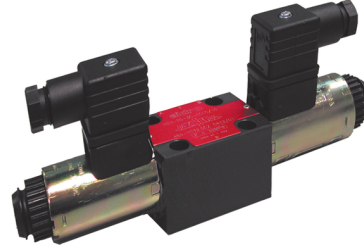


ISO 03 HYDRAULIC VALVES type HD3-ES/20 DIRECTIONAL CONTROL - SOLENOID OPERATED

- 4-way solenoid operated directional valves
 - ISO 03 interface, light execution (solenoids ISO 02)
 - Oil immersed solenoids for AC and DC current
 - Emergency pin for manual override
 - Maximum flow rate: 60 l/min
 - Maximum pressure (port P-A-B): 320 bar
 - Maximum pressure (port T): 160 bar
 - 100% duty cycle
 - Suitable for mineral oil according to ISO 18/16/14 filtration class or better.
- Recommended viscosity range: 10 to 60cSt



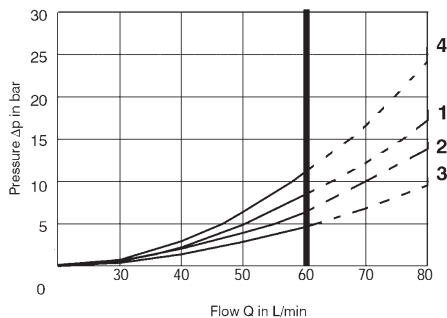
SPOOL TYPE**	
0	
1	
3	
4	

DRIVE ARRANGEMENT	
C	
LL	
ML	

ORDERING CODE	
HD3 – ES – 3 C – * / 20	
HD3	ISO 03 4-way directional control valve
ES	Electrically controlled, solenoid ISO 02
3	Spool type (see table)
C	Drive arrangement (see table)
*	b: only for versions LL, ML, LM solenoid "b"
B02 – *	
B02	Coil for HD3-E2 valves (plugs according to ISO 4400) Admissible voltage variation: -10% +5%
012C	12V DC – 2,4A
024C	24V DC – 1,2A
-115A	115V 50/60Hz AC – 0,30A
-230A	230V 50/60Hz AC – 0.15A

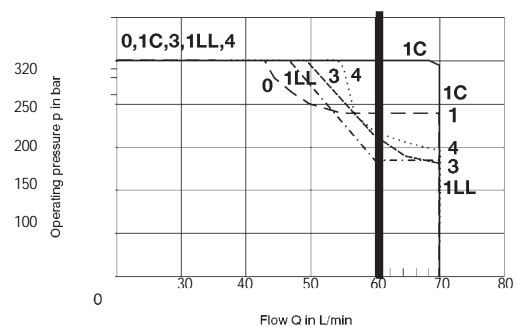
TYPICAL DIAGRAMS

Typical Δp -Q curves for valves HD3-ES/20 in standard configuration, with mineral oil at 36cSt and 50°C for flow P→A,B, A,B→T and P→T



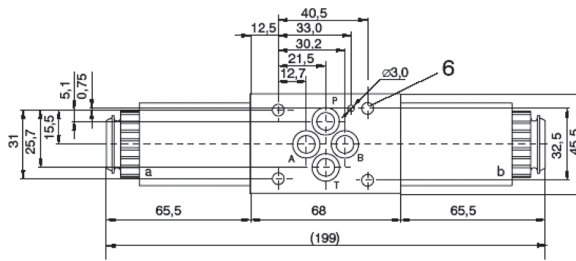
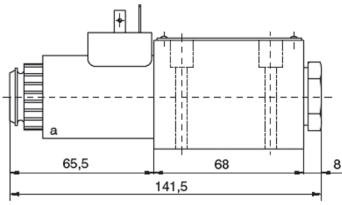
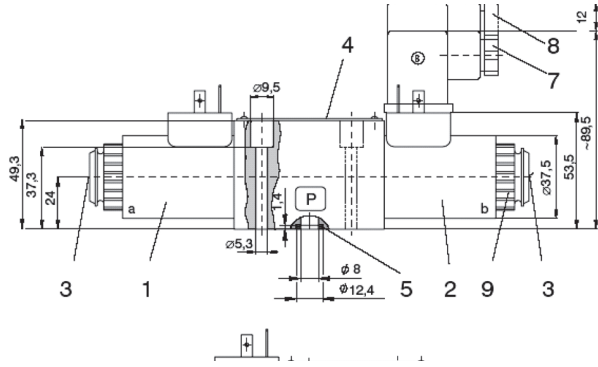
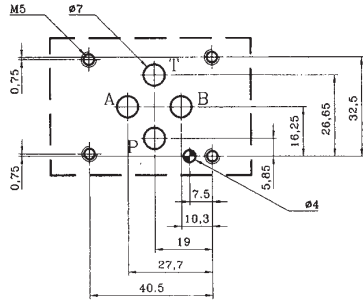
3) Spool 1LL P→A,B and spool 0 A,B→T 2) Spools 0,1,3 P→A,B and spool 1 A,B→T
4) Spool 4 P→A,B and A,B→T

Typical p-Q curves of operating limits for maximum hydraulic power transferred by valves HD3-ES/20



Input voltage 5% less than nominal rate

ISO 03 Interface



Fixing bolts: n.4 M5 x 45 (not included) — Tightening torque 8Nm
Valve mass: 1,40 kg (with 1 coil) — 1,60 kg (with 2 coils)

Subject to technical and dimensional changes without notice

1	Body	6-7	ISO 4400 plugs (not included)
2-3	Coils	8	Ring nut
4	Spring	9	Emergency pin
5	Spool		

