

# Solenoid Valves

Electrical operated directional control valve

NG10 (cetop 5)



**CHARACTERISTICS FEATURES**

A solenoid valve is a control unit which, either shuts off or allows fluid flow when electrically energized or de-energized.

- Size 10
- Porting pattern according to ISO 4401-03-02-0-05
- Working voltage possible 12V, 24V DC or 220 V/50 Hz AC, each valve 50 W
- Manual override

Max. flow [L/min]	Max. pressure [bar]	
	(P,A,B)	(T)
120	315	100

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## Ordering details

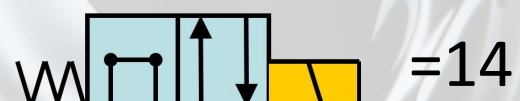
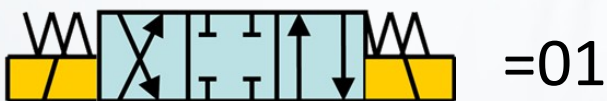
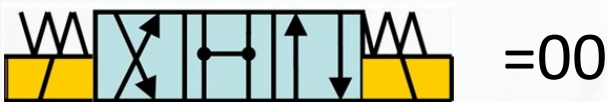
NG	10	01	12V
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Nominal size (eg. 06, 10)

Hydraulic symbol (eg. 00, 01, 02, 04)

Method of energizing  
(eg. 12 V DC, 24 V DC,  
230 V AC 50/60 Hz)

## Symbols



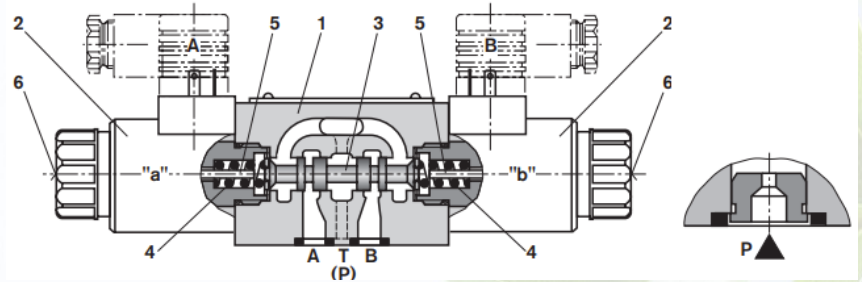
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## Function

Type NG directional valves are solenoid operated directional spool valves. They control the start, stop and direction of flow. The directional control valves consist of housing (1), one or two solenoids (2), control spool (3), and one or two return springs (4).



In the de-energised condition the control spool (3) is held in the neutral or initial position by means of return springs (4) (except for impulse spools). The control spool (3) is operated via wet pin solenoids (2). To guarantee satisfactory operation care should be taken to ensure that the solenoid pressure chamber is filled with oil. The force of the solenoids (2) acts via the plunger (5) on the control spool (3) and pushes this from its neutral position into the required end position. This permits flow from either:  $P \rightarrow A$  and  $B \rightarrow T$ , or  $P \rightarrow B$  and  $A \rightarrow T$ . When solenoid (2) is de-energised, the control spool (3) is returned to its neutral position by means of the return springs (4). A hand override (6), allows movement of the control spool (3) without energising the solenoid.

## Technical Data

Ambient temperature	°C	-30 to +50 NBR seals	
Ports A, B, P	bar	315	
Max flow	L/min	120	
Available voltages	Current	DC	AC 50/60 Hz
	V	12, 24	230

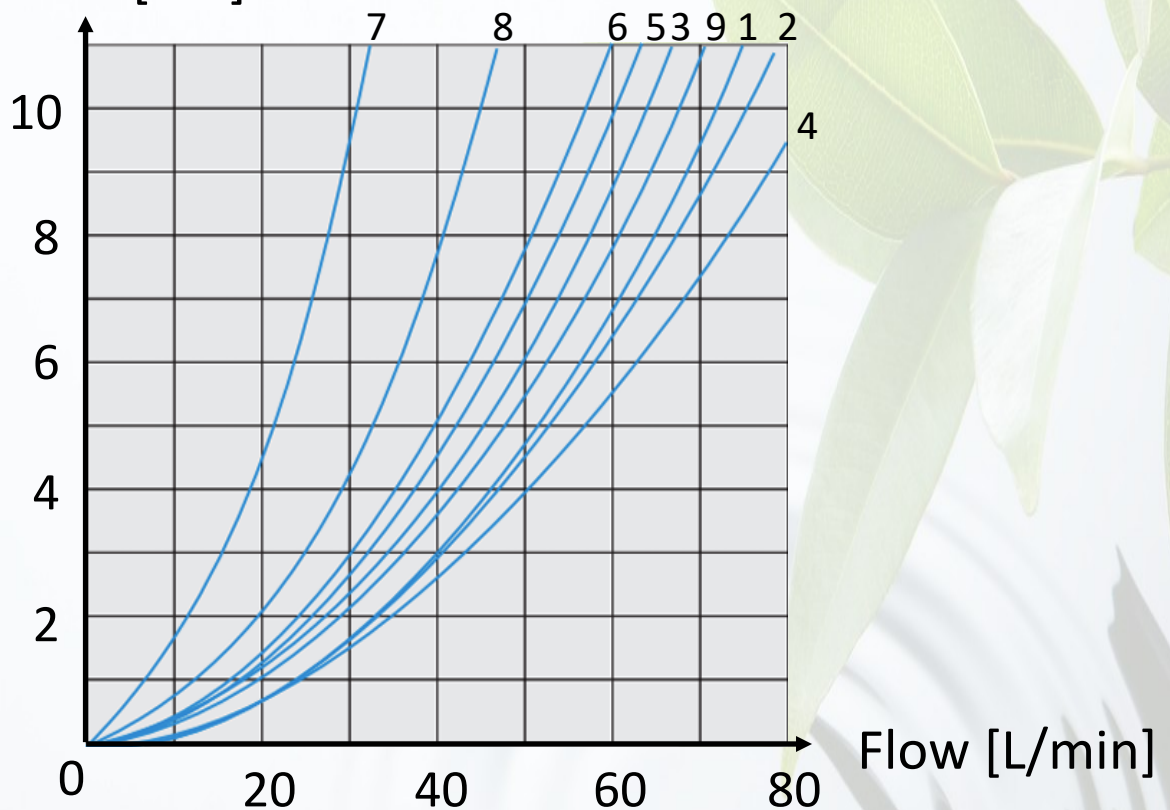
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## Characteristic Curves

Pressure loss [bar]



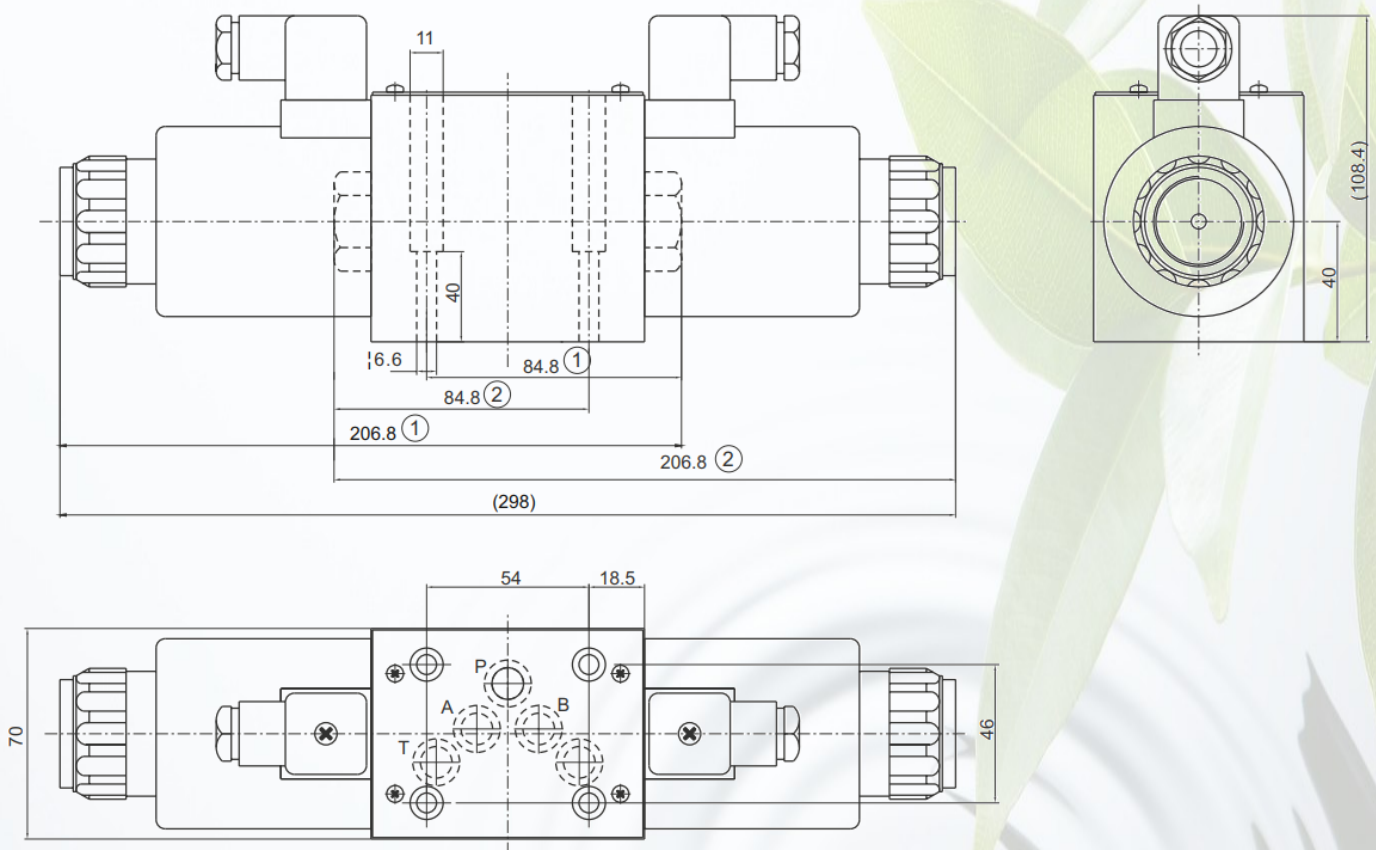
Function	Curve on the diagram			
	P to A	P to B	A to T	B to T
00	2	4	2	2
01	3	3	1	1
02	6	6	9	9
04	1	1	2	1
10	5	5	3	3
12	5	5	3	3
14	6	6	9	9

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## Unit Dimensions



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