XD2A... / XD2C... Solenoid operating proportional valves Cetop 2

XD2A../XD2C.. series valves are used for controlling fluid direction and flow rate as a function of the supply current to the proportional control solenoid.

Any valve Δp variation causes a change in the set flow rate; however the valve itself ensures a high level internal compensation maintaining constant a regulated flow.

The XD2 cetop valve could be used for accurate proportional controls with compact size, reducing weight.
These valves can be also combined with Mini Powerpacks type MR/MC/FP creating compact solutions. Il can be also used on a Cetop 3 interface using a reduction plate type BS32001.

XD2...	
Standard connectors	Cap. I • 20
REMSRA...	Cap. IX • 4
REMDRA...	Cap. IX • 7
CEPS	Cap. IX • 2
AM3H...	Cap. VIII • 12
BS32001	Cap. VII • 3

XD2A01N.. **XD2A03N..** **XD2C01N..** **XD2C03N..**

Ordering code

XD	Proportional valve
2	CETOP 2/NG04
*	**A** = Single solenoid **C** = Double solenoid
**	Type of spool (null position) **01** =  **03** = 
N	Flow path control (see symbols table) **N** = symmetrical
*	Flow rating l/min (Δp 5 bar) P → A/B (Δp 10 bar) P → A/B → T or P → B/A → T **1** = 1 l/min **3** = 3 l/min
*	Max. spool current **F** = 1.3 A **G** = 0.65 A
**	Variant: see Tab.1
2	Serial No.

Tab.1 - Variants

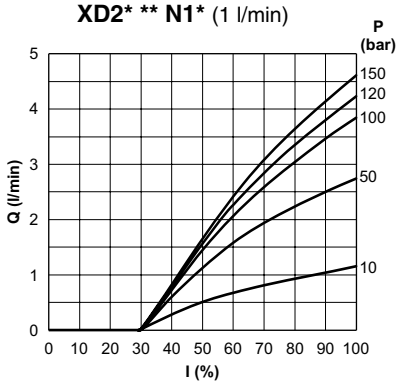
No variant (without connectors)	S1(*)
Emergency button	ES
Viton	SV

(*) Coils with Hirschmann connection supplied without connectors. The connectors can be ordered separately, Cap. I • 20.

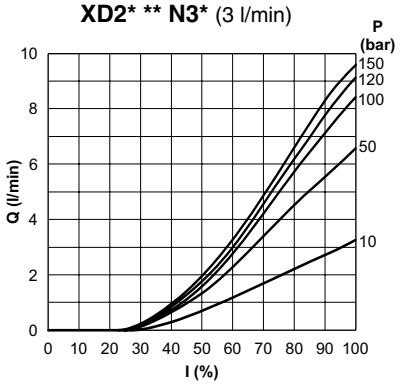
Input signal curves - flow rate

Characteristic curves Q/I: P→A/B →T or P→B/A→T

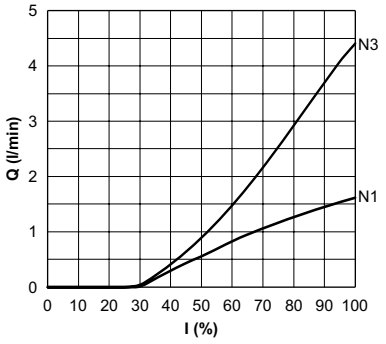
XD2* ** N1* (1 l/min)



XD2* ** N3* (3 l/min)

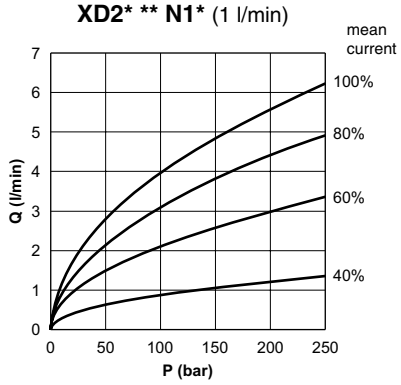


With compensator AM3H3VP108002

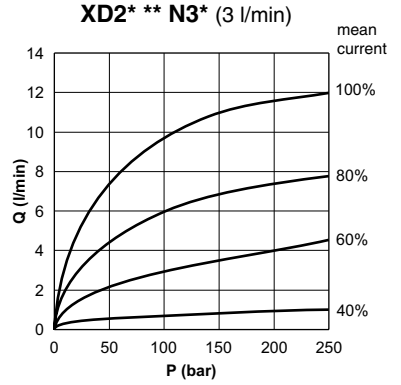


Power limits transmitted: P→A/B →T o P→B/A→T

XD2* ** N1* (1 l/min)



XD2* ** N3* (3 l/min)



The fluid used was a mineral oil with a viscosity of 46 mm²/s at 40°C.
The tests have been carried out at with a fluid of 40°C.

OPERATING SPECIFICATIONS

Max. operating pressure ports P/A/B *(1)*	250 bar
Max. operating pressure port T - for dynamic pressure see note *(2)*	250 bar
Nominal flow rate:(Δp 5 bar: P→ A/B) (Δp 10 bar: P→A/B→T or P→B/A→T)	1/3 l/min
Maximum regulated flow rate: (Δp 150 bar: P→A/B→T or P→B/A→T)	4.5/9.5 l/min
Flow rate gain	See diagrams
Hysteresis with connection P/A/B/T Δp = 5 bar (P/A)	≤ 13% of max. flow rate
Fluid viscosity	10 ÷ 500 mm²/s
Fluid temperature	-20°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 8 in accordance with NAS 1638 with filter $ß_{10}≥75$
Weight XD.2.A... (single solenoid)	1.0 Kg
Weight XD.2.C... (double solenoid)	1.37 Kg

• Operating specifications are valid for fluid with 46 mm²/s viscosity at 40°C, using the specified electronic control units.

Supply voltage	12VDC	24VDC
Supply tolerance	+/- 10%	
Supply voltage type	PWM (pulse width modulation)	
Frequence PWM or Dither	100-150 Hz	
Relative duty cycle	Continuous 100% ED	
Max. current	1.3A	0.65A
Solenoid coil resistance at 20°C (68°F)	5.5 Ohm	21.8 Ohm

ELECTRONIC CONTROL UNIT

REMSRA and REMDRA****
Card type control for single and double solenoid.
Recommended dither frequency 100 Hz.

CEPS
Electronic amplifier plug version
for single solenoid proportional valve (150Hz PWM frequency setting)

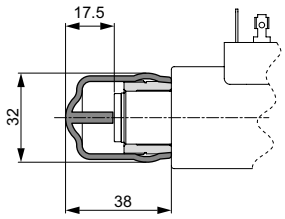
(1) **With AM3H compensator:** hysteresist guaranteed up to 150 bar on ports A and B.

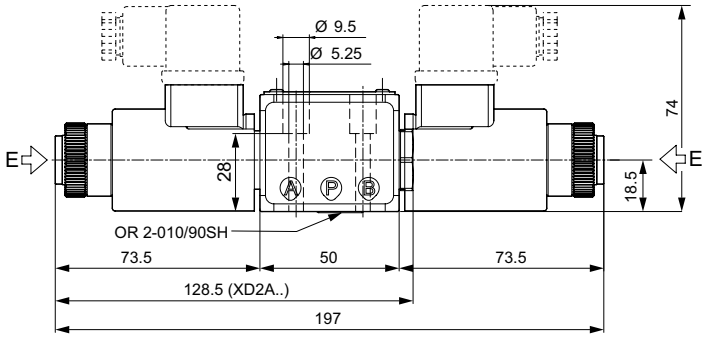
Without compensator: use of the valve allowed up to 150 bar.

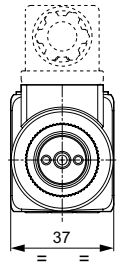
(2) Dynamic pressure allowed for 500000 cycles.

OVERALL DIMENSIONS

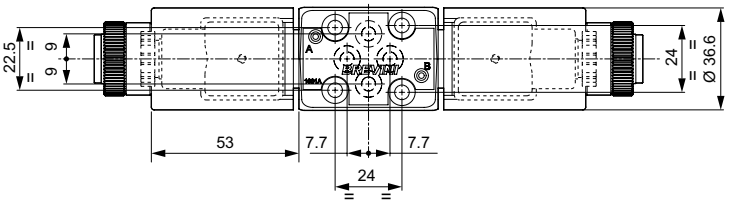
Variant ES: Emergency button.





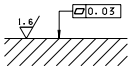


E: Manual emergency: if necessary, use a tool that does not damage the brass button.



Fixing screws UNI 5931 M5x35 (min. 8.8 material screws are recommended)
Tightening torque 5 Nm / 0.5 Kgm

Support plane specification



PROPORTIONAL SOLENOID

Type of protection (in relation to connector used)	IP 65
Insulation class wire	H
Weight	0,22 Kg
Surface treatment	FeZn5 UNI ISO 2081