



**RODAVIGO, S.A.**  
RODAMIENTOS VIGO, S.A.

[www.rodavigo.net](http://www.rodavigo.net)

**+34 986 288118**  
Servicio de Att. al Cliente

 [www.khadamathydraulic.com](http://www.khadamathydraulic.com)  
Tell: 021-55882749  
Tell: 021-33488178  
Fax: 021-33488105

**6407**  
**CONTROL VALVES**

***Roquet***  
making moves



**Roquet**  
making moves

## Introduction to the company

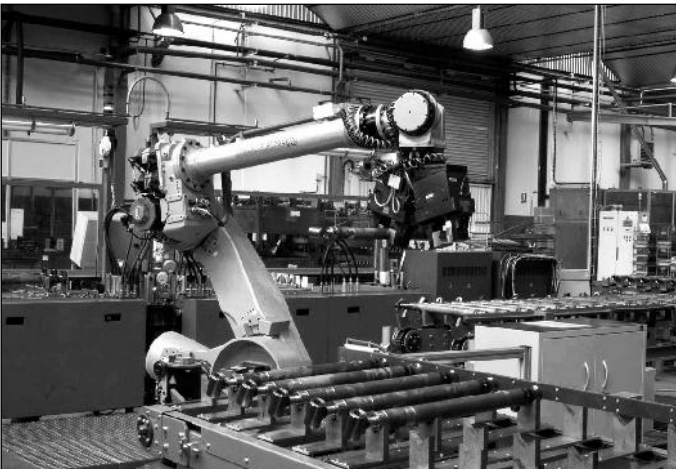
Type  
**6407**

**HISTORY** Over fifty years experience in fluid power. Supplier to international manufactures of agricultural, construction, mining, mechanical handling, machine-tool and food machinery. Main supplier to the Spanish market with rapidly increasing presence in European and world markets.

**TECHNOLOGY** Roquet has a large design and development department with substantial fatigue, noise, corrosion-resistance, cleanliness and testing facilities, backed by a well-equipped metallurgical laboratory.

**RELIABILITY** A broad range of robust products: designed to perform, built to last. All products ranges life-tested under realistic conditions during development to ensure their suitability for use in applications such as tractors, fork-lift trucks, loaders, excavators, cranes, dumpers, dock-levellers... Each and every product tested to a stringent test specification prior to shipment.

**CAPABILITY** 400 well trained employees. Four factories with a total floor area of 30.000m<sup>2</sup> Current production 180.000 pumps, 300.000 control valve bodies, 500.000 cylinders and 30.000 power packs per year. Distribution network in over 35 countries.





Type  
**6407**

This range of directional control valves is primarily intended for applications such as construction, material handling and agricultural machinery etc.

The valves are actuated by hand-levers, pneumatic operated, cable operated, etc.

Auxiliary valves can be fitted in each port.

*Index*

<b>Technical data</b> .....	4
<b>Directional control valve curves</b> .....	5
<b>Directional control valve dimensions</b> .....	6
<b>Directional control valve, general view</b> .....	7
<b>Hydraulic circuit</b> .....	7
<b>Coding system</b> .....	8-9
<b>Inlet section details</b>	
Main relief valve and unloading valve .....	10
<b>Operating section details</b>	
Spool types .....	11
Spool positions kits .....	12-13
Operators .....	13
Auxiliary valves .....	14-15
Rotative operator .....	16
Multiple rotative operator .....	17
Pneumatic pilot .....	18
Hydraulic pilot .....	19
<b>Additional sections</b>	
3 way flow control for directional control valves .....	20
<b>Outlet</b>	
Return configuration .....	21
<b>Build sheet</b> .....	22

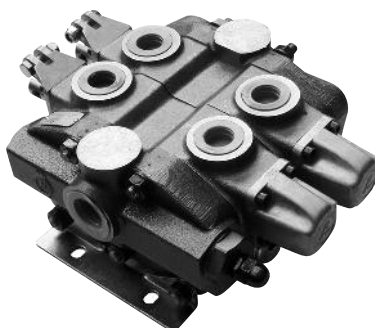
This Catalogue shows the product in the most standard configuration; customized or special designs are also available, please contact to PEDRO ROQUET S.A. The specifications and data in this catalogue are not open to any interpretation, please contact with PEDRO ROQUET S.A. in case of doubt. PEDRO ROQUET S.A. reserves the right to modify, update or revise this catalogue without prior notice. PEDRO ROQUET S.A. IS NOT RESPONSABLE FOR ANY DAMAGE CAUSED BY AN INCORRECT USE OF THE PRODUCT.



Directional control valves 6407

Type  
**6407**

**6407**



**Technical data**

CONTROL VALVES TYPE		<b>6407</b>
Ports A and B		# 12 SAE-ORB 1 1/16"-12 UN
Port P		# 16 SAE-ORB 1 5/16"-12 UN
Port P1		# 12 SAE-ORB 1 1/16"-12 UN
Port T		# 16 SAE-ORB 1 5/16"-12 UN
Port T1		# 16 SAE-ORB 1 5/16"-12 UN
Maximum spool quantity		6
Spool diameter (mm)		22
Spool stroke (mm)		9
Type		Parallel
Nominal flow		150 (l/min) / 40 (US GPM)
Working max. pressure		350 bar / 5075 psi
Return max. pressure T port	Static spool	80 bar / 1160 psi
	During spool positioning	20 bar / 290 psi
Spool force (kg)		27 Kg / 60 Lb
Fluid to be used		ISO 6743 Type HM, HV, HG
Temperature range (NBR)		-20°C...+80°C (-4° F...+176° F)
Viscosity range		ISO 3448 CAT. VG22-VG68
Recommended fluid cleanliness		16/13 s./ISO 4406 o NAS 10

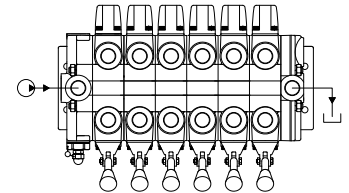
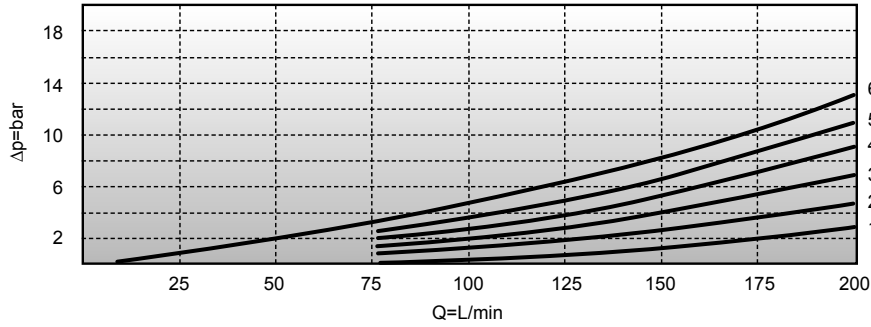


Directional control valve curves

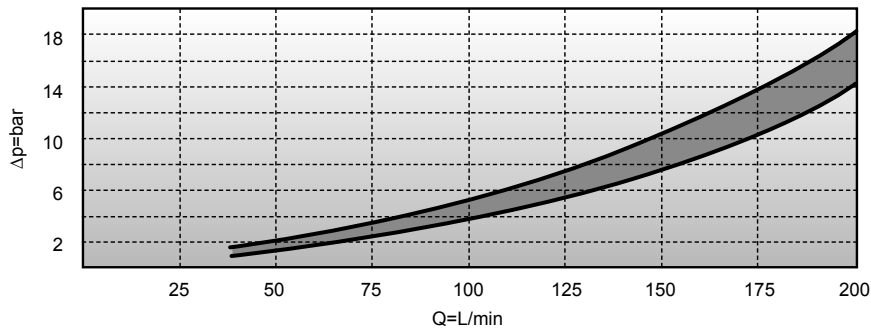
Type  
**6407**

Diagrams

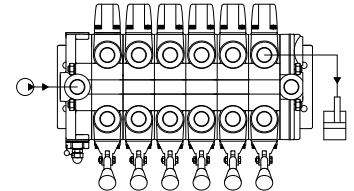
**P→T**



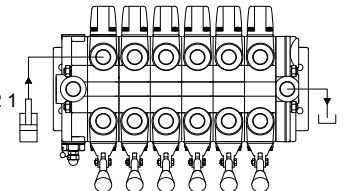
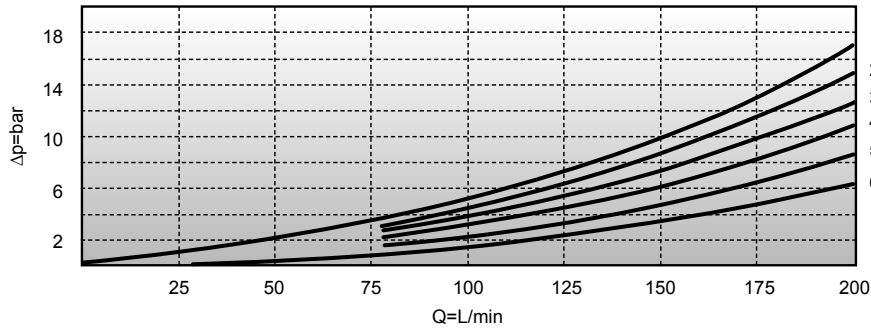
**P→A or B**



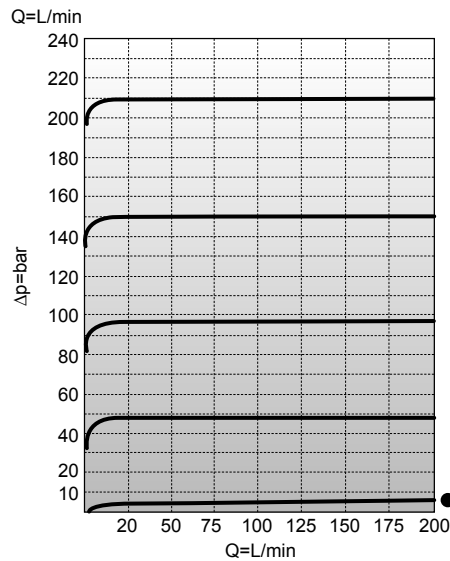
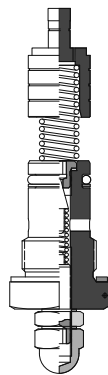
From 1 to 6 elements



**A or B→T**



**Main relief valve**



● Minimal pressure curve





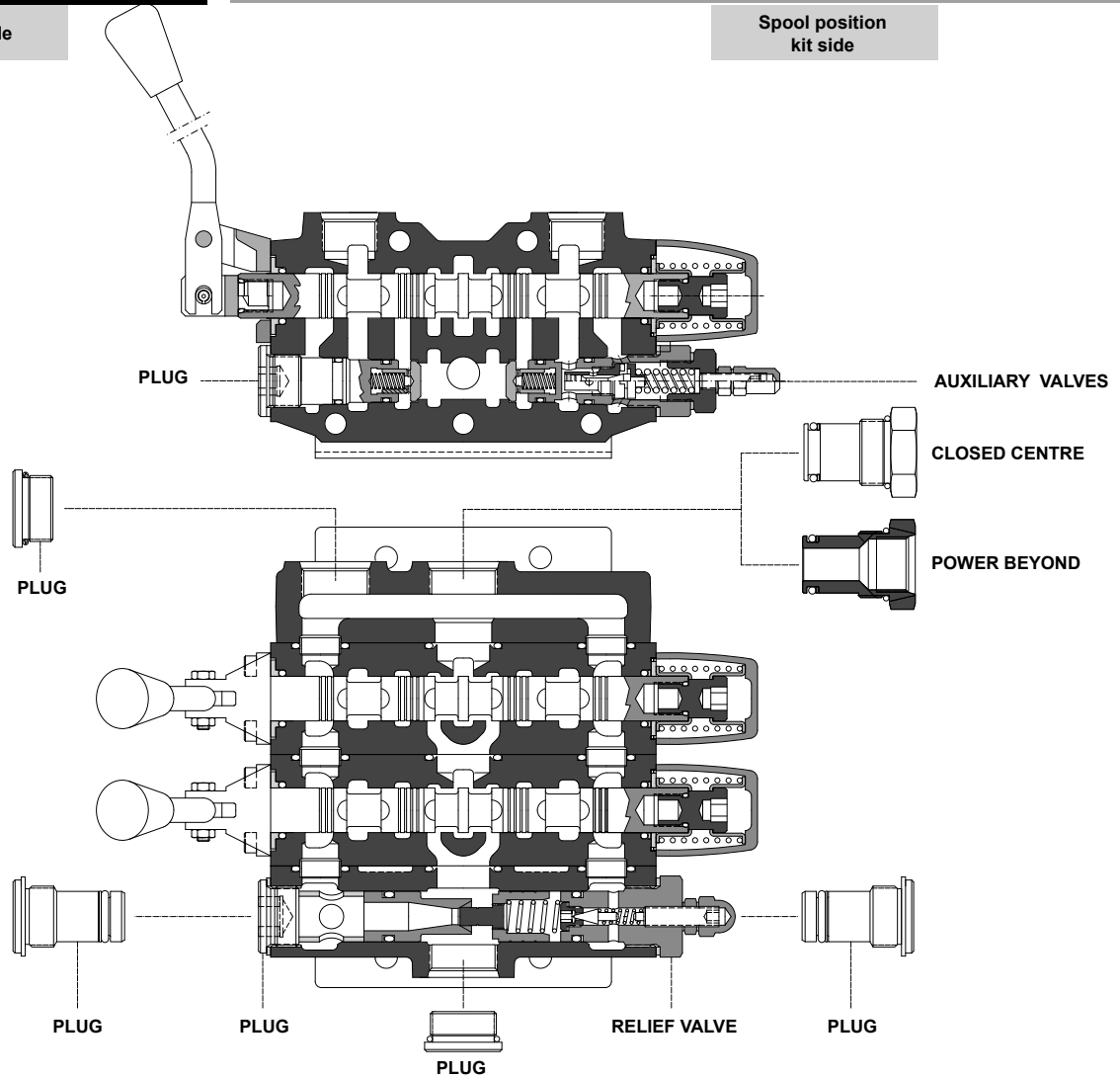
**Roquet**  
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Directional control valve, general view

Type  
**6407**

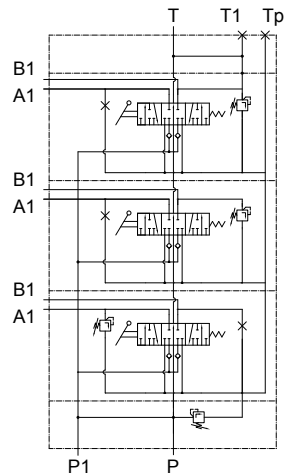
Operator side

Spool position  
kit side



**Hydraulic circuit**

Hydraulic scheme with main relief valve and auxiliary valves.





**Coding system**

Type  
**6407**

**INLET SECTION**

6407 / CV - 11 - L0 - S - CODE

Control valve type	
6407	

Front cover type	
CV	Front cover with relief valve.
SV	Front cover without relief valve.

Main relief valve pressure range standard (pressure set at 26l / min)		
Adjustment	Pressure range bar	Pressure range psi
11	5-80 (80)	70-1100 (1100)
12	85-175 (160)	1200-2500 (2200)
13	180-250 (200)	2600-3600 (2900)
14	255-350 (315)	3700-5000 (4600)
00	Without main relief valve (for SV front cover type)	

Code	
------	--

Operative pressure port	
S	Side port (P1 plugged).
T	Top port (P plugged).

With electrical unloading valve	
L0	Plug

**OUTLET SECTION**

6407 / CF - N - S - CODE

Control valve type	
6407	

Outlet	
CF	Outlet.

Code	
------	--

Operative tank port	
S	Side port (T1 plugged).
T	Top port (T plugged).

Return configuration	
N	Open center.
Z	Power beyond.
C	Closed center.

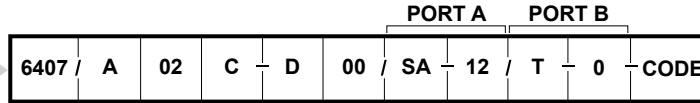




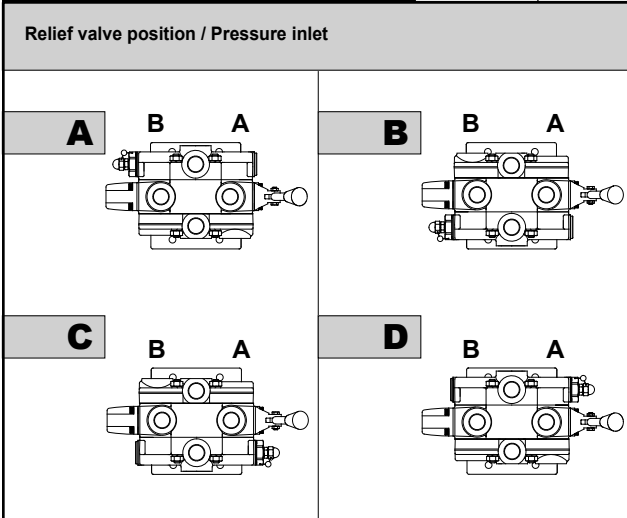
Coding system

Type  
**6407**

OPERATING SECTIONS



Control valve type
6407



Spool position kits	
02	Three positions with detents.
03	Two end positions by spring, action pushing spool.
07	One end position and neutral position with detent, action pulling spool; and other end position by spring, action pushing spool.
09	Two end positions with detents.
11	Three positions, return to neutral position by spring.
18	Fourth positions with detents. Pushing spool to fourth position.
19	Fourth positions. Fourth position with detent, action pushing spool.
20	Fourth positions. Fourth position with detent, action pulling spool.
21	Fourth positions with detents. Action pulling spool to fourth position.
22	Three positions, pneumatic pilot.
29	Three positions, neutral position by spring, and two end positions with detent.
35	Rotary device with detent in neutral position.
71	Three positions, hydraulic pilot. Progressive.

Code

Auxiliary valve pressure range (pressure set at 261 / min.)			
Adjustment		Pressure range bar	Pressure range psi
Adjustable	Fixed		
11	1	5-80 (80)	70-1100 (1100)
12	2	85-175 (160)	1200-2500 (2200)
13	3	180-250 (200)	2600-3600 (2900)
14	4	255-350 (315)	3700-5000 (4600)

Auxiliary valves	
SP	Piloted auxiliary valve.
SA	Direct auxiliary valve.
A	Anticavitation.
T	Plug.

D.C. VOLTAGE	
00	Non-electric spool position device

Spool types	
D	3 position, 4 - way, double acting, A and B ports blocked in 0 position.
I	3 position, 4 - way, double acting, A and B ports open to tank in 0 position.
L	4 position, 4 - way, double acting, A and B port blocked in position 0, 4th position float pulling spool.
M	4 positions, 4 way, double acting. A and B ports blocked in 0 position, 4th position float pushing the spool.
S	3 position, 3 - way, single acting, A port blocked in position 0, B port plugged.
V	3 position, 3 - way, single acting, B port blocked in position 0, A port plugged.

Operators	
C	Hand lever.
H	Hand lever without lever.
R	Rotary hand lever (see more information in page 16).
S	Open spool end.
Y	Hydraulic pilot (see more inf. page 18).

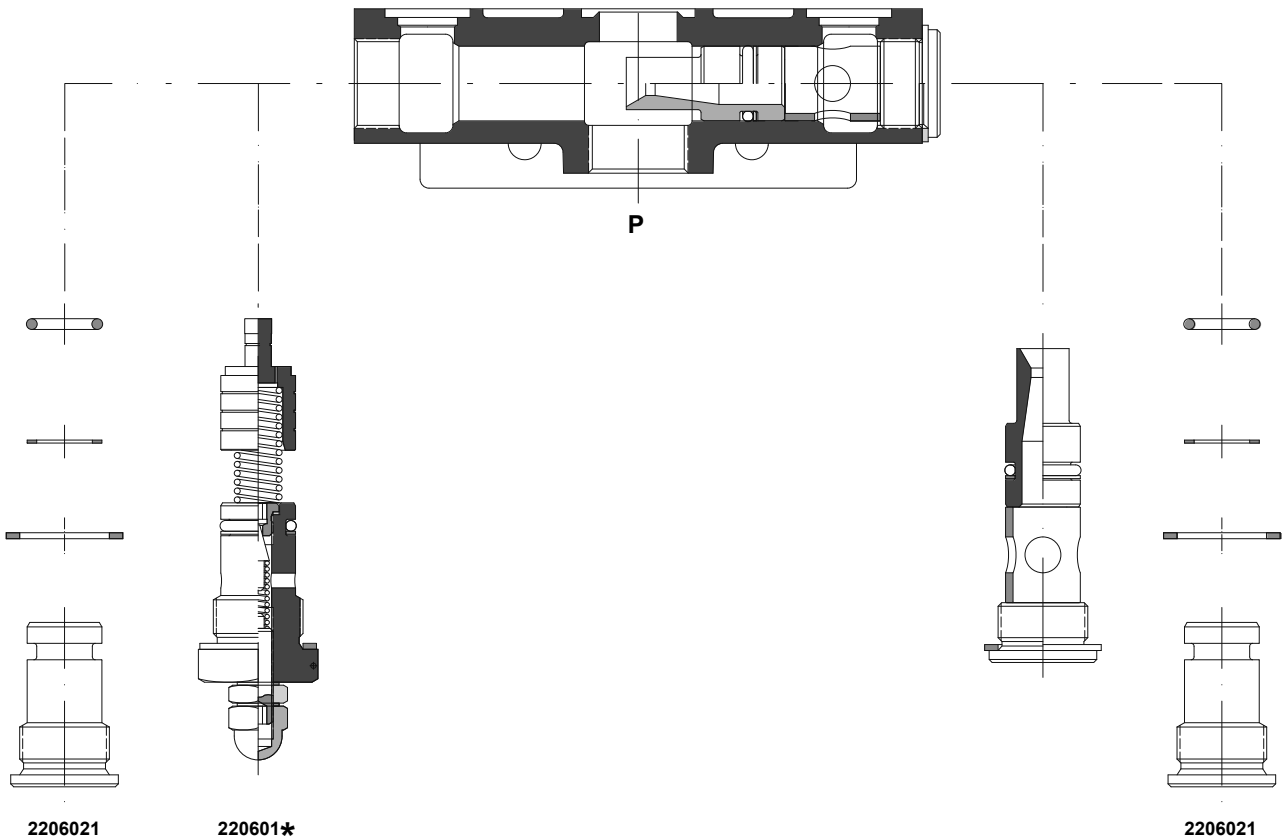


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making moves

Inlet section details

Type  
**6407**

Main relief valve



**NOTE:** Plug kit 2206021 included two plugs.

Main relief valve (pressure set at 26l. / min)			
Pressure range		Adjustable	Spring P.N.
5-80 (80) bar	70-1100 (1100) psi	11	4832/8
85-175 (160) bar	1200-2500 (2200) psi	12	4832/9
180-250 (200) bar	2600-3600 (2900) psi	13	4832/10
255-350 (315) bar	3700-5000 (4600) psi	14	5748/233



**Roquet**  
making moves

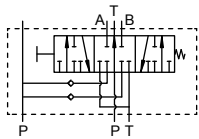
Operating section details

Type  
**6407**

Spool types

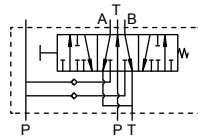
**D**

3 position, 4-way, double acting, A and B ports blocked in 0 position.



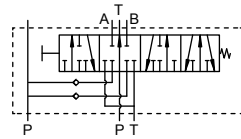
**I**

3 position, 4-way, double acting, A and B ports open to tank in 0 position.



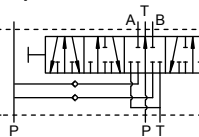
**L**

4 position, 4-way, double acting, A and B port blocked in position 0, 4th position float pulling spool.



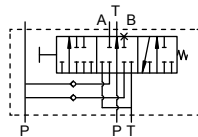
**M**

4 positions, 4-way, double acting. A and B ports blocked in 0 position, 4th position float pushing the spool.



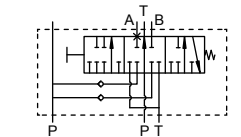
**S**

3 position, 3-way, single acting, A port blocked in position 0, B port plugged.



**V**

3 position, 3-way, single acting, B port blocked in position 0, A port plugged.



Four position spools may only be assembled on last operation section.



**Roquet**  
making moves

Operating section details

Type  
**6407**

Spool position kits

**02** **P.N. M5748/339**

Three positions with detents.

**03** **P.N. M5748/340**

Two end positions by spring, action pushing spool.

**07** **P.N. M5748/341**

One end position and neutral position with detent, action pulling spool; and other end position by spring, action pushing spool.

**09** **P.N. M5748/342**

Two end positions with detents.

**11** **P.N. M5748/343**

Three positions, return to neutral position by spring.

**18** **P.N. M5748/344**

Fourth positions with detents. Pushing spool to fourth position.

**19** **P.N. M5748/345**

Fourth positions. Fourth position with detent, action pushing spool.

**20** **P.N. M5748/346**

Fourth positions. Fourth position with detent, action pulling spool.



**Roquet**  
making moves

Operating section details

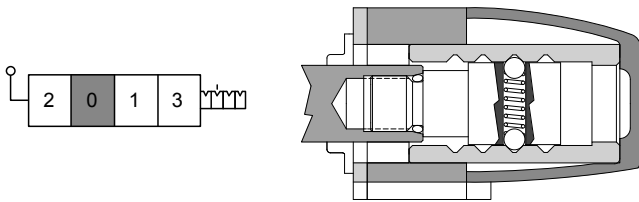
Type  
**6407**

Spool position kits

21

P.N. M5748/347

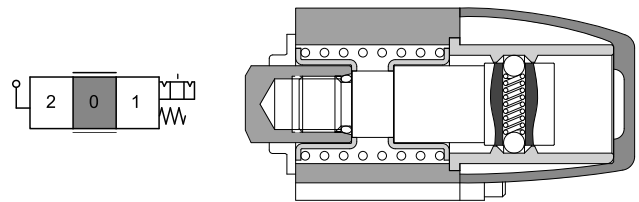
Fourth positions with detents. Action pulling spool to fourth position.



29

P.N. M5748/325

Three positions, neutral position by spring, and two end positions with detent.

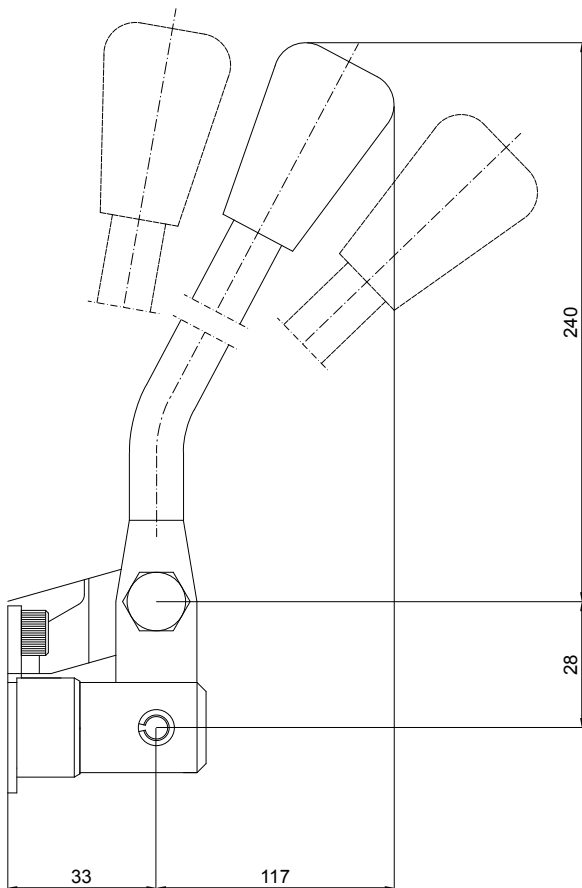


Operators

Hand lever

P.N. M5748/418

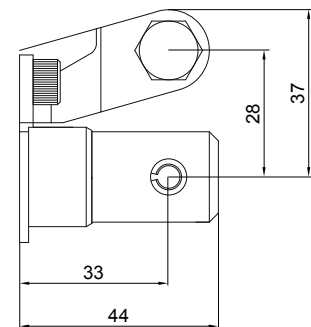
C



Hand lever without lever

P.N. M5748/422

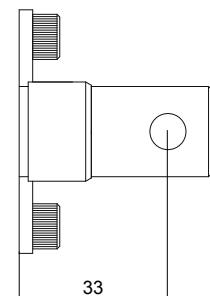
H



Open spool end

P.N. M5748/348

S



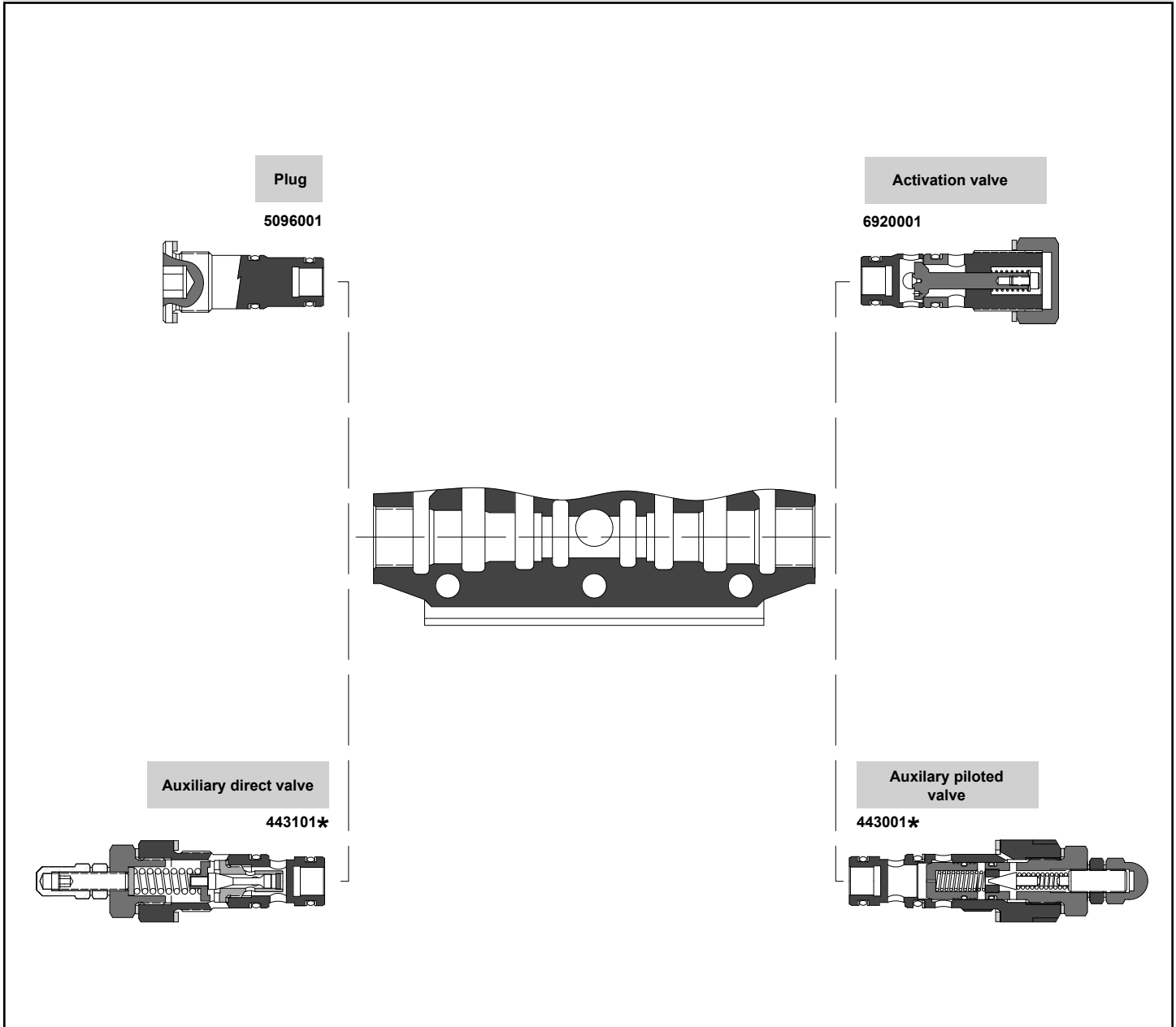


**Roquet**  
making moves

Operating section details

Type  
**6407**

Auxiliary valves



Port relief pressure setting (pressure set at 26l. / min)		
Adjustable *	Pressure ranges	
11	5-80 (80) bar	70-1100 (1100) psi
12	85-175 (160) bar	1200-2500 (2200) psi
13	180-250 (200) bar	2600-3600 (2900) psi
14	255-350 (315) bar	3700-5000 (4600) psi



***Roquet***  
making moves

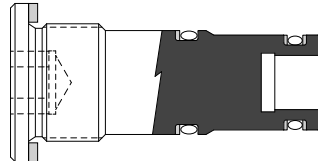
Operating section details

Type  
**6407**

Auxiliary valves

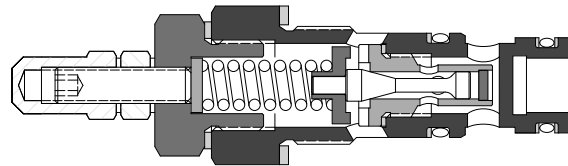
Plug

P.N. 5096001



Direct auxiliary valve

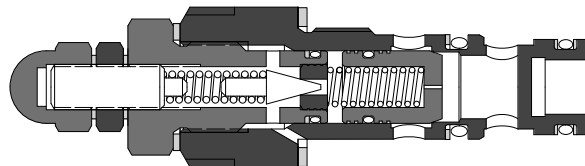
P.N. 443101\*



Adjustable

Piloted auxiliary valve

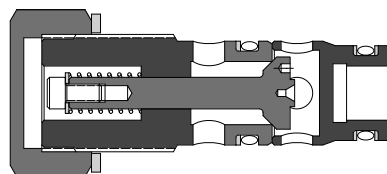
P.N. 443001\*



Adjustable

Anticavitation valve

P.N. 6920001





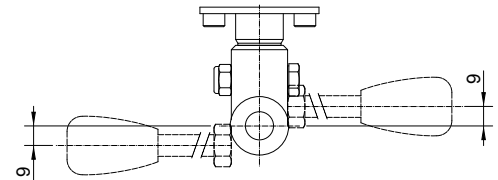
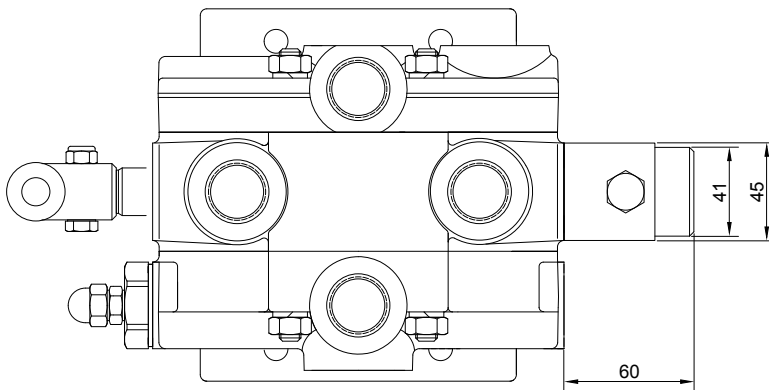
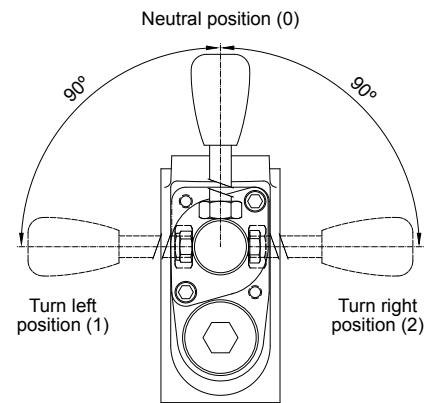
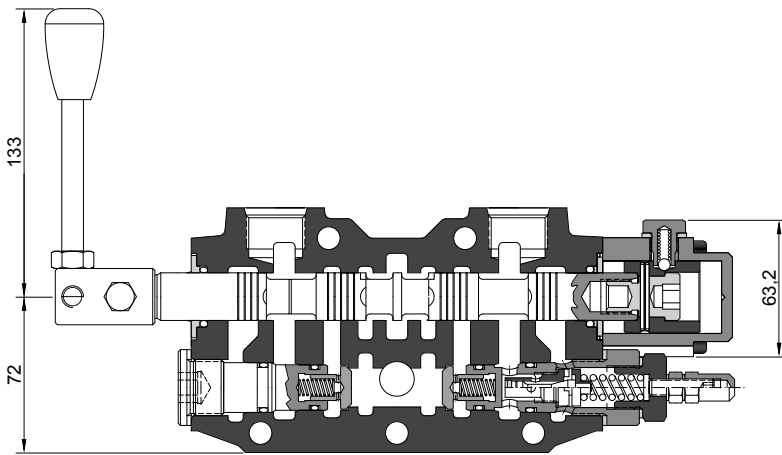
Operating section details

Type  
**6407**

Rotative operator

Operator (R)

Spool position  
kit (35)



NOTE: Rotative pilot normally use a stainless steel spool.

Spool position type 35 and operator type R standard **P.N. M5748/351/1**

Operator	Spool position Kit	Function	Description
R	35		Rotary device with detent in neutral position.



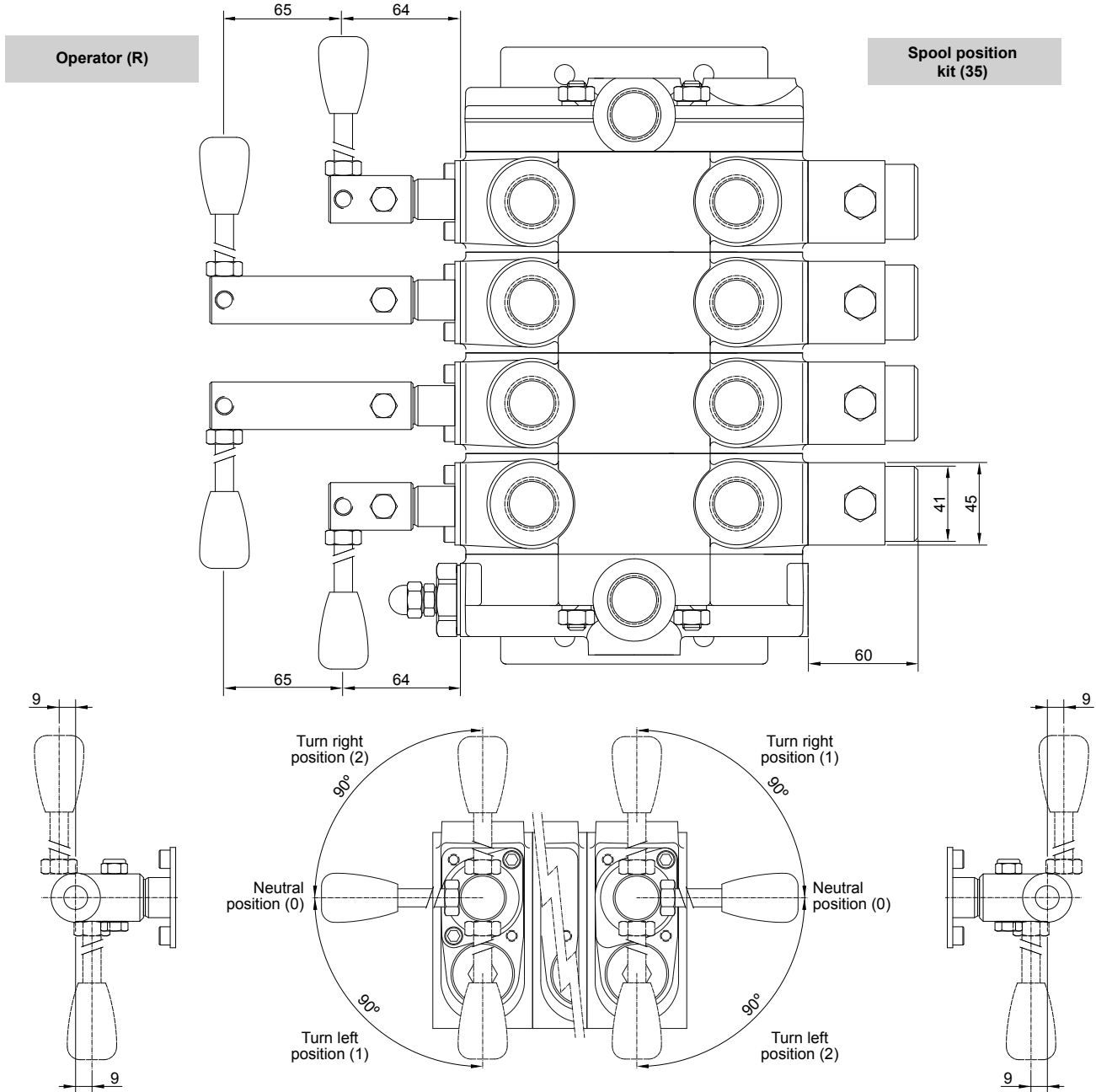


**Roquet**  
making moves

Operating section details

Type  
**6407**

Multiple rotative operator



Spool position type 35 and operator type R standard	<b>P.N. M5748/351/1</b>
Spool position type 35 and operator type R extended	<b>P.N. M5748/351/2</b>

NOTE: Rotative pilot normally use a stainless steel spool.

Operator	Spool position Kit	Function	Description
R	35		Rotary device with detent in neutral position.

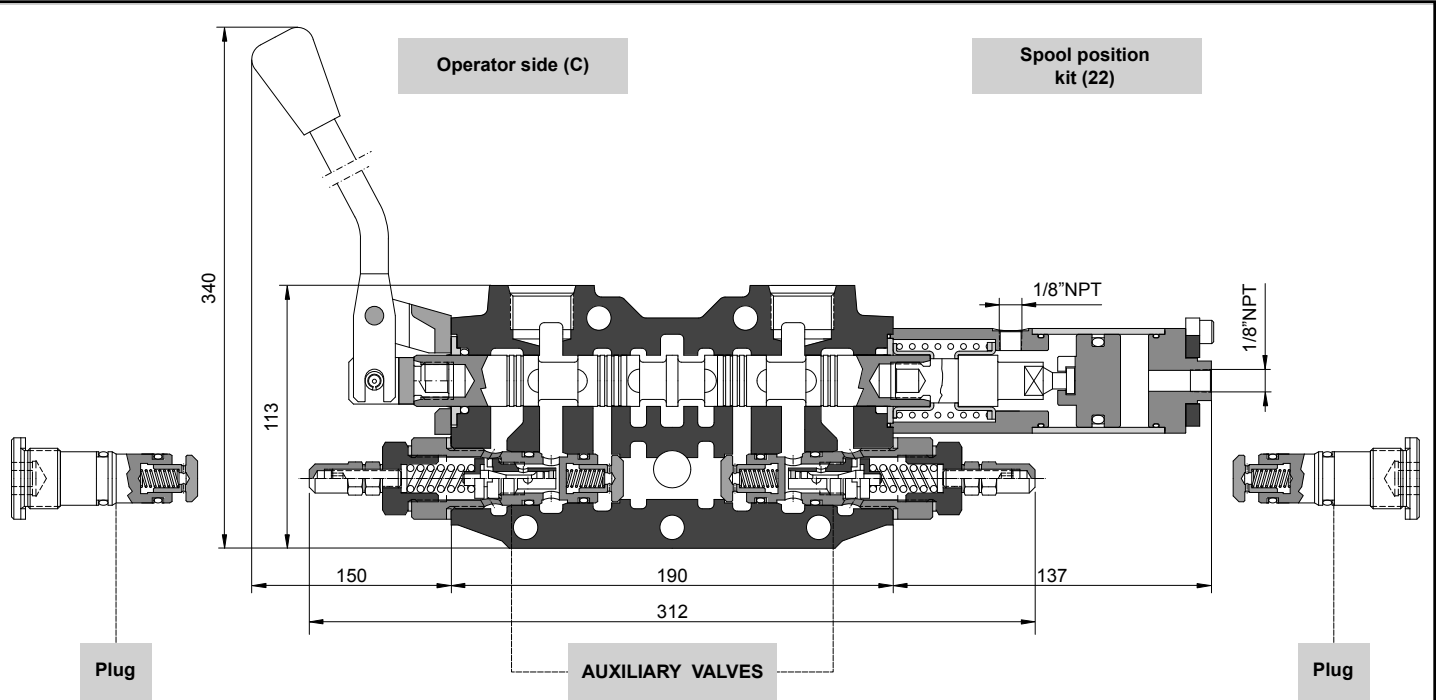


**Roquet**  
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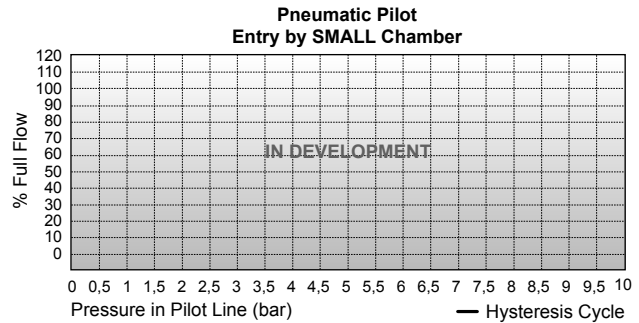
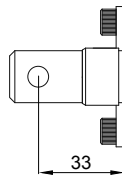
Operating section details

Type  
**6407**

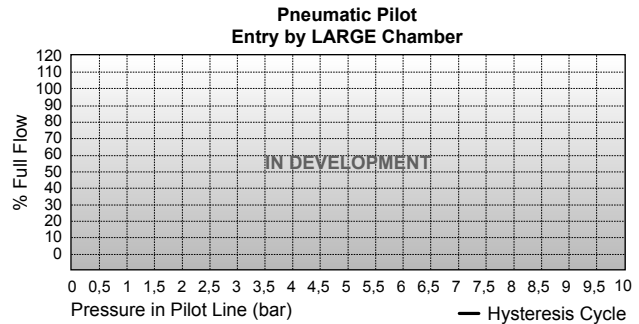
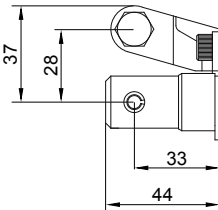
Pneumatic pilot



Operator side (S)



Operator side (H)



Operator	Spool position	Function	Description
C	22		Three positions pneumatic piloted.
H			
S			



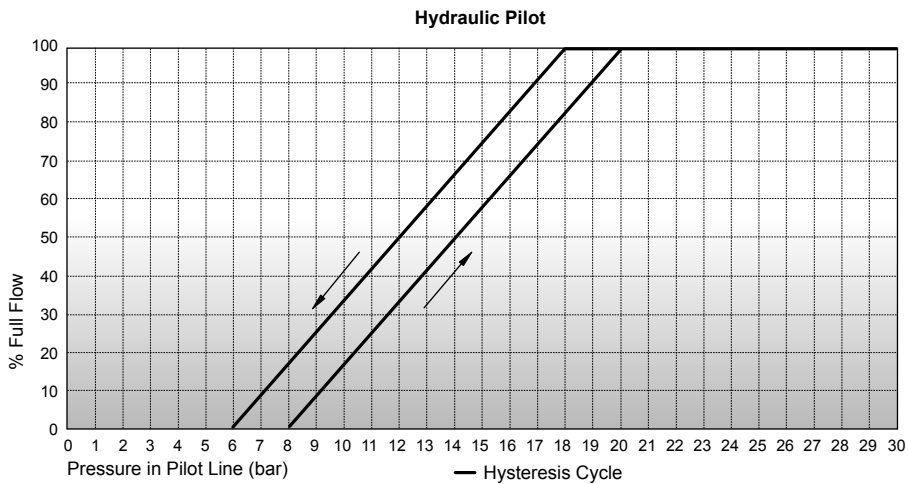
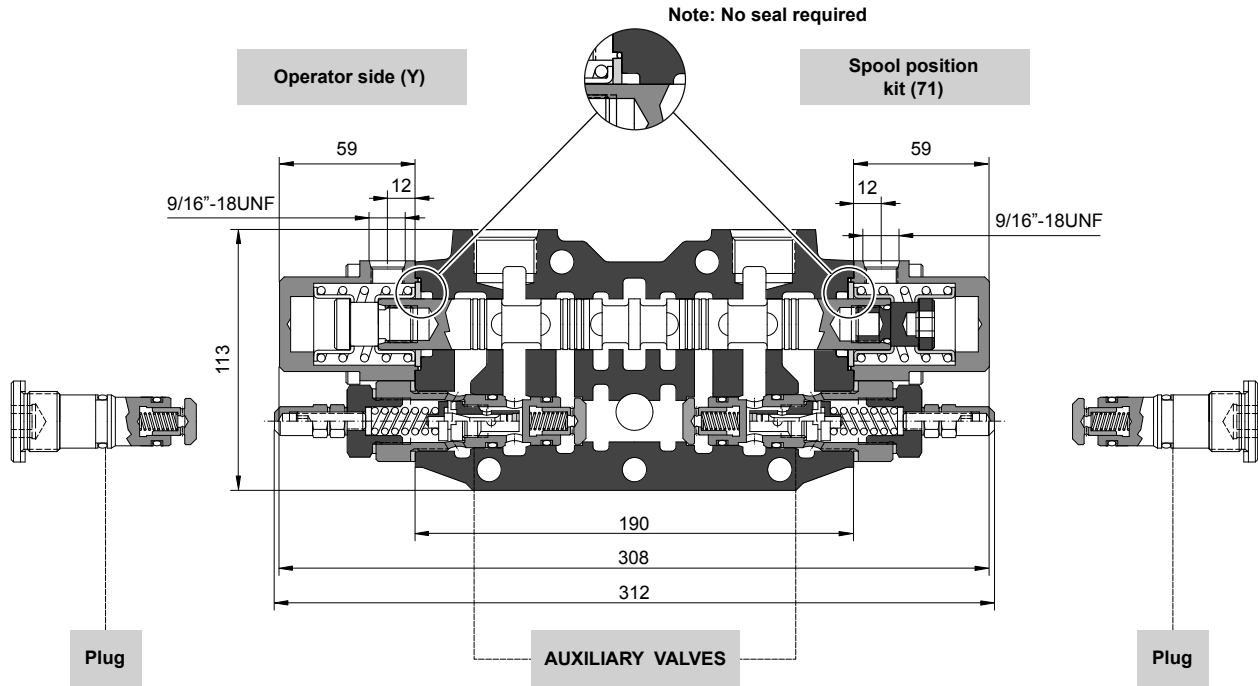
**Roquet**  
making moves

Operating section details

Type  
**6407**

Hydraulic pilot

**NOTE:**  
Hydraulic pilot only use spool position kit 71 and operator Y.

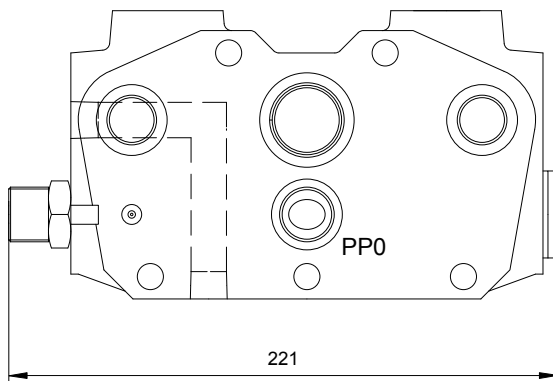


Operator	Spool position Kit	Function	Description
Y	71		Three positions hydraulic piloted.

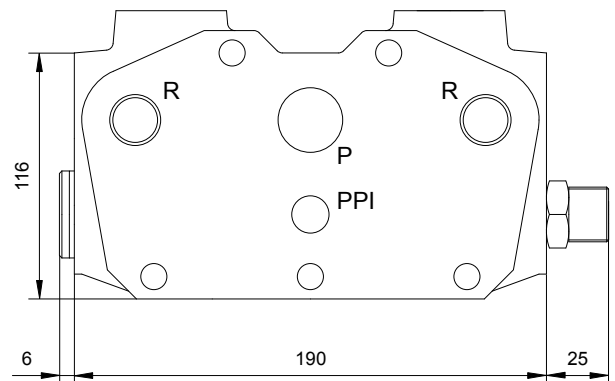
**3 way flow control for directional control valves**

This flow control section can be fitted at any position in valve assembly except final section, according to which sections are required with a reduced flow rate. All sections downstream of this valve can only operated at this reduced flow rate.

**BACK SIDE**



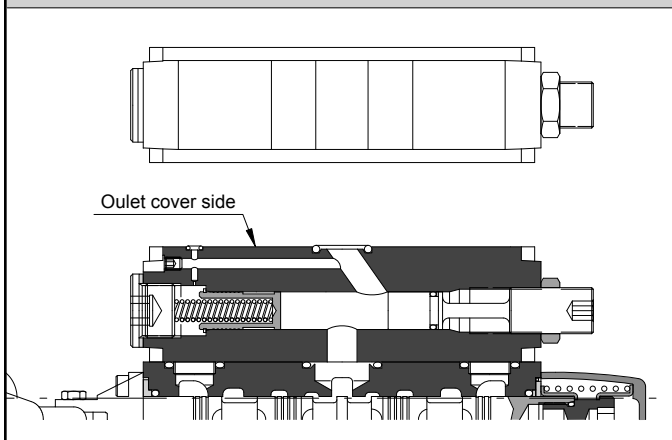
**FRONT SIDE**



**NOTE:**  
Not possible reduce flow on final section.

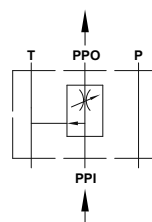
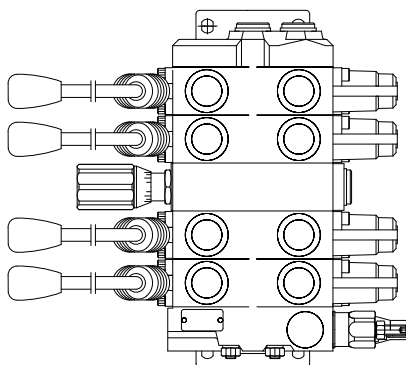
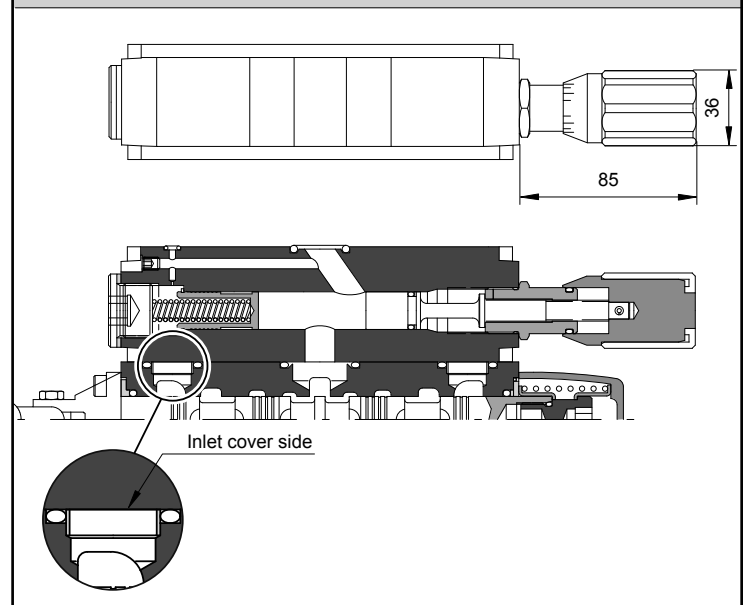
**3 way flow control valve ajustable**

P.N. M8928002



**3 way flow control valve with knob**

P.N. M8928003



**Technical data**

<b>Nominal flow rate</b>	120 l/min / 32 (US GPM)
<b>Min. flow rate</b>	5 l/min / 1 (US GPM)
<b>Max. work pressure</b>	350 bar / 5075 psi

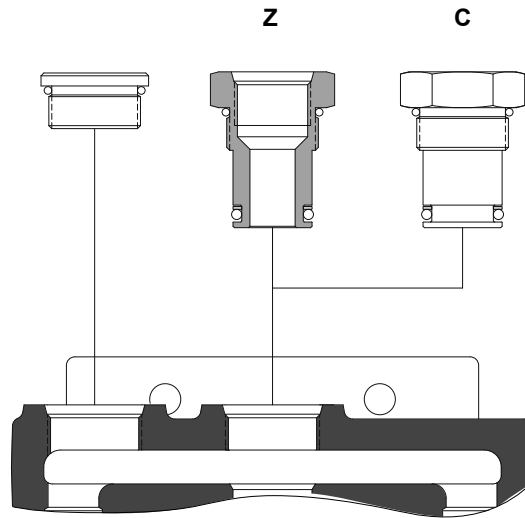


***Roquet***  
making moves

Outlet

Type  
**6407**

Return configuration



Return type		Ports	Part number
		T	
<b>N</b>	Open center	# 16 SAE-ORB 1 5/16"-12 UN	Standard
<b>Z</b>	Power beyond	# 12 SAE-ORB 1 1/16"-12 UN	M5748/423
<b>C</b>	Closed center	Plug	M5748/424





**Pedro Roquet, s/a**  
[www.pedro-roquet.com](http://www.pedro-roquet.com)



**USA**

BERENDSEN FLUID POWER, INC.  
Tel.: 1 888 873 2327  
Fax: 1 800 329 2327  
Web: [www.bfpna.com](http://www.bfpna.com)  
E-mail: [salesdesk@bfpna.com](mailto:salesdesk@bfpna.com)

Hours: 7.00 am to 7.00 pm CST Monday to Friday

**CANADA**

BERENDSEN FLUID POWER, LTD.  
Tel.: 1 888 265 5454  
Fax: 1 800 329 2327  
Web: [www.bfpna.com](http://www.bfpna.com)  
E-mail: [salesdesk@bfpna.com](mailto:salesdesk@bfpna.com)

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