

HIDROSIB

S.A.



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240 l/min	Hydraulic directional control valves Dn 16	Fc - 3
315 bar		

GENERALITIES

4-way, 2 or 3 position (4/2 or 4/3) directional control valves

Direct operated:

manually, by hand lever

hydraulically, from a remote pilot source

Pilot operated:

solenoid operated, by a DE 6 pilot valve, electrically controlled.

Spring or pressure return to normal position. Indexable at manual operated valves.

Different control functions, obtained by different spools.

Subplate mounting surface conforming to ISO 4401.

PERFORMANCE DATA

GENERAL

Fixing: face mounting

Mounting position: function 11: horizontally; the other functions: unrestricted.

Temperature range of ambient medium: -20°C.....+50°C

HIDRAULIC

Maximal pressure at ports P,A,B : 315 bar

Maximal pressure at port T : 250 bar - pt Y ext

160 bar - pt Y intern

Flow: see figures 1- 3

Fluid :

Fluid type: additived mineral oil.

Viscosity range: 10.....500 cSt

Temperature range: -25°C.....+80°C

Filtration : < 25 μm

SPECIFIC TO DEH 16 VALVES

Main valve pilot pressure: min 10 bar

Main valve shift volume:

For 2 positions

for 3 positions

8,9 cm³

4,45 cm³

Main valve response time:

solenoid energized:	50 bar	200 bar
	30 .. 50 ms (c.c)	15 ... 25 ms (A.C)
no solenoid energized	50 bar	200 bar
	40 .. 60 ms (C.C)	40 ... 60 ms (A.C)

SOLENOID CHARACTERISTICS

Type of current:

Direct current (DC)

Alternating current (AC)

Voltage, Un

**12 V
24 V**

**110 V/50Hz
220 V/50Hz**

Voltage admissible deviation: $\pm 10\%$

Relative duty cycle : Da100%

Maximum switch frequency per hour: 3600

Power input at 20 °C :

solenoid energized :	35 W	120VA
no solenoid energized:	35 W	40 VA

***Pilot valve response time:**

solenoid energized :	20... 60 ms	5 ...20 ms
no solenoid energized :	10 ... 60ms	10 ... 60 ms

Maximal admissible pressure at solenoid chamber: 160 bar

Type of connection: plug-in connector, conforming to ISO 4400

Type of protection : IP65; conforming to STAS 5325 (DIN 40050)

NOTE :

*** Response time will vary with valve hydraulic power.**

CHARACTERISTIC CURVES

Pressure drop vs. flow rate, $\Delta p = f(Q)$

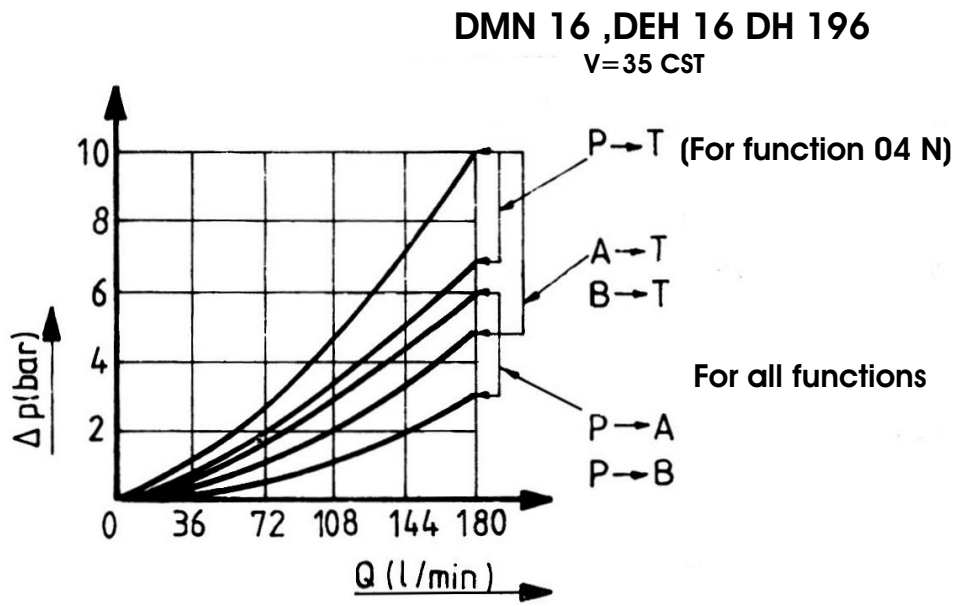


Fig. 1

Admissible flow rate vs. working pressure

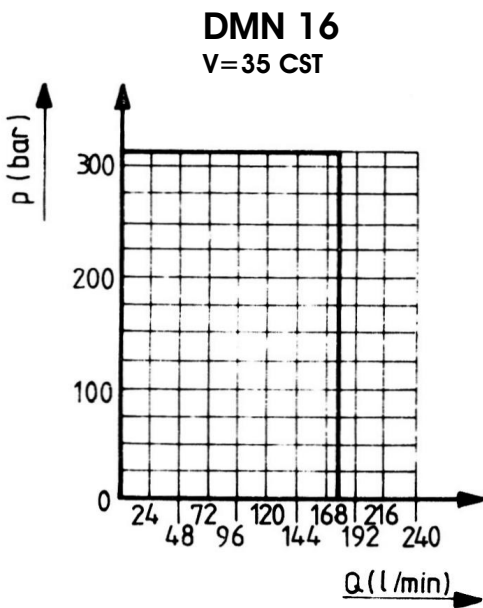


Fig. 2

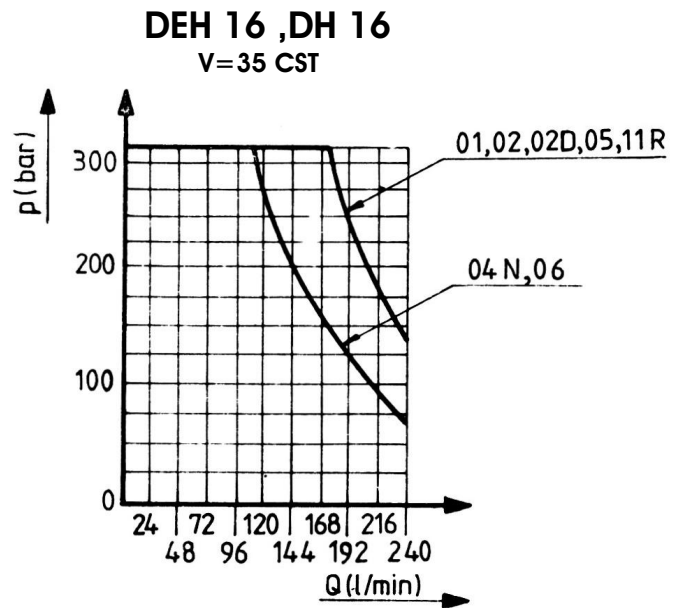


Fig. 3

VALVE FUNCTIONS

Distributional valve functions

Table .1

Spool type	Symbol	Lap	Symbol	Lap
	DH		DMN	
01		+		
02				+
02D				-
04	—			+
04N		-		-
05				
06				

Table .2

Spool type	Simplified symbol	Lap	DEH					
			Voltage					
			012/00	024/00	096/00	190/00	110/50	220/50
01		+		PY [•]			XY	PY [•]
02				XY [•]			XY	XY [•]
02D				PY [•]				PY
04N		-		PY [•]				
05				PY [•]			XY	PY [•]
06				XY [•]				XY
11R				XY [•]			XY	

Regarding tables 1 and 2:

1. The lap during shifting represents the mode of effecting the connection between P,A,B,T channels during spool travel

Overlap (+) : during shifting, channels don't intercommunicate

Underlap (-) : during shifting channels intercommunicate

2.Preferred

DIMENSIONS

DMN 16 type, hand lever operated valves

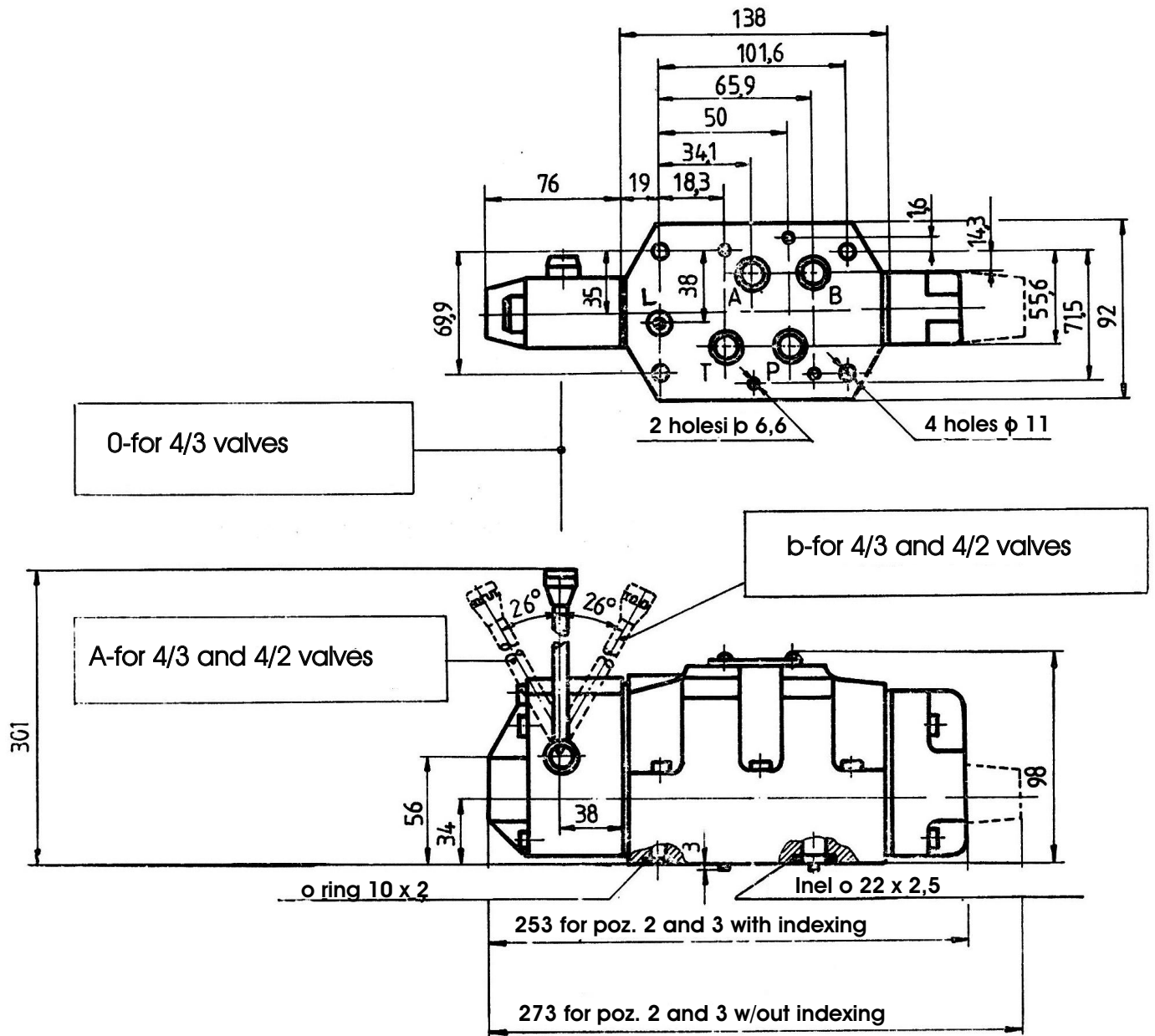
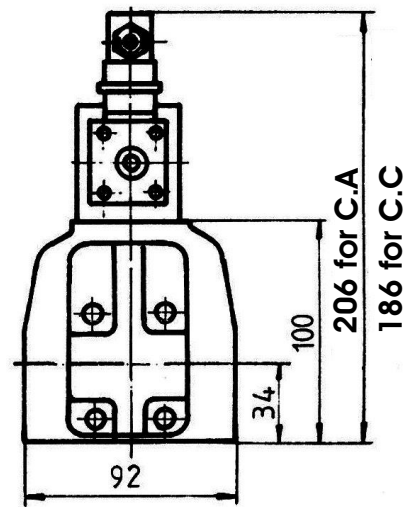
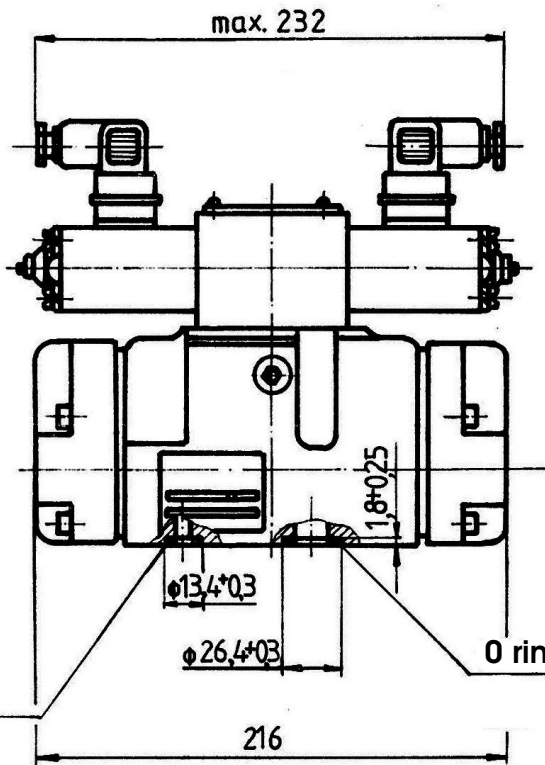
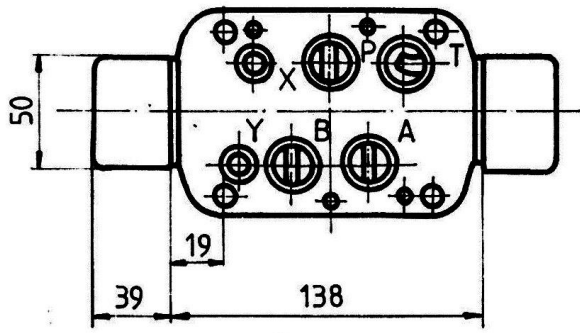


Fig. 4

Weight : 9.5 kg

DEH 16 type, solenoid piloted valves



Weight : 11,5 kg

DH 16 type , direct oil operated valves

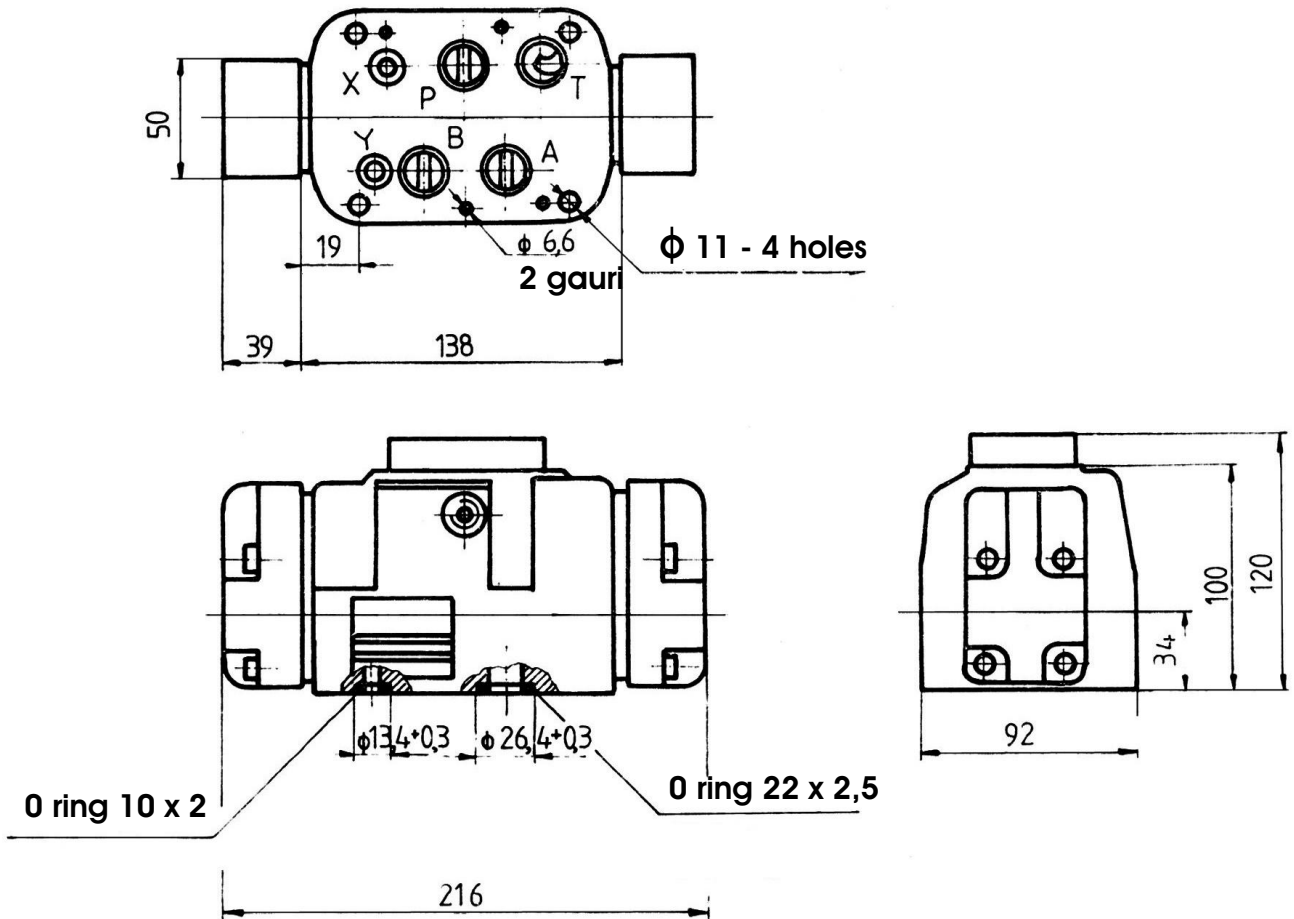


Fig. 6

Weight : 9,7 kg

SUBPLATES

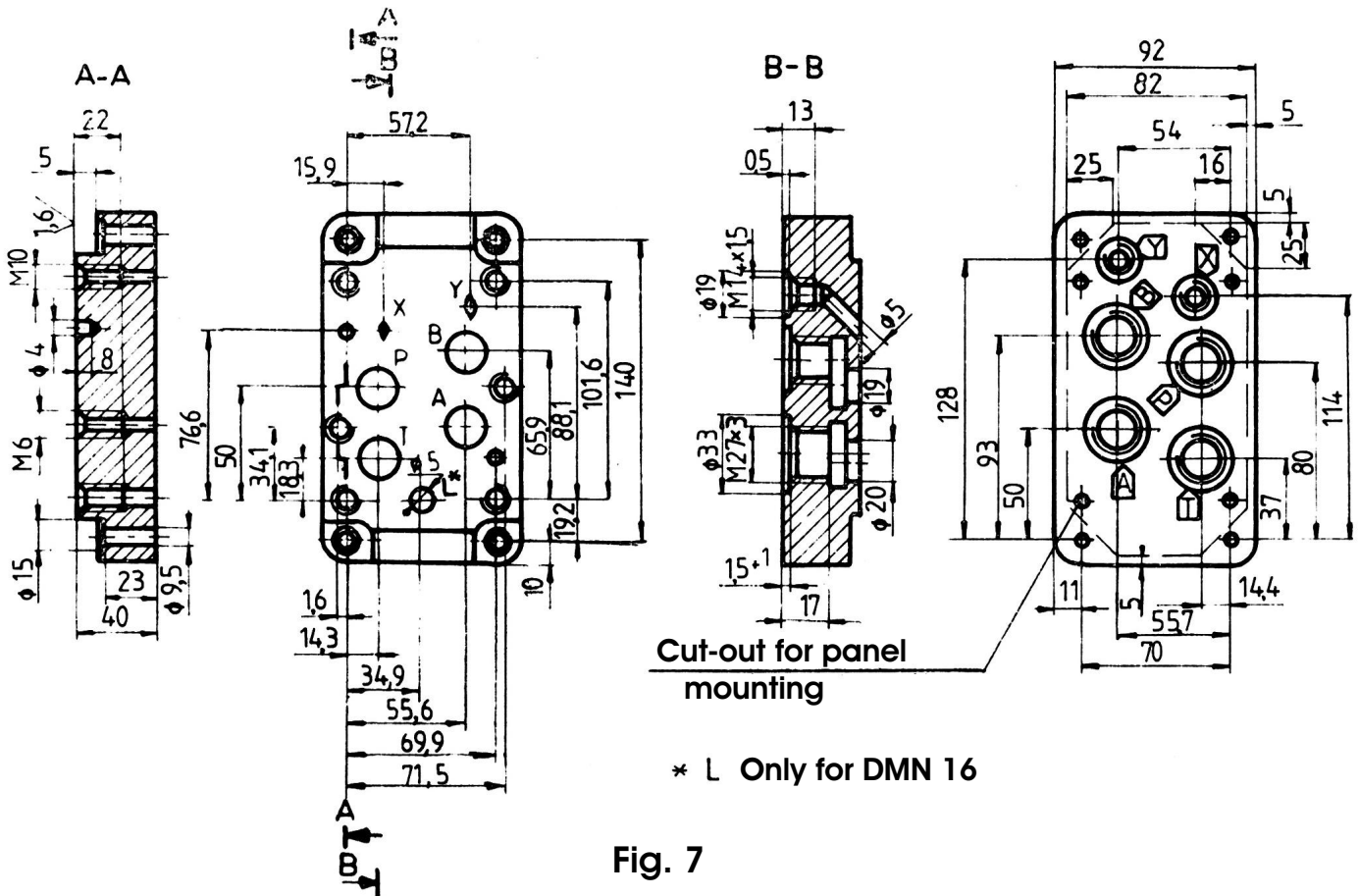


Fig. 7

L-port only in DMN 16 si DEH 16 type directional control valves

Model code PBD 16-1

Weight : 3,200 kg

fixing screws M10x60 SR ISO 4762:1993, gr.10.9. Tightening torque 50^{+10} daNm

fixing screws M6x60 SR ISO 4762:1993, gr.10.9. Tightening torque 11^{+3} daNm

Screws delivered separately.

MODEL CODE

123-4-567**-8**-9**/10**-11**-12**/*

* For climatic protected model, add /T1 or t2 at the end of the model code.

** Only for DEH 16 valves

1 . D - Hydraulic directional control valve

2 . Valve actuation

MN - hand lever operated, for DMN 16

EH - electrically-hydraulically operated, for DEH 16

H - direct oil operated for DH 16

3 . 16 - Nominal bore

4. Valve functions conforming to table.

5. Shifting time adjusting:

-w/out

T-with (only for DEH 16 and DH 16)

o-Series (only for DMN 16)

6. Control flow limiting:

-w/out

T-with (only for DEH 16)

o-Series (only for DH 16)

7. Differential actuating of spool

-w/out

D-with

8. Operating directional flow connections

XY

PT(except for open centre or underlap functions)

PY

XT

10, Voltage (v) frequency (Hz)

DC -012/00

-024/00

AC -20/50

-110/50

-220/50

11.S-Plug-in connector

12.O-Series