

# MONOBLOCK DIRECTIONAL CONTROL VALVE TYPE RM80

## GENERAL DESCRIPTION

List: RM80-1-Sept 2015

Hydraulic valve RM80 provides change of fluid flow direction, hydro-systems pressure restriction, pump unloading in neutral position of the spools. The valve RM80 is designed to be integrated in hydraulic systems of Mobile and Industrial Machines.

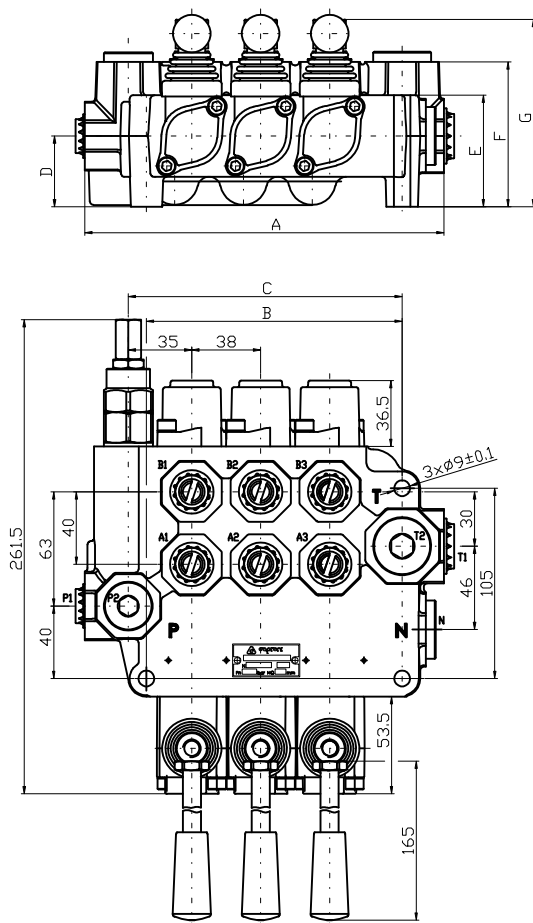
The valve assembly consists of:

A body with integrated relief and check valves, spools, control and spring-centering group of the spools. The valve RM80 provides parallel distribution of the working liquid and direct passing of the flow from the pump line to the tank at neutral position (open center). Options "closed centre" and "carry over" are possible with additional adapters. There are different control options: spring-centering in "neutral" position, detent, automatic kick-out, hydraulic and electro-hydraulic control.

## TECHNICAL DATA

Rated flow	80 l/min
Max. pressure	P=250 bar; T=50 bar; A,B= 300 bar
Spool stroke	±7 mm
Working temperature range	-15...+80 °C
Working liquid	hydraulic oil HLP DIN51524
Liquid viscosity	15...300cSt
Nominal filtration	ISO4406: 19/16 (recommended filter element - 0,025mm mesh)
Internal leakage at 120 bar , t=40°C and viscosity 46cSt	max. 8cm <sup>3</sup> /min; max 2cm <sup>3</sup> /min (special version)
Actuating force	less than 280N

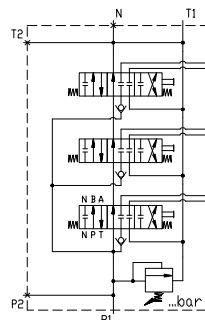
## DIMENSIONS



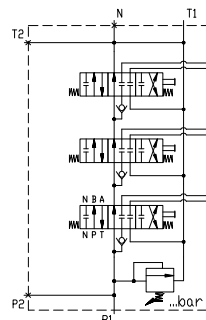
RM80P/3/Q/3x/1CLA1/R/P1T1/G/N

Type	A	B	C	D	E	F	G	Weight, kg
parallel								
serial								
RM80	108	65	-	24	46.5	65	88.3	4.0
RM80P/2	160	103	113					7.4
RM80P/3	198	141	151					9.7
RM80P/4	236	179	189	39	61.5	80	103.3	12.0
RM80P/5	274	217	227					14.3
RM80P/6	312	255	265					16.7

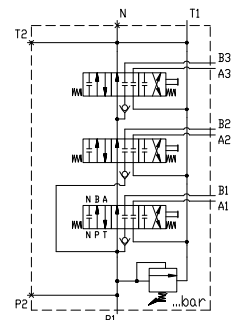
STANDARD PARALLEL CIRCUIT



STANDARD SERIES CIRCUIT



TANDEM CIRCUIT



# MONOBLOCK DIRECTIONAL CONTROL VALVE TYPE RM80

## ORDERING CODE

RM80PEHI / 3 / Q / 1 CL A 1 E1 / R / P1T1 / G / N

type of connection	Code
for RM80	omit
Parallel	P
Series*	S
Tandem (P+S)*	T

\* The scheme (connection type S and T) needs special body.

type of control	Code
without control	omit
On-Off internal electro-hydraulic	EHI
On-Off external electro-hydraulic	EHE
On-Off electro-pneumatic	EPC
On-Off hydraulic	HC
On-Off pneumatic	PC

number of the spools for RM80 - omit

relief valve	Code
setting range 20...300bar (example of required settings 180bar)	Q Q180
shut-off plug installed	K

spools	Code
	1
	2
	3
	4
	5
	6
	7
	8*
	9*
	10
	12
	13

\* The scheme (spool code 8 and 9) needs special body with extra machining.

standard port threads			
Code	P1, P2, A, B	T1, T2, N	
M	M22x1,5-6H	M26x1,5-6H	
G	G1/2"-A	G3/4"-A	
U	7/8-14UNF-2B	1 1/16-12UN-2B	

Code	application
N	normal
T	tropical

Code	hydraulic power output
R	open center (port N connected to T - short plug)
W	closed center (port N plugged - long plug)
C	carry over (port N - with power beyond sleeve)

Code	used conn. ports
P1T1	P1 and T1
P1T2	P1 and T2
P2T1	P2 and T1
P2T2	P2 and T2

Code	spool control
1	
2	
3	
4	
5	
6	
7	
9	
11*	 Adjustment range of automatic kick-out feature - 60...180bar

Code	micro switch: max. current/voltage - 5A/250V AC protection - IP67 contact configuration
	 DIN 43650-A
omit	without microswitch
E1	
E2	
E3	

Code	spool control
12	20-12 12VDC 20-24 24VDC 20-11 110VRAC 20-22 220VRAC ON-OFF EHI & EHE 
13	30-12 12VDC 30-24 24VDC 30-11 110VRAC 30-22 220VRAC ON-OFF EPC 
14	SD1 
15	SD5 
16	SD10 
17	
32	ON-OFF HC & PC 

\* The kit (spool control code 11) needs special spool.

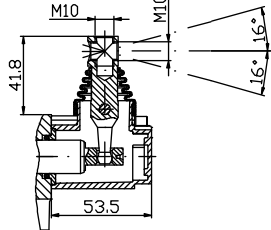
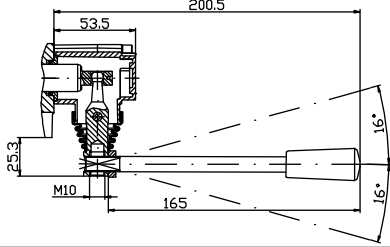
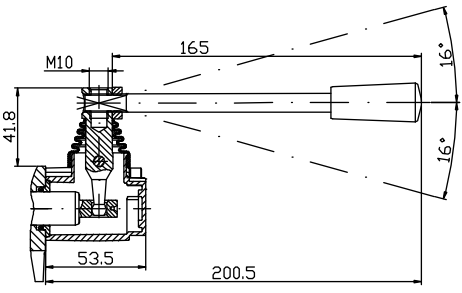
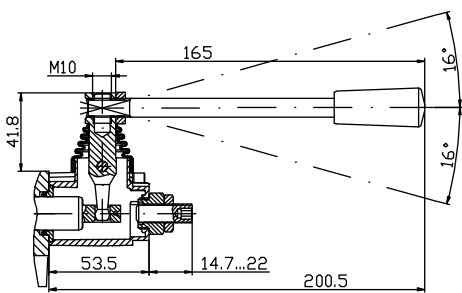
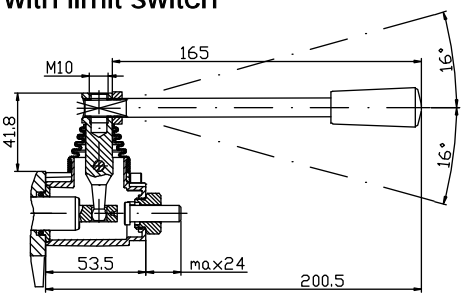
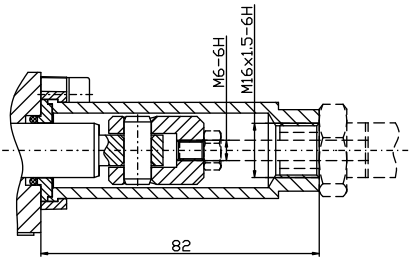
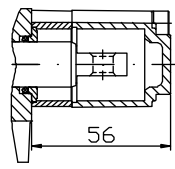
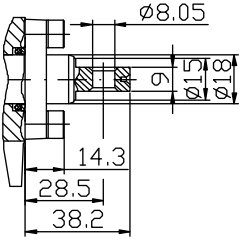
Code	operation control
C	see page 3/5
CL	
CLO	
CLR	
CLS	
CP	
H	
Z	see page 4/5
J...	

Code	lever position
A	at port side A (standard)
B	at port side B

\*\* Repeat for each spool. In case of identical spools ordering code example is:  
RM80P / 3 / Q / 3x / 1CL A1 / R / P1T1 / G / N

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## OPERATION CONTROL

operation control		operation control	Code
without standard hand lever 	C	with standard hand lever at 180° 	CLO
with standard hand lever 	CL	with stroke (flow) limiter 	CLR
with limit switch 	CLS	with cable control  <p>Cables , single levers and joystick controls - on request</p>	H
with protection cap 	CP	without lever , with dust-proof plate 	Z

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## OPERATION CONTROL

Working scheme by assembly on the side of threaded ports A (standard)

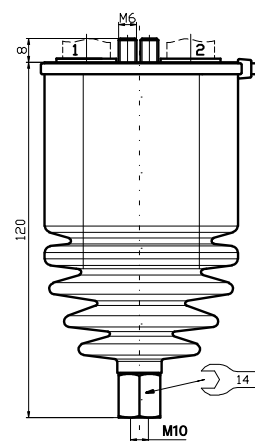
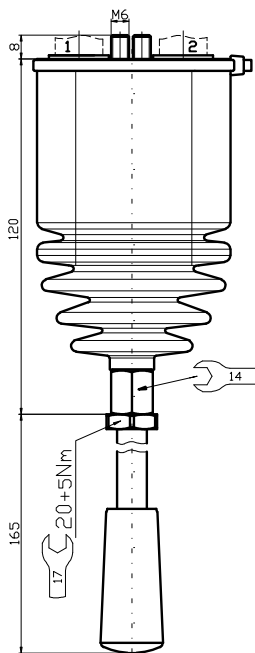
	Code		Code
	J2...		J1...
	J3...		J4...

joystick  
with standard hand lever

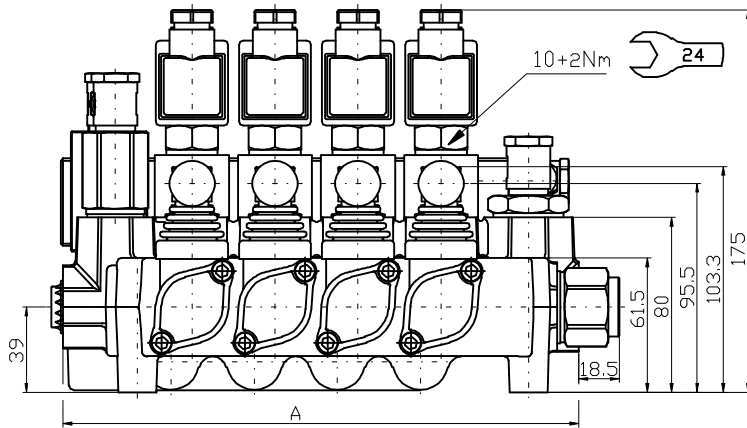
Code: J1L ; J2L ; J3L ; J4L

joystick  
without standard hand lever

Code: J1 ; J2 ; J3 ; J4



# MONOBLOCK DIRECTIONAL CONTROL VALVE TYPE RM80



RM80PEHI/4/Q/4x1CLA20-24/R/P1T1/G/N

On/Off electrohydraulic control (internal)  
operating features:

- Pilot pressure - 10...50 bar
- Max. pilot flow - 8 l/min
- Filtration - 25 mm
- Coil - 18W, duty cycle ED 100%
- Voltage options - 12V DC, 24V DC, 110V RAC, 220V RAC
- Integrated back pressure valve

