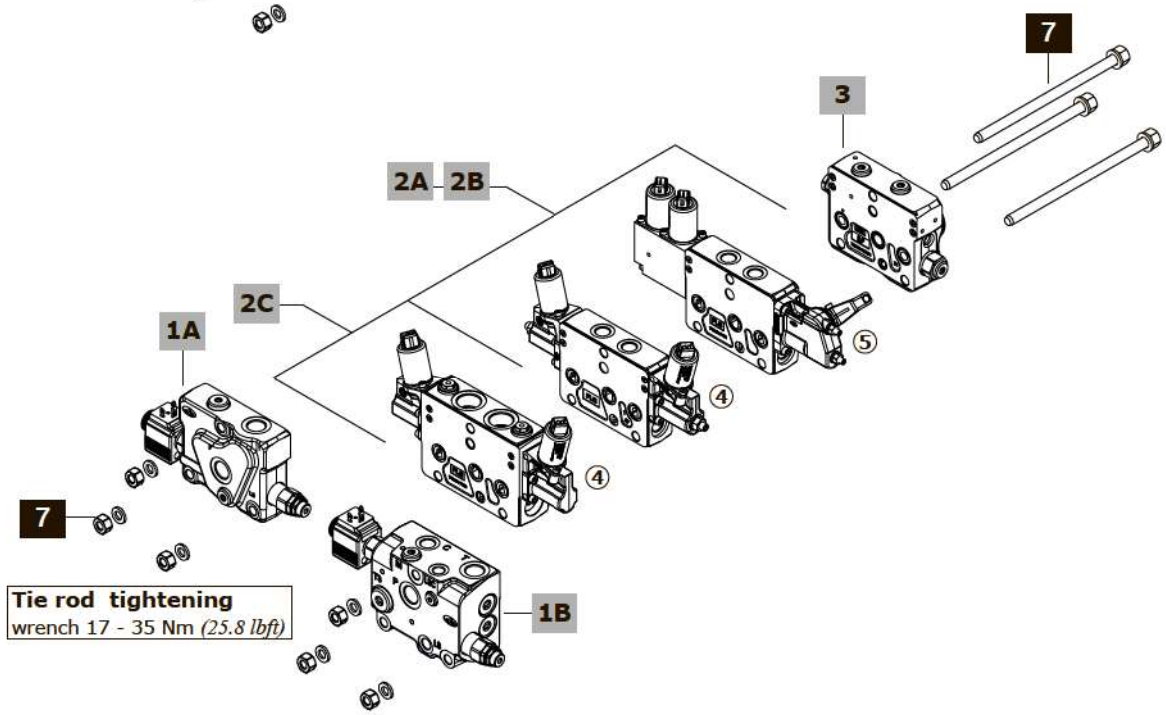
1A 1B 2C 2B 2A 3 4 5 6

**DPX100** = standard pressure valve
**DPX100HP** = High Pressure valve
**DPX100HF:** High Flow valve
For working conditions and guide to **HP** and **HF** valve configuration see pages 5, 6, 38, 39.




① - mechanical control
② - hydraulic control
③ - solenoid control
④ - two-side electrohydraulic control
⑤ - one-side electrohydraulic control

**Tie rod tightening**
wrench 17 - 35 Nm *(25.8 lbft)*




**Tie rod tightening**
wrench 17 - 35 Nm *(25.8 lbft)*

## Complete section ordering codes

### 1A Std pressure inlet section *

The codes are referred to sections with FPM o-ring seals

**Open Center circuit**

TYPE: **DPX100/AM1(TGW3-175/ELN)-12VDC-FPM**
CODE: 640203033V
DESCRIPTION: With compensator, press. relief valve and unloader valve, with P-T-LS ports (LS plugged)
TYPE: **DPX100/AM1(TGW3-175/ELN)-12VDC-BSP34-FPM**
CODE: 640204007V
DESCRIPTION: As previous one with G3/4 P and T ports
TYPE: **DPX100/AM1(SO/TGW3-175/ELN)-12VDC-FPM**
CODE: 640203007V
DESCRIPTION: As first one with non-return flow limiter from inlet section to working section and by-pass valve
TYPE: **DPX100/AM1(SU/TGW3-175/ELN)-12VDC-FPM**
CODE: 640203029V
DESCRIPTION: With non-return flow limiter from working section to inlet section and by-pass valve
TYPE: **DPX100/APF4\TGW3-175\VP-D(1.2)-SB10-Q40-FPM**
CODE: 640203302V
DESCRIPTION: **Designed for steering**, compensator, priority and pressure relief valves, with P-T-T3-LS-M-C-LSC ports (T-M-LS plugged). Needs special tie rods
TYPE: **DPX100/APF4\TGW3-175\VP-D(1.2)-SB10-Q40-BSP34-FPM**
CODE: 640203303V
DESCRIPTION: As previous one, P-T with G3/4 and C with G1/2 thread

**Closed Center circuit**

TYPE: **DPX100/AN1(TGW3-175/ELN)-12VDC-FPM**
CODE: 640203030V
DESCRIPTION: Without compensator, with press. relief valve and unloader valve, with P-T-LS ports
TYPE: **DPX100/AN1(TGW3-175/ELN)-BSP34-12VDC-FPM**
CODE: 640204008V
DESCRIPTION: As previous one with G3/4 P and T ports
Not available for High Pressure valve configuration
TYPE: **DPX100/AN1(SO/TGW3-175/ELN)-12VDC-FPM**
CODE: 640203009V
DESCRIPTION: As first one (Closed Center) with non-return flow limiter from inlet section to working section and by-pass valve
TYPE: **DPX100/AN1(SU/TGW3-175/ELN)-12VDC-FPM**
CODE: 640203031V
DESCRIPTION: With non-return flow limiter from working section to inlet section and by-pass valve
TYPE: **DPX100/APFS4\TGW3-175\VP-D(1.2)-SB10-Q40\SB25-LSF(NOFC)\ESO22N-12VDC-FPM** CODE: 640203300V
DESCRIPTION: **Designed for steering**, with flushing valve (stand-by 25 bar - *360 psi*), priority, shut-off and pressure relief valves, P-T-T3-LS-M-C-LSC ports (T3-M plugged). Needs special tie rods
Not available for High Pressure valve configuration
TYPE: **DPX100/APFS4\TGW3-175\VP-D(1.2)-SB10-Q40\SB25-LSF(NOFC)\ESO22N-BSP34-12VDC-FPM** CODE: 640203301V
DESCRIPTION: As previous one, P-T with G3/4 and C with G1/2 thread. Not available for High Pressure valve configuration

### 1B High pressure inlet section *

The codes are referred to sections with FPM o-ring seals

**Open Center circuit**

TYPE: **DPX100HP/AM1(TGW5-350/ELN)-12VDC-FPM**
CODE: 640203036V
DESCRIPTION: With compensator, press. relief valve and unloader valve, with P-T-LS ports (LS plugged)
TYPE: **DPX100HP/AM1(TGW5-350/ELN)-BSP34-12VDC-FPM**
CODE: 640204011V
DESCRIPTION: As previous one with G3/4 P and T ports
TYPE: **DPX100HP/AM1(SO/TGW5-350/ELN)-12VDC-FPM**
CODE: 640203037V
DESCRIPTION: As first one with non-return flow limiter from inlet section to working section and by-pass valve
TYPE: **DPX100HP/AM1(SU/TGW5-350/ELN)-12VDC-FPM**
CODE: 640203038V
DESCRIPTION: With non-return flow limiter from working section to inlet section and by-pass valve

**Closed Center circuit**

Refer to "Std pressure" inlet sections

### 2A Std pressure working section *

The codes are referred to sections with FPM o-ring seals

**Mechanical control**

TYPE: **DPX100/Q-101(80/80)-8L-FPM**
CODE: 640113001V
DESCRIPTION: Lever control without port valve arrangement
TYPE: **DPX100/P-101(80/80)-8L.U3T-FPM**
CODE: 640103001V
DESCRIPTION: As previous one with port valve arrangement

**Proportional hydraulic control**

TYPE: **DPX100/Q-E101(80/80)-8IMN-FPM**
CODE: 640113600V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100/P-E101(80/80)-8IMN.U3(100)-FPM**
CODE: 640103012V
DESCRIPTION: With antishock port valves

**On/off solenoid control**

TYPE: **DPX100/Q-S102(60/60)-8ES3-12VDC-FPM**
CODE: 640113018V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100/P-S102(60/60)-8ES3.U3(100)-12VDC-FPM**
CODE: 640103024V
DESCRIPTION: With antishock port valves

**Two-side proportional electrohydraulic control**

TYPE: **DPX100/QE-E101(80/80)-8EB3TF3-12VDC-FPM**
CODE: 640113007V
DESCRIPTION: With spool stroke limiter, without port valve arrang.
TYPE: **DPX100/PE-E101(80/80)-8EB3TF3.U3T-12VDC-FPM**
CODE: 640103009V
DESCRIPTION: As previous one with port valves arrangement
TYPE: **DPX100/PE-E101(80/80)-8EB3TF3.U3(100)-12VDC-FPM**
CODE: 640103025V
DESCRIPTION: As previous one with antishock port valves

**One-side proportional electrohydraulic control**

TYPE: **DPX100/QZ-E101(80/80)-8EZ3LQF3-12VDC-FPM**
CODE: 640113019V
DESCRIPTION: With spool stroke limiter, without port valve arrang.
TYPE: **DPX100/PZ-E101(80/80)-8EZ3LQF3.U3T-12VDC-FPM**
CODE: 640103028V
DESCRIPTION: As previous one with port valve arrangement
TYPE: **DPX100/PZ-E101(80/80)-8EZ3LQF3.U3(100)-12VDC-FPM**
CODE: 640103026V
DESCRIPTION: As previous one with antishock port valves

NOTE (*): *Codes are referred to **BSP** thread.*

## Complete section ordering codes

### 2B High Pressure working section *

The codes are referred to sections with FPM o-ring seals

**Mechanical control**

TYPE: **DPX100HP/Q-101(80/80)-8L-FPM-FPM**
CODE: 640113009V
DESCRIPTION: Lever control without port valve arrangement
TYPE: **DPX100HP/P-101(80/80)-8L.U3T-FPM**
CODE: 640103011V
DESCRIPTION: As previous one with port valve arrangement

**Proportional hydraulic control**

TYPE: **DPX100HP/Q-E101(80/80)-8IMN-FPM**
CODE: 640113021V DESCRIPTION: Without port valve arrang.
TYPE: **DPX100HP/P-E101(80/80)-8IMN.U3(320)-FPM**
CODE: 640103030V DESCRIPTION: With antishock port valves

**On-off solenoid control**

TYPE: **DPX100HP/Q-S102(60/60)-8ES3-12VDC-FPM**
CODE: 640113022V DESCRIPTION: Without port valve arrang.
TYPE: **DPX100HP/P-S102(60/60)- 8ES3.U3(320)-12VDC-FPM**
CODE: 640103031V DESCRIPTION: With antishock port valves

**Two-side proportional electrohydraulic control**

TYPE: **DPX100HP/QE-E101(80/80)-8EB3TF3-12VDC-FPM**
CODE: 640113023V
DESCRIPTION: With stroke limiter, without port valve arrangement
TYPE: **DPX100HP/PE-E101(80/80)-8EB3TF3.U3T-12VDC-FPM**
CODE: 640103037V
DESCRIPTION: As previous one with port valve arrangement
TYPE: **DPX100HP/PE-E101(80/80)-8EB3TF3.U3(320)-12VDC-FPM**
CODE: 640103032V
DESCRIPTION: As previous one with antishock port valves

**One-side proportional electrohydraulic control**

TYPE: **DPX100HP/QZ-E101(80/80)-8EZ3LQF3-12VDC-FPM**
CODE: 640113024V
DESCRIPTION: With stroke limiter, without port valve arrangement
TYPE: **DPX100HP/PZ-E101(80/80)-8EZ3LQF3.U3T-12VDC-FPM**
CODE: 640103033V
DESCRIPTION: As previous one with port valve arrangement
TYPE: **DPX100HP/PZ-E101(80/80)-8EZ3LQF3.U3(320)-12VDC-FPM**
CODE: 640103034V
DESCRIPTION: As previous one with port valve arrangement

### 2C High Flow working section *

The codes are referred to sections with FPM o-ring seals

**Mechanical control**

TYPE: **DPX100HF/Q-101(120/120)-8L-FPM**
CODE: 640113026V
DESCRIPTION: Lever control without port valve arrangement
TYPE: **DPX100HF/P-101(120/120)-8L.U3T-FPM**
CODE: 640103039V
DESCRIPTION: As previous one with port valve arrangement

**Proportional hydraulic control**

TYPE: **DPX100HF/Q-E101(120/120)-8IMN-FPM**
CODE: 640113027V DESCRIPTION: Without port valve arrang.
TYPE: **DPX100HF/P-E101(120/120)-8IMN.U3(100)-FPM**
CODE: 640103040V DESCRIPTION: With antishock port valves

**Two-side proportional electrohydraulic control**

TYPE: **DPX100HF/QE-E101(120/120)-8EB3TF3-12VDC-FPM**
CODE: 640113028V
DESCRIPTION: With stroke limiter, without port valve arrangement
TYPE: **DPX100HF/PE-E101(120/120)-8EB3TF3.U3T-12VDC-FPM**
CODE: 640103041V
DESCRIPTION: As previous one with port valve arrangement

**One-side proportional electrohydraulic control**

TYPE: **DPX100/QZ-E101(120/120)-8EZ34SLCQ-12VDC-FPM**
CODE: 640103046V
DESCRIPTION: With encap on B side, without port valve arrangement
TYPE: **DPX100HF/PZ-E101(120/120)-8EZ34LQF3.U3T-12VDC-FPM**
CODE: 640103045V
DESCRIPTION: With spool stroke limiter, with port valve arrangement

### 3 Outlet section *

The codes are referred to sections with FPM o-ring seals
Outlet section is the same type for standard and High Pressure valve

**For mechanical, hydraulic or solenoid configuration**

TYPE: **DPX100/RF-FPM** CODE: 640303003V
DESCRIPTION: With bleed valve and upper T2 port (plugged)
TYPE: **DPX100/RF-BSP34-FPM** CODE: 640304003V
DESCRIPTION: As previous one with G3/4 T2 port (plugged)
TYPE: **DPX100/RF(04)-FPM** CODE: 640303011V
DESCRIPTION: Bleed valve, upper T2, side P1-T1-LS1-M1 ports (plugged)

**For electrohydraulic or mixed configuration**

TYPE: **DPX100/RDN-NOTAP(VL)-FPM** CODE: 640303002V
DESCRIPTION: Without pressure reducing valve, external pilot and drain (V-L ports), with Bleed valve and side T1 port (plugged)
TYPE: **DPX100/RDN-NOTAP(VL)-BSP34-FPM** CODE: 640304001V
DESCRIPTION: As previous one with G3/4 T1 port
TYPE: **DPX100/RDR-FPM** CODE: 640303006V
DESCRIPTION: With pressure reducing valve and Bleed valve, internal pilot and drain (V-L plugged ports), side T1 port (plugged)
Type: **DPX100/RDR(03)-FPM** CODE: 640303007V
DESCRIPTION: With pressure reducing valve and Bleed valve, internal pilot and drain (V-L plugged ports), side T1-P1-LS1 ports (plugged)
Type: **DPX100/RDR(03)-BSP34-FPM** CODE: 640304005V
DESCRIPTION: As previous one with G3/4 P1 and T1 ports
**Note**: for sections with different port arrangement please contact Sales Dpt.

### 4 Valve threading

Only specify if it is different from BSP standard (see page 6).

### 5 Voltage

Specify the voltage of electric devices.

### 6 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

### 6 Assembling kit

**Standard tie rods: for M and N type inlet sections**

| CODE | DESCRIPTION | CODE | DESCRIPTION |
|---|---|---|---|
| 5TIR110145 | For 1 section valve | 5TIR110359 | For 7 section valve |
| 5TIR110179 | For 2 section valve | 5TIR110397 | For 8 section valve |
| 5TIR110215 | For 3 section valve | 5TIR110431 | For 9 section valve |
| 5TIR110252 | For 4 section valve | 5TIR110467 | For 10 section valve |
| 5TIR110289 | For 5 section valve | 5TIR110503 | For 11 section valve |
| 5TIR110323 | For 6 section valve | 5TIR110541 | For 12 section valve |

**Special tie rods: for PFS type inlet section**

| | | | |
|---|---|---|---|
| 5TIR110163 | For 1 section valve | 5TIR110382 | For 7 section valve |
| 5TIR110200 | For 2 section valve | 5TIR110417 | For 8 section valve |
| 5TIR110238 | For 3 section valve | 5TIR110454 | For 9 section valve |
| 5TIR110273 | For 4 section valve | 5TIR110487 | For 10 section valve |
| 5TIR110307 | For 5 section valve | 5TIR110526 | For 11 section valve |
| 5TIR110344 | For 6 section valve | 5TIR110561 | For 12 section valve |

**Special tie rods: for valve HF configuration valve**

| | | | |
|---|---|---|---|
| 5TIR110152 | For 1 section valve | 5TIR110238 | For 3 section valve |
| 5TIR110195 | For 2 section valve | 5TIR110280 | For 4 section valve |

NOTE: For valve in mixed configuration (standard+HF or HP+HF) or with PFS inlet sections, please contact Sales Department

## Inlet section part ordering codes

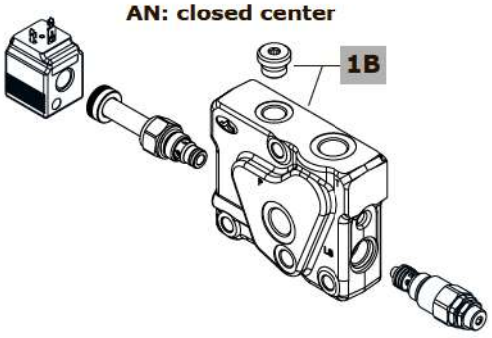
Valve setting (bar)

**DPX100 / A M1 (TGW3 - 175 / ELN) - ..... - 12VDC - FPM**

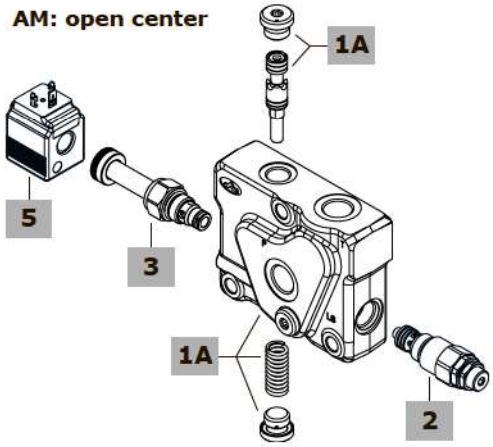
1A 1B 2 3 4 5 6

**DPX100**: standard pressure section
**DPX100HP**: High Pressure section

**AN: closed center**




**AM: open center**




### 1A Std pressure inlet section kit* page 46

The codes are referred to sections with FPM o-ring seals

**Open Center circuit**

TYPE: **DPX100/M1/EL-FPM** CODE: YFIA104310V
DESCRIPTION: With compensator, P-T-LS ports (LS plugged), arranged for unloader valve

TYPE: **DPX100/M1-BSP34/EL-FPM** CODE: YFIA104406V
DESCRIPTION: As previous one with G3/4 P and T ports

TYPE: **DPX100/M1(SU)/EL-FPM** CODE: YFIA104311V
DESCRIPTION: As first one with non return flow limiter from working section to inlet section and by-pass valve

TYPE: **DPX100/M1(SO)/EL-FPM** CODE: YFIA104312V
DESCRIPTION: As previous one with non return flow limiter from inlet section to working section and by-pass valve

**Closed Center circuit**

TYPE: **DPX100/N1/EL-FPM** CODE: YFIA104313V
DESCRIPTION: Without compensator, with P-T-LS ports, arranged for unloader valve

TYPE: **DPX100/N1-BSP34/EL-FPM** CODE: YFIA104401V
DESCRIPTION: As previous one with G3/4 P and T ports

TYPE: **DPX100/N1(SU)/EL-FPM** CODE: YFIA104314V
DESCRIPTION: As first one (Clsed Center) with non return flow limiter from working section to inlet section and by-pass valve

TYPE: **DPX100/N1(SO)/EL-FPM** CODE: YFIA104315V
DESCRIPTION: As previous one with non return flow limiter from inlet section to working section and by-pass valve

### 2 Main pressure relief valve page 50

The codes are referred to parts with FPM o-ring seals
Valves standard setting is referred to 5 l/min *(1.3 US gpm)* flow.

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **(TGW2-80)** | 0MC09002009 | Range 10-120 bar *(145-1750 psi)* std setting 80 bar *(1160 psi)* |
| **(TGW3-175)** | 0MC09002007 | Range 40-220 bar *(580-3200 psi)* std setting 175 bar *(2550 psi)* |
| **(TGW4-250)** | 0MC09002005 | Range 200-350 bar *(2900-5100 psi)* std setting 250 bar *(3600 psi)* |
| **(TGW5-300)** | 0MC09002008 | Range 290-385 bar *(4200-5600 psi)* std setting 300 bar *(4350 psi)* |
| **SV** | XTAP524340V | Relief valve blanking plug |

NOTE (*): *Codes are referred to **BSP** thread.*

### 1B High pressure inlet section kit* page 46

The codes are referred to sections with FPM o-ring seals

**Open Center circuit**

TYPE: **DPX100HP/M1/EL-FPM** CODE: YFIA104316V
DESCRIPTION: With compensator, P-T-LS ports (LS plugged) arranged for unloader valve

TYPE: **DPX100HP/M1-BSP34/EL-FPM** CODE: YFIA104402V
DESCRIPTION: As previous one with G3/4 P and T ports

TYPE: **DPX100HP/M1(SU)/EL-FPM** CODE: YFIA104317V
DESCRIPTION: As first one with non return flow limiter from working section to inlet section and by-pass valve

TYPE: **DPX100HP/M1(SO)/EL-FPM** CODE: YFIA104318V
DESCRIPTION: As previous one with non return flow limiter from inlet section to working section and by-pass valve

**Closed Center circuit**

Refer to "Std pressure" inlet sections

### 3 Solenoid operated unloading valve page 50

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **ELN** | 0EF08002015 | Without emergency override |
| **ELV** | 0EF08002017 | With screw type emergency override |
| **ELP** | 0EF08002010 | With push-button emergency override |
| **ELT** | 0EF08002016 | With "twist & push" emergency override |
| **LT** | XTAP510320V | Unloading valve blanking plug |

### 4 Section threading

Only specify if it is different from BSP standard (see page 6).

### 5 Coil

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **12VDC** | 4SLE001200A | **BER** type coil, ISO4400 conn., 12VDC |

For complete available coils list see page 125.

### 6 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

## Inlet section part ordering codes

Valve setting (bar) — Priority valve stand-by (bar) — Steering max. flow — Compensator stand-by (bar)

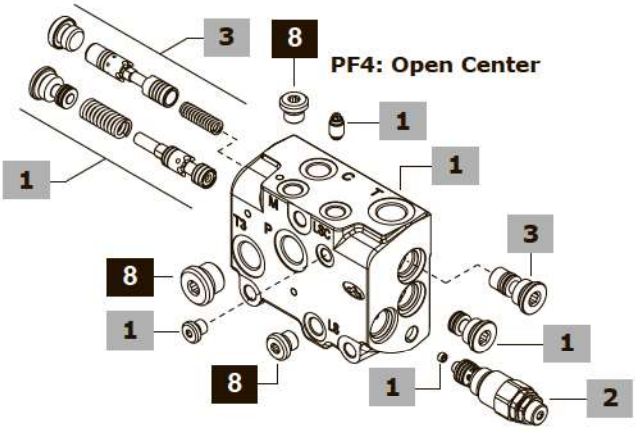
**DPX100 / APF4 \ TGW3-175 \ VP-D(1.2) - SB10 - Q40 \ SB14 - ..... - FPM**

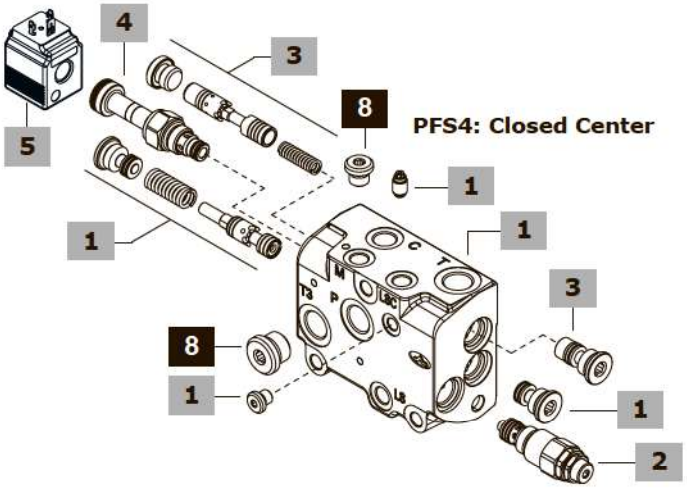
1 2 3 1 6 7

**DPX100** = standard pressure section

**DPX100 / APFS4 \ TGW3-175 \ VP-D(1.2)-SB10-Q40 \ SB25-LSF(NOFC) \ ESO22N - ..... - 12VDC - FPM**

1 2 3 1 4 6 5




### 1 Inlet section kit* page 48

The codes are referred to sections with FPM o-ring seals
Following sections are suitable only for standard pressure valve

**Open Center circuit**

TYPE: **DPX100/APF4-FPM** CODE: YFIA104472V
DESCRIPTION: With compensator, P-T-T3-LS-M-C-LSC ports
TIPO: **DPX100/APF4-BSP34-FPM** CODE: YFIA104471V
DESCRIPTION: As previous one, P-T with G3/4 and C with G1/2 thread

**Closed Center circuit**

TYPE: **DPX100/APFS4-FPM** CODE: YFIA104473V
DESCRIPTION: With flushing valve (stand-by 25 bar - *360 psi*), shut-off valve arrangement and P-T-T3-LS-M-C-LSC ports
TYPE: **DPX100/APFS4-BSP34-FPM** CODE: YFIA104470V
DESCRIPTION: As previous one, P-T with G3/4 and C with G1/2 thread
TYPE: **DPX100/APS4-FPM** CODE: YFIA104474V
DESCRIPTION: Without compensator (seat plugged), shut-off valve arrangement and P-T-T3-LS-M-C-LSC ports

### 2 Main pressure relief valve page 50

See previous page

### 3 Priority valve kit page 51

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **Regulated flow = 40 l/min** *(10.5 US gpm)* | | |
| **D(1.2)-SB10-Q40** | 5CAS314058AV | Stand-by (margin pressure) 10 bar *(145 psi)* |
| **D(1.2)-SB07-Q40** | 5CAS314058BV | Stand-by (margin pressure) 7 bar *(100 psi)* |

NOTE (*): *Codes are referred to **BSP** thread.*

### 4 Solenoid operated shut-off valve page 51

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **ESO22N** | 0EC08002053 | Without emergency override |
| **ESO22P** | 0EC08002047 | With push-button emergency override |
| **ESO22V** | 0EC08002054 | With screw type emergency override |
| **ESO22T** | 0EC08002055 | With "twist & push" emergency override |
| **EST** | XTAP510320V | Valve blanking plug |

### 5 Coil

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **12VDC** | 4SLE001200A | **BER** type coil, ISO4400 conn., 12VDC |

For complete available coils list see page 125.

### 6 Section threading

Only specify if it is different from BSP standard (see page 6).

### 7 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

### 8 Plugs*

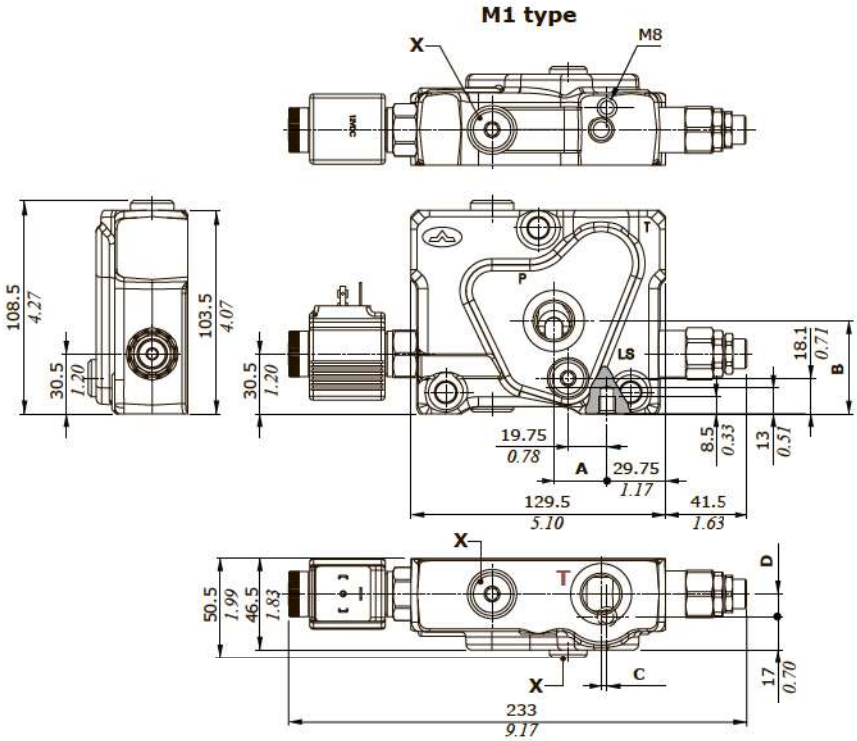
The codes are referred to parts with FPM o-ring seals

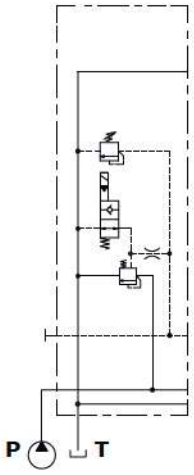
| CODE | DESCRIPTION |
|---|---|
| XTAP719160 | G1/4 plug, nr.1 for PFS section, nr.2 for PF section |
| XTAP727200 | G1/2 plug, nr.1 |
| XTAP732220 | G3/4 plug, nr.1 (only for BSP34 inlet sections) |

## Inlet section

### Dimensions and hydraulic circuit

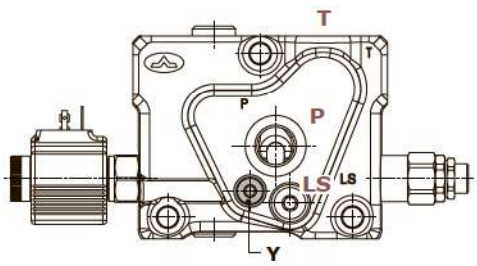
**Example of M Open Center section, standard pressure type**



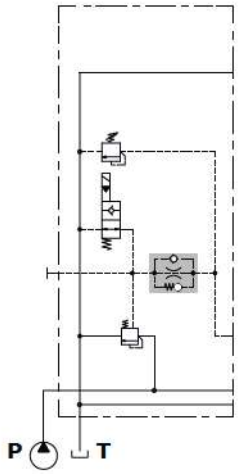

| INLET SECTION TYPE | | P inlet port A | | P inlet port B | | T outlet port C | | T outlet port D | |
|---|---|---|---|---|---|---|---|---|---|
| | | mm | *in* | mm | *in* | mm | *in* | mm | *in* |
| Standard pressure | Standard thread | 27.1 | *1.07* | 47.25 | *1.86* | 3 | *0.118* | 11.5 | *0.45* |
| High pressure (HP) | Standard thread | 27.1 | *1.07* | 51.5 | *2.03* | 3 | *0.118* | 11.5 | *0.45* |
| | G3/4 thread | 27.1 | *1.07* | 51.5 | *2.03* | 3 | *0.118* | 9 | *0.35* |

**M1(SO) or M1(SU) type**

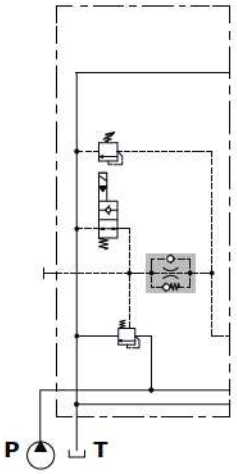



**Wrenches and tightening torques**
X = allen wrench 6 - 24 Nm *(17.7 lbft)*
Y = allen wrench 4 - 9.8 Nm *(7.2 lbft)*
NOTE: for valves wrench and torque see related pages

**M1(SU) type**



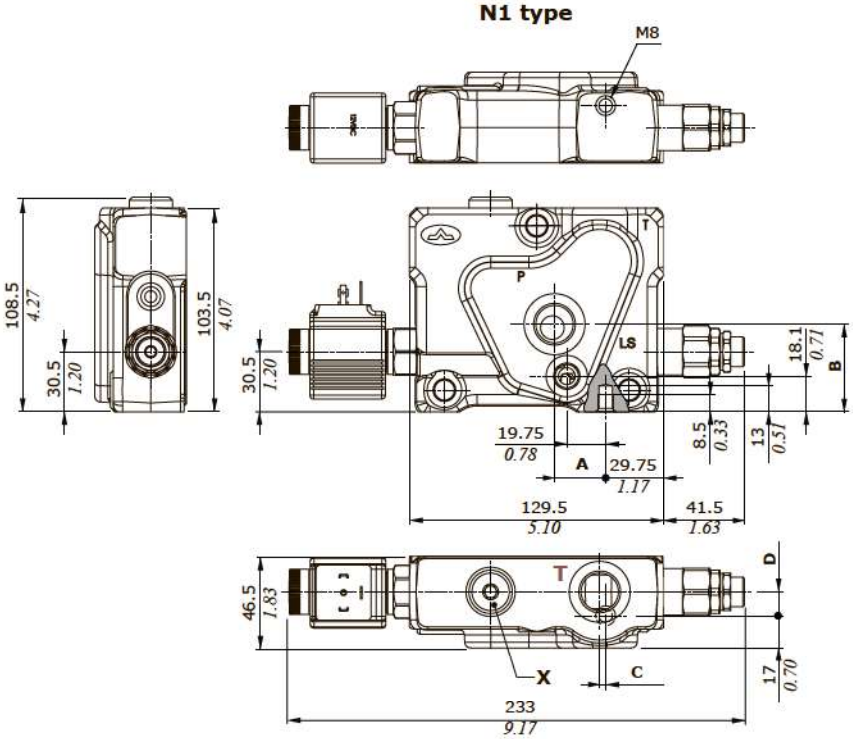

**M1(SO) type**



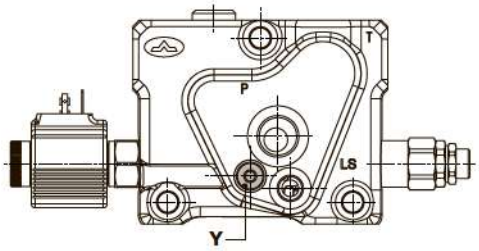
## Dimensions and hydraulic circuit

### Example of N Closed Center section

**N1 type**



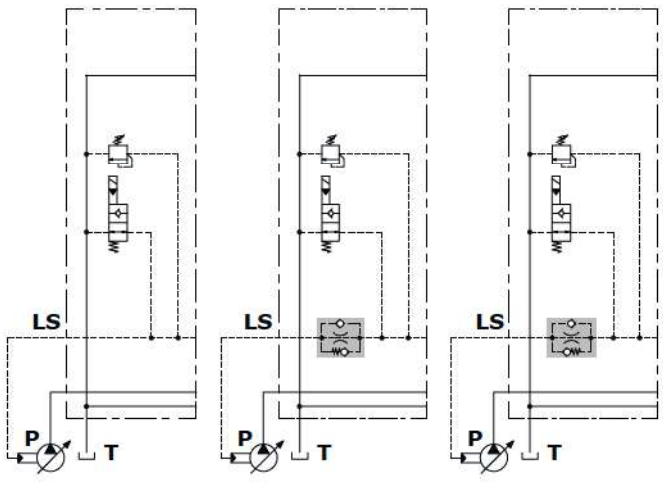

**N1(SO) or N1(SU) type**




**Wrenches and tightening torques**
X = allen wrench 6 - 24 Nm *(17.7 lbft)*
Y = allen wrench 4 - 9.8 Nm *(7.2 lbft)*
NOTE: for valves wrench and torque see related pages

| INLET SECTION TYPE | P inlet port A | | P inlet port B | | T outlet port C | | T outlet port D | |
|---|---|---|---|---|---|---|---|---|
| | mm | *in* | mm | *in* | mm | *in* | mm | *in* |
| **Standard thread** | 26 | *1.02* | 44.5 | *1.75* | 3 | *0.118* | 11.5 | *0.45* |
| **G3/4 thread** | 27.1 | *1.07* | 47.25 | *1.86* | 3 | *0.118* | 9 | *0.35* |

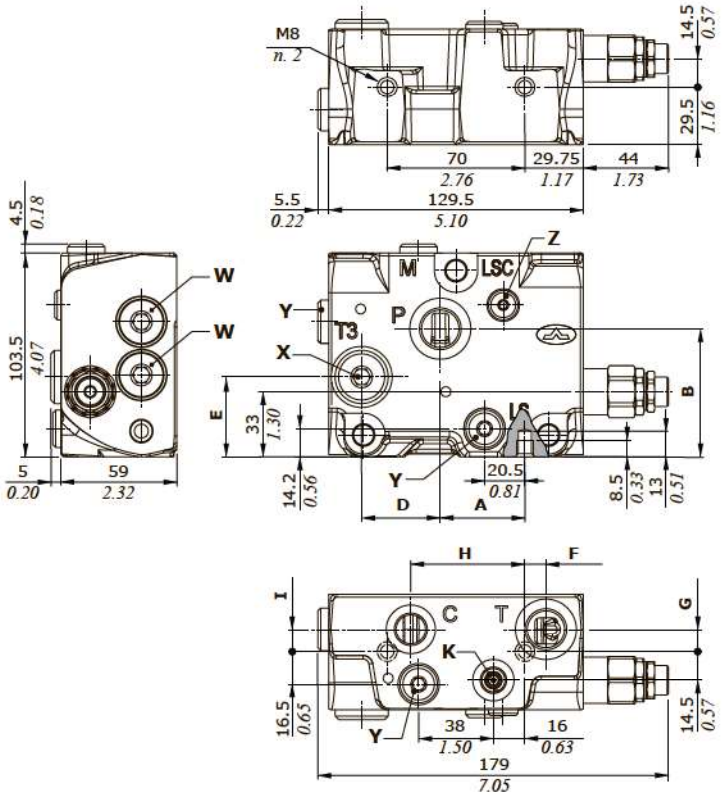
**N1 type** **N1(SU) type** **N1(SO) type**

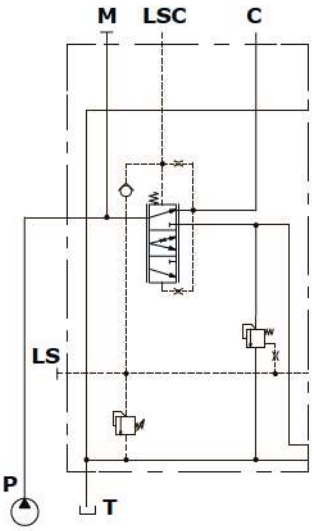


## Inlet section

### Dimensions and hydraulic circuit

**Example of PF4 Open Center section, with priority valve**



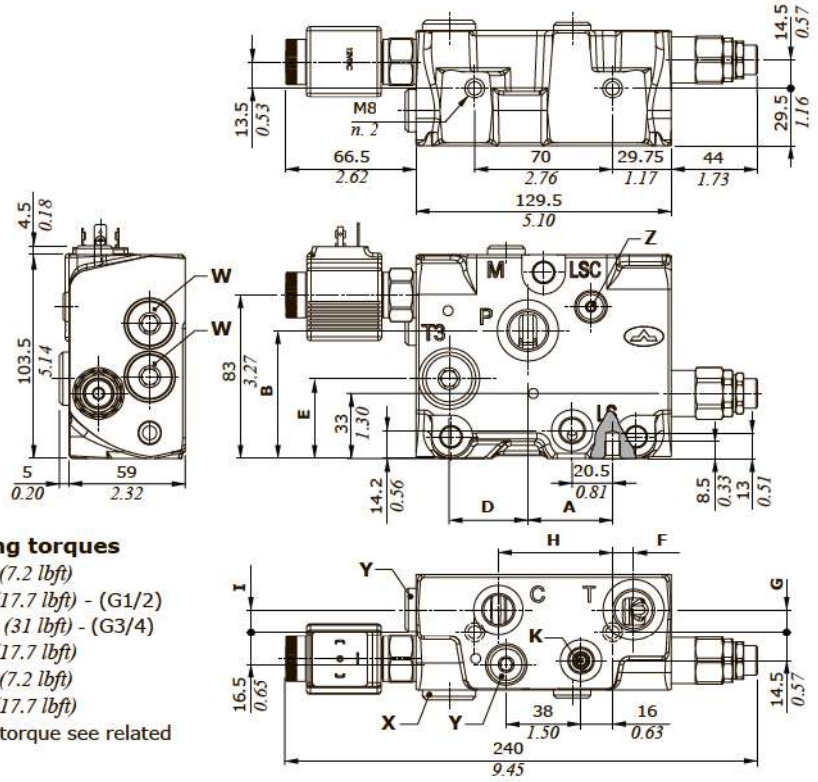

**Wrenches and tightening torques**

K = allen wrench 5 - 9.8 Nm *(7.2 lbft)*
X = allen wrench 8 - 24 Nm *(17.7 lbft)* - (G1/2)
allen wrench 12 - 42 Nm *(31 lbft)* - (G3/4)
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
Z = allen wrench 4 - 9.8 Nm *(7.2 lbft)*
W = allen wrench 8 - 24 Nm *(17.7 lbft)*
NOTE: for valves wrench and torque see related pages

| Port threading | P inlet | | | | T3 outlet | | | | T outlet | | | | C controlled | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | B | | D | | E | | F | | G | | H | | I | |
| | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* |
| **P,T=G1/2 / C=G3/8** | 43 | *1.69* | 65 | *2.56* | 40 | *1.57* | 40.5 | *1.59* | 10.7 | *0.42* | 11.5 | *0.45* | 58 | *2.28* | 11.5 | *0.45* |
| **P,T=G3/4 / C=G1/2** | 43 | *1.69* | 63 | *2.48* | 38 | *1.50* | 41 | *1.61* | 9.5 | *0.37* | 9 | *0.35* | 58 | *2.28* | 11.5 | *0.45* |

## Dimensions and hydraulic circuit

### Example of PFS4 Closed Center section, with priority valve and shut-off valve arrangement

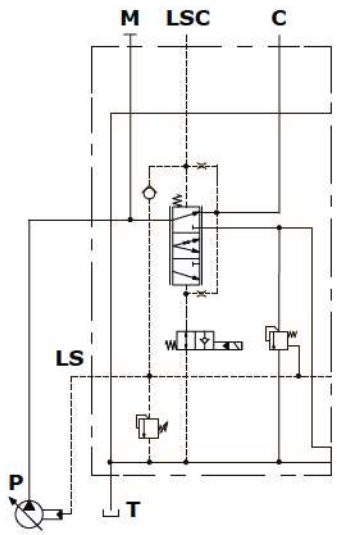



**Wrenches and tightening torques**

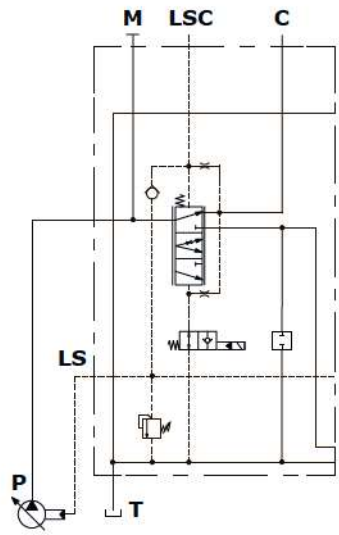
K = allen wrench 5 - 9.8 Nm *(7.2 lbft)*
X = allen wrench 8 - 24 Nm *(17.7 lbft)* - (G1/2)
allen wrench 12 - 42 Nm *(31 lbft)* - (G3/4)
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*
Z = allen wrench 4 - 9.8 Nm *(7.2 lbft)*
W = allen wrench 8 - 24 Nm *(17.7 lbft)*
NOTE: for valves wrench and torque see related pages

| Port threading | P inlet | | | | T3 outlet | | | | T outlet | | | | C controlled | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | B | | D | | E | | F | | G | | H | | I | |
| | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* | mm | *in* |
| **P,T=G1/2 / C=G3/8** | 43 | *1.69* | 65 | *2.56* | 40 | *1.57* | 40.5 | *1.59* | 10.7 | *0.42* | 11.5 | *0.45* | 58 | *2.28* | 11.5 | *0.45* |
| **P,T=G3/4 / C=G1/2** | 43 | *1.69* | 63 | *2.48* | 38 | *1.50* | 41 | *1.61* | 9.5 | *0.37* | 9 | *0.35* | 58 | *2.28* | 11.5 | *0.45* |

**PFS4 type**



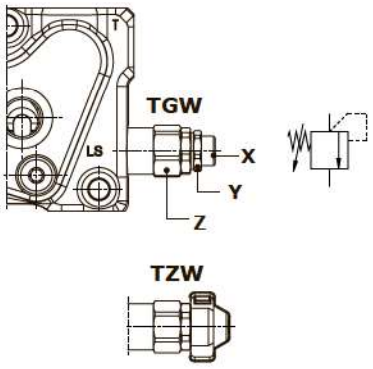

**PS4 type**



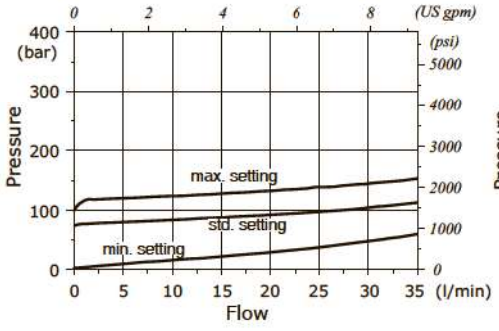
## Inlet section

### Main pressure relief valve

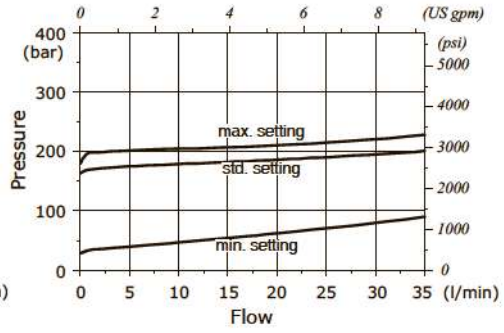
**Setting types**



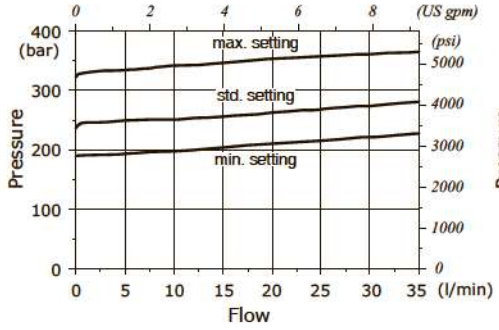

**Setting range: TGW2 type**



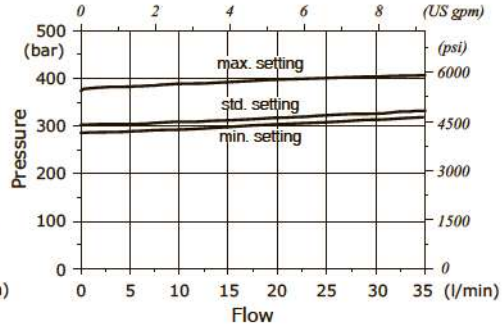

**Setting range: TGW3 type**




**Setting range: TGW4 type**




**Setting range: TGW5 type**

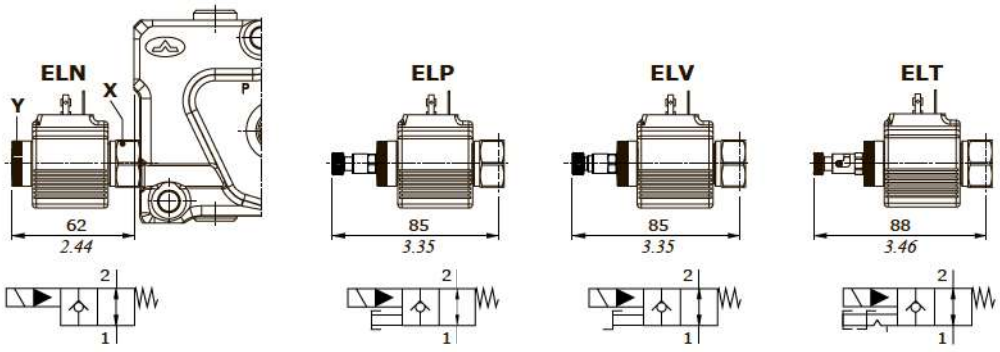



**Legenda**
**TGW**: free setting
**TZW**: valve set and locked
(cap code 4COP126301, n.2 pcs)
RAL3003 pigmented

**Wrenches and tightening torques**
X = allen wrench 5
Y = wrench 19 - 20 Nm *(14.7 lbf)*
Z = wrench 24 - 42 Nm *(31 lbf)*

### Solenoid operated unloading valve

**Manual emergency types**



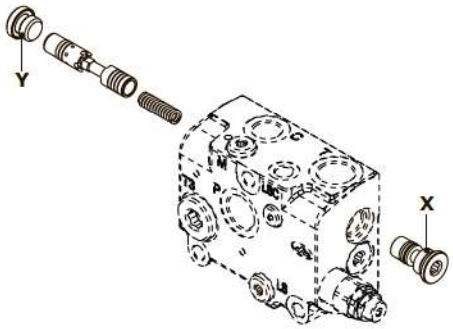

**Legenda**
**ELN**: without emergency
**ELP**: push button emergency override
**ELV**: screw emergency override
**ELT**: "push&twist" emergency override

**Wrenches and tightening torques**
X = wrench 24 - 30 Nm *(22 lbf)*
Y = manual tightening

**Features**
Max. flow . . . . . : 40 l/min *(10.6 US gpm)*
Max. pressure. . . . . : 380 bar *(5500 psi)*
Internal leakage . . . . . : 0.25 cm³/min @ 210 bar
*(0.015 in³/min @ 3050 psi)*

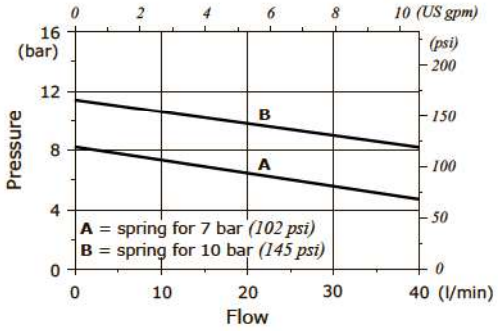
For coil features and options see **BER** type coil at page 125.

## Priority valve kit



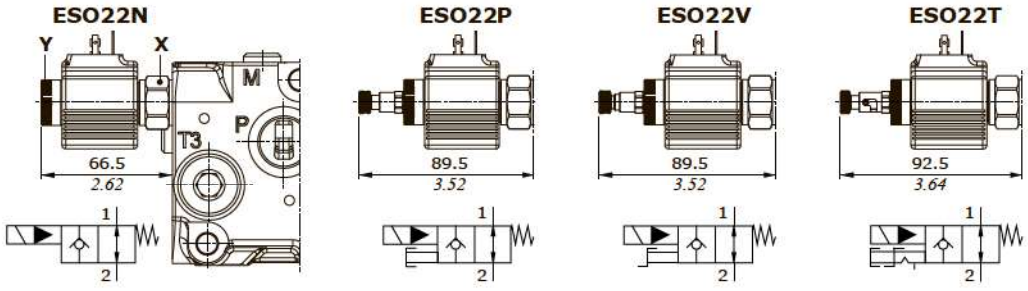

**Wrenches and tightening torques**
X = allen wrench 8 - 24 Nm *(17.7 lbft)*
Y = allen wrench 6 - 24 Nm *(17.7 lbft)*

**Stand-by (margin pressure) vs. regulated flow**
Regulated flow = 40 l/min *(10.6 US gpm)*




## Shut-off valve

**Manual emergency types**



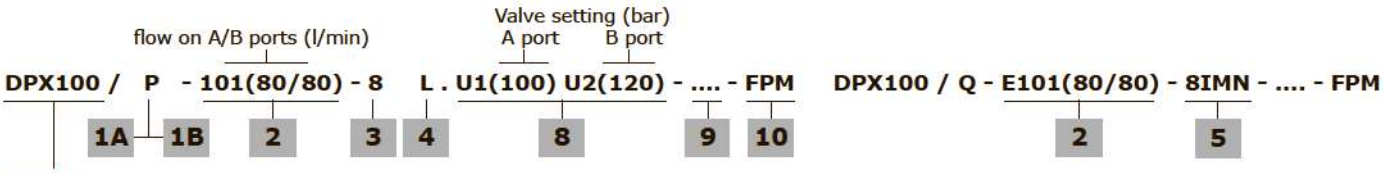

**Legenda**
**ESO22N**: without emergency
**ESO22P**: push button emergency override
**ESO22V**: screw emergency override
**ESO22T**: "push&twist" emergency override

**Wrenches and tightening torques**
X = wrench 24 - 30 Nm *(22 lbf)*
Y = manual tightening

**Features**
Max. flow . . . . . .: 40 l/min *(10.6 US gpm)*
Max. pressure. . . . . .: 380 bar *(5500 psi)*
Internal leakage . . . . . .: 0.25 cm³/min @ 210 bar *(0.015 in³/min @ 3050 psi)*

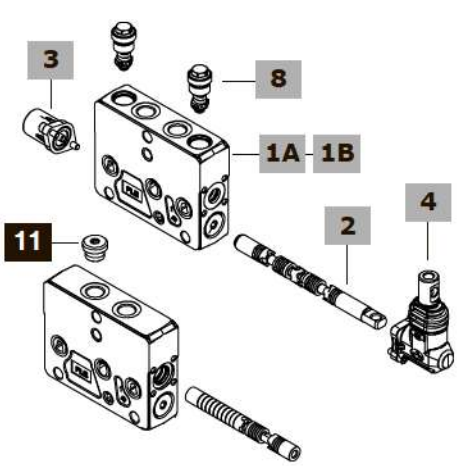
For coil features and options see **BER** type coil at page 125.

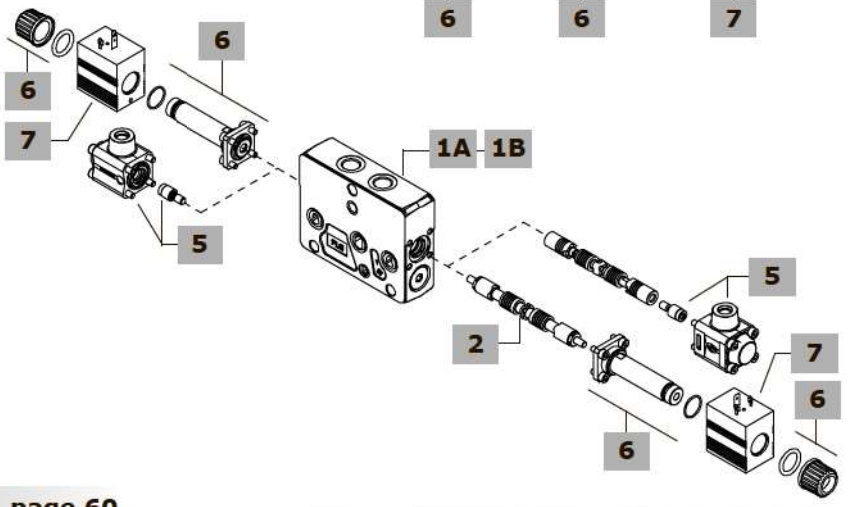
## Working section part ordering codes (mechanical, hydraulic, solenoid)




**DPX100** : standard section
**DPX100HP**: High Pressure section

**DPX100 / Q - S102(60/60) - 8ES3 - .... - 12VDC - FPM**
6 6 7




### 1A Std press. working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For mechanical control**

TYPE: **DPX100/Q-FPM** CODE: 5EL1043010V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100/Q-BSP12-FPM** CODE: 5EL1044010V
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100/P-FPM** CODE: 5EL1043000V
DESCRIPTION: With port valve arrangement
TYPE: **DPX100/P-BSP12-FPM** CODE: 5EL1044000V
DESCRIPTION: As previous one with G1/2 ports

**For hydraulic and solenoid control**

TYPE: **DPX100/Q-IM-FPM** CODE: 5EL1043010AV
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100/Q-IM-BSP12-FPM** CODE: 5EL1044010AV
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100/P-IM-FPM** CODE: 5EL1043000AV
DESCRIPTION: With port valve arrangement
TYPE: **DPX100/P-IM-BSP12-FPM** CODE: 5EL1044000AV
DESCRIPTION: As previous one with G1/2 ports

### 1B High press. working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For mechanical control**

TYPE: **DPX100HP/Q-FPM** CODE: 5EL1043011V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HP/Q-BSP12-FPM** CODE: 5EL1044011V
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100HP/P-FPM** CODE: 5EL1043004V
DESCRIPTION: With port valve arrangement
TYPE: **DPX100HP/P-BSP12-FPM** CODE: 5EL1044008V
DESCRIPTION: As previous one with G1/2 ports

**For hydraulic and solenoid control**

TYPE: **DPX100HP/Q-IM-FPM** CODE: 5EL1043010BV
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HP/Q-IM-BSP12-FPM** CODE: 5EL1044010EV
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100HP/P-IM-FPM** CODE: 5EL1043000BV
DESCRIPTION: With port valve arrangement
TYPE: **DPX100HP/P-IM-BSP12-FPM** CODE: 5EL1044007AV
DESCRIPTION: As previous one with G1/2 ports

### 2 Spool for Std and HP sections page 61

Flow is referred to 14 bar *(200 psi)* stand-by (margin pressure)

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **For mechanical control** | | |
| Double acting with A and B closed in neutral position | | |
| **101(80)** | 3CU7110101 | 80 l/min *(21 US gpm)* flow |
| **109(70)** | 3CU7110109 | 70 l/min *(18.5 US gpm)* flow |
| **102(60)** | 3CU7110102 | 60 l/min *(16 US gpm)* flow |
| **112(50)** | 3CU7110003 | 50 l/min *(13.2 US gpm)* flow |
| **103(40)** | 3CU7110103 | 40 l/min *(10.5 US gpm)* flow |
| **111(30)** | 3CU7110002 | 30 l/min *(7.9 US gpm)* flow |
| **104(20)** | 3CU7110104 | 20 l/min *(5.3 US gpm)* flow |
| **113(10)** | 3CU7110113 | 10 l/min *(2.6 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **201(80)** | 3CU7110201 | 80 l/min *(21 US gpm)* flow |
| **211(70)** | 3CU7125211 | 70 l/min *(18.5 US gpm)* flow |
| **206(60)** | 3CU7110204 | 60 l/min *(16 US gpm)* flow |
| **209(50)** | 3CU7125209 | 50 l/min *(13.2 US gpm)* flow |
| **208(40)** | 3CU7125208 | 40 l/min *(10.5 US gpm)* flow |
| **212(30)** | 3CU7125212 | 30 l/min *(7.9 US gpm)* flow |
| **205(20)** | 3CU7110205 | 20 l/min *(5.3 US gpm)* flow |
| **214(5)** | 3CU7125214 | 5 l/min *(1.3 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **2H01(80)** | 3CU7110202 | 80 l/min *(21 US gpm)* flow |
| **2H06(60)** | 3CU7124213 | 60 l/min *(16 US gpm)* flow |
| **2H05(40)** | 3CU7124212 | 40 l/min *(10.5 US gpm)* flow |
| **2H04(20)** | 3CU7124211 | 20 l/min *(5.3 US gpm)* flow |
| **2H07(10)** | 3CU7124214 | 10 l/min *(2.6 US gpm)* flow |
| Single acting on A, B plugged: G3/8 or G1/2 plug is required | | |
| **301(80)** | 3CU7110301 | 80 l/min *(21 US gpm)* flow |
| **304(60)** | 3CU7131304 | 60 l/min *(16 US gpm)* flow |
| **303(40)** | 3CU7131303 | 40 l/min *(10.5 US gpm)* flow |
| **302(20)** | 3CU7131302 | 20 l/min *(5.3 US gpm)* flow |
| Double acting with A and B closed in neutral pos., 4 positions, floating in 4th pos. with spool in: type 13 or 13F positioner is required | | |
| **508(70)** | 3CU7142508 | 70 l/min *(18.5 US gpm)* flow |
| **507(60)** | 3CU7142507 | 60 l/min *(16 US gpm)* flow |
| **505(40)** | 3CU7142505 | 40 l/min *(10.5 US gpm)* flow |
| **506(20)** | 3CU7142506 | 20 l/min *(5.3 US gpm)* flow |

NOTE (*): *Codes are referred to **BSP** thread.*

# Working section part ordering codes (mechanical, hydraulic, solenoid)

## 2 Spool for Std and HP sections page 61

.....continuation

Flow is referred to 14 bar *(200 psi)* stand-by (margin pressure)

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **For solenoid control** | | |
| Double acting with A and B closed in neutral position | | |
| **S102(60)** | 3CU7410102 | 60 l/min *(16 US gpm)* flow |
| **S108(40)** | 3CU7410108 | 40 l/min *(10.5 US gpm)* flow |
| **S107(30)** | 3CU7410107 | 30 l/min *(7.9 US gpm)* flow |
| **S105(20)** | 3CU7410105 | 20 l/min *(5.3 US gpm)* flow |
| **S106(10)** | 3CU7410106 | 10 l/min *(2.6 US gpm)* flow |
| **S109(5)** | 3CU7410109 | 5 l/min *(1.3 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **S2H02(60)** | 3CU7410202 | 60 l/min *(16 US gpm)* flow |
| **S2H06(10)** | 3CU7410206H | 10 l/min *(2.6 US gpm)* flow |
| Single acting on A or B, other port plugged: G3/8 or G1/2 plug is required | | |
| **S308-S408(40)** | 3CU7410308 | 40 l/min *(10.5 US gpm)* flow |
| **S305-S405(20)** | 3CU7410305 | 20 l/min *(5.3 US gpm)* flow |
| **For hydraulic control** | | |
| Double acting with A and B closed in neutral position | | |
| **E101(80)** | 3CU7710101 | 80 l/min *(21 US gpm)* flow |
| **E108(60)** | 3CU7710108 | 60 l/min *(16 US gpm)* flow |
| **E123(50)** | 3CU7710123 | 50 l/min *(13.2 US gpm)* flow |
| **E105(40)** | 3CU7710105 | 40 l/min *(10.5 US gpm)* flow |
| **E113(30)** | 3CU7710113 | 30 l/min *(7.9 US gpm)* flow |
| **E106(20)** | 3CU7710106 | 20 l/min *(5.3 US gpm)* flow |
| **E110(10)** | 3CU7710110 | 10 l/min *(2.6 US gpm)* flow |
| **E159(5)** | 3CU7710159 | 5 l/min *(1.3 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **E210(70)** | 3CU7725006 | 70 l/min *(18.5 US gpm)* flow |
| **E209(60)** | 3CU7725005 | 60 l/min *(16 US gpm)* flow |
| **E214(50)** | 3CU7725010 | 50 l/min *(13.2 US gpm)* flow |
| **E206(40)** | 3CU7725003 | 40 l/min *(10.5 US gpm)* flow |
| **E202(30)** | 3CU7725002 | 30 l/min *(7.9 US gpm)* flow |
| **E205(20)** | 3CU7725001 | 20 l/min *(2.6 US gpm)* flow |
| **E211(10)** | 3CU7725007 | 10 l/min *(2.6 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **E2H01(80)** | 3CU7710202 | 80 l/min *(21 US gpm)* flow |
| **E2H05(60)** | 3CU7724004 | 60 l/min *(16 US gpm)* flow |
| **E2H04(40)** | 3CU7724003 | 40 l/min *(10.5 US gpm)* flow |
| **E2H06(20)** | 3CU7724005 | 20 l/min *(5.3 US gpm)* flow |
| **E2H03(10)** | 3CU7724002 | 10 l/min *(2.6 US gpm)* flow |
| **E2H25(5)** | 3CU7724159 | 5 l/min *(1.3 US gpm)* flow |
| Single acting on A or B, other port plugged: G3/8 or G1/2 plug is required | | |
| **E301-E401(80)** | 3CU7710301 | 80 l/min *(21 US gpm)* flow |
| **E305-E405(60)** | 3CU7731305 | 60 l/min *(16 US gpm)* flow |
| **E304-E404(40)** | 3CU7731304 | 40 l/min *(10.5 US gpm)* flow |
| **E303-E403(20)** | 3CU7731303 | 20 l/min *(5.3 US gpm)* flow |
| Double acting with A and B closed in neutral pos., 4 positions, floating in 4th pos. with spool in: type 13IMS control is required | | |
| **I504(60)** | YCU7742504 | 60 l/min *(16 US gpm)* flow |
| **I503(20)** | YCU7742503 | 20 l/min *(5.3 US gpm)* flow |

## 10 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

## 11 Plug for single acting spool *

The codes are referred to sections with FPM o-ring seals

| CODE | DESCRIPTION | CODE | DESCRIPTION |
|---|---|---|---|
| XTAP722160 | G3/8 plug | XTAP727200 | G1/2 plug |

## 3 "A" side spool positioners page 63

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **7FT** | 5V07407000 | With friction and neutral pos. notch |
| **7FTN** | 5V07407010 | As 7FT, friction regulation with spring |
| **8** | 5V08107000 | 3 pos., spring return to neutral pos. |
| **8F2** | 5V08107100 | Spool stroke limiter on B port |
| **8D** | 5V08107200 | External pin with M6 female thread |
| **8TL** | 5V08107310 | Arrangement for double control |
| **8RM2-12VDC** | 5V08107590 | Electromagnetic detent in pos.2 |
| **8MG3(NO)** | 5V08107660 | With micro in postions 1 and 2 |
| **8PP** | 5V08107700 | Proportional pneumatic control |
| **8PNB** | 5V08107718 | On/off waterproof pneumatic control |
| **8EPNB3-12VDC** | 5V08107742 | On/off electropneumatic control |
| **8EPNB3-24VDC** | 5V08107743 | On/off electropneumatic control |
| **8K-12DC** | 5V08707112 | Solenoid detent in neutral position |
| **8K-24DC** | 5V08707124 | Solenoid detent in neutral position |
| **9B** | 5V09207000 | Detent in position 1 |
| **10B** | 5V10207000 | Detent in position 2 |
| **11B** | 5V11207000 | Detent in positions 1 and 2 |
| For floating circuit (spool 5) | | |
| **13N** | 5V13307005 | 4 positions, detent in 4th position with spring return to neutral position |
| **13F** | 5V13507000 | 4 pos., spring return to neutral pos. |

## 4 "B" side spool control kit page 68

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **L** | 5LEV107000 | Standard lever box |
| **LSG** | 5LEV107000S | As previous one, water-proof type |
| **LF1** | 5LEV107100 | As type L, spool stroke limiter on A port |
| **LSGF1** | 5LEV107100S | As previous one, water-proof type |
| **SLC** | 5COP207000 | Without lever with endcap |
| **SLP** | 5COP107010 | Without lever with dust-proof plate |
| **TQ** | 5TEL102100 | Flexible cable connection |
| **LCA1-4** | 5CLO207010 | Joystick for 2 section operation: type 1 and 4 configurations. |
| **LCA2-3** | 5CLO207011 | As previous one: type 2-3 configurations |

## 5 Proportional hydraulic control* page 70

The codes are referred to sections with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8IMN** | 5IDR204304V | Range 8-27 bar *(116-392 psi)* |
| **8IMF3N** | 5IDR204314V | As previous one, with spool stroke limiter |
| **8IMXN** | 5IDR204303V | Range 7.5-24 bar *(109-348 psi)* |
| **8IMXF3N** | 5IDR204313V | As previous one, with spool stroke limiter |
| For floating circuit (spool I5) | | |
| **13IMS** | 5IDR207350V | Range 6.5-15.5 / 8-22.5 bar *(94-225 / 116-326 psi)* |

## 6 On/off solenoid control page 71

The codes are referred to sections with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8ES1-8ES2** | 5CAN08061V | Single acting on A or B port |
| **8ES3** | 5CAN08062V | Double acting |

## 7 Coil

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **12VDC** | 4SOL412012 | 12VDC, ISO4400 **D12** type connector |

For complete available coils list see page 125.

## 8 Port valves page 82

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **U025** | 5KIT330025 | Setting: 25 bar *(360 psi)* |

For complete valves list see next pages.

## 9 Section threading

Only specify if it is different from BSP standard (see page 6).

## Working section part ordering codes (electrohydraulic)

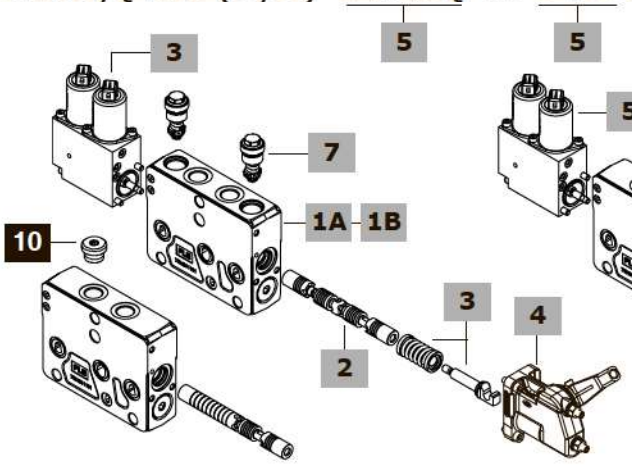
flow on A/B ports (l/min) — Valve setting (bar) A port B port

**DPX100 / PZ - E101(80/80) - 8EZ3 LQF3 . U1(100) U2(120) - ..... - 12VDC - FPM**

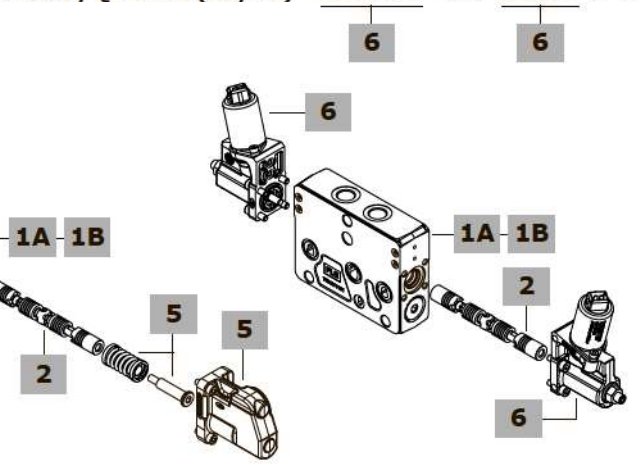
1A 1B 2 3 4 7 8 3 9

**DPX100** : standard section - **DPX100HP**: High Pressure section

**DPX100/QZ-E101(80/80) - 8EZ3SLCQ - .... -12VDC-FPM**




**DPX100/QE-E101(80/80) - 8EB3TF3 - .... -12VDC-FPM**




### 1A Std press. working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For two-side electrohydraulic control**

TYPE: **DPX100/QE-FPM** CODE: 5EL1043012V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100/QE-BSP12-FPM** CODE: 5EL1044012V
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100/PE-FPM** CODE: 5EL1043002V
DESCRIPTION: With port valve arrangement
TYPE: **DPX100/PE-BSP12-FPM** CODE: 5EL1044002V
DESCRIPTION: As previous one with G1/2 ports

**For one-side electrohydraulic control**

TYPE: **DPX100/QZ-FPM** CODE: 5EL1043022V
DESCRIPTION: Without port valves arrangement
Type: **DPX100/QZ-BSP12-FPM** CODE: 5EL1044013AV
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100/PZ-FPM** CODE: 5EL1043006V
DESCRIPTION: With port valve arrangement
TYPE: **DPX100/PZ-BSP12-FPM** CODE: 5EL1044004AV
DESCRIPTION: As previous one with G1/2 ports

### 1B High press. working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For two-side electrohydraulic control**

TYPE: **DPX100HP/QE-FPM** CODE: 5EL1043015V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HP/QE-BSP12-FPM** CODE: 5EL1044014V
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100HP/PE-FPM** CODE: 5EL1043005V
DESCRIPTION: With port valve arrangement
TYPE: **DPX100HP/PE-BSP12-FPM** CODE: 5EL1044005V
DESCRIPTION: As previous one with G1/2 ports

**For one-side electrohydraulic control**

TYPE: **DPX100HP/QZ-FPM** CODE: 5EL1043022AV
DESCRIPTION: Without port valves arrangement
TYPE: **DPX100HP/QZ-BSP12-FPM** CODE: 5EL1044013BV
DESCRIPTION: As previous one with G1/2 ports
TYPE: **DPX100HP/PZ-FPM** CODE: 5EL1043200AV
DESCRIPTION: With port valves arrangement
TYPE: **DPX100HP/PZ-BSP12-FPM** CODE: 5EL1044003AV
DESCRIPTION: As previous one with G1/2 ports

### 2 Spool page 61

Flow is referred to 14 bar *(200 psi)* stand-by (margin pressure)

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| Double acting with A and B closed in neutral position | | |
| **E101(80)** | 3CU7710101 | 80 l/min *(21 US gpm)* flow |
| **E108(60)** | 3CU7710108 | 60 l/min *(16 US gpm)* flow |
| **E123(50)** | 3CU7710123 | 50 l/min *(13.2 US gpm)* flow |
| **E105(40)** | 3CU7710105 | 40 l/min *(10.5 US gpm)* flow |
| **E113(30)** | 3CU7710113 | 30 l/min *(7.9 US gpm)* flow |
| **E106(20)** | 3CU7710106 | 20 l/min *(5.3 US gpm)* flow |
| **E110(10)** | 3CU7710110 | 10 l/min *(2.6 US gpm)* flow |
| **E159(5)** | 3CU7710159 | 5 l/min *(1.3 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **E210(70)** | 3CU7725006 | 70 l/min *(18.5 US gpm)* flow |
| **E209(60)** | 3CU7725005 | 60 l/min *(16 US gpm)* flow |
| **E214(50)** | 3CU7725010 | 50 l/min *(13.2 US gpm)* flow |
| **E206(40)** | 3CU7725003 | 40 l/min *(10.5 US gpm)* flow |
| **E202(30)** | 3CU7725002 | 30 l/min *(7.9 US gpm)* flow |
| **E205(20)** | 3CU7725001 | 20 l/min *(2.6 US gpm)* flow |
| **E211(10)** | 3CU7725007 | 10 l/min *(2.6 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **E2H01(80)** | 3CU7710202 | 80 l/min *(21 US gpm)* flow |
| **E2H05(60)** | 3CU7724004 | 60 l/min *(16 US gpm)* flow |
| **E2H04(40)** | 3CU7724003 | 40 l/min *(10.5 US gpm)* flow |
| **E2H06(20)** | 3CU7724005 | 20 l/min *(5.3 US gpm)* flow |
| **E2H03(10)** | 3CU7724002 | 10 l/min *(2.6 US gpm)* flow |
| **E2H25(5)** | 3CU7724159 | 5 l/min *(1.3 US gpm)* flow |
| Single acting on A or B, other port plugged: G3/8 or G1/2 plug is required | | |
| **E301-E401(80)** | 3CU7710301 | 80 l/min *(21 US gpm)* flow |
| **E305-E405(60)** | 3CU7731305 | 60 l/min *(16 US gpm)* flow |
| **E304-E404(40)** | 3CU7731304 | 40 l/min *(10.5 US gpm)* flow |
| **E303-E403(20)** | 3CU7731303 | 20 l/min *(5.3 US gpm)* flow |
| Double acting with A and B closed in neutral pos., 4 pos., floating in 4th pos. with spool in: 13EB3.. or 13EZ3.. type control is required | | |
| **E504(60)** | 3CU7742504 | 60 l/min *(16 US gpm)* flow |
| **E503(20)** | 3CU7742503 | 20 l/min *(5.3 US gpm)* flow |

# Working section part ordering codes (electrohydraulic)

## 3 One-side electrohydr. control page 78

The codes are referred to parts with FPM o-ring seals

**Combine to "B" side options type LQ and LQF3**

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8EZ3-12VDC** | 5IDR604300V | With AMP connector |
| **8EZ3-24VDC** | 5IDR604301V | With AMP connector |
| **8EZ34-12VDC** | 5IDR604302V | With Deutsch connector |
| **8EZ34-24VDC** | 5IDR604303V | With Deutsch connector |
| With spool position sensor | | |
| **8EZ3SPSD-12VDC** | 5IDR604304V | AMP conn. and digital sensor |
| **8EZ3SPSD-24VDC** | 5IDR604305V | AMP conn. and digital sensor |
| **8EZ34SPSD-12VDC** | 5IDR604306V | Deutsch conn. and digital sensor |
| **8EZ34SPSD-24VDC** | 5IDR604307V | Deutsch conn. and digital sensor |
| **8EZ34SPSL-0.5(A)-4.5(B)-12VDC** | 5IDR604311V | AMP conn. and analog sensor |
| For floating circuit (spool E5) | | |
| **13EZ3-12VDC** | 5IDR614300V | With AMP connector |
| **13EZ3-24VDC** | 5IDR614301V | With AMP connector |
| **13EZ34-12VDC** | 5IDR614302V | With Deutsch connector |
| **13EZ34-24VDC** | 5IDR614303V | With Deutsch connector |

## 4 "B" side options page 79

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **For one-side electrohydraulic control** | | |
| **LQ** | 5LEV100700V | Lever box |
| **LQF3** | 5LEV100701V | Lever box with spool stroke limiter |
| **LQSL** | 5COP204100V | Lever box without lever |

## 5 Complete one-side e.h. control page 80

The codes are referred to parts with FPM o-ring seals

**Controls already comprehensive of endcap on B side**

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8EZ3SLCQ-12VDC** | 5IDR604300SV | With AMP connector |
| **8EZ3SLCQ-24VDC** | 5IDR604301SV | With AMP connector |
| **8EZ34SLCQ-12VDC** | 5IDR604302SV | With Deutsch connector |
| **8EZ34SLCQ-24VDC** | 5IDR604303SV | With Deutsch connector |

With spool position sensor

TYPE: **8EZ3SPSDSLCQ-12VDC** CODE: 5IDR604304SV
DESCRIPTION: With AMP connector and digital sensor

TYPE: **8EZ3SPSDSLCQ-24VDC** CODE: 5IDR604305SV
DESCRIPTION: As previous one

TYPE: **8EZ34SPSDSLCQ-12VDC** CODE: 5IDR604306SV
DESCRIPTION:With Deutsch connector and digital sensor

TYPE: **8EZ34SPSDSLCQ-24VDC** CODE: 5IDR604307SV
DESCRIPTION: As previous one

TYPE: **8EZ34SPSL-0.5(A)-4.5(B)SLCQ-12VDC** CODE: 5IDR604311SV
DESCRIPTION: With AMP connector and analog sensor

## 8 Section threading

Only specify if it is different from BSP standard (see page 6).

## 9 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

## 10 Plug for single acting spool *

The codes are referred to parts with FPM o-ring seals

| CODE | DESCRIPTION | CODE | DESCRIPTION |
|---|---|---|---|
| XTAP722160 | G3/8 plug | XTAP727200 | G1/2 plug |

NOTE (*): *Codes are referred to **BSP** thread.*

## 6 Two-side electrohydr. control page 76

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| Without lever control | | |
| **8EB3T-12VDC** | 5IDR904214V | With AMP connector |
| **8EB3T-24VDC** | 5IDR904222V | With AMP connector |
| **8EB34T-12VDC** | 5IDR904236V | With Deutsch connector |
| **8EB34T-24VDC** | 5IDR904237V | With Deutsch connector |
| **8EB3TF3-12VDC** | 5IDR904217V | With AMP, spool stroke limiter |
| **8EB3TF3-24VDC** | 5IDR904224V | As previous one |
| **8EB34TF3-12VDC** | 5IDR904235V | Deutsch conn.and stroke limiter |
| **8EB34TF3-24VDC** | 5IDR904238V | As previous one |
| Without lever control, with spool position sensor | | |
| **8EB3TSPSD-12VDC** | 5IDR904233V | AMP conn. and digital sensor |
| **8EB3TSPSD-12VDC** | 5IDR904226V | As previous one |
| Without lever control: for floating circuit (E5 spool) | | |
| **13EB3T-12VDC** | 5IDR914201V | With AMP connector |
| **13EB3T-24VDC** | 5IDR914202V | With AMP connector |
| **13EB34T-12VDC** | 5IDR914214V | With Deutsch connector |
| **13EB34T-24VDC** | 5IDR914215V | With Deutsch connector |
| With lever control | | |
| **8EB3TLH-12VDC** | 5IDR904215V | With AMP connector |
| **8EB3TLH-24VDC** | 5IDR904228V | With AMP connector |
| **8EB34TLH-12VDC** | 5IDR904219V | With Deutsch connector |
| **8EB34TLH-24VDC** | 5IDR904239V | With Deutsch connector |
| **8EB3TLHF3-12VDC** | 5IDR904229V | With AMP, spool stroke limiter |
| **8EB3TLHF3-24VDC** | 5IDR904218V | As previous one |
| **8EB34TLHF3-12VDC** | 5IDR904240V | With Deutsch connector with spool stroke limiter |
| **8EB34TLHF3-24VDC** | 5IDR904241V | As previous one |
| With lever control and spool position sensor | | |
| **8EB3TLHSPSD-12VDC** | 5IDR904234V | AMP connector and digital sensor |
| **8EB3TLHSPSD-24VDC** | 5IDR904232V | As previous one |
| **8EB3TLHF3SPSL-0.5(A)-4.5(B)-12VDC** | 5IDR904259V | With spool limiter, AMP connector and analog sensor |
| **8EB3TLHF3SPSL-0.5(A)-4.5(B)-24VDC** | 5IDR904247V | As previous one |
| With lever control: for floating circuit (E5 spool) | | |
| **13EB3TLH-12VDC** | 5IDR914220V | With AMP connector |
| **13EB3TLH-24VDC** | 5IDR914211V | With AMP connector |
| **13EB34TLH-12VDC** | 5IDR914216V | With Deutsch connector |
| **13EB34TLH-24VDC** | 5IDR914217V | With Deutsch connector |
| **13EB3TLHF3-12VDC** | 5IDR914213V | With AMP and spool stroke limiter |
| **13EB3TLHF3-24VDC** | 5IDR914210V | As previous one |
| **13EB34TLHF3-12VDC** | 5IDR914218V | With Deutsch, spool stroke limiter |
| **13EB34TLHF3-24VDC** | 5IDR914219V | As previous one |

## 7 Port valves page 82

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **UT** | XTAP522441V | Valve blanking plug |
| | XTAP522442V | As previous one, for HP valve |
| **C** | 5KIT410000V | Anticavitation valve |

**Fixed setting antishock and anticavitation valves:** setting is referred to 10 l/min *(2.6 US gpm)*

TYPE: **U 100** (100: setting (bar)) CODE: 5KIT330 100 V (100: setting (bar))

SETTING:

| | | |
|---|---|---|
| 25 bar *(363 psi)* | 30 bar *(435 psi)* | 40 bar *(580 psi)* |
| 50 bar *(725 psi)* | 63 bar *(914 psi)* | 80 bar *(1150 psi)* |
| 100 bar *(1450 psi)* | 110 bar *(1590 psi)* | 125 bar *(1800 psi)* |
| 140 bar *(2050 psi)* | 150 bar *(2150 psi)* | 160 bar *(2300 psi)* |
| 175 bar *(2550 psi)* | 190 bar *(2750 psi)* | 200 bar *(2900 psi)* |
| 210 bar *(3050 psi)* | 220 bar *(3190 psi)* | 230 bar *(3350 psi)* |
| 240 bar *(3500 psi)* | 250 bar *(3600 psi)* | 260 bar *(3750 psi)* |
| 270 bar *(3900 psi)* | 280 bar *(4050 psi)* | 290 bar *(4200 psi)* |
| 300 bar *(4350 psi)* | 310 bar *(4500 psi)* | 320 bar *(4650 psi)* |
| 340 bar *(4950 psi)* | 360 bar *(5200 psi)* | 400 bar *(5800 psi)* |
| 420 bar *(6100 psi)* | | |

## HF working section part ordering codes (mechanical, hydraulic)

flow on A/B ports (l/min)

Valve setting (bar) A port B port

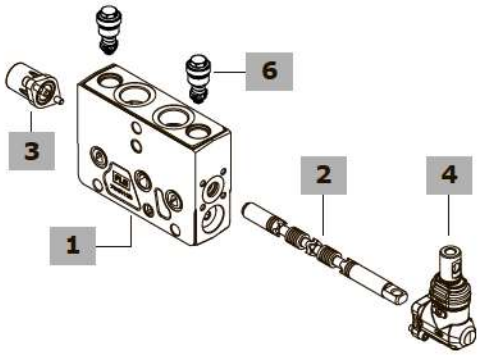
**DPX100HF / P - 101(80/80) - 8 L . U1(100) U2(120) - ..... - FPM**

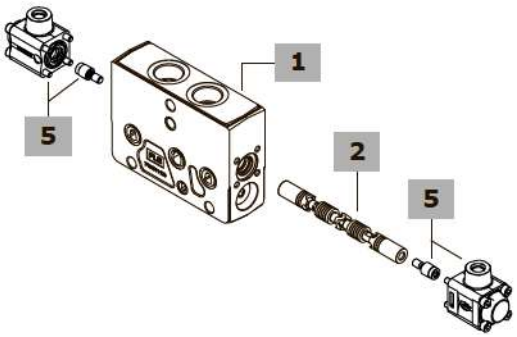
1 2 3 4 6 7 8

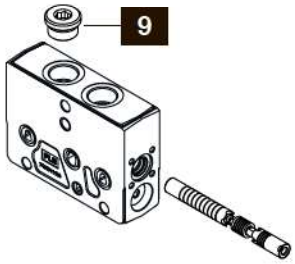
High flow section

**DPX100HF / Q - E101(120/120) - 8IMN - ..... - FPM**

2 5



# HF working section part ordering codes (mechanical, hydraulic)

## 1 High flow working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For mechanical control**

TYPE: **DPX100HF/Q-FPM** CODE: 5EL1043F10V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HF/P-FPM** CODE: 5EL1043F00V
DESCRIPTION: With port valve arrangement

**For hydraulic control**

TYPE: **DPX100HF/Q-IM-FPM** CODE: 5EL1043F10AV
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HF/P-IM-FPM** CODE: 5EL1043F00AV
DESCRIPTION: With port valve arrangement

## 2 Spool page 61

Flow is referred to 14 bar *(200 psi)* stand-by (margin pressure)

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **For mechanical control** | | |
| Double acting with A and B closed in neutral position | | |
| **101(120)** | 3CU7110F01 | 120 l/min *(32 US gpm)* flow |
| **103(100)** | 3CU7110F03 | 100 l/min *(26 US gpm)* flow |
| **104(80)** | 3CU7110F04 | 80 l/min *(21 US gpm)* flow |
| **102(60)** | 3CU7110F02 | 60 l/min *(16 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **201(120)** | 3CU7125F01 | 120 l/min *(32 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **2H11(100)** | 3CU7124F11 | 100 l/min *(26 US gpm)* flow |
| **2H06(60)** | 3CU7124F06 | 60 l/min *(16 US gpm)* flow |
| **For hydraulic control** | | |
| Double acting with A and B closed in neutral position | | |
| **E101(120)** | 3CU7710F01 | 120 l/min *(32 US gpm)* flow |
| **E103(80)** | 3CU7710F03 | 80 l/min *(21 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **E201(80)** | 3CU7725F01 | 80 l/min *(21 US gpm)* flow |
| Single acting on A or B, other port plugged: G3/4 plug is required | | |
| **E301-E401(120)** | 3CU7731F01 | 120 l/min *(32 US gpm)* flow |

## 3 "A" side spool positioners page 63

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **7FT** | 5V07407000 | With friction and neutral pos. notch |
| **7FTN** | 5V07407010 | As 7FT, friction regulation with spring |
| **8** | 5V08107000 | 3 pos., spring return to neutral pos. |
| **8F2** | 5V08107100 | Spool stroke limiter on B port |
| **8D** | 5V08107200 | External pin with M6 female thread |
| **8TL** | 5V08107310 | Arrangement for double control |
| **8RM2-12VDC** | 5V08107590 | Electromagnetic detent in pos.2 |
| **8MG3(NO)** | 5V08107660 | With micro in postions 1 and 2 |
| **8PP** | 5V08107700 | Proportional pneumatic control |
| **8PNB** | 5V08107718 | On/off waterproof pneumatic control |
| **8EPNB3-12VDC** | 5V08107742 | On/off electropneumatic control |
| **8EPNB3-24VDC** | 5V08107743 | On/off electropneumatic control |
| **8K-12DC** | 5V08707112 | Solenoid detent in neutral position |
| **8K-24DC** | 5V08707124 | Solenoid detent in neutral position |
| **9B** | 5V09207000 | Detent in position 1 |
| **10B** | 5V10207000 | Detent in position 2 |
| **11B** | 5V11207000 | Detent in positions 1 and 2 |

## 4 "B" side spool control kit page 68

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **L** | 5LEV107000 | Standard lever box |
| **LSG** | 5LEV107000S | As previous, one water-proof type |
| **LF1** | 5LEV107100 | As L type, spool stroke limiter on A port |
| **LSGF1** | 5LEV107100S | As previous one, water-proof type |
| **SLC** | 5COP207000 | Without lever with endcap |
| **SLP** | 5COP107010 | Without lever with dust-proof plate |

## 5 Proportional hydraulic control* page 70

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8IMN** | 5IDR204304V | Range 8-27 bar *(116-392 psi)* |
| **8IMF3N** | 5IDR204314V | As previous one with spool stroke limiter |
| **8IMXN** | 5IDR204303V | Range 7.5-24 bar *(109-348 psi)* |
| **8IMXF3N** | 5IDR204313V | As previous one with spool stroke limiter |

## 6 Port valves page 82

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **UT** | XTAP522441V | Valve blanking plug |
| | XTAP522442V | As previous, for HP valve |
| **C** | 5KIT410000V | Anticavitation valve |

**Fixed setting antishock and anticavitation valves:** setting is referred to 10 l/min *(2.6 US gpm)*

TYPE: **U 100** (100 = setting (bar)) CODE: 5KIT330 100 V (100 = setting (bar))

SETTING:

| | | |
|---|---|---|
| 25 bar *(363 psi)* | 30 bar *(435 psi)* | 40 bar *(580 psi)* |
| 50 bar *(725 psi)* | 63 bar *(914 psi)* | 80 bar *(1150 psi)* |
| 100 bar *(1450 psi)* | 110 bar *(1590 psi)* | 125 bar *(1800 psi)* |
| 140 bar *(2050 psi)* | 150 bar *(2150 psi)* | 160 bar *(2300 psi)* |
| 175 bar *(2550 psi)* | 190 bar *(2750 psi)* | 200 bar *(2900 psi)* |
| 210 bar *(3050 psi)* | 220 bar *(3190 psi)* | 230 bar *(3350 psi)* |
| 240 bar *(3500 psi)* | 250 bar *(3600 psi)* | 260 bar *(3750 psi)* |
| 270 bar *(3900 psi)* | 280 bar *(4050 psi)* | 290 bar *(4200 psi)* |
| 300 bar *(4350 psi)* | 310 bar *(4500 psi)* | 320 bar *(4650 psi)* |
| 340 bar *(4950 psi)* | 360 bar *(5200 psi)* | 400 bar *(5800 psi)* |
| 420 bar *(6100 psi)* | | |

## 7 Section threading

Only specify if it is different from BSP standard (see page 6).

## 8 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

## 9 Plug for single acting spool *

| CODE | DESCRIPTION |
|---|---|
| XTAP732220 | G3/4 plug, with FPM o-ring seal |

NOTE (*): *Codes are referred to **BSP** thread.*

## HF working section part ordering codes (electrohydraulic)

flow on A/B ports (l/min)

Valve setting (bar) A port B port

**DPX100HF / PZ - E101(120/120) - 8EZ3 LQF3 . U1(100) U2(120) - ..... - 12VDC - FPM**

1 2 3 4 7 8 3 9

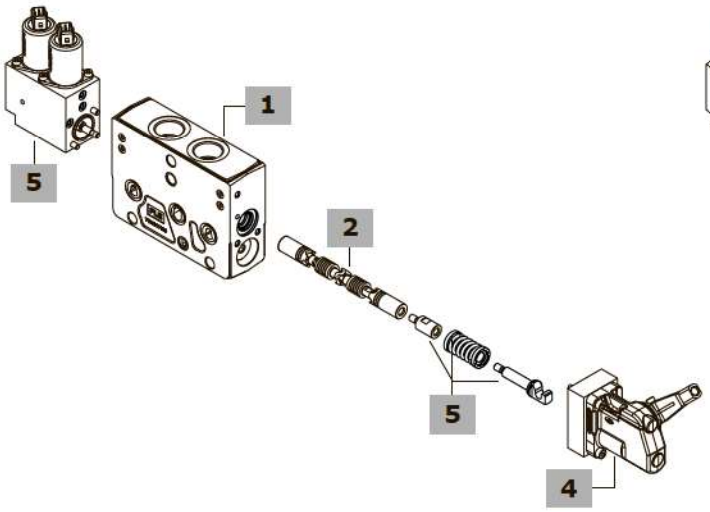
High Flow section

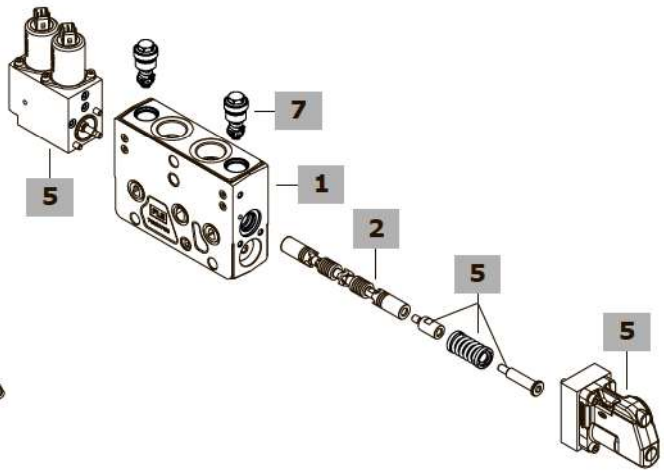
**DPX100HF/QZ-E101(120/120) - 8EZ3SLCQ - ..... - 12VDC - FPM**

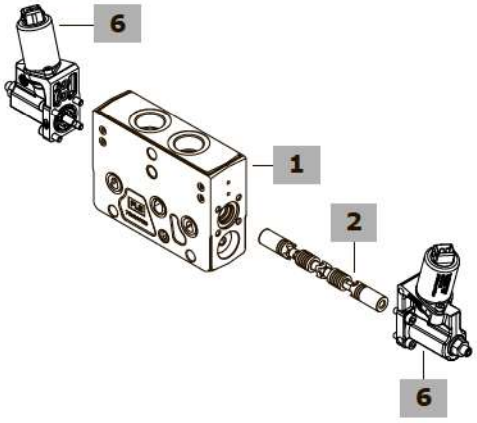
5 5

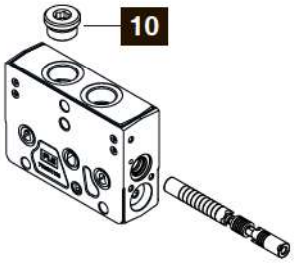
**DPX100HF/QE-E101(120/120) - 8EB3TF3 - ..... - 12VDC - FPM**

6 6



# HF working section part ordering codes (electrohydraulic)

## 1 High flow working section kit* page 60

The codes are referred to sections with FPM o-ring seals

**For two-side electrohydraulic control**

TYPE: **DPX100HF/QE-FPM** CODE: 5EL1043F11V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HF/PE-FPM** CODE: 5EL1043F02V
DESCRIPTION: With port valve arrangement

**For one-side electrohydraulic control**

TYPE: **DPX100HF/QZ-FPM** CODE: 5EL1043F22V
DESCRIPTION: Without port valve arrangement
TYPE: **DPX100HF/PZ-FPM** CODE: 5EL1043F06V
DESCRIPTION: With port valve arrangement

## 2 Spool page 61

Flow is referred to 14 bar *(200 psi)* stand-by (margin pressure)

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| Double acting with A and B closed in neutral position | | |
| **E101(120)** | 3CU7710F01 | 120 l/min *(32 US gpm)* flow |
| **E106(100)** | 3CU7710F06 | 100 l/min *(26 US gpm)* flow |
| **E103(80)** | 3CU7710F03 | 80 l/min *(21 US gpm)* flow |
| **E105(60)** | 3CU7710F05 | 60 l/min *(16 US gpm)* flow |
| **E104(40)** | 3CU7710F04 | 40 l/min *(10.5 US gpm)* flow |
| Double acting with A and B to tank in neutral position | | |
| **E201(80)** | 3CU7725F01 | 80 l/min *(21 US gpm)* flow |
| Double acting with A and B partially to tank in neutral position | | |
| **E2H01(120)** | 3CU7724F01 | 120 l/min *(32 US gpm)* flow |
| **E2H03(100)** | 3CU7724F03 | 100 l/min *(26 US gpm)* flow |
| **E2H02(60)** | 3CU7724F02 | 60 l/min *(16 US gpm)* flow |
| Single acting on A or B, other port plugged: G3/4 plug is required | | |
| **E301-E401(120)** | 3CU7731F01 | 120 l/min *(32 US gpm)* flow |

## 3 One-side electrohydr. control page 78

The codes are referred to parts with FPM o-ring seals

**Combine to "B" side options**

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8EZ3-12VDC** | 5IDR604314V | With AMP connector |
| **8EZ3-24VDC** | 5IDR604313V | With AMP connector |
| **8EZ34-12VDC** | 5IDR604315V | With Deutsch connector |
| **8EZ34-24VDC** | 5IDR604316V | With Deutsch connector |
| With spool position sensor | | |
| **8EZ3SPSD-12VDC** | 5IDR604317V | AMP connector and digital sensor |
| **8EZ3SPSD-24VDC** | 5IDR604318V | AMP connector and digital sensor |
| **8EZ34SPSD-12VDC** | 5IDR604319V | Deutsch conn. and digital sensor |
| **8EZ34SPSD-24VDC** | 5IDR604320V | Deutsch conn. and digital sensor |
| **8EZ34SPSL-0.5(A)-4.5(B)-12VDC** | 5IDR604321V | AMP conn. and analog sensor |

## 4 "B" side options page 79

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **For one-side electrohydraulic control** | | |
| **LQ** | 5LEV100705V | Lever box |
| **LQF3** | 5LEV100706V | Lever box with spool stroke limiter |
| **LQSL** | 5COP204101V | Lever box without lever |

## 10 Plug for single acting spool *

| CODE | DESCRIPTION |
|---|---|
| XTAP732220 | G3/4 plug, with FPM o-ring seal |

NOTE (*): *Codes are referred to **BSP** thread.*

## 5 Complete one-side e.h. control page 81

The codes are referred to parts with FPM o-ring seals

**Controls already comprehensive of endcap on B side**

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **8EZ3SLCQ-12VDC** | 5IDR604314SV | With AMP connector |
| **8EZ3SLCQ-24VDC** | 5IDR604313SV | With AMP connector |
| **8EZ34SLCQ-12VDC** | 5IDR604315SV | With Deutsch connector |
| **8EZ34SLCQ-24VDC** | 5IDR604316SV | With Deutsch connector |

With spool position sensor

TYPE: **8EZ3SPSDSLCQ-12VDC** CODE: 5IDR604317SV
DESCRIPTION: With AMP connector and digital sensor
TYPE: **8EZ3SPSDSLCQ-24VDC** CODE: 5IDR604318SV
DESCRIPTION: As previous one
TYPE: **8EZ34SPSDSLCQ-12VDC** CODE: 5IDR604319SV
DESCRIPTION:With Deutsch connector and digital sensor
TYPE: **8EZ34SPSDSLCQ-24VDC** CODE: 5IDR604320SV
DESCRIPTION: As previous one
TYPE: **8EZ34SPSL-0.5(A)-4.5(B)SLCQ-12VDC** CODE: 5IDR604321SV
DESCRIPTION: With AMP connector and analog sensor

## 6 Two-side electrohydr. control page 76

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| Without lever control | | |
| **8EB3T-12VDC** | 5IDR904214V | With AMP connector |
| **8EB3T-24VDC** | 5IDR904222V | With AMP connector |
| **8EB34T-12VDC** | 5IDR904236V | With Deutsch connector |
| **8EB34T-24VDC** | 5IDR904237V | With Deutsch connector |
| **8EB3TF3-12VDC** | 5IDR904217V | With AMP, spool stroke limiter |
| **8EB3TF3-24VDC** | 5IDR904224V | As previous one |
| **8EB34TF3-12VDC** | 5IDR904235V | Deutsch conn. and stroke limiter |
| **8EB34TF3-24VDC** | 5IDR904238V | As previous one |
| Without lever control, with spool position sensor | | |
| **8EB3TSPSD-12VDC** | 5IDR904233V | AMP conn. and digital sensor |
| **8EB3TSPSD-12VDC** | 5IDR904226V | As previous one |
| With lever control | | |
| **8EB3TLH-12VDC** | 5IDR904215V | With AMP connector |
| **8EB3TLH-24VDC** | 5IDR904228V | With AMP connector |
| **8EB34TLH-12VDC** | 5IDR904219V | With Deutsch connector |
| **8EB34TLH-24VDC** | 5IDR904239V | With Deutsch connector |
| **8EB3TLHF3-12VDC** | 5IDR904229V | With AMP, spool stroke limiter |
| **8EB3TLHF3-24VDC** | 5IDR904218V | As previous one |
| **8EB34TLHF3-12VDC** | 5IDR904240V | With Deutsch conn. with spool stroke limiter |
| **8EB34TLHF3-24VDC** | 5IDR904241V | As previous one |
| With lever control and spool position sensor | | |
| **8EB3TLHSPSD-12VDC** | 5IDR904234V | AMP conn. and digital sensor |
| **8EB3TLHSPSD-24VDC** | 5IDR904232V | As previous one |

## 7 Port valves page 82

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **U025** | 5KIT330025V | Setting: 25 bar *(360 psi)* |

For complete valves list see previous pages.

## 8 Section threading

Only specify if it is different from BSP standard (see page 6).

## 9 Seals

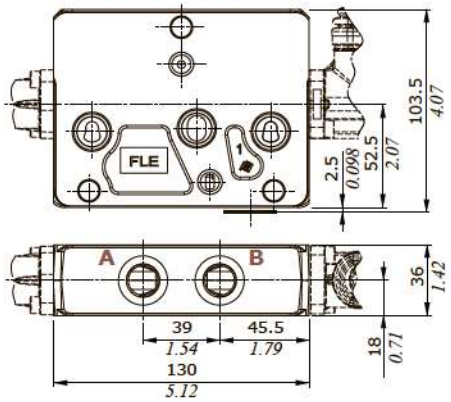
| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

## Working section

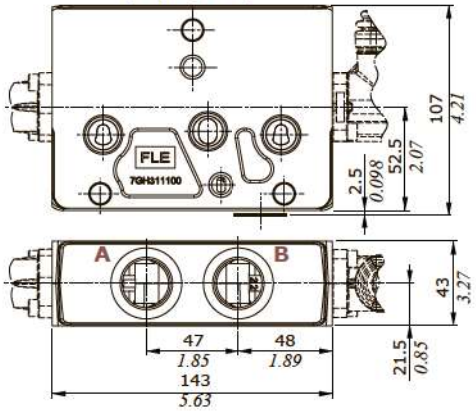
### Dimensions and hydraulic circuit

#### For mechanical, hydraulic and solenoid controls

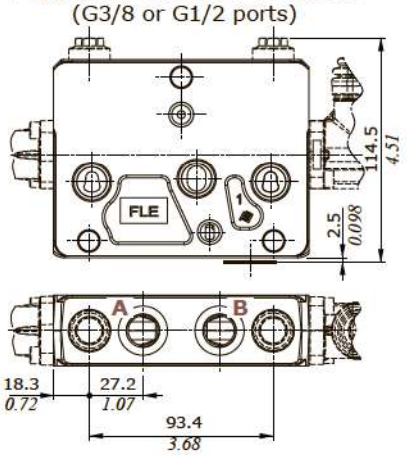
**Q type, for std or HP sections**
(G3/8 or G1/2 ports)



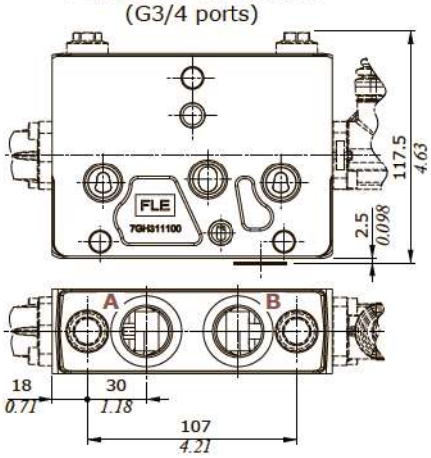

**Q type, for FH section**
(G3/4 ports)

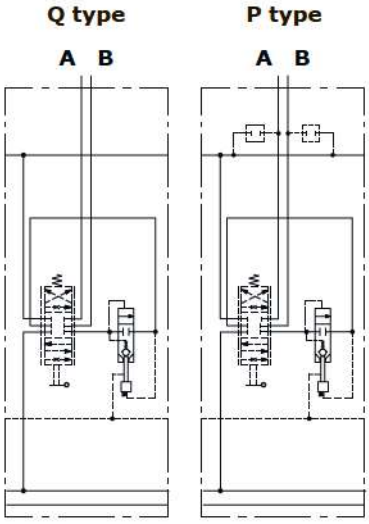



**P type, for std or HP sections**
(G3/8 or G1/2 ports)



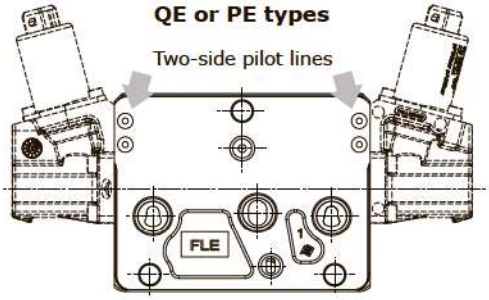

**P type, for FH section**
(G3/4 ports)



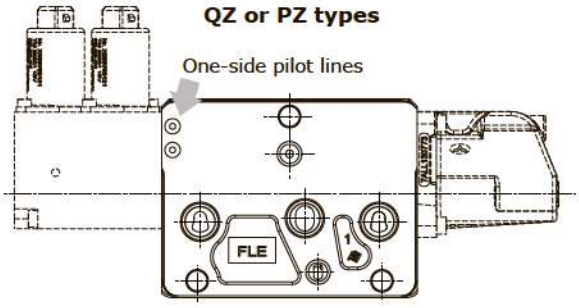



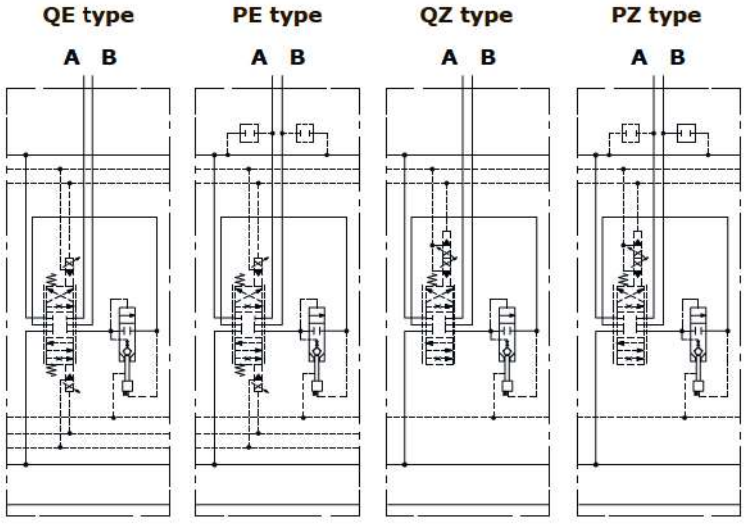

#### For electrohydraulic control

**QE or PE types**
Two-side pilot lines



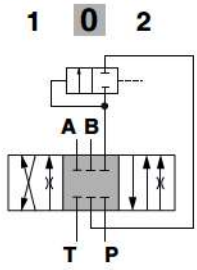

**QZ or PZ types**
One-side pilot lines



## Spools

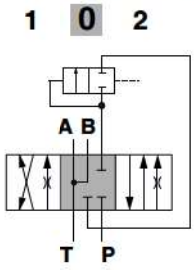
**Type 1 (1../E1../S1..) spool**
A, B closed in neutral position




**Spool stroke (1../E1..)**
position 1: + 6.5 mm *(- 0.26 in)*
position 2: - 6.5 mm *(+ 0.26 in)*

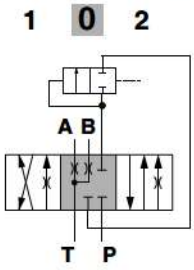
**Spool stroke (S1..)**
position 1: + 3.5 mm *(- 0.14 in)*
position 2: - 3.5 mm *(+ 0.14 in)*

**Type 2 (E2H..) spool**
A, B to tank in neutral position




**Spool stroke**
position 1: + 6.5 mm *(- 0.26 in)*
position 2: - 6.5 mm *(+ 0.26 in)*

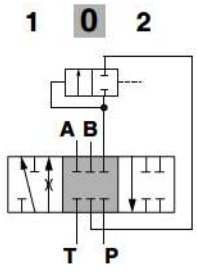
**Type 2H (2H../E2H../S2H..) spool**
A, B partially to tank in neutral pos.




**Spool stroke (2H../E2H..)**
position 1: + 6.5 mm *(- 0.26 in)*
position 2: - 6.5 mm *(+ 0.26 in)*

**Spool stroke (S2H..)**
position 1: + 3.5 mm *(- 0.14 in)*
position 2: - 3.5 mm *(+ 0.14 in)*

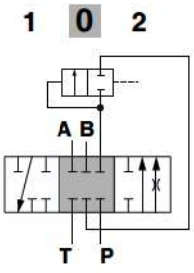
**Type 3 (3../E3../S3..) spool**
single acting on A




**Spool stroke (3../E3..)**
position 1: + 6.5 mm *(- 0.26 in)*
position 2: - 6.5 mm *(+ 0.26 in)*

**Spool stroke (S3..)**
position 1: + 3.5 mm *(- 0.14 in)*
position 2: - 3.5 mm *(+ 0.14 in)*

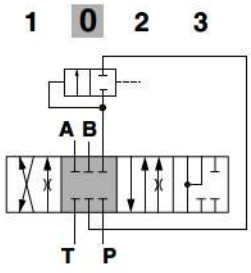
**Type 4 (4../E4../S4..) spool**
single acting on B




**Spool stroke (4../E4..)**
position 1: + 6.5 mm *(- 0.26 in)*
position 2: - 6.5 mm *(+ 0.26 in)*

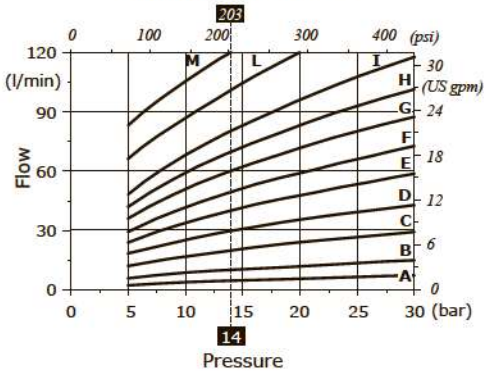
**Spool stroke (S4..)**
position 1: + 3.5 mm *(- 0.14 in)*
position 2: - 3.5 mm *(+ 0.14 in)*

**Type 5 (5../E5../I5..) spool**
floating in 4th position (pos.3)




**Spool stroke**
position 1: + 6 mm *(- 0.24 in)*
position 2: - 6 mm *(+ 0.24 in)*
position 3: - 10.5 mm *(- 0.41 in)*

**Spool flow vs. Stand-by pressure (margin pressure)**




**Curves with spool nominal flow**
**@ 14 bar** *(200 psi)* **stand-by (margin pressure)**
**A** = 5 l/min *(1.3 US gpm)*
**B** = 10 l/min *(2.6 US gpm)*
**C** = 20 l/min *(5.3 US gpm)*
**D** = 30 l/min *(7.9 US gpm)*
**E** = 40 l/min *(10.6 US gpm)*
**F** = 50 l/min *(13.2 US gpm)*
**G** = 60 l/min *(16 US gpm)*
**H** = 70 l/min *(18.5 US gpm)*
**I** = 80 l/min *(21 US gpm)*
**L** = 100 l/min *(26 US gpm)* - only for HF working sections
**N** = 120 l/min *(32 US gpm)* - only for HF working sections

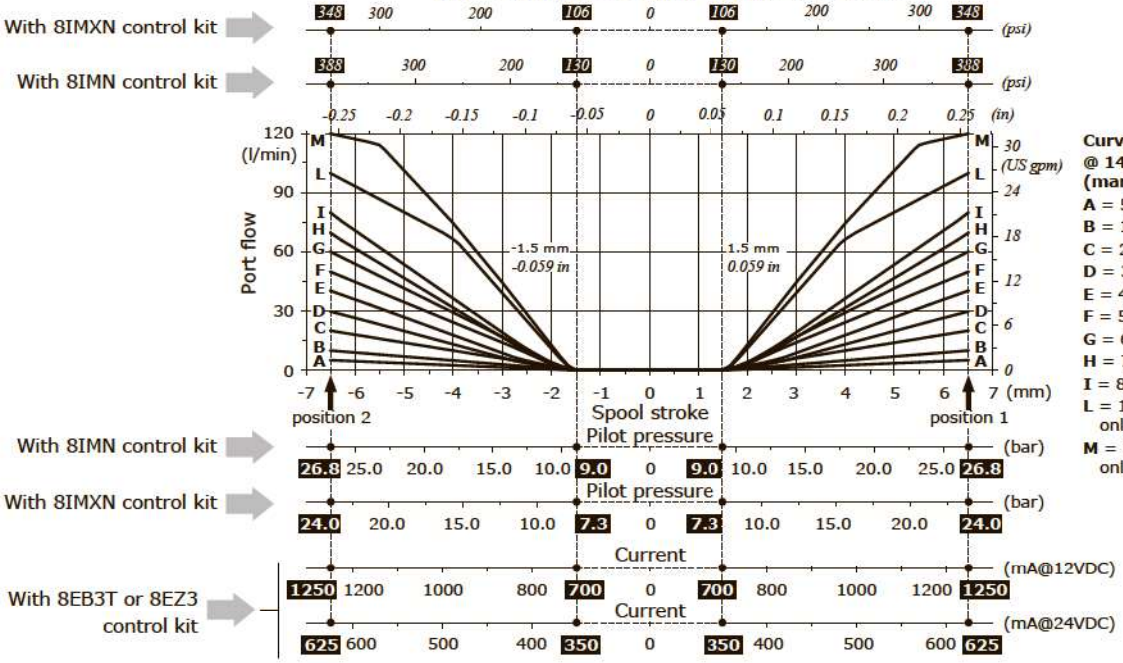
## Working section

### Spools

Following curves are detected with standard spools, connecting P⇒A⇒B⇒T and P⇒B⇒A⇒T ports without flow multiplication. Customized spools with backpressure or flow multiplication may require different force, pressure and pilot current for operation.

**3 position spool metering curve**

Qin = 120 l/min *(32 US gpm)* - Open center circuit

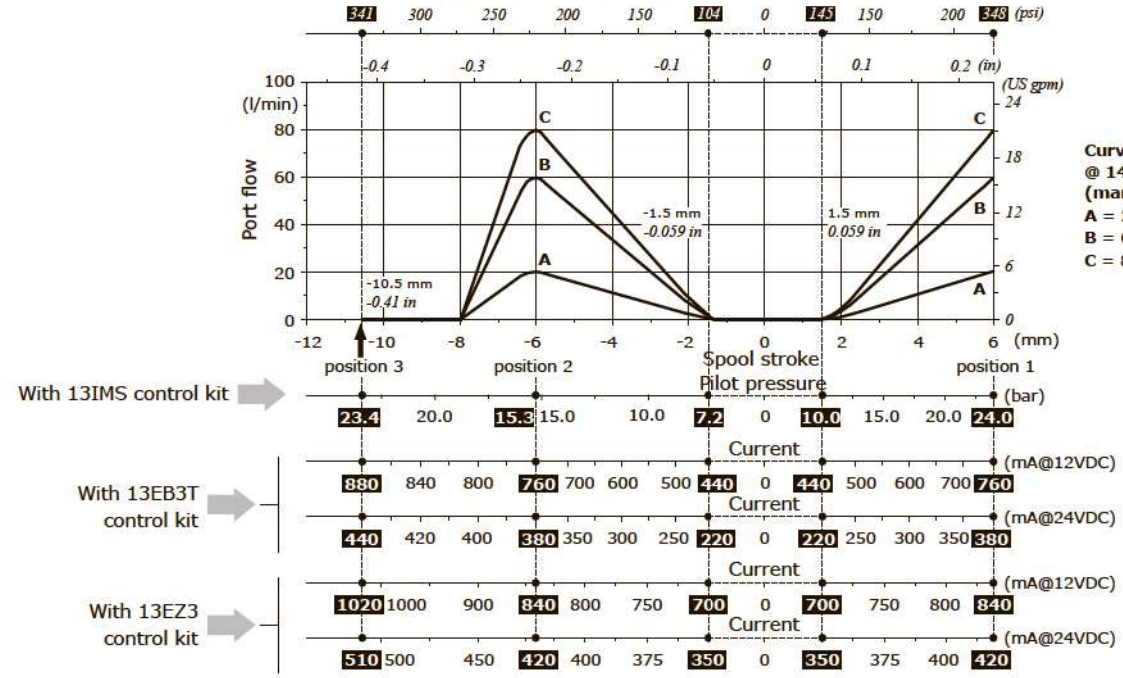



**Curves with spool nominal flow @ 14 bar *(200 psi)* stand-by (margin pressure)**

**A** = 5 l/min *(1.3 US gpm)*
**B** = 10 l/min *(2.6 US gpm)*
**C** = 20 l/min *(5.3 US gpm)*
**D** = 30 l/min *(7.9 US gpm)*
**E** = 40 l/min *(10.6 US gpm)*
**F** = 50 l/min *(13.2 US gpm)*
**G** = 60 l/min *(16 US gpm)*
**H** = 70 l/min *(18.5 US gpm)*
**I** = 80 l/min *(21 US gpm)*
**L** = 100 l/min *(26 US gpm)* only for HF working sections
**M** = 120 l/min *(32 US gpm)* only for HF working sections

**Floating spool metering curve**

Qin = 90 l/min *(24 US gpm)* - Open center circuit



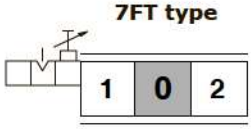

**Curves with spool nominal flow @ 14 bar *(200 psi)* stand-by (margin pressure)**

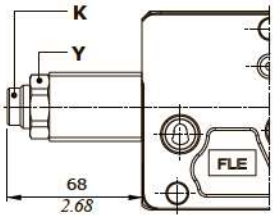
**A** = 20 l/min *(5.3 US gpm)*
**B** = 60 l/min *(16 US gpm)*
**C** = 80 l/min *(21 US gpm)*

## "A" side spool positioners

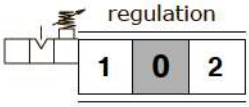
### With friction

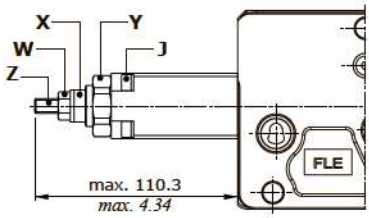
**7FT type**




**7FTN type**
With spring regulation

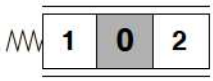


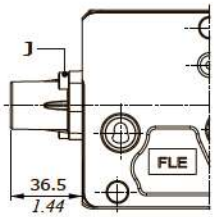




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
K = allen wrench 6
X = wrench 17
Y = wrench 30, manual tightening
Z = allen wrench 4
W = wrench 13 - 24 Nm *(17.7 lbft)*

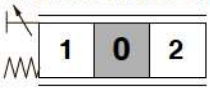
### With spring return to neutral position

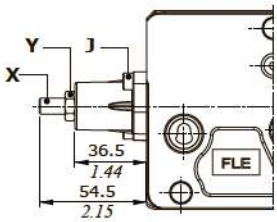
**8 type**



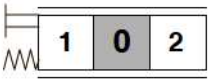



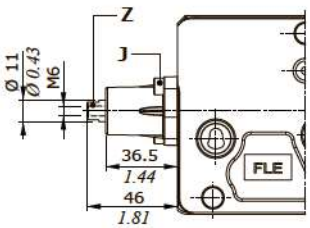

**8F2 type**
Spool stroke limiter on B port



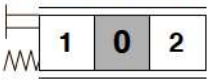



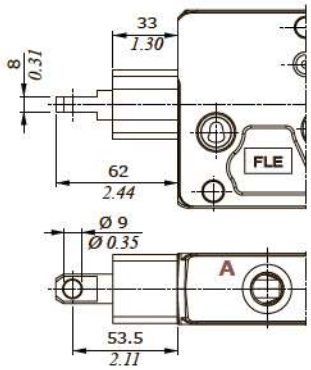

**8D type**
External pin with M6 female thread



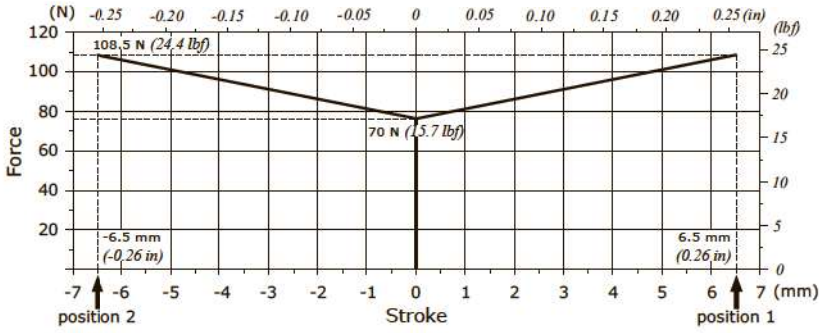

**8TL type**
Arrangement for double mechanical control




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = allen wrench 4
Y = wrench 13 - 24 Nm *(17.7 lbft)*
Z = wrench 9

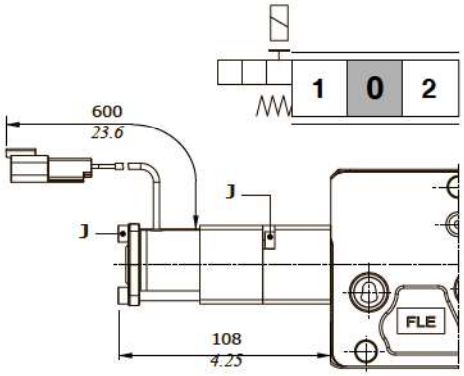
**Force vs. Stroke diagram**



## Working section

### "A" side spool positioners

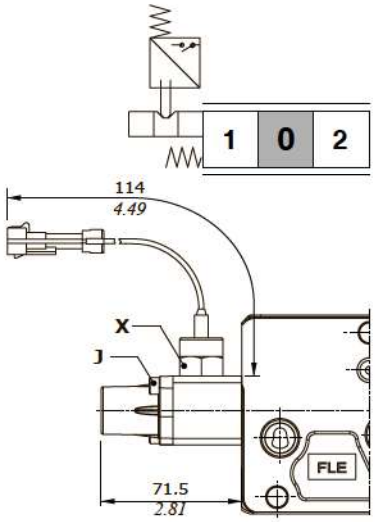
#### With electromagnetic detent in position 2, 8RM2 type




**Features**
Nominal voltage . . . . . : 12 VDC ± 10%
Power rating. . . . . : 5.5 W
Min. detent release . . . . . : 200 N *(45 lbft)*
Coil resistance (@ 20°C - *68°F*) : 26.2 Ohm
Coil insulance . . . . . : Class H *(180°C - 356°F)*
Insertion . . . . . : 100%
Connector . . . . . : Deutsch DT04-2P
Mating connector . . . . . : Deutsch DT06-2S, code 5CON140046

**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

#### With microswitch for spool check in positions 1 and 2, 8MG3 type



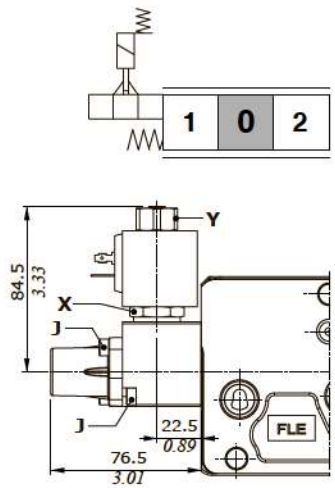

**Features**
Switch mechanical life . . . . . : $5x10^5$ cycles
Switch electric life . . . . . : $10^5$ cycles @ 7 A - 13.5 VDC, resistive load
$5x10^4$ cycles @ 10 A - 12 VDC, resistive load
$5x10^4$ cycles @ 3 A - 28 VDC, resistive load
Connector . . . . . : Packard Weather-Pack
Mating connector . . . . . : Packard Weather-Pack, code 5CON001

**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = wrench 22 - 24 Nm *(17.7 lbft)*

| Complete controls | | | |
|---|---|---|---|
| | Microswitch operation | | |
| **Circuit** | position 1 **8MG1** | position 2 **8MG2** | positions 1, 2 **8MG3** |
| **(NO)** | 5V08107670 | 5V08107680 | 5V08107660 |
| **(NC)** | / | / | 5V08107662 (*) |

Note (*): with integrated connector

#### With solenoid lock device in neutral position, 8K type




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = wrench 24 - 9,8 Nm *(7.2 lbft)*
Y = wrench 21 - 6,6 Nm *(4.9 lbft)*

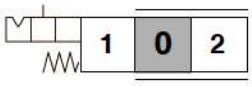
| Complete controls | | | |
|---|---|---|---|
| | Coil connector | | |
| **Voltage** | ISO 4400 | Packard M-Mack | Deutsch DT04 |
| **12 VDC** | 5V08707112 | 5V08707613 | 5V08707412 |
| **24 VDC** | 5V08707124 | 5V08707624 | 5V08707424 |

For coil features and options see **BE** type coil at page 123.

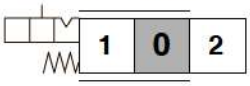
## "A" side spool positioners

### With detent and spring return to neutral position from either directions

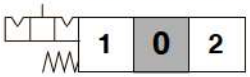
**9BZ type**
Detent in position 1
(see A curve)

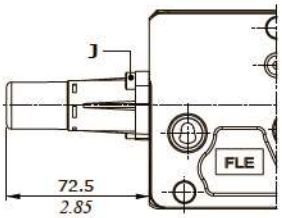



**10BZ type**
Detent in position 2
(see B curve)



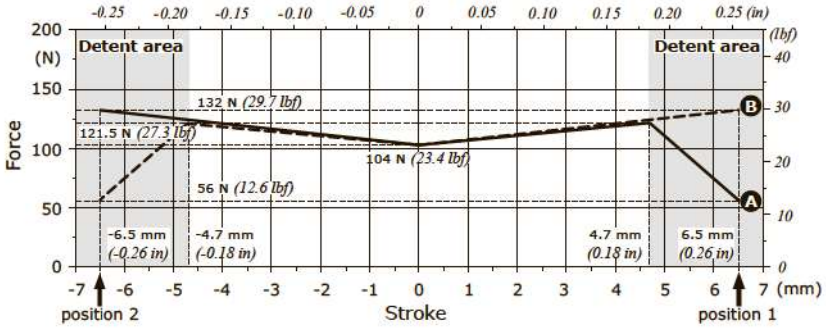

**11BZ type**
Detent in positions 1
(A curve) and 2 (B urve)



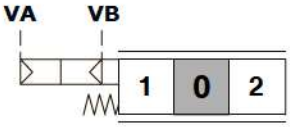

**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

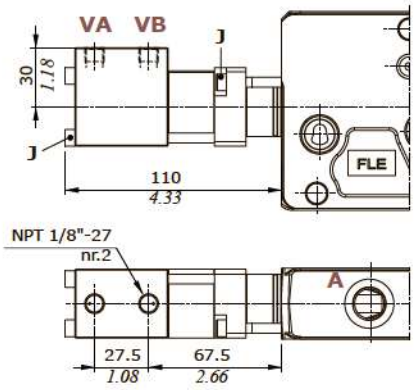
**Force vs. Stroke diagram**




Release force 160 N ± 10 N *(36 lbf ± 2.2 lbf)*

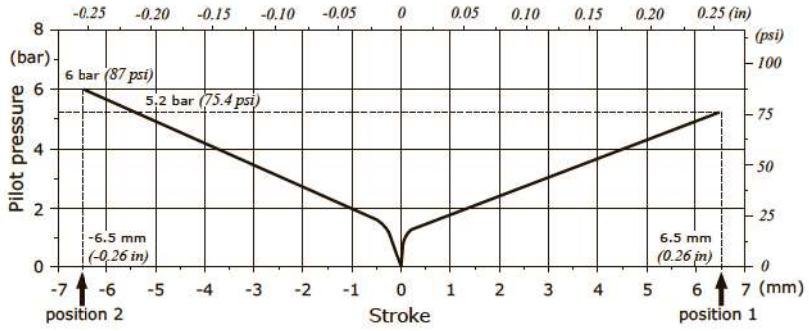
### Proportional pneumatic control, 8PP type




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

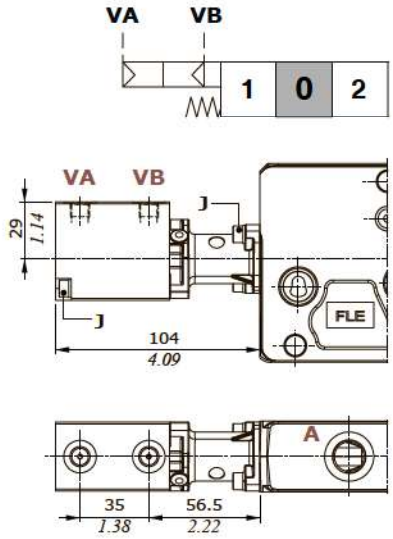
**Stroke vs. Pilot pressure diagram**



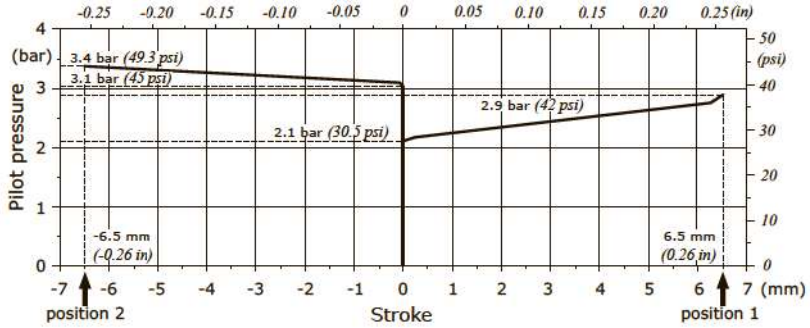
## Working section

### "A" side spool positioners

#### On/off pneumatic control, 8PNB type

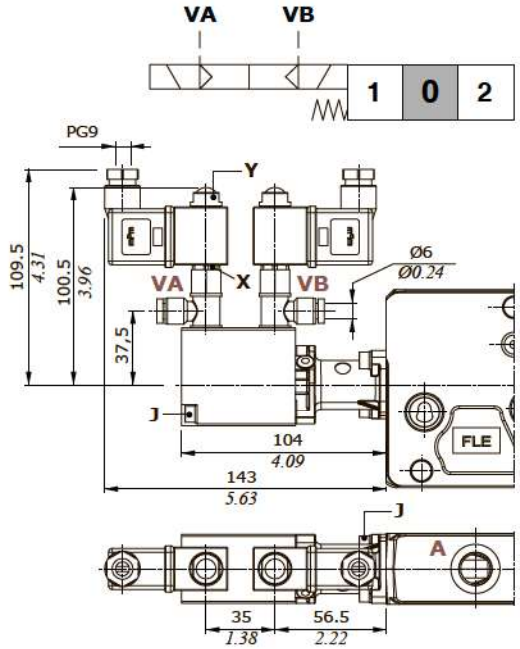



**Stroke vs. Pilot pressure diagram**




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

#### On/off electropneumatic control, 8EPNB3 type




**Features**
Pilot pressure . . . . . : 6 bar (max.15 bar)
*87 psi (max. 218 psi)*

For coil features and options see **BPV** type coil at page 124.

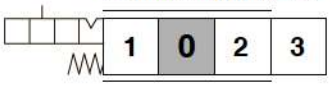
**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = wrench 15 - 6,6 Nm *(4.9 lbft)*
Y = wrench 13, manual tightening

## "A" side spool positioners

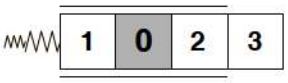
### For floating circuit

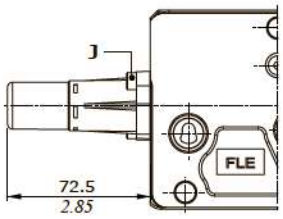
Not available for HF (High Flow) sections.

**13N type**
Detent in position 3



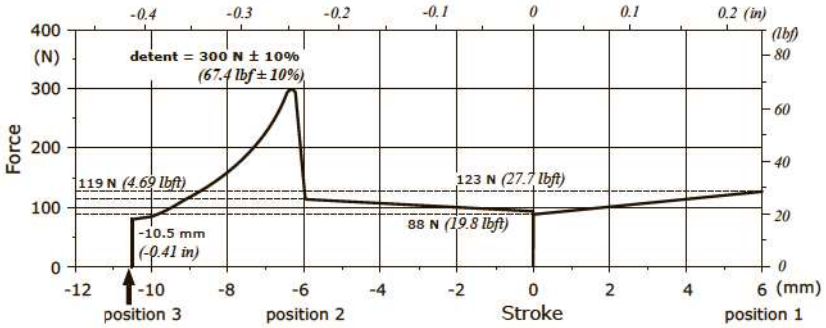

**13F type**
Additional spring in position 3



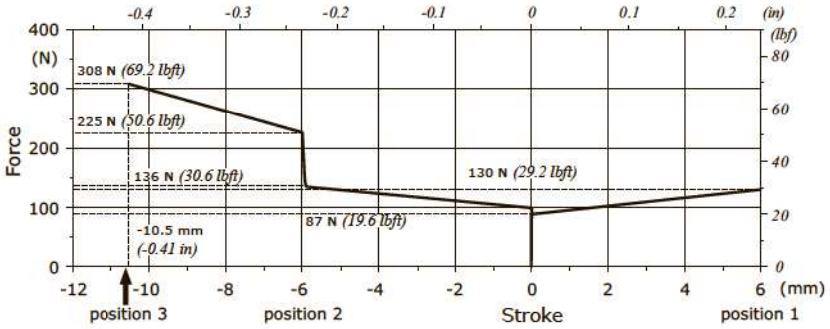

**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

**13N type: Force vs. Stroke diagram**




Release force from pos.3: 250 N ± 10% *(56.2 lbf ± 10%)*

**13F type: Force vs. Stroke diagram**

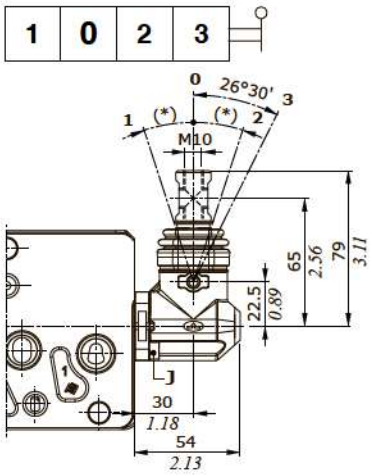


## Working section

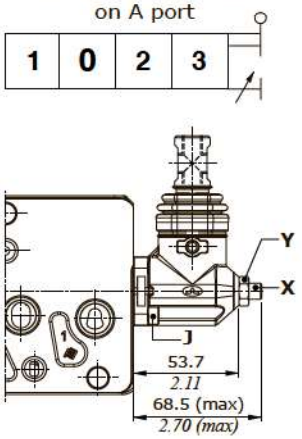
### "B" side spool control kit

#### Standard lever boxes

**L type**

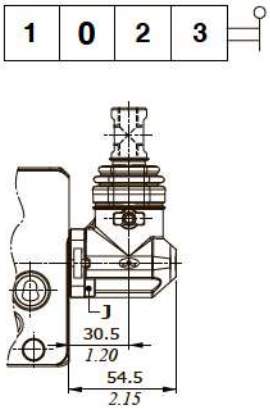



**LF1 type**
Spool stroke limiter on A port

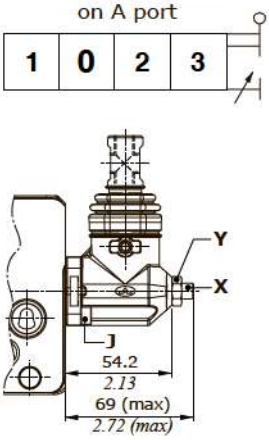



#### Waterproof lever boxes

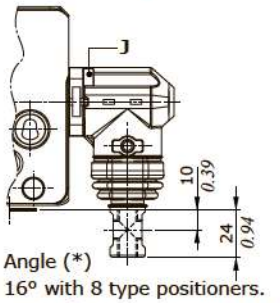
**LSG type**




**LSGF1 type**
Spool stroke limiter on A port




**L180 configuration**

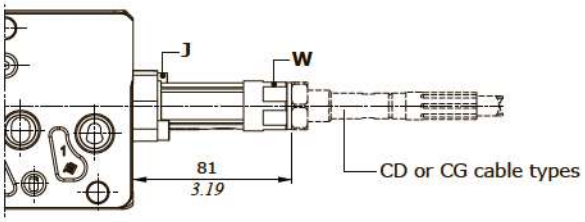



Angle (*)
16° with 8 type positioners.
15° with 13 type positioners.

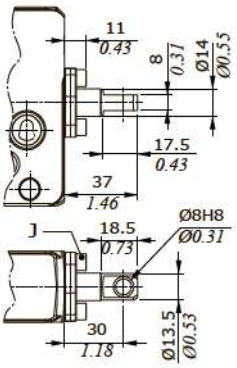
**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = allen wrench 4
Y = wrench 13 - 24 Nm *(17.7 lbf)*
W = wrench 24

#### Without lever boxes

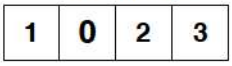
**TQ type**
Flexible cabler connection

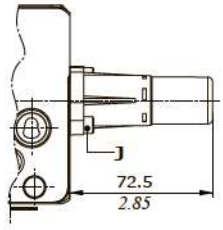




**SLP type**
With dust-proof plate


**SLC type**
With endcap

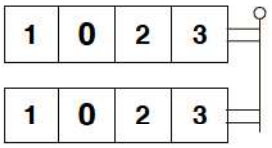


## "B" side spool control kit

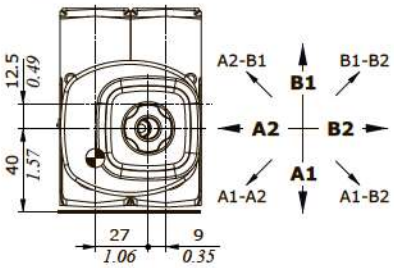
### Joysticks for two section operation

Not available for HF (High Flow) sections.

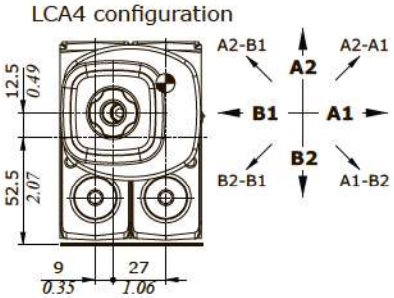



**LCA1-4 type**

LCA1 configuration

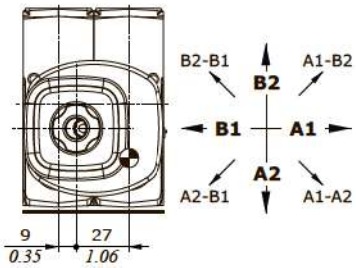



LCA4 configuration

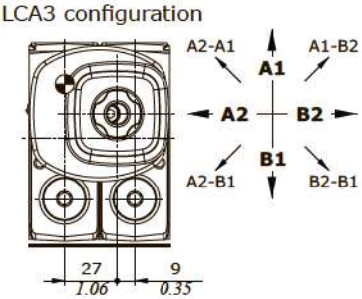


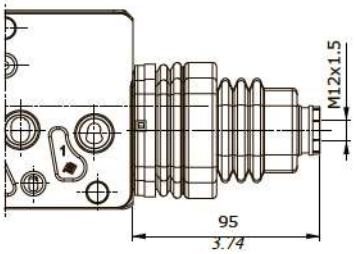

**LCA2-3 type**

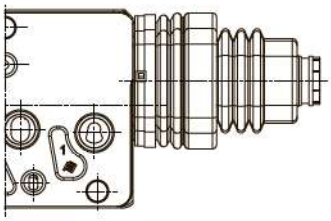
LCA2 configuration



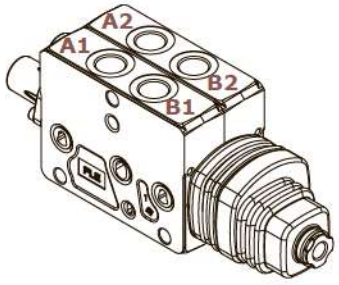

LCA3 configuration



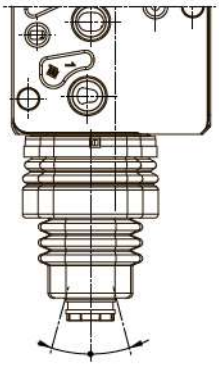
**LCA2 configuration example**




**Working angles**

Horizontal axis


Vertical axis

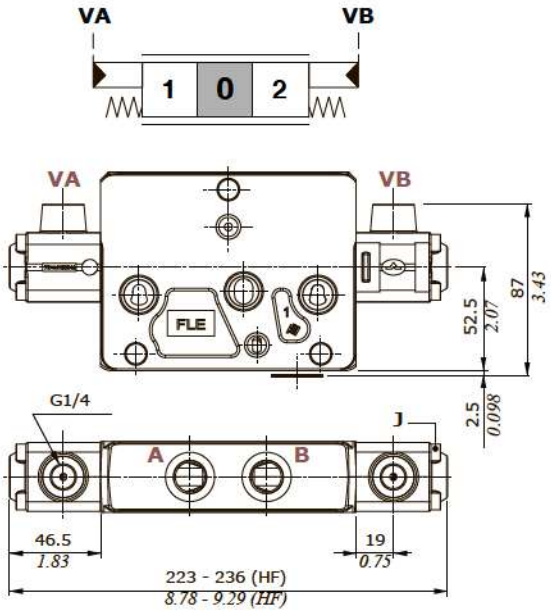


| Max. working angles | Horizontal axis | Vertical axis |
|---|---|---|
| Single action operation | 15°4' | 15°4' |
| Single action operation with floating | 25°2' | 25°2' |
| Two section operation | 15°52' | 15°52' |
| Two section operation with floating | 18°3' | 18°3' |

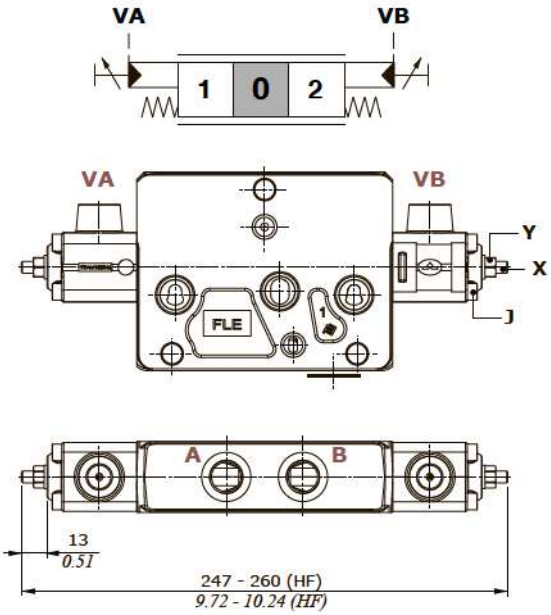
## Working section

### Proportional hydraulic control

**8IMN - 8IMXN types**



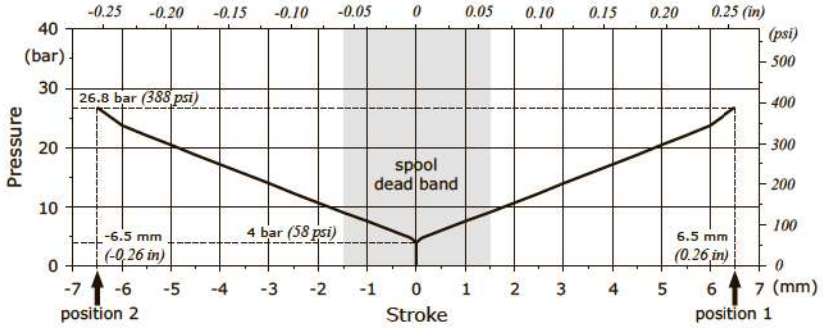

**8IMF3N - 8IMXF3N types**
With spool stroke limiter on A and B ports



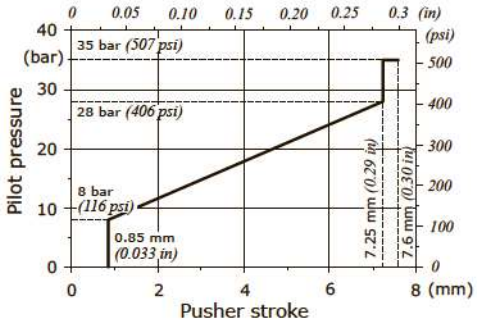

**Features (all types)**
Max. pressure. . . . . : 70 bar *(1015 psi)*

**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = allen wrench 3
Y = wrench 10 - 9.8 Nm *(7.2 lbf)*

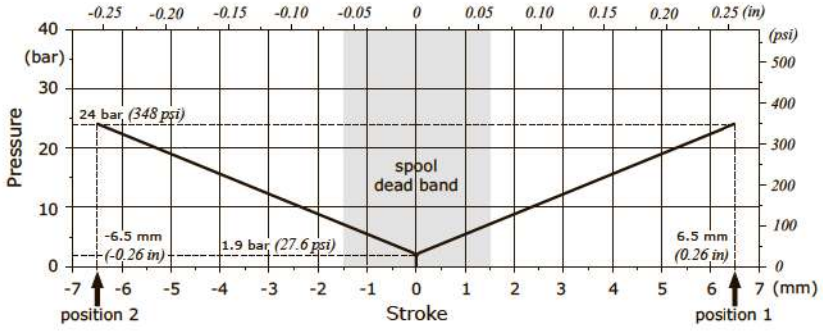
**8IMN-8IMF3N types: Pressure vs. Stroke diagram**



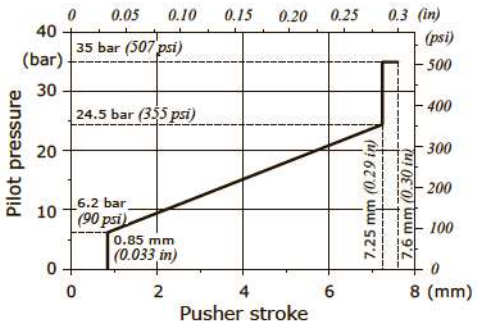

**Suggested pressure control curve: 089 type**




**8IMXN-8IMXF3N types: Pressure vs. Stroke diagram**



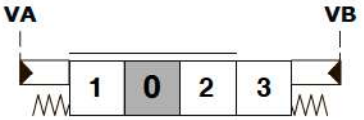

**Suggested pressure control curve: 054 type**

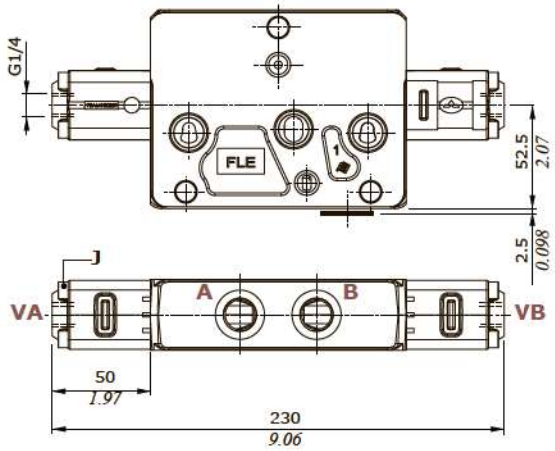


## Proportional hydraulic control

### For floating circuit, 13IMS type

Not available for HF (High Flow) sections.



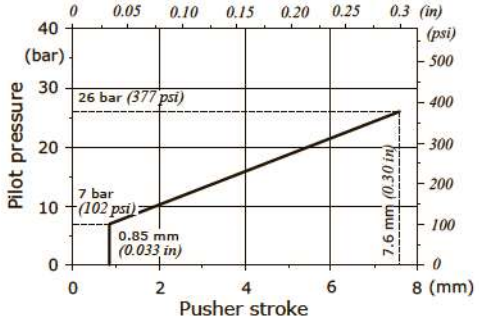

**Wrenches and tightening torques**

J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*

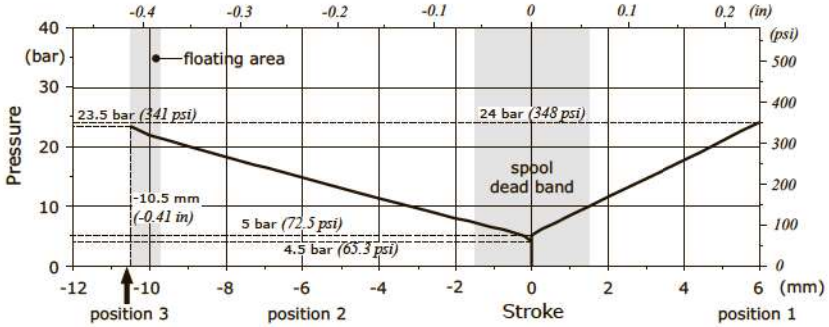
**Features**

Max. pressure. . . . . .: 70 bar *(1015 psi)*

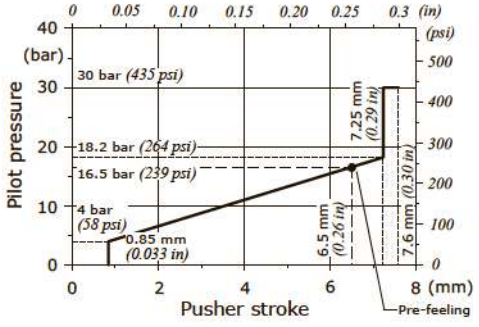
**Suggested pressure control curve on port VA: 098 type**




**Stroke vs. Pressure diagram**




**Suggested pressure control curve on port VB: 086 type**

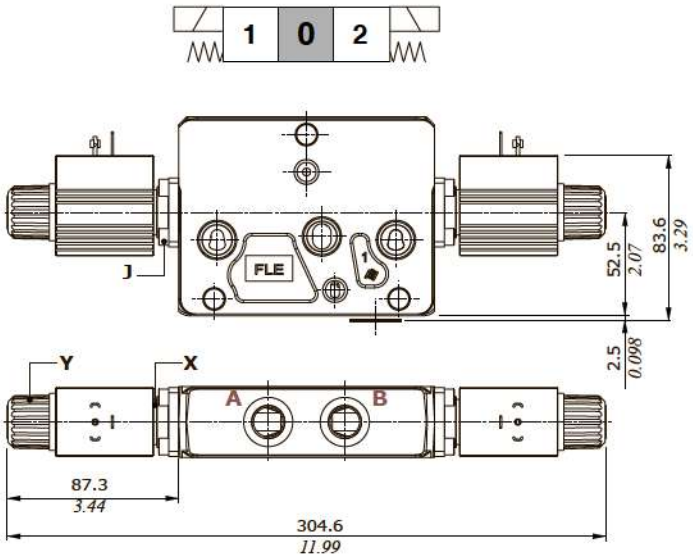


## Working section

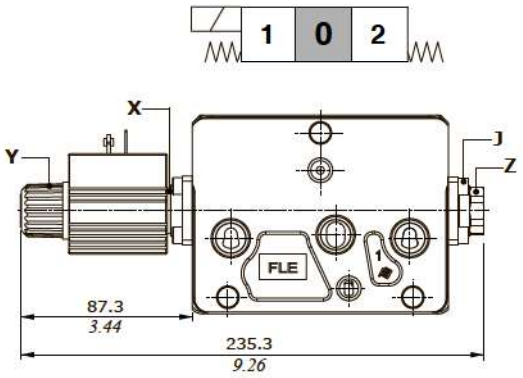
### On/off solenoid control

Not available for HF (High Flow) sections.

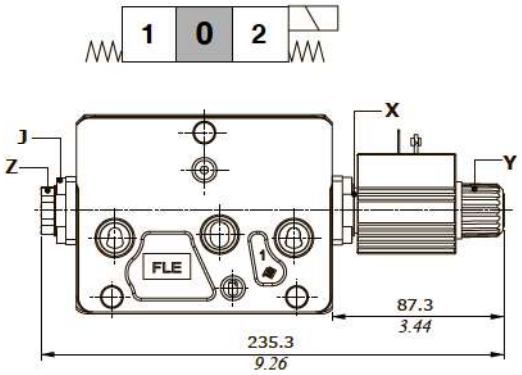
**8ES3 type**
Double acting




**8ES1 type**
Single acting in A




**8ES2 type**
Single acting in B




**Wrenches and tightening torques**
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = wrench 17 - 24 Nm *(17.7 lbf)*
Y = special wrench - 6.6 Nm *(4.9 lbft)*
Z = wrench 22 - 24 Nm *(17.7 lbf)*

**Features**
Max. flow on working ports : **60 l/min** *(16 US gpm)*
Internal leakage A(B)⇒T . . : 15 cm³/min @ 100 bar and 20°C
*(0.92 in³/min @ 1450 psi and 68°F)*

For coil features and options see **D12** type coil at page 125.

## Electrohydraulic control performace data

Following specifications are measured with:

- mineral oil of 46 mm²/s *(46 cSt)* viscosity at 40°C *(104°F)* temperature.
- standard spools, connecting P⇒A⇒B⇒T ports without flow multiplication
- 12 VDC and 24 VDC nominal voltage with ± 10% tolerance.

Following electrohydraulic controls need CED100X or CED400X electronic unit; for information please contact Sales Department.

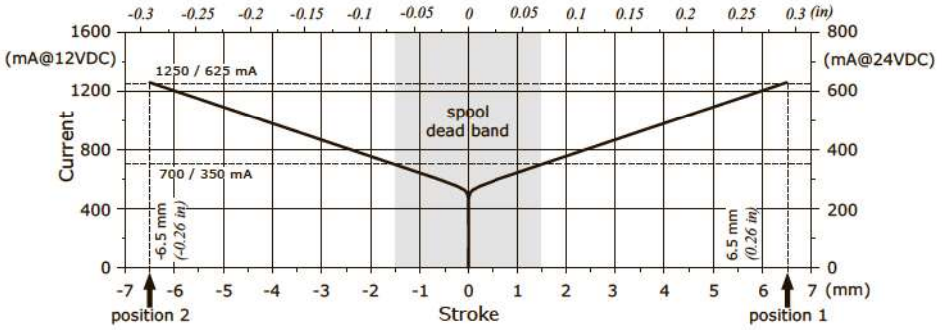
| Specifications | | Spool control type | | | |
|---|---|---|---|---|---|
| | | 8EB3 | 13EB3 | 8EZ3 | 13EZ3 |
| **Electric specifications** | | | | | |
| Coil impedance | 12 VDC | 4.72 Ω | 4.72 Ω | 4.72 Ω | 4.72 Ω |
| | 24 VDC | 20.8 Ω | 20.8 Ω | 20.8 Ω | 20.8 Ω |
| Max. operating current | 12 VDC | 1.5 A | 1.5 A | 1.5 A | 1.5 A |
| | 24 VDC | 0.75 A | 0.75 A | 0.75 A | 0.75 A |
| No load current consumption | | 0 | 0 | 0 | 0 |
| Hysteresis max. (1) | | | | With lever box configured controls | |
| | external drain | 3%<br>5% with lever | 4%<br>7% with lever | 7% | 7% |
| | internal drain | 4%<br>6% with lever | 6%<br>9% with lever | 9% | 9% |
| Time response | from 0 ⇒ 100% and from 100% ⇒ 0 of stroke | < 50 ms | < 55 ms | < 50 ms | < 55 ms |
| Min. flow control signal | 12 VDC | 700 mA | 440 mA | 700 mA | 700 mA |
| | 24 VDC | 350 mA | 220 mA | 350 mA | 350 mA |
| Flow control signal | 12 VDC | 1250 mA | 760 mA | 1250 mA | 840 mA |
| | 24 VDC | 625 mA | 380 mA | 625 mA | 420 mA |
| Max. float flow control signal | 12 VDC | | 880 mA | | 1020 mA |
| | 24 VDC | | 440 mA | | 510 mA |
| Dither frequency | low frequency | 150 Hz | | 150 Hz | |
| | high frequency | 180 Hz - 200 mA | | 180 Hz - 200 mA | |
| Insertion | | 100% | | 100% | |
| Coil insulance | | Class H (180°C - *356°F*) | | Class H (180°C - *356°F*) | |
| Connector type | | AMP JPT - Deutsch DT | | AMP JPT - Deutsch DT | |
| Weather protection (connector) | | IP65 (JPT type) - IP69K (DT type) | | IP65 (JPT type) - IP69K (DT type) | |
| **Hydraulic specifications** | | | | | |
| Max. pressure | | 40 bar *(580 psi)* | | 50 bar *(725 psi)* | |
| Max. back pressure | | 10 bar *(145 psi)* | | 10 bar *(145 psi)* | |

Note (1) hysteresis is indicated at nominal supply voltage and f = 0.008 Hz for one cycle (one cycle = neutral ⇒ full A ⇒ neutral ⇒ full B ⇒ neutral). For the calculation rules see "Appendix A" on page 134.

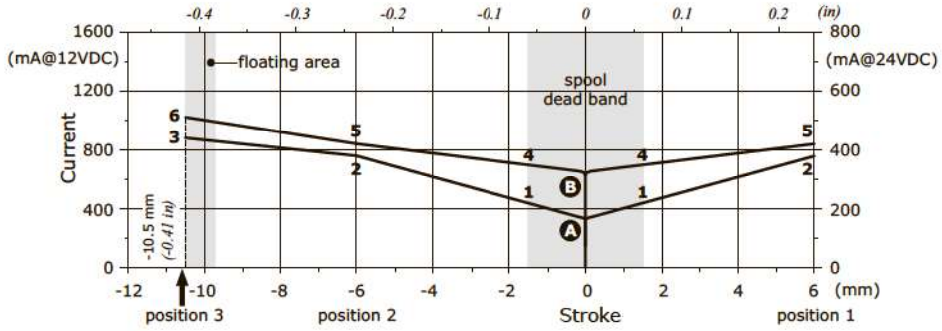
## Working section

### Electrohydraulic control performace data

**8EB3T-8EZ3 type: Stroke vs. Current diagram**




**13EB3T-13EZ3 type: Stroke vs. Current diagram**




**A curve = 13EB3T control**
**1** = 440 mA @ 12 VDC - 220 mA @ 24 VDC
**2** = 760 mA @ 12 VDC - 380 mA @ 24 VDC
**3** = 880 mA @ 12 VDC - 440 mA @ 24 VDC

**B curve = 13EZ3 control**
**4** = 700 mA @ 12 VDC - 350 mA @ 24 VDC
**5** = 840 mA @ 12 VDC - 420 mA @ 24 VDC
**6** = 1020 mA @ 12 VDC - 510 mA @ 24 VDC

## Electrohydraulic controls: spool position sensor

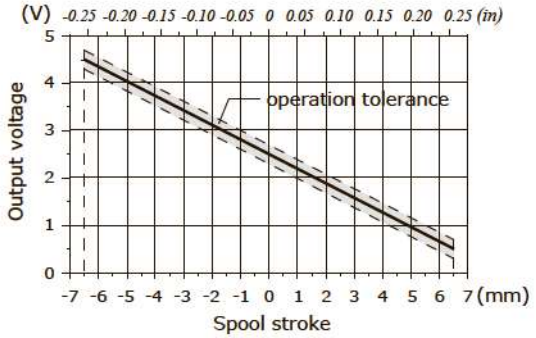
The sensor can be ordered exclusively through the electrohydraulic EB and EZ type controls; see pages 53 and 57 for available control list.

### SPSL sensor

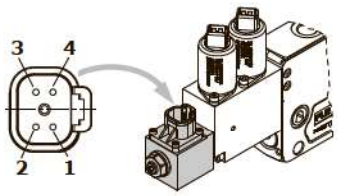
The SPSL position sensor converts the spool movements into a voltage linear signal.

| Working conditions | | |
|---|---|---|
| Voltage supply | | 5 VDC |
| Current absorption | | < 10 mA (no load) |
| Mechanical life | | 3x10⁶ |
| Connector type | | DT04-4P Deutsch |
| Weather protection | | IP67 / IP69K |
| Working temperature | | from -40°C to 105°C *(from -40°F to 221°F)* |
| Working pressure | | 350 bar *(5100 psi)* |
| Max. electrical stroke | | ±10 mm *(±0.39 in)* |
| Max. mechanical stroke | | ±10 mm *(±0.39 in)* |
| Output signal | range | from 0.5 to 4.5 V |
| | linearity | ± 5% |
| | spool in neutral | 2.5 ± 0.2 V |
| | max. current | 1 mA |
| EMC compatibility | | ISO 13766 / ISO 14982 |
| Mechanical vibrations, shock, bumps | | IEC 68-2-6,-27,-29 |

**SPSL sensor output signal**




| Deutsch DT04-4P connector | |
|---|---|
| Pin | Function |
| 1 | + 5V |
| 2 | not connected |
| 3 | GND |
| 4 | signal OUT |



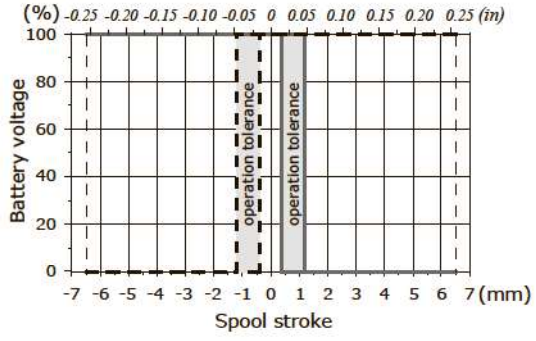

Deutsch DT06-4S mating connector, code 5CON140072

### SPSD sensor

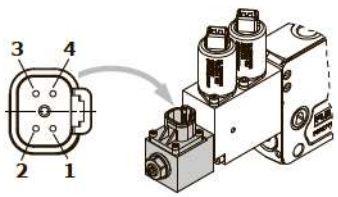
The SPSD position sensor converts the spool movements into an electric digital signal.

| Working conditions | | |
|---|---|---|
| Voltage supply | | from 9 to 32 VDC |
| Current absorption | | < 10 mA (no load) |
| Mechanical life | | 3x10⁶ |
| Connector type | | DT04-4P Deutsch |
| Weather protection | | IP67 / IP69K |
| Working temperature | | from -40°C to 105°C *(from -40°F to 221°F)* |
| Working pressure | | 350 bar *(5100 psi)* |
| Max. electrical stroke | | ±10 mm *(±0.39 in)* |
| Max. mechanical stroke | | ±10 mm *(±0.39 in)* |
| Output signal | type | PNP |
| | max. current | 6 mA |
| EMC compatibility | | ISO 13766 / ISO 14982 |
| Mechanical vibrations, shock, bumps | | IEC 68-2-6,-27,-29 |

**SPSD sensor output signal**




| Deutsch DT04-4P connector | |
|---|---|
| Pin | Function |
| 1 | Out A |
| 2 | GND |
| 3 | VB + |
| 4 | Out B |




Deutsch DT06-4S mating connector, code 5CON140072

## Working section

### Two-side electrohydraulic control

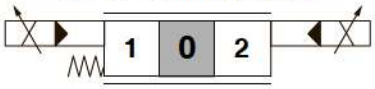
**Control Types**

❶ : With AMP JPT connector - AMP JPT mating connector, code: 5CON003
❷ : With Deutsch DT04 connector - Deutsch DT06-2S mating connector code: 5CON140031

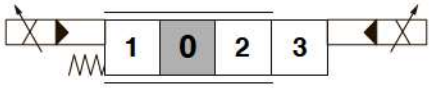
### Without lever control

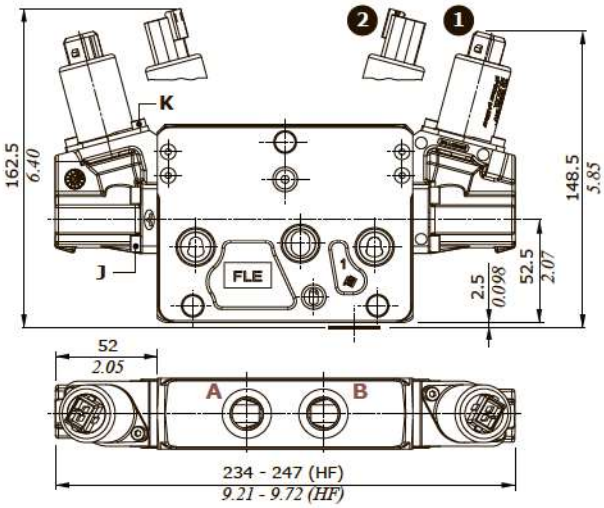
13EB3 type controls are not available for HF sections.

**8EB3T - 8EB34T types**

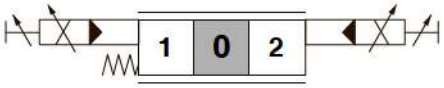


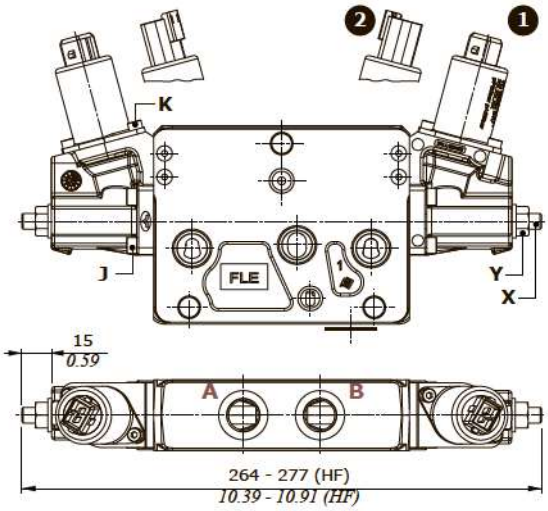

**13EB3T - 13EB34T types**



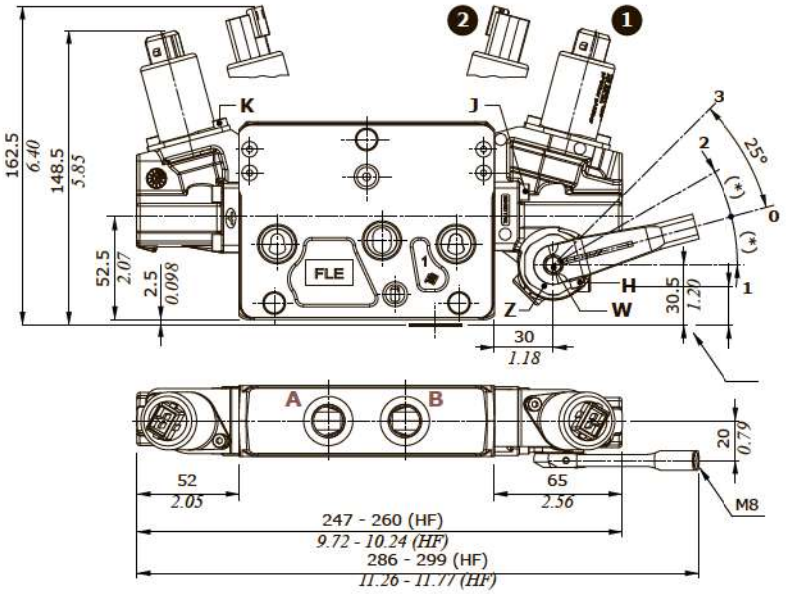

**8EB3TF3 - 8EB34TF3 types**




### With lever control

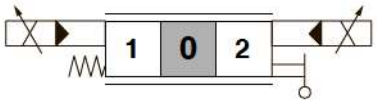
13EB3 types controls are not available for HF sections.



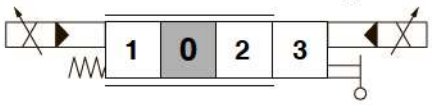

**Wrenches and tightening torques**

H = allen wrench 3 - 6.6 Nm *(4.9 lbft)*
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
K = allen wrench 3 - 5 Nm *(3.7 lbft)*
X = allen wrench 3
Y = wrench 10 - 9.8 Nm *(7.2 lbf)*
Z = wrench 29 - 24 Nm *(17.7 lbf)*
W = wrench 8

**8EB3TLH - 8EB34TLH types**




**13EB3TLH - 13EB34TLH types**




Angle (*)
15° with 8EB3.. type controls
14° with 13EB3.. type controls

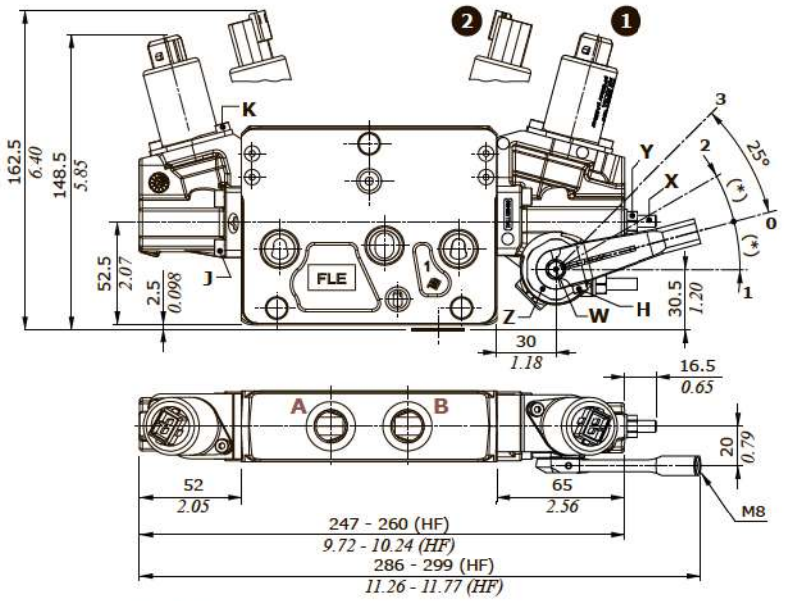
## Two-side electrohydraulic control

**Control Types**

❶ : With AMP JPT connector - AMP JPT mating connector, code: 5CON003
❷ : With Deutsch DT04 connector - Deutsch DT06-2S mating connector code: 5CON140031

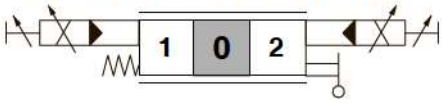
### With lever control

13EB3 type controls are not available for HF sections.

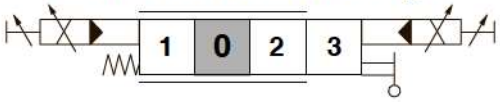



Angle (*)
15° with 8EB3.. type controls; 14° with 13EB3.. type controls

**8EB3TLHF3 - 8EB34TLHF3 types**




**13EB3TLHF3 - 13EB34TLHF3 types**

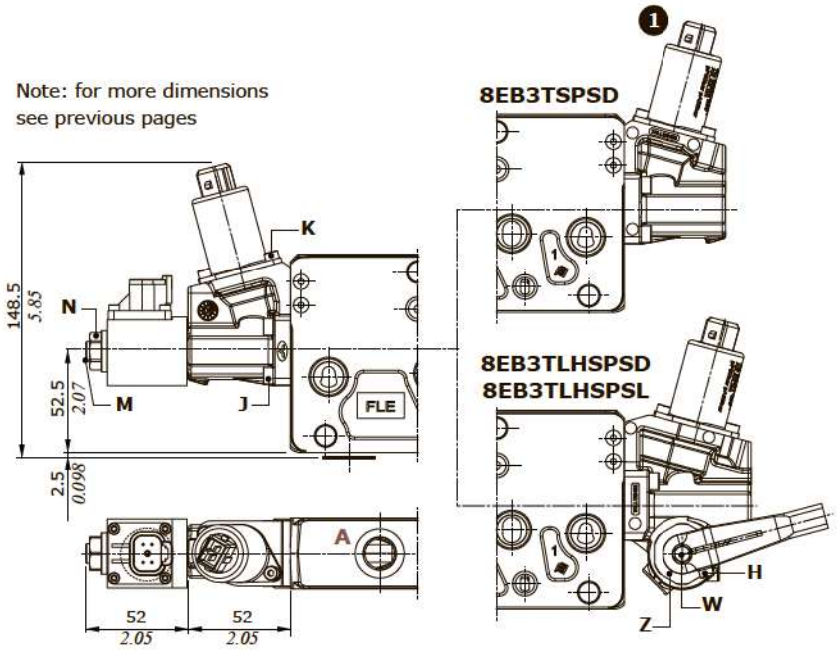



**Wrenches and tightening torques**

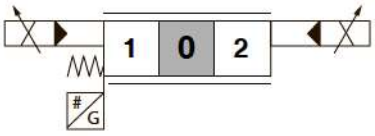
H = allen wrench 3 - 6.6 Nm *(4.9 lbft)*
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
K = allen wrench 3 - 5 Nm *(3.7 lbft)*
M = allen wrench 4 - 9.8 Nm *(7.2 lbf)*
N = wrench 17 - 9.8 Nm *(7.2 lbf)*
X = allen wrench 3
Y = wrench 10 - 9.8 Nm *(7.2 lbf)*
Z = wrench 29 - 24 Nm *(17.7 lbf)*
W = wrench 8

### With spool position sensor

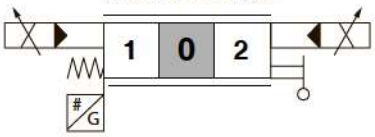
Note: for more dimensions see previous pages



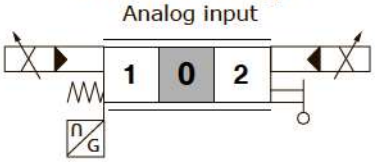

**8EB3TSPSD type**
CANbus interface




**8EB3TLHSPSD type**
CANbus interface




**8EB3TLHSPSL type**
Analog input



## Working section

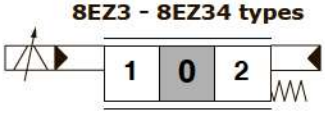
### One-side electrohydraulic control

**Control Types**

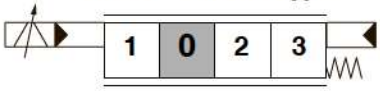
❶ : With AMP JPT connector - AMP JPT mating connector, code: 5CON003
❷ : With Deutsch DT04 connector - Deutsch DT06-2S mating connector code: 5CON140031

**For Standard and HP sections**

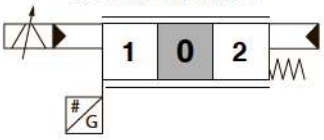
**8EZ3 - 8EZ34 types**



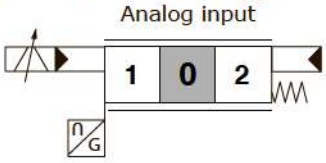

**13EZ3 - 13EZ34 types**

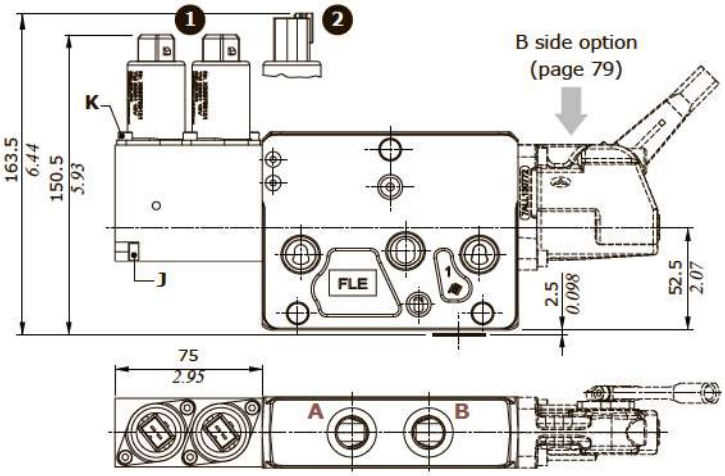



**8EZ3SPSD - 8EZ34SPSD types**
CANbus interface



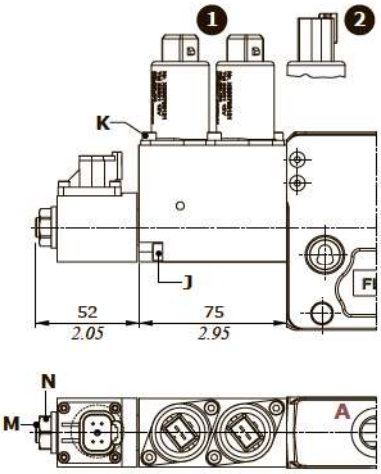

**8EZ34SPSL type**
Analog input




**Wrenches and tightening torques**

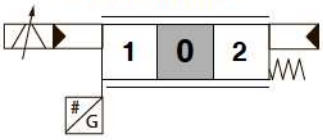
J = allen wrench 4
6.6 Nm *(4.9 lbft)*
K = allen wrench 3
5 Nm *(3.7 lbft)*
M = allen wrench 4
9.8 Nm *(7.2 lbf)*
N = wrench 17
9.8 Nm *(7.2 lbf)*



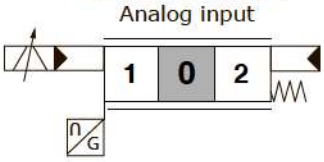

**For HF sections**

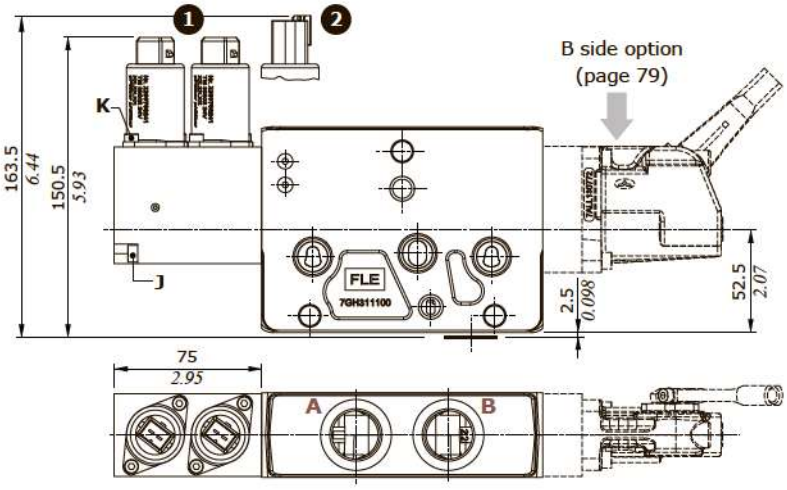
**8EZ3 - 8EZ34 types**

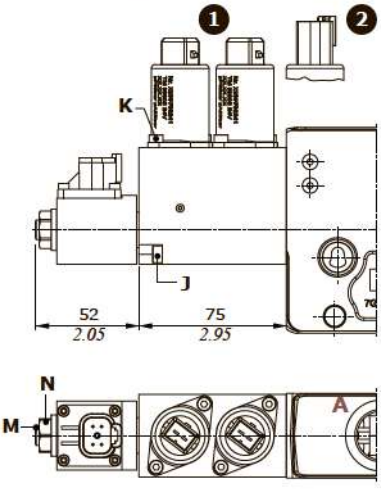

**8EZ3SPSD - 8EZ34SPSD types**
CANbus interface




**8EZ34SPSL type**
Analog input



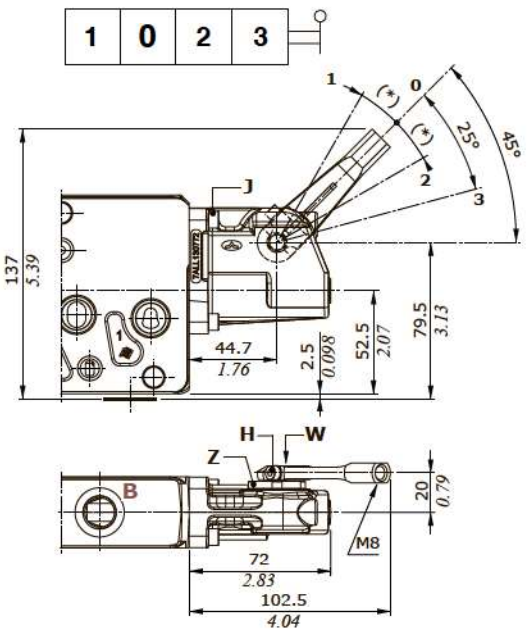



## "B" side options

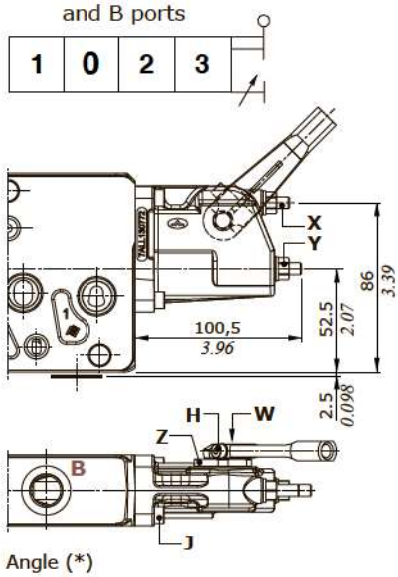
These options are available for one-side electyrohydraulic controls only.

### Lever boxes for Standard and HP sections

**LQ type**

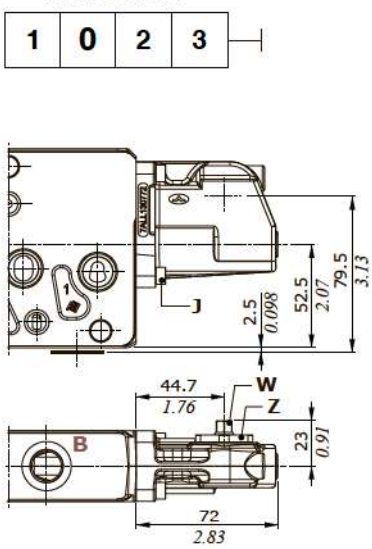



**LQF3 type**
Spool stroke limiter on A and B ports




Angle (*)
15° with 8EZ3.. type controls
14° with 13EZ3.. type controls

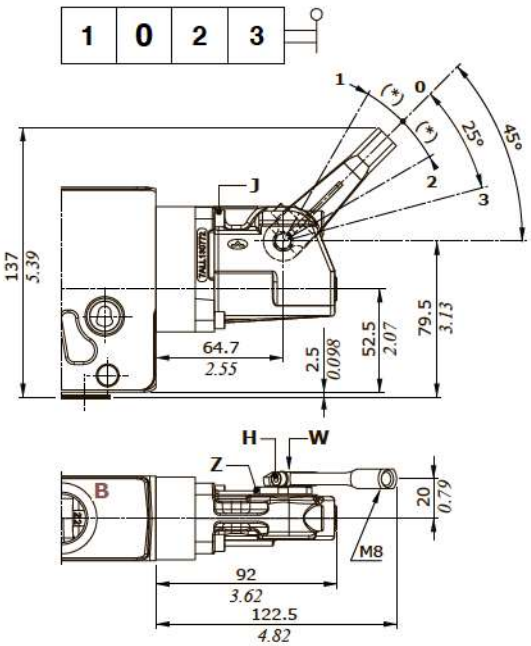
**LQSL type**
Without lever



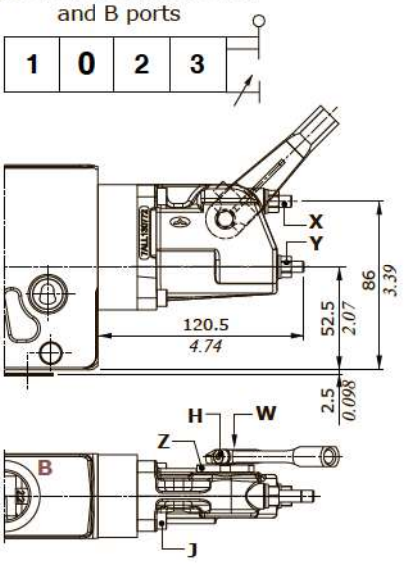

**Wrenches and tightening torques**
H = allen wrench 3 - 6.6 Nm *(4.9 lbft)*
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
X = allen wrench 3
Y = wrench 10 - 9.8 Nm *(7.2 lbf)*
Z = wrench 29 - 24 Nm *(17.7 lbf)*
W = wrench 8

### Lever boxes for HF section

**LQ type**

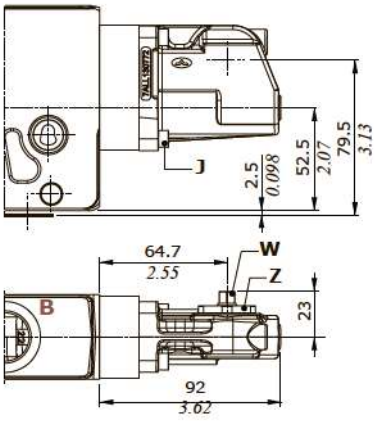



**LQF3 type**
Spool stroke limiter on A and B ports




Angle (*)
15° with 8EZ3.. type controls
14° with 13EZ3.. type controls

**LQSL type**
Without lever



## Working section

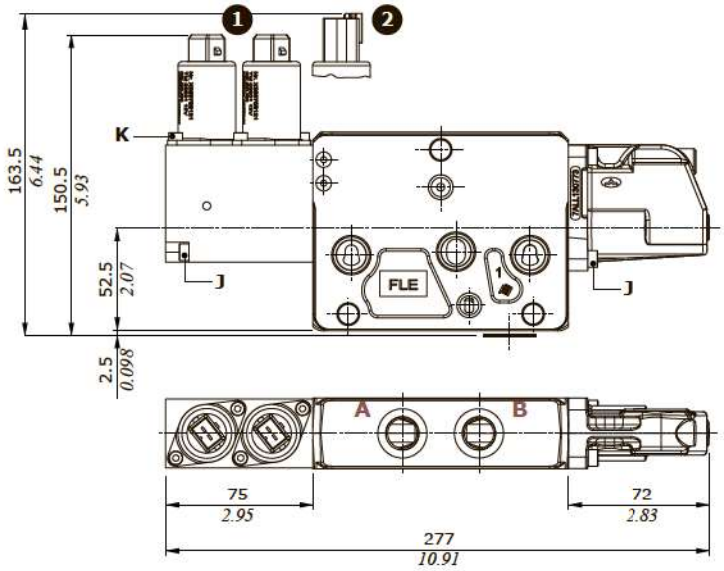
### Complete one-side electrohydraulic control

Controls already comprehensive of endcap on B side.

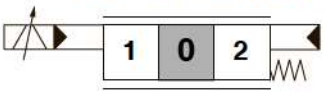
**Control Types**

1 : With AMP JPT connector - AMP JPT mating connector, code: 5CON003
2 : With Deutsch DT04 connector - Deutsch DT06-2S mating connector code: 5CON140031

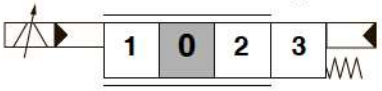
**For Standard and HP sections**




**8EZ3 - 8EZ34 types**

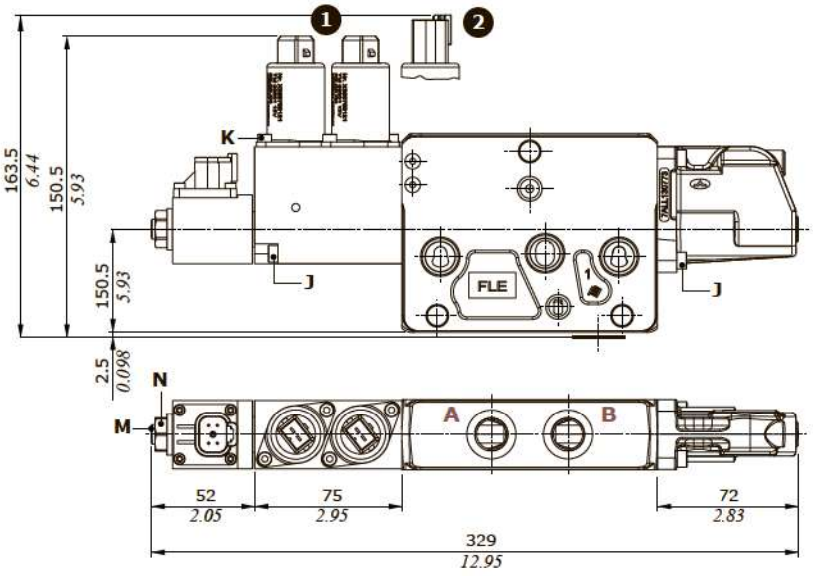



**13EZ3 - 13EZ34 types**

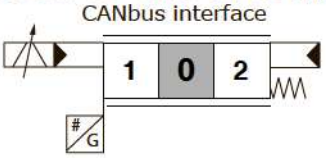



**Wrenches and tightening torques**

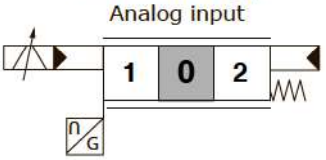
J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
K = allen wrench 3 - 5 Nm *(3.7 lbft)*
M = allen wrench 4 - 9.8 Nm *(7.2 lbf)*
N = wrench 17 - 9.8 Nm *(7.2 lbf)*




**8EZ3SPSD - 8EZ34SPSD types**
CANbus interface




**8EZ34SPSL type**
Analog input



## Complete one-side electrohydraulic control

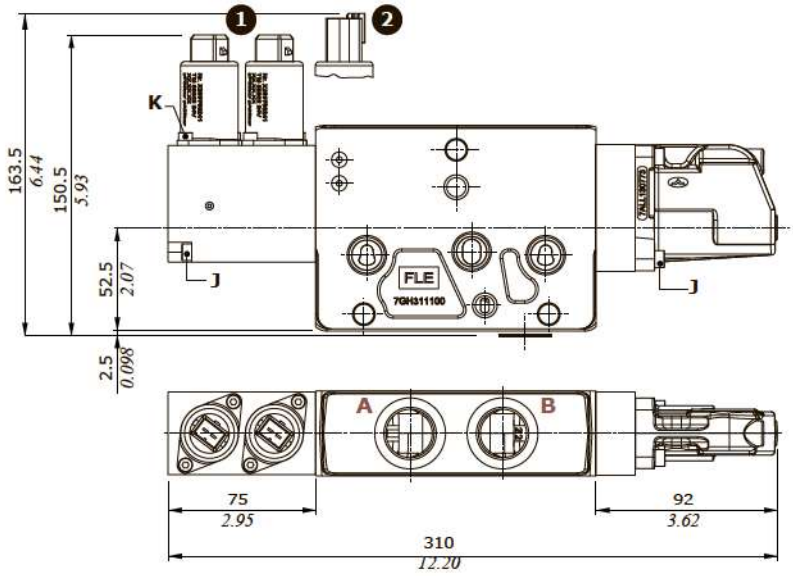
Controls already comprehensive of endcap on B side.

**Control Types**

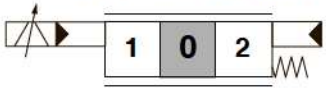
❶ : With AMP JPT connector - AMP JPT mating connector, code: 5CON003

❷ : With Deutsch DT04 connector - Deutsch DT06-2S mating connector code: 5CON140031

**For HF section**

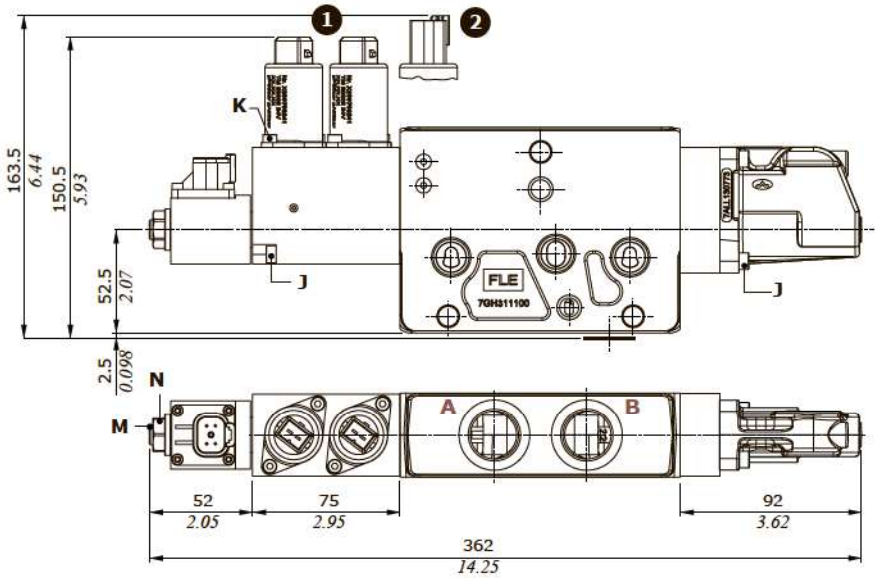



**8EZ3 - 8EZ34 types**



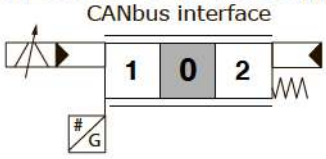

**Wrenches and tightening torques**

J = allen wrench 4 - 6.6 Nm *(4.9 lbft)*
K = allen wrench 3 - 5 Nm *(3.7 lbft)*
M = allen wrench 4 - 9.8 Nm *(7.2 lbf)*
N = wrench 17 - 9.8 Nm *(7.2 lbf)*



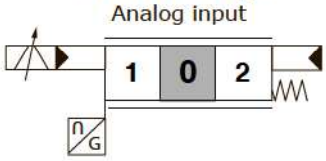

**8EZ3SPSD - 8EZ34SPSD types**

CANbus interface



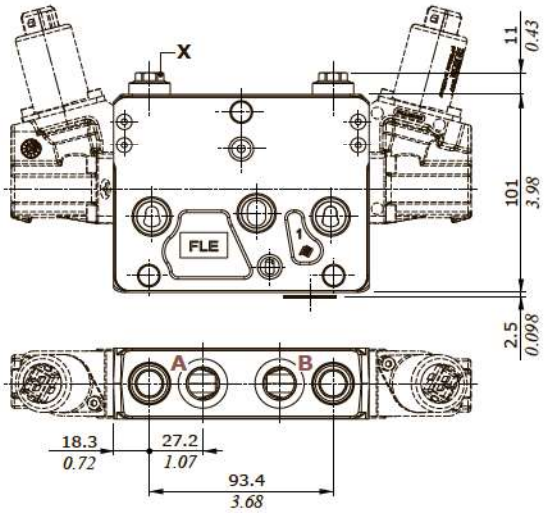

**8EZ34SPSL type**

Analog input



## Working section

### Port valves



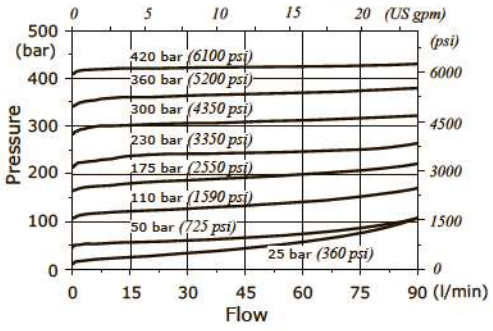

**U type**

**C type**

**Wrenches and tightening torques**
X = wrench 13 - 24 Nm *(17.7 lbf)*

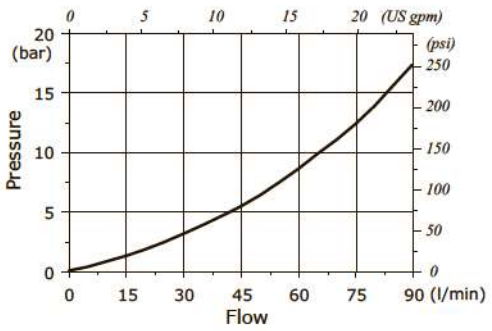
**U type: antishock valves with prefill**

**Setting example**
(10 l/min - *2.6 Us gpm*)

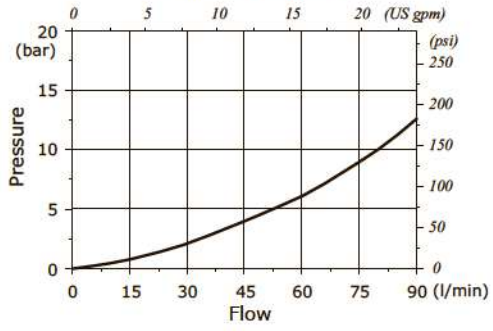



**C type: anticavitation valves**

**Pressure drop**




**Pressure drop**
(in anticavitation)



## Outlet section part ordering codes

**DPX100 / RF (04) - ..... - FPM**

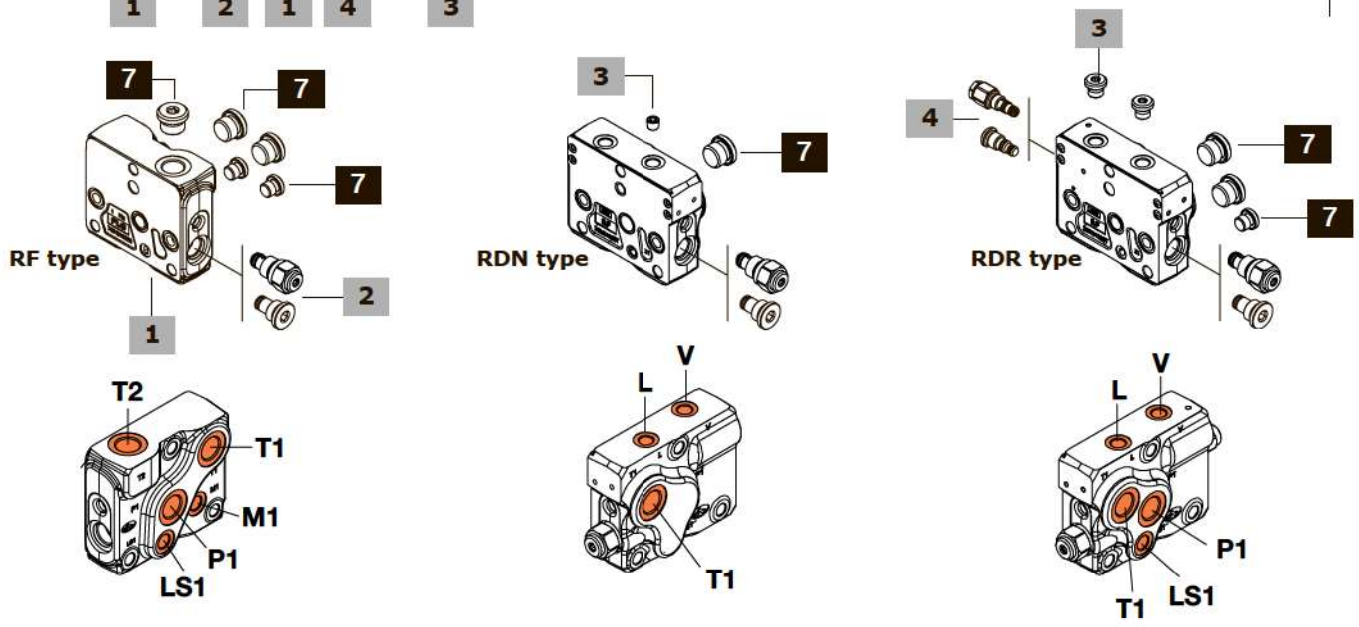
1 1 5 6

**DPX100 / RDN (VBT) - NOTAP(VL) - ..... - FPM**

1 2 3

**DPX100 / RDR (VBT / 03 / RT) - TAP(VL) - ..... - FPM**

1 2 1 4 3




### 1 Outlet section kit* page 84

The codes are referred to sections with FPM o-ring seals
Outlet section is the same type for standard and High Pressure valve
**For mechanical, hydraulic and solenoid controls**
TYPE: **DPX100/RF-FPM** CODE: YFIA204300V
DESCRIPTION: With T2 upper port port
TYPE: **DPX100/RF-BSP34-FPM** CODE: YFIA204400V
DESCRIPTION: As previous one with G3/4 port
TYPE: **DPX100/RF(04)-FPM** CODE: YFIA204305V
DESCRIPTION: With T2 upper port and P1, T1, LS1, M1 side ports
**For electrohydraulic controls**
TYPE: **DPX100/RDN-FPM** CODE: YFIA204391V
DESCRIPTION: Without pressure reducing valve arrangement, T1 side and V-L upper ports
TYPE: **DPX100/RDN-BSP34-FPM** CODE: YFIA204491V
Description: As previous one with G3/4 T1 port
TIPO: **DPX100/RDR-FPM** CODE: YFIA204307V
DESCRIZIONE: With pressure reducing valve arrangement, V and L upper ports, T1 side port
TYPE: **DPX100/RDR(03)-FPM** CODE: YFIA204302V
DESCRIPTION: With pressure reducing valve arrangement, V and L upper ports, P1, T1, LS1 side ports
TYPE: **DPX100/RDR(03)-BSP34-FPM** CODE: YFIA204403V
DESCRIPTION: As previous one with G3/4 P and T ports
**Note**: for outlet sections with different port arrangement please contact Sales Dpt.

### 2 Bleed valve page 85

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **(-)** | X138810000V | Bleed valve |
| **(VBT)** | XTAP525320V | Valve blanking plug |

### 3 Pilot and drain *

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **NOTAP(VL)** | 4TAP310007 | M10x1 DIN906 plug, for external drain |
| **(-)** | XTAP719160 | G1/4 plug, nr.2 for int.pilot and drain, FPM o-ring seal |

### 4 Pressure reducing valve page 85

The codes are referred to parts with FPM o-ring seals

| TYPE | CODE | DESCRIPTION |
|---|---|---|
| **(-)** | X219740035V | Pressure reducing valve, 30-45 bar *(435-650 psi)* |
| **(RT)** | XTAP418350V | Valve blanking plug, FPM o-ring seal |

### 5 Section threading

Only specify if it is different from BSP standard (see page 6)

### 6 Seals

| TYPE | DESCRIPTION |
|---|---|
| **FPM** | FPM o-ring seals; standard |
| **NBR** | NBR o-ring seals |

### 7 Parts *

The codes are referred to parts with FPM o-ring seals

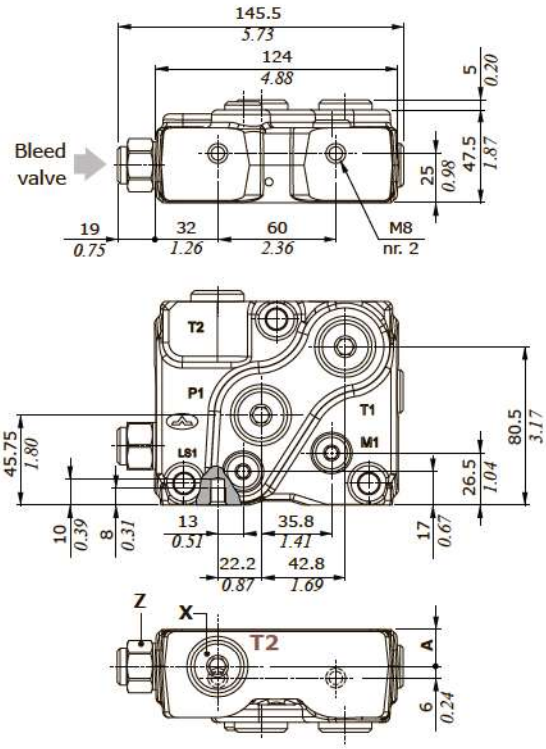
| CODE | DESCRIPTION |
|---|---|
| XTAP727200 | G1/2 plug, nr.1 for RF and RDN section, nr.2 for RDR(03) section, nr.3 for RF(04) section |
| XTAP732220 | G3/4 plug, for qty see G1/2 plug |
| XTAP719160 | G1/4 plug, nr.1 for RDR(03) section, nr.2 for RF(04) section |

NOTE (*): *Codes are referred to **BSP** thread.*
NOTE (-): "TYPE" omitted in outlet section description

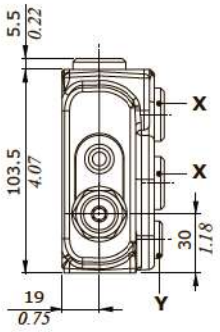
## Outlet section

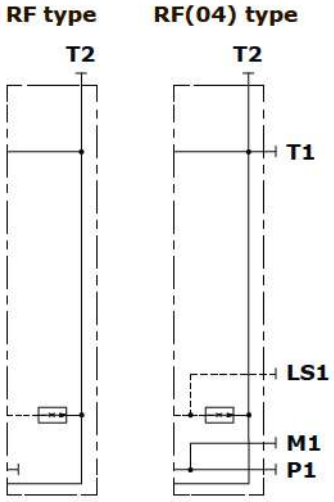
### Dimensions and hydraulic circuit

#### Example of RF(04) outlet section



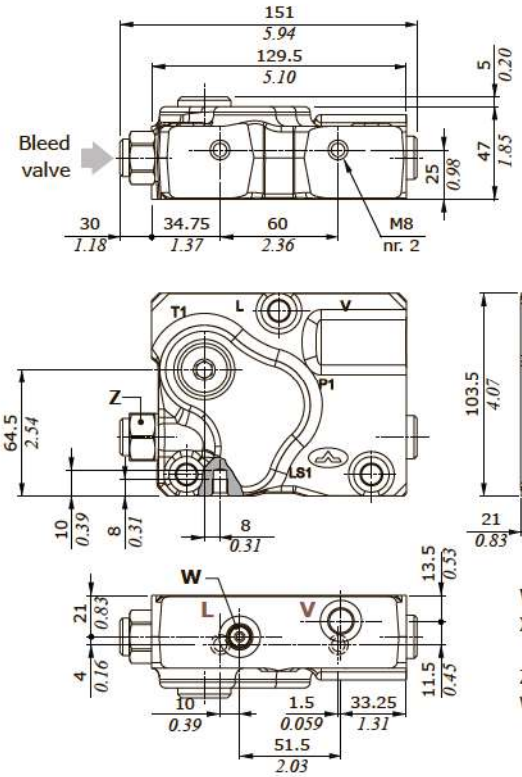

**Wrenches and tightening torques**
X = allen wrench 8 - 24 Nm *(17.7 lbf)*
Y = allen wrench 6 - 24 Nm *(17.7 lbf)*
Z = wrench 24 - 42 Nm *(31 lbf)*

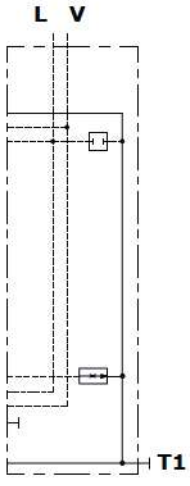



| OUTLET SECTION TYPE | A | |
|---|---|---|
| | mm | *in* |
| T2 standard thread | 19 | *0.75* |
| T2 with G3/4 thread | 23 | *0.91* |

#### Example of RDN outlet section




**Wrenches and tightening torques**
X = allen wrench 8 - 24 Nm *(17.7 lbf)* - (G1/2)
= allen wrench 12 - 42 Nm *(31 lbf)* - (G3/4)
Z = wrench 24 - 42 Nm *(31 lbf)*
W = allen wrench 5 - 9.8 Nm *(7.2 lbf)*