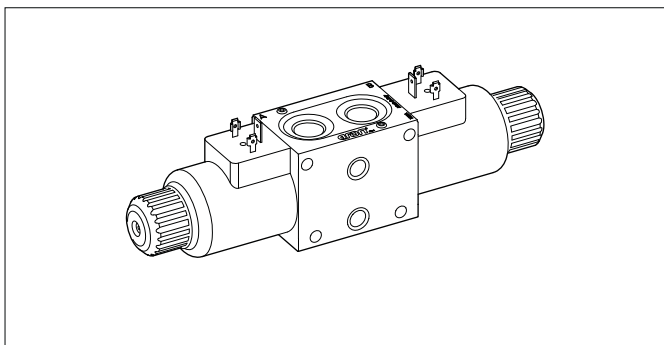




SOLENOID OPERATING PROPORTIONAL CONTROL BANKABLE VALVES



Connector to be ordered separately, see page 58.

ORDERING CODE

CX	Proportional control bankable valve
3	Size
*	A = Single solenoid C = Double solenoid
*	Body type: A = Ports G3/8" parallel B = Ports 9/16" - 18UNF parallel G = Presetting for modular valves (parallel) L = Ports G3/8" parallel (LS version)
**	Type of spool 01 =  03 = 
N	Symmetrical flow path control (see symbols table)
*	Flow rating l/min 1 = 3 l/min 2 = 10 l/min 3 = 15 l/min 4 = 20 l/min
*	Max. current at solenoid (1): E = 2.35 A - Special coil (9 VDC) F = 1.76 A (12 VDC) G = 0.88 A (24 VDC)
**	Variants (1-2): S1 = No variant SV = Viton ES = Emergency button (3) P2 = Rotary emergency (3) R5 = Rotary emergency 180° (3)
2	Serial No.

- (1) Coils technical data, see page 63.
Voltage codes are not stamped on the plate, their are readable on the coils
(2) Connector to be ordered separately, see page 58;
(3) Emergency (see page 28)

CX3 series valves are used for controlling fluid direction and flow rate as a function of the supply current to the proportional control solenoid.
The individual valve is available in two different sizes: G3/8" or 9/16" - 18UNF.
The body valve is white zinc plated.

FEATURES

Max. operating pressure ports P/A/B	250 bar
Max. operating pressure ports T (Pressure dynamic allowed for 2 millions of cycles)	250 bar
Regulated flow rate	3 / 10 / 15 / 20 l/min
Relative duty cycle	Continuous 100% ED
Type of protection (Hirschmann coil)	IP 66
Fluid viscosity	10 ÷ 500 mm²/s
Fluid temperature	-20°C ÷ 75° C
Ambient temperature	-20°C ÷ 60°C
Max. contamination level (filter $\beta_{10} \geq 75$)	ISO 4406:1999: class 19/17/14 NAS 1638: class 8
Weight with single solenoid (CX3A..)	1.389 kg
Weight with double solenoid (CX3C..)	1.778 kg

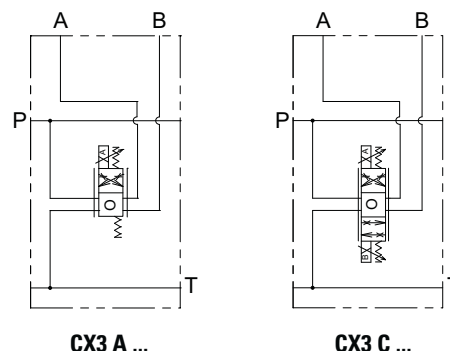
Solenoid	@ 9Vdc	@ 12Vdc	@ 24Vdc
Current supply	PWM (pulse width modulation)		
Max. current solenoid	2.35 A	1.76 A	0.88 A
Solenoid coil resistance at 25°C (77°F)	2.25 Ohm	4.0 Ohm	16.0 Ohm
PWM or superimposed dither frequency	100 ÷ 150 Hz		

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

Accessories

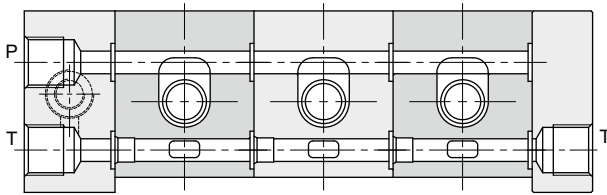
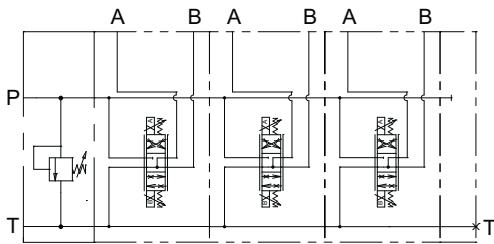
REMSRA..	Card type control for single and double solenoid
REMDRA..	Electronic amplifier plug version for single solenoid
CEPS...	Electronic module for integrate control of proportional valves and ON/OFF
MAV	Joystick with standard handle
JMPEIOM700101	Joystick with standard handle
JMPIUOM700138	Joystick Person present handle

HYDRAULIC SYMBOLS



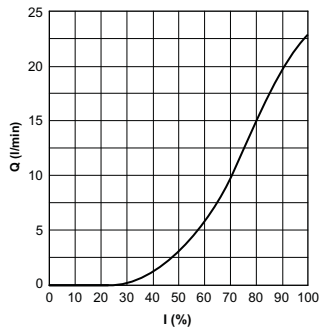
HYDRAULIC SYMBOLS AND INSTRUCTION OF CONNECTION

PARALLEL CONNECTION

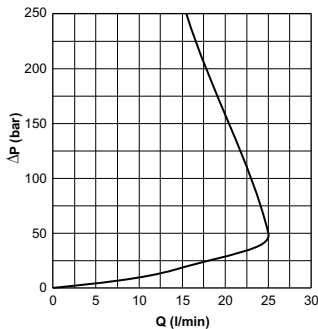


DIAGRAMS

INPUT SIGNAL
CX3.01N4... (DP 100 bar)



POWER LIMITS TRANSMITTED
CX3.01N4...

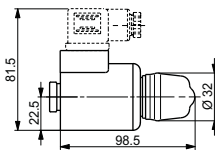


The fluid used is a mineral based oil with a viscosity of 46 mm²/s at 40°C.
The tests have been carried out at with a fluid of a 40°C.

VARIANTS

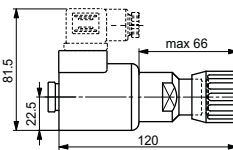
"ES"

Manual emergency



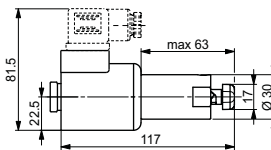
"P2"

Rotary emergency



"R5"

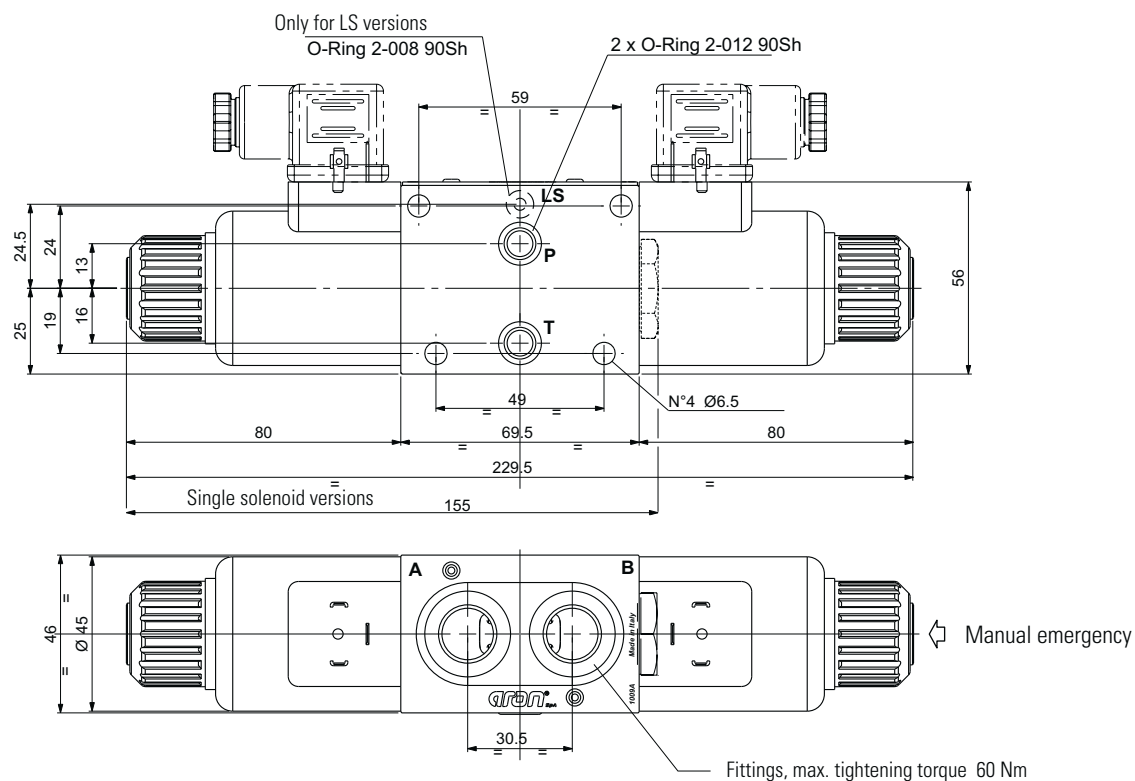
Rotary emergency 180°



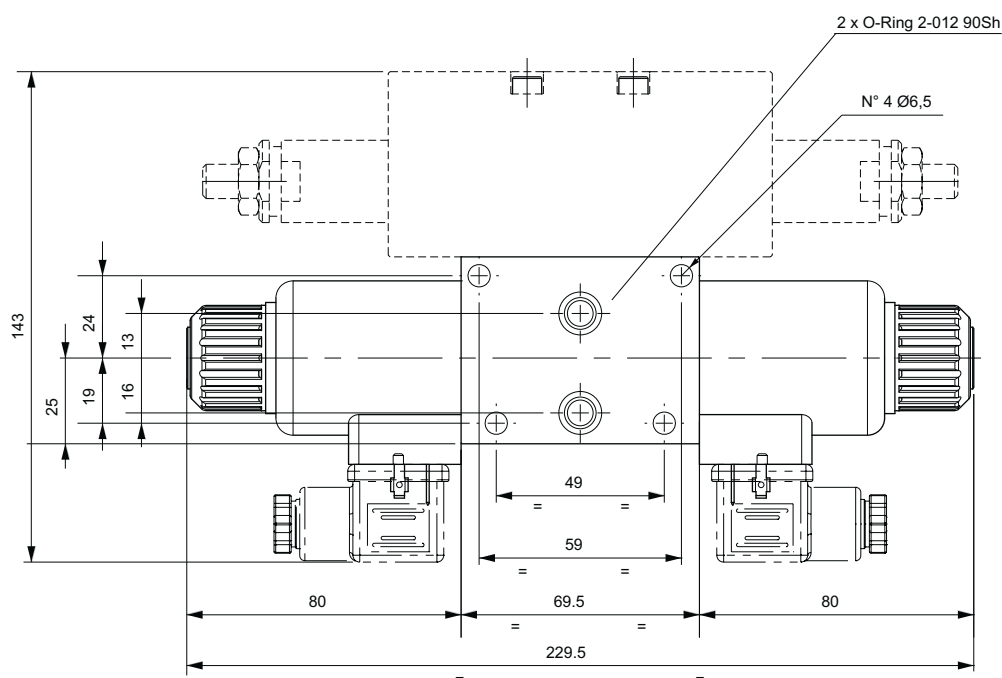
Emergency P2 and P5, tightening torque max. 6÷9 Nm (CH n. 22)

OVERALL DIMENSIONS

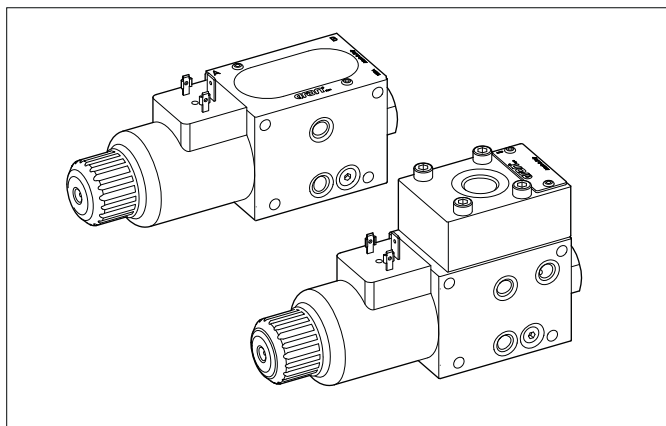
Parallel body



Parallel body Presetting for modular valves



OPEN LOOP PROPORTIONAL PRESSURE COMPENSATED BANKABLE FLOW REGULATORS



Connector to be ordered separately, see page 58.

ORDERING CODE

CXQ	Open loop 3 way proportional compensated flow regulator for module units and bankable valves
3	Size
C	3 way compensation
*	P = 3 way (external excedence Line/ priority function) T = 3 way (internal excedence to T)
*	Nominal flow rates H = 15 l/min I = 25 l/min
D	With decompression
*	Max. current at solenoid (1): E = 2.35 A - Special coil (9 VDC) F = 1.76 A (12 VDC) G = 0.88 A (24 VDC)
**	Variants (1-2): S1 = No variant L7 = emergency lever (3) P2 = Rotary emergency (3) R5 = Rotary emergency 180° (3)
2	Serial No.

- (1) Coils technical data, see page 63.
Voltage codes are not stamped on the plate, their are readable on the coils
(2) Connector to be ordered separately, see page 58;
(3) Emergency (see page 32)

The open loop proportional flow regulator 3 way compensated with priority function is designed to regulate flow in proportion to an applied electrical current (REM, MAV or CEPS power amplifier).

Flow regulation is independent both from load – P_{OUT} port – and pump flow variations. Load compensation is achieved by a spool compensator, which holds the pressure drop constant across the proportional spool.

Operating specifications and overall size make this valve suitable to interlock to module units and bankable valves in order to combine a proportional control with directional control typical of bankable systems.

The body valve is white zinc plated.

FEATURES

Max. operating pressure ports P _{in} / P _{out} / E	250 bar
Max. operating pressure ports T (Pressure dynamic allowed for 2 millions of cycles)	250 bar
Regulated flow rate	15 / 25 l/min
Decompression drain flow	max 0.7 l/min
Relative duty cycle	Continuous 100% ED
Type of protection (Hirschmann coil)	IP 66
Flow rate gain	See diagram "Input signal flow"
Fluid viscosity	10 ÷ 500 mm ² /s
Fluid temperature	-20°C ÷ 75° C
Ambient temperature	-20°C ÷ 60°C
Max. contamination level (filter β ₁₀ ≥ 75)	ISO 4406:1999: class 19/17/14 NAS 1638: class 8
Weight version CXQ3CP..	2.25 kg
Weight version CXQ3CT..	1.75 kg

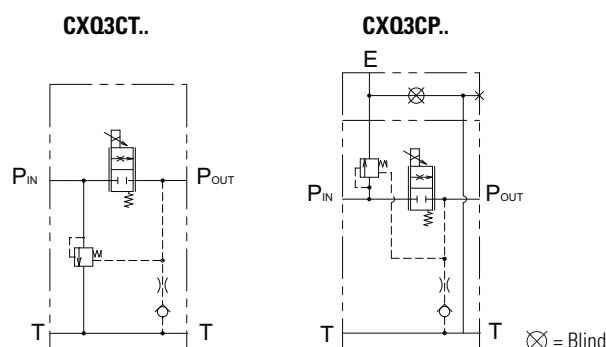
Solenoid	@ 9Vdc	@ 12Vdc	@ 24Vdc
Current supply	PWM (pulse width modulation)		
Max. current solenoid	2.35 A	1.76 A	0.88 A
Solenoid coil resistance at 25°C (77°F)	2.25 Ohm	4.0 Ohm	16.0 Ohm
PWM or superimposed dither frequency	100 ÷ 150 Hz		

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

Accessories

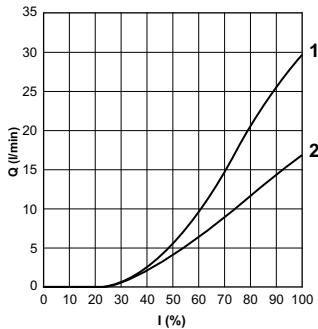
REMSRA..	Card type control for single solenoid
CEPS...	Electronic amplifier plug version for single solenoid
MAV	Electronic module for integrate control of proportional valves and ON/OFF
JMPEIOM700101	Joystick with standard handle
JMPIUOM700138	Joystick Person present handle

HYDRAULIC SYMBOLS

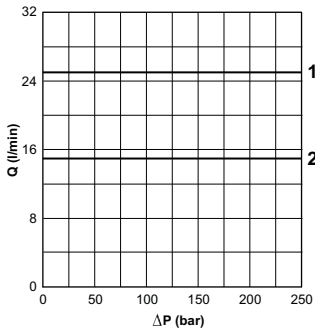


DIAGRAMS

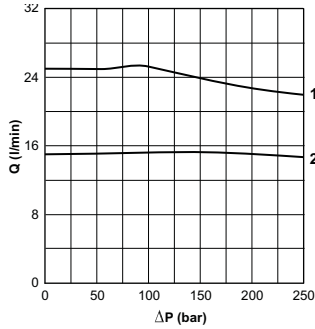
INPUT SIGNAL FLOW



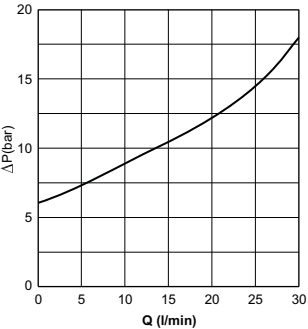
FLOW RATE BACK PRESSURE ON PRIORITY LINE



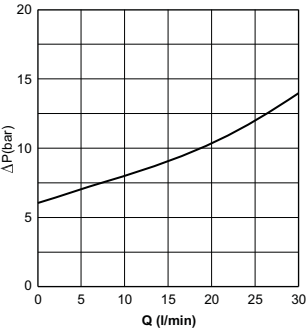
FLOW RATE BACK PRESSURE ON SECONDARY LINE



**ΔP PUMP FLOW P_{IN} → T
CXQ3CT ...**



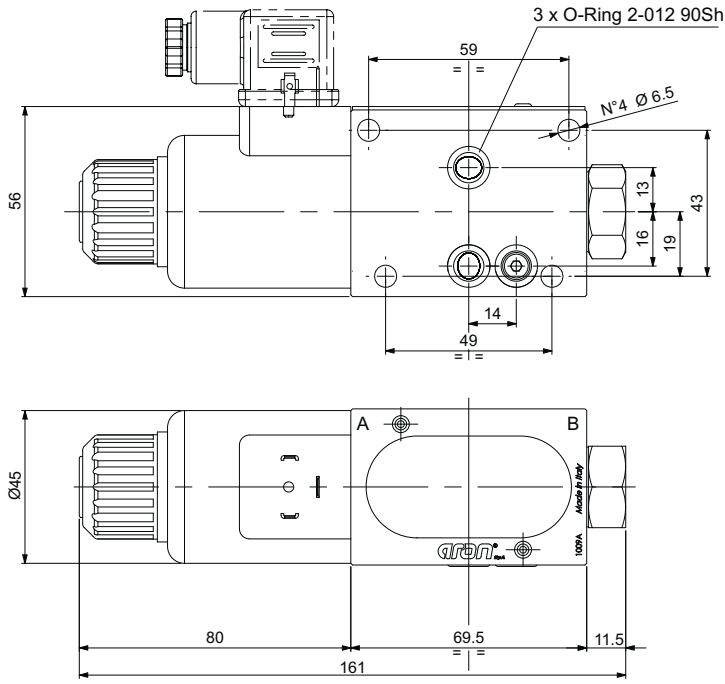
**ΔP PUMP FLOW P_{IN} → T
CXQ3CP ...**



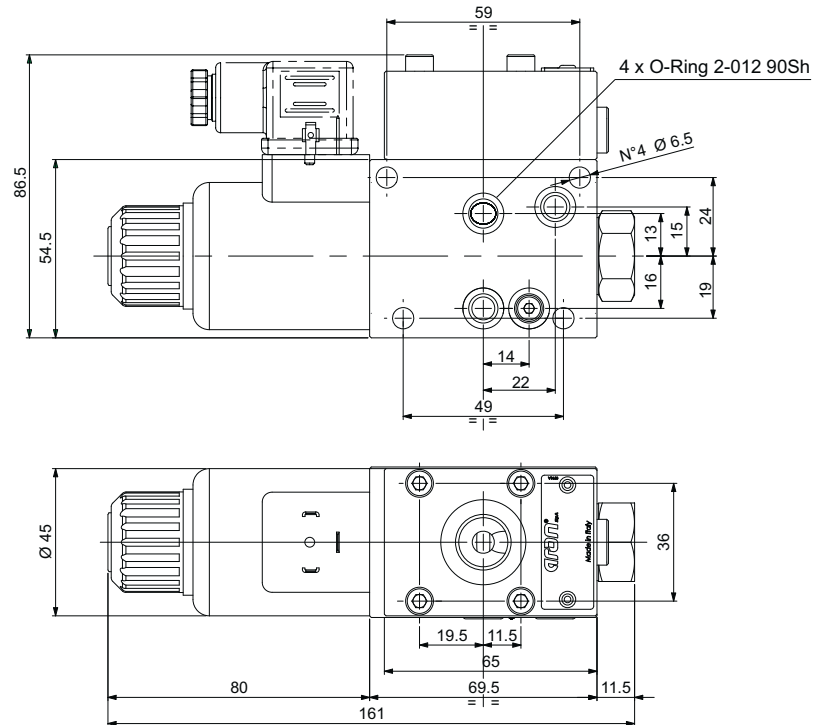
1= CXQ3C*I...
2= CXQ3C*H..

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

OVERALL DIMENSIONS CXQ3CT ...

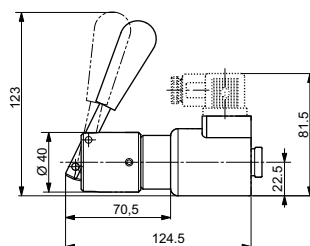


OVERALL DIMENSIONS CXQ3CP ...

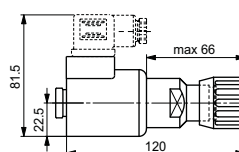


VARIANTS

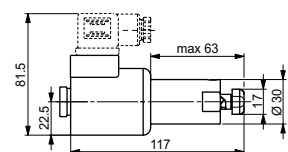
"L7"
Emergency lever



"P2"
Rotary emergency



"R5"
Rotary emergency 180°



Emergency P2 and P5, tightening torque max. 6÷9 Nm (CH n. 22)