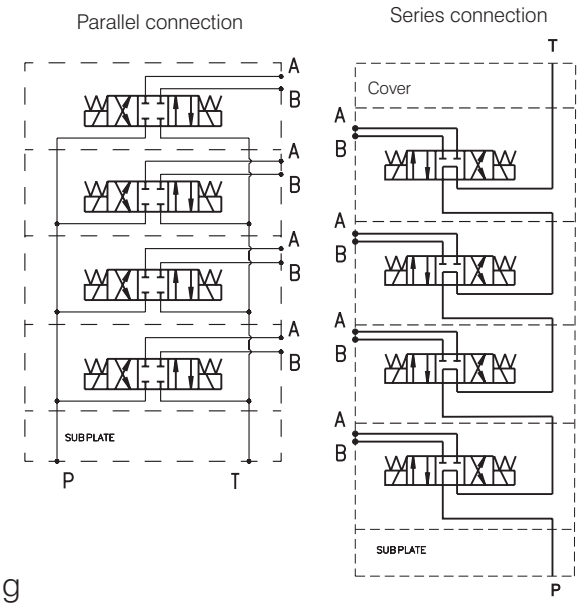
GENERAL DESCRIPTION

Document: SDCV-1-May 2012

- ✓ 4/3- and 4/2- way directional control valves with solenoid operation
- ✓ Thread connection of working ports “A” and “B” except RH06...1-.../...GFS modification
- ✓ Up to 8 sections for horizontal stacking & up to 4 sections for vertical stacking

Sheme for vertical stacking



The RH06...1-.../...GF... valves consist of a spool , housing , springs and solenoids.

The valves are used for hydraulic power control. These modifications are designed with two-spring centered spool about 4/3- and 4/2- valves. The housing has 5-chambers and a horizontal “T” duct. Working ports “A” and “B” are threaded directly into the valve housing except RH06...1-.../...GFS modification.

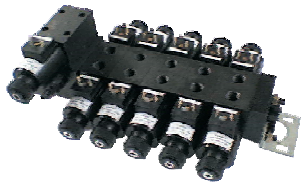
The valve location during assembly is of minor importance , but the horizontal position is generally recommended.

RH06...1-.../...GF... model is designed as a end plate , at modular mounting of directional control valves type RH06...1-.../...GFM... and they are used for vertical stacking - see next page.

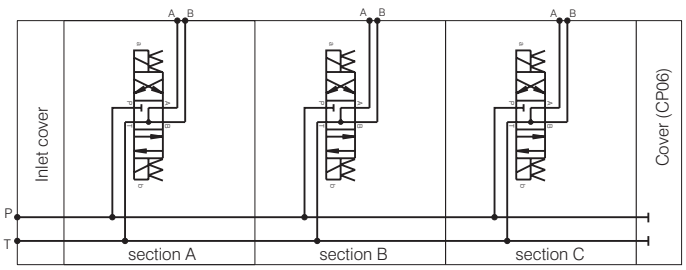
RH06...1-.../...GFS... , RH06...1-.../...GFST... & RH06...1-.../...GFSTS... are designed for horizontal stacking.

All these modifications supersedes completely those with plate , but with less cost and the maximum flow is reduced - max. flow - 40l/min.

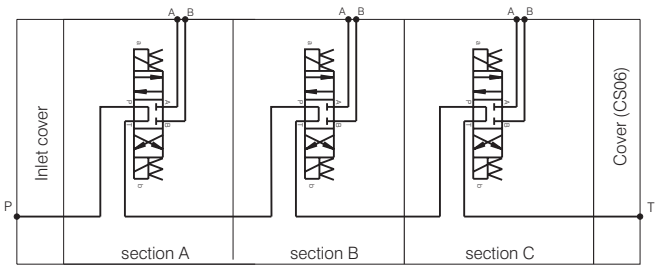
Sheme for horizontal stacking



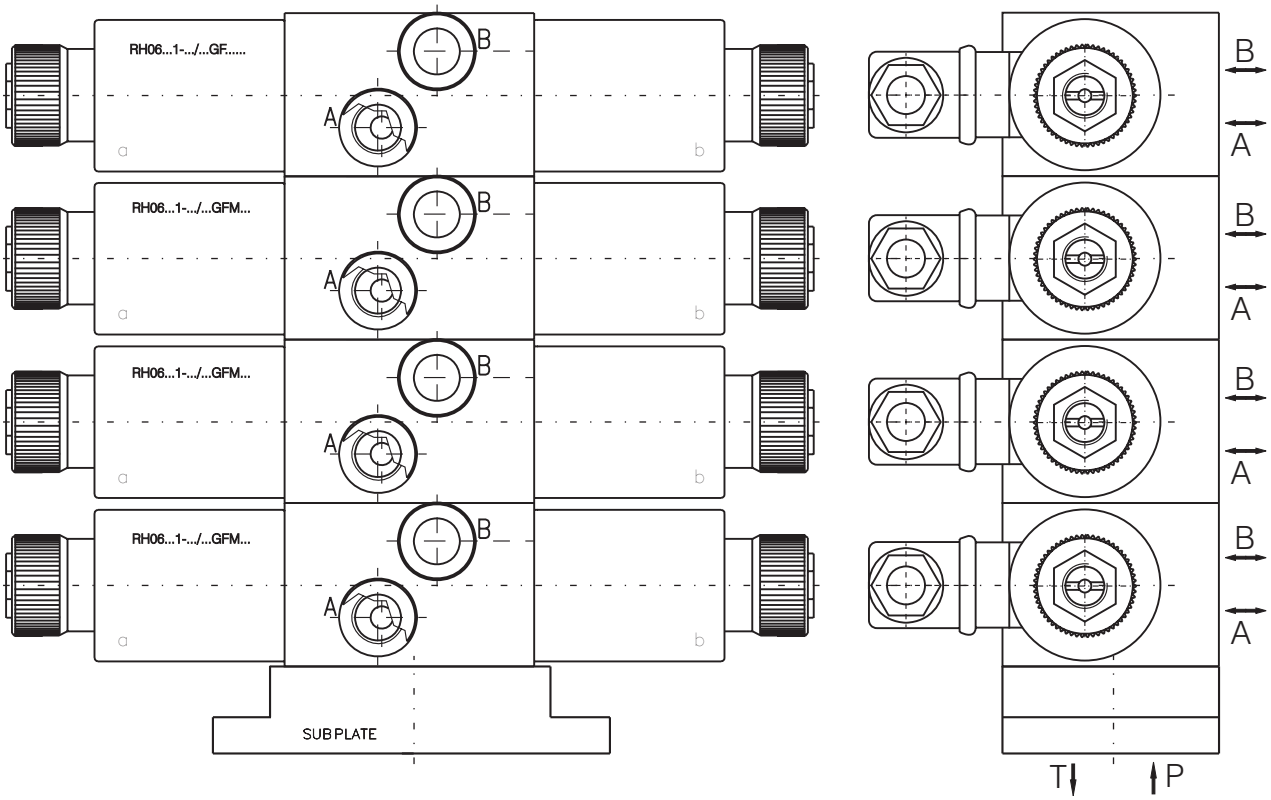
Parallel connection



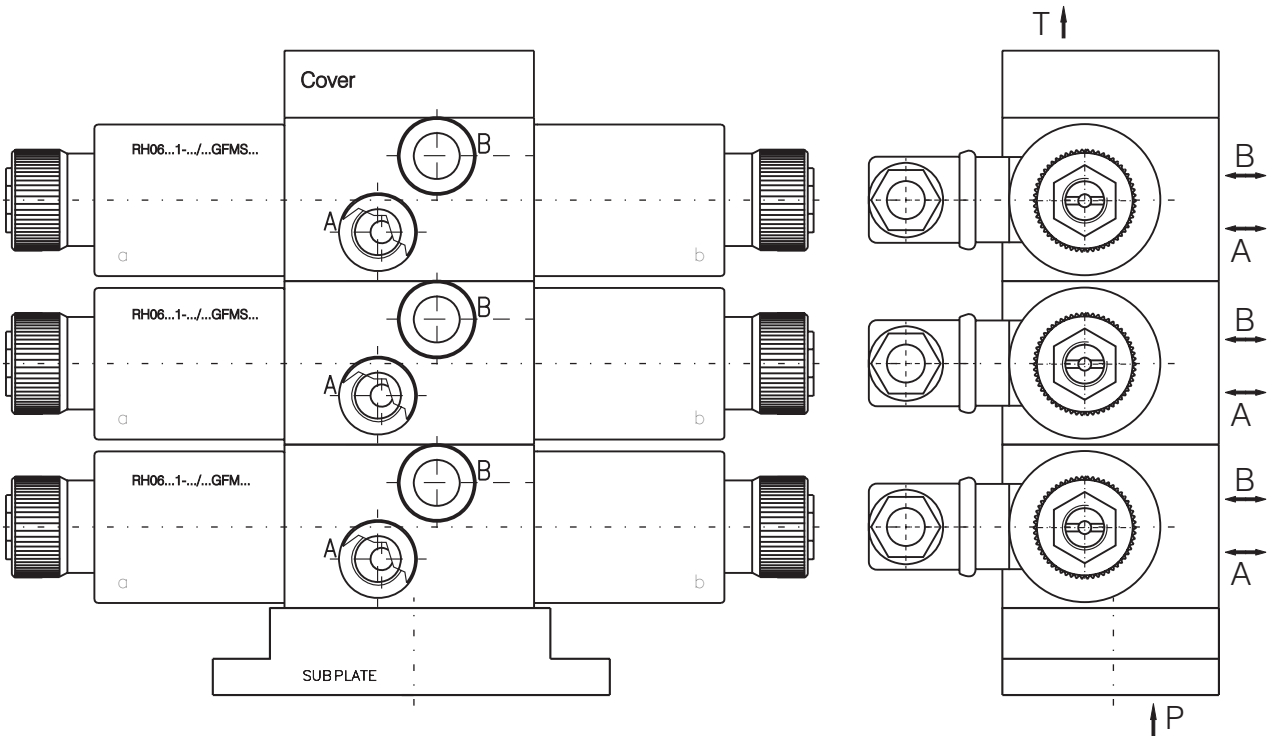
Series connection

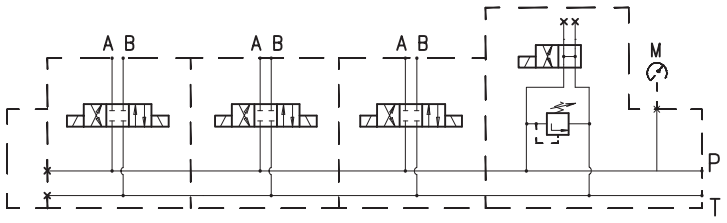


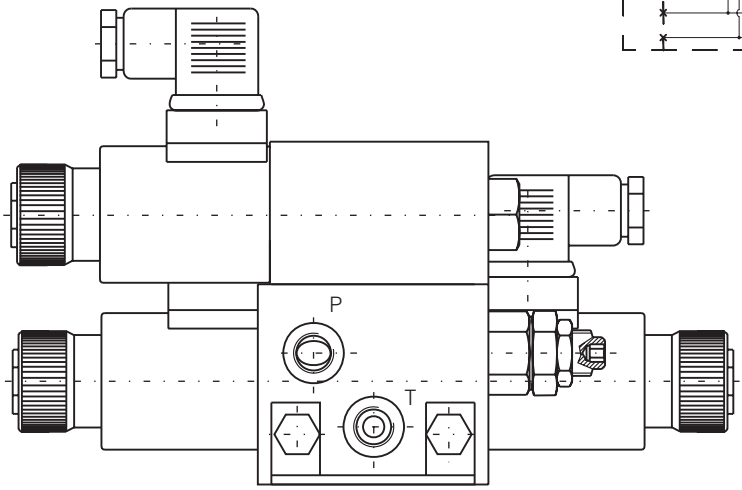
RH06...1-.../...GF.....-parallel connection

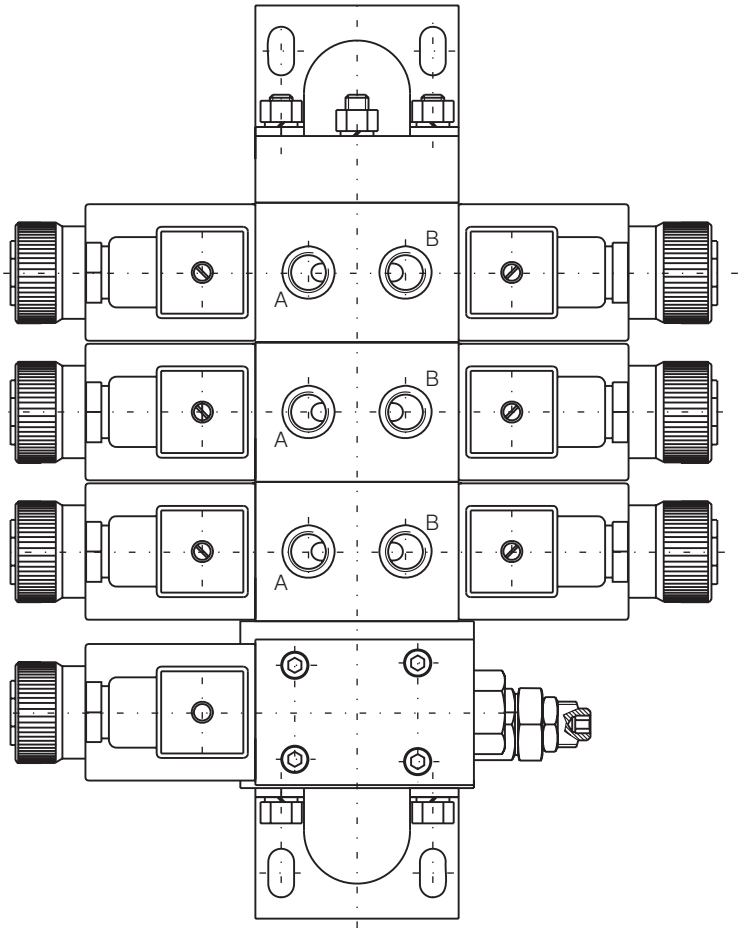


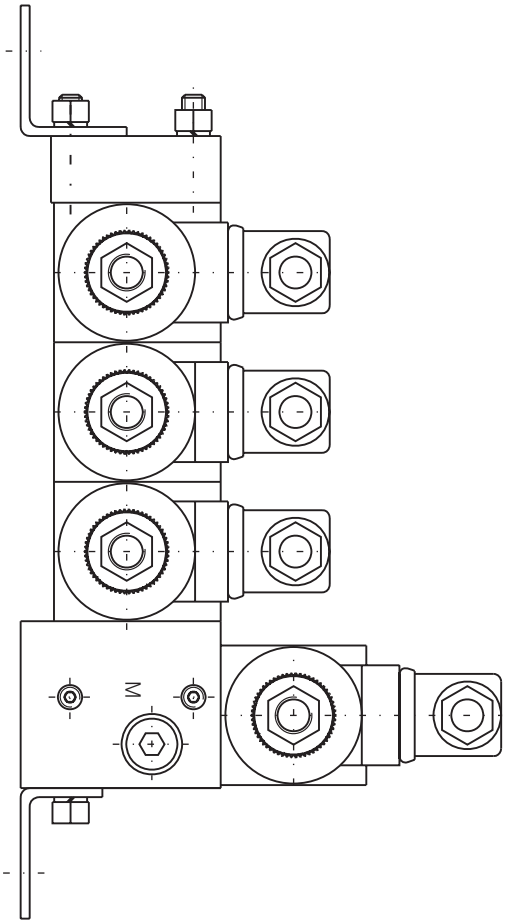
RH06...1-.../...GF.....-series connection




A B
A B
A B
M
P
T


P
T


A
B
A
B
A
B



RH	06		1	-	.../...	G...				

Directional control valve

Nominal size

Functional symbol
see the page below

Type of control: -electrical

Supply voltage/current frequency
see page 12/20
012/00
024/00
110/50
220/50

Modification
see pages 6/20...11/20
GF
GFM
GFMS
GFS
GFST
GFSTS

Connectors
see page 12/20
C1
C2
C3
C4
C5

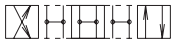
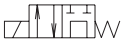
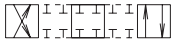
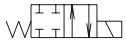
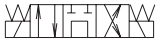
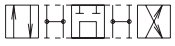
Backing of the housing
normal - **N**
tropic - **T**

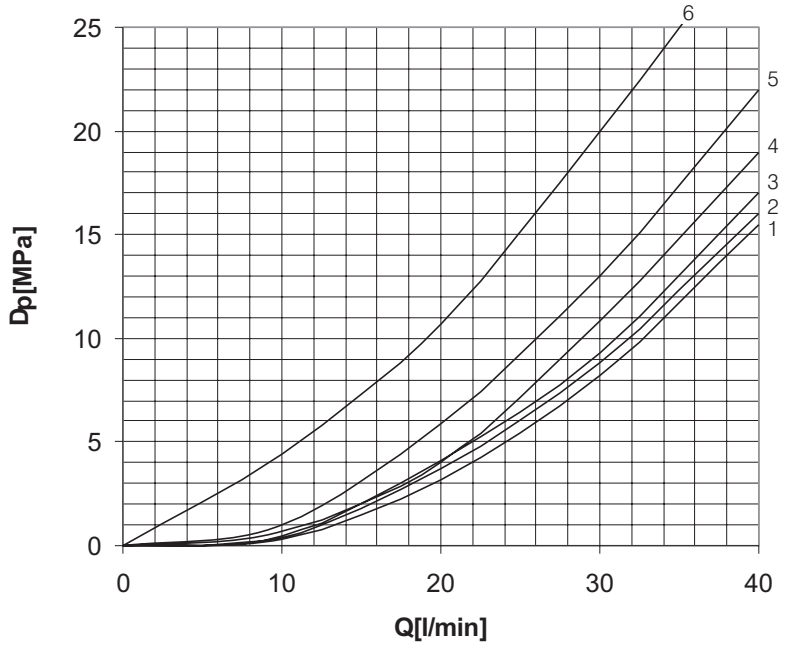
Threads at A & B ports**
M14x1,5- **Omit**
M16x1,5- **M1**
M18x1,5- **M2***
G3/8"- **G1**
G1/4"- **G2**

Screw cap
with plastic cap- **Omit**
with metal cap- **M**

* Only for GFST & GFSTS modification
** These options are not valid for GFS modification

FUNCTIONAL SYMBOLS

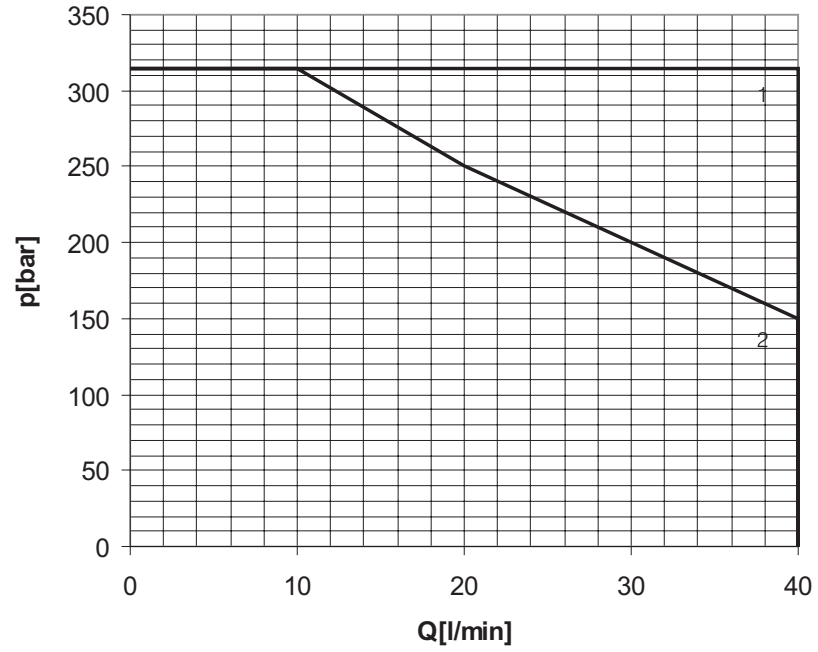
DESIG-NATION	SYMBOL	INTERMEDIATE	DESIG-NATION	SYMBOL	INTERMEDIATE	DESIG-NATION	SYMBOL	INTERMEDIATE
00			14			33		
01			16			35		
02			24			45		
04			28			74		



SYMBOL	CURVE				
	P>A	P>B	A>T	B>T	P>T
00	2	2	1	1	3
01	3	3	2	2	
02	5	5	6	6	4
04	3	3	1	1	
14	5			6	4
16	3			2	
24		3	1		
28	3			1	
33		2	1		3
35		5	6		4
45		3	2		
74	2			1	3

p/Q

The operating limit of hydraulic power shown here is for applications with two directions of flow (e.g. from P to B and simultaneously from A to T). If the valve is with one direction passage only (e.g. from P to B and with blocked port A), the operating limit may considerably be reduced. The performance limits are measured with hydraulic oil 35±5 cSt , temperature 50 °C and supply voltage 0,9U_N

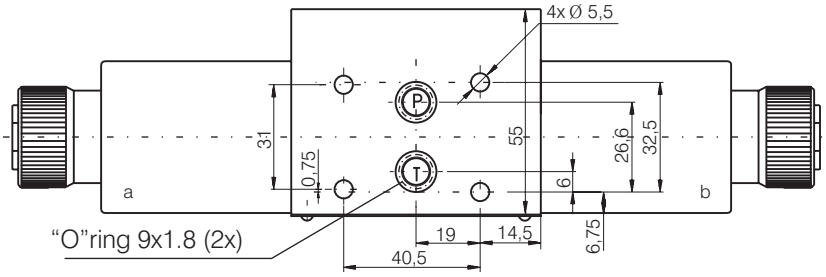


SYMBOL	CURVE
00	1
01	1
02	2
04	1
14	2
16	1
24	1
28	1
33	1
35	2
45	1
74	1

All dimensions are shown in mm.

RH06...1-.../...GF...

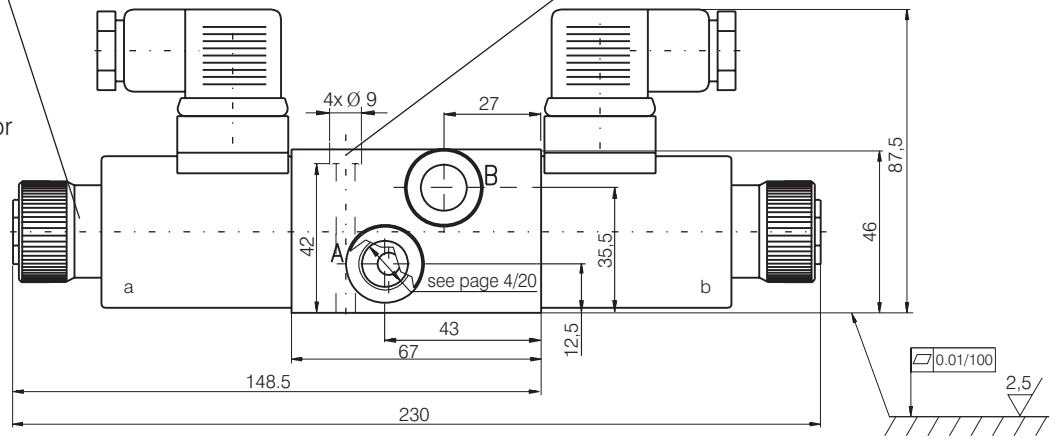
with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"

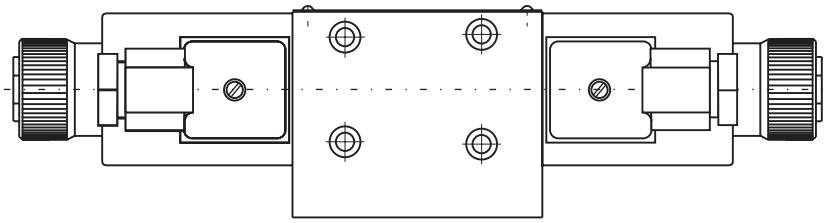


For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

Standard fixing bolts are M5x50 (10,9 class recommended). Torque 6...8 Nm.

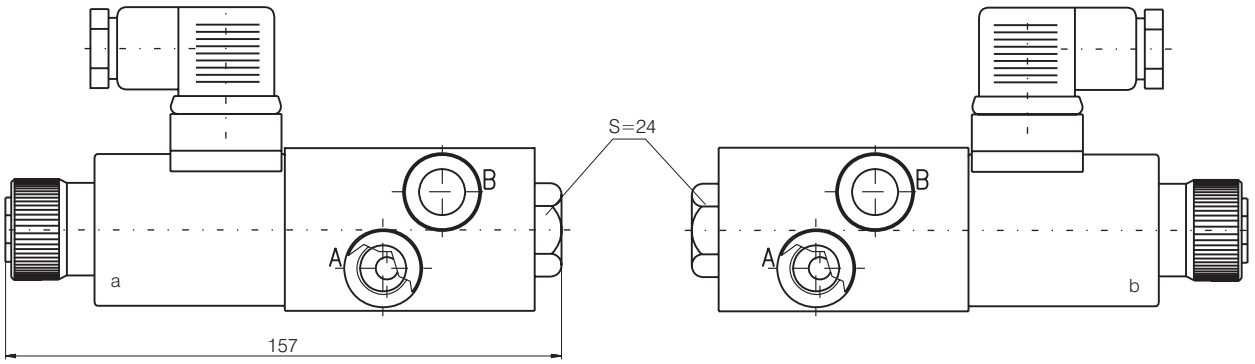
The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.





with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

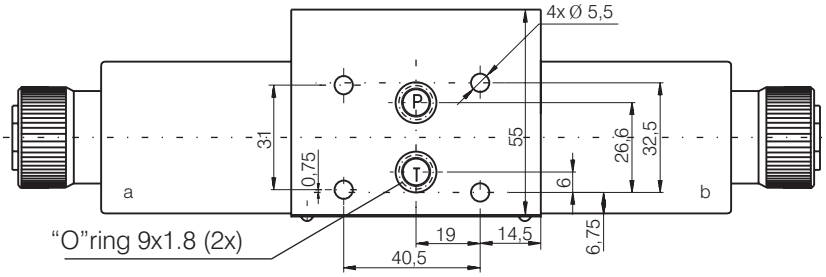


The other dimensions are the same as double solenoid valve.

All dimensions are shown in mm.

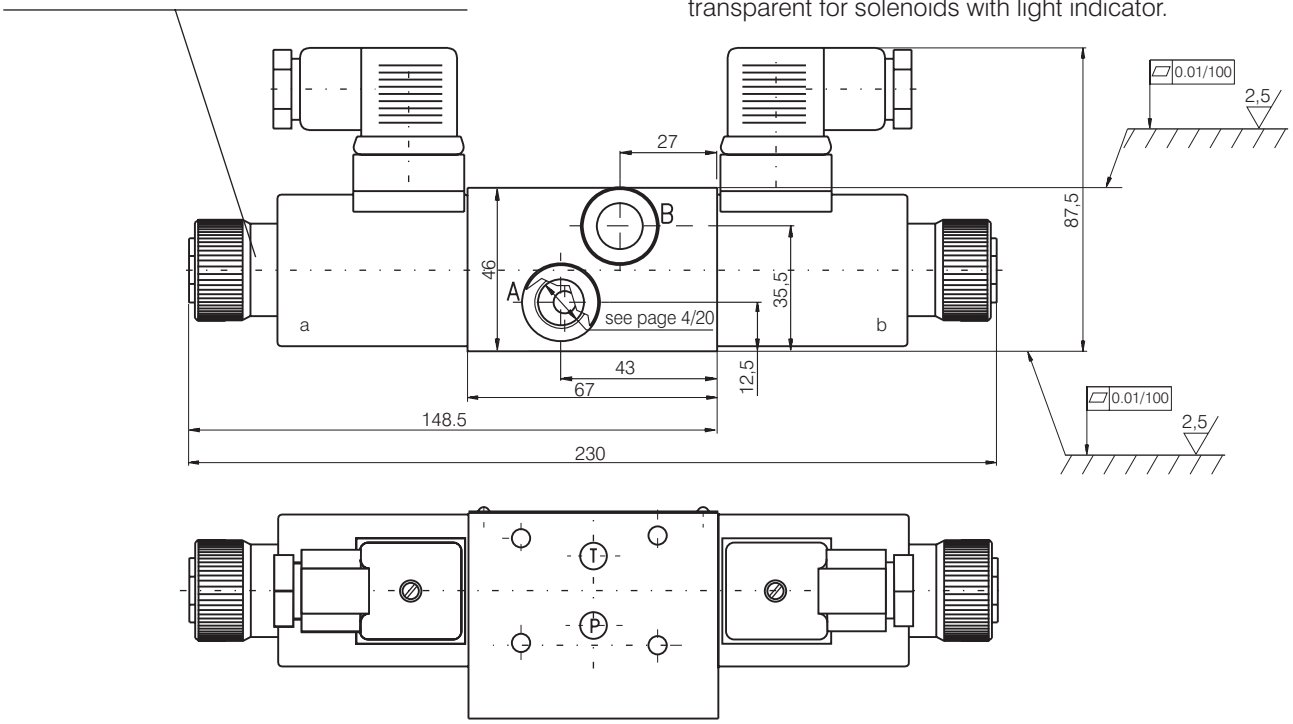
RH06...1-.../...GFM...

with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"



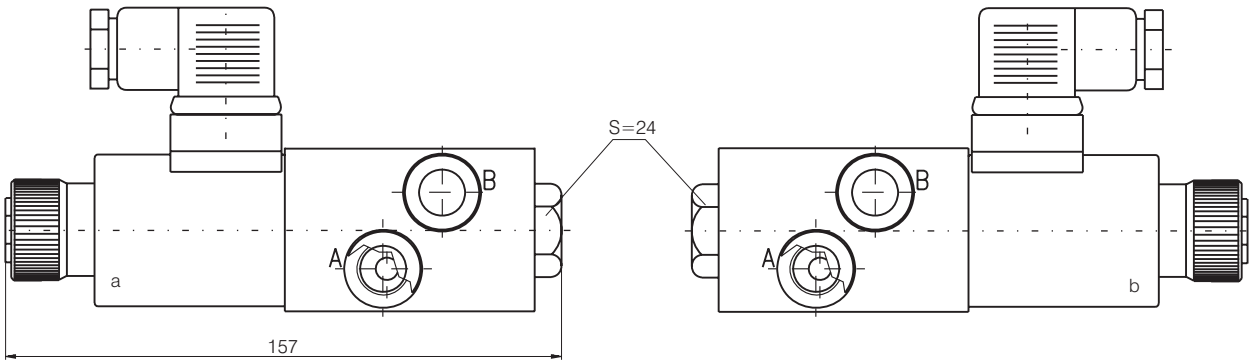
For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.



with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

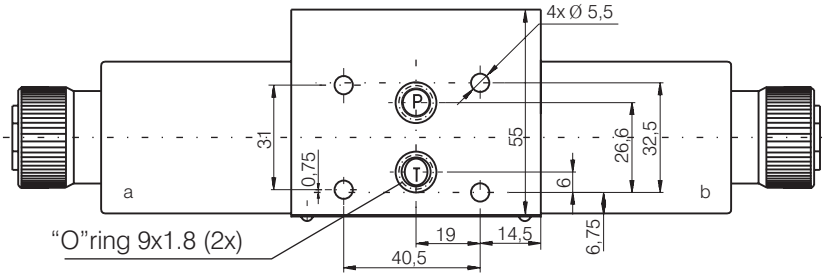


The other dimensions are the same as double solenoid valve.

All dimensions are shown in mm.

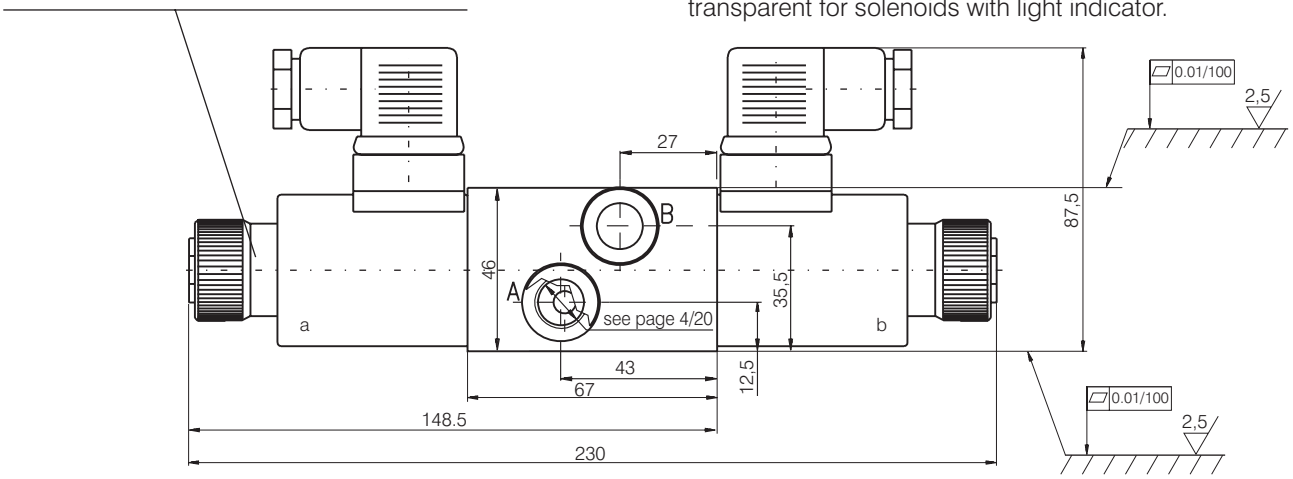
RH06...1-.../...GFMS...

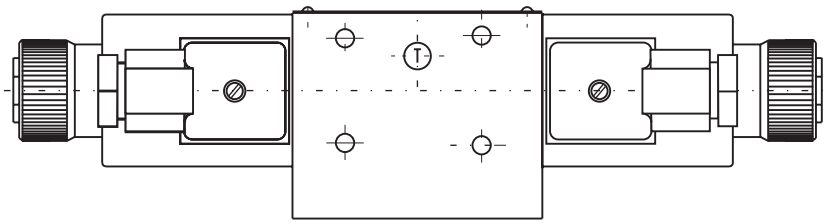
with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"



For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

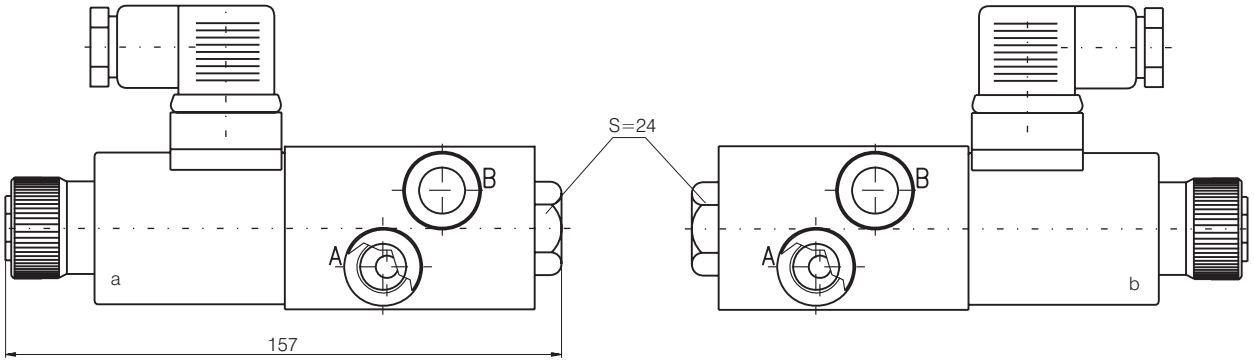
The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.





with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

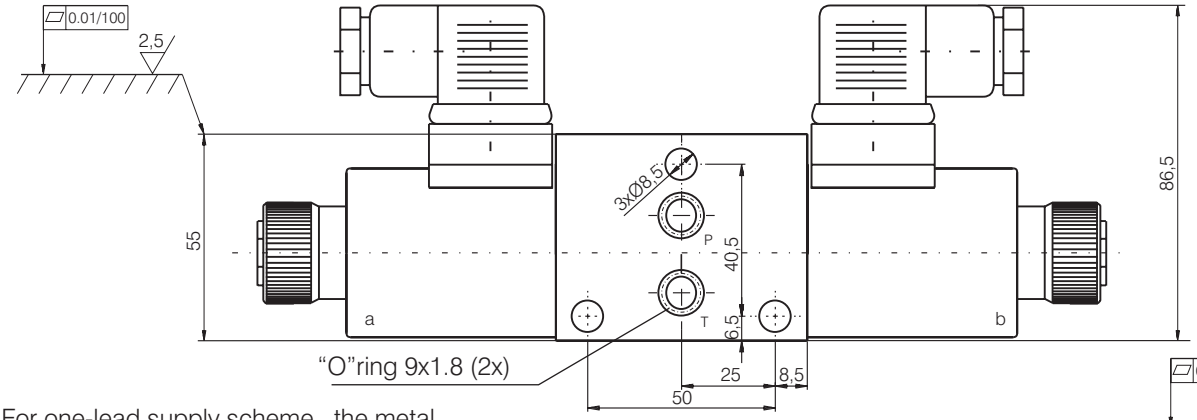


The other dimensions are the same as double solenoid valve.

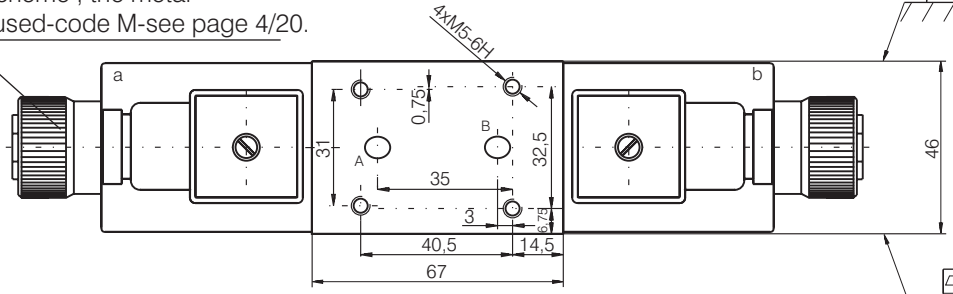
All dimensions are shown in mm.

with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"

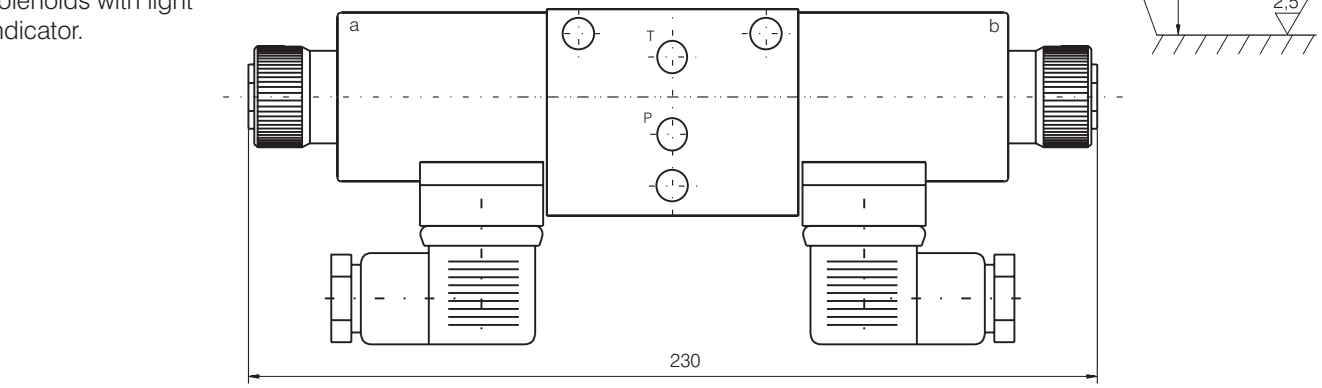
RH06...1-.../...GFS...



For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

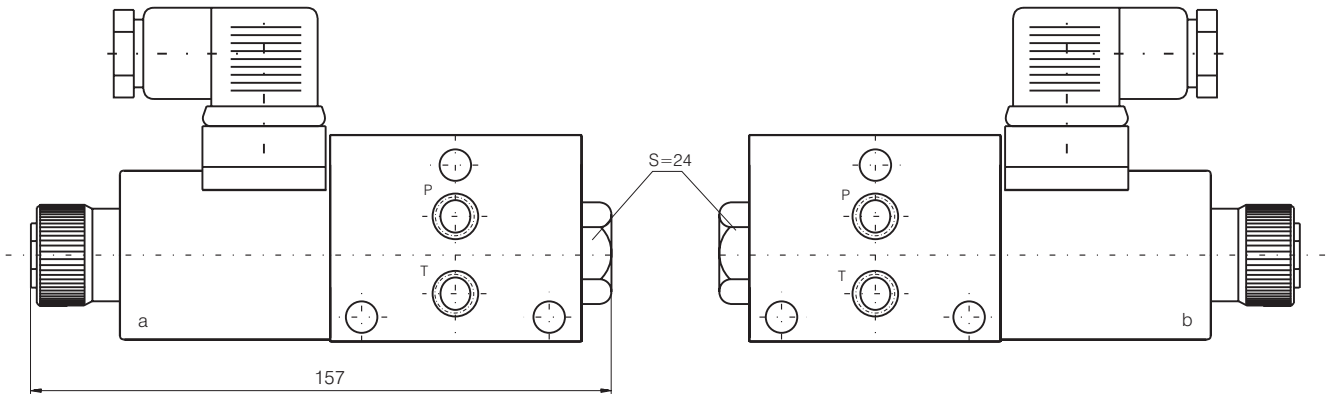


The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.



with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

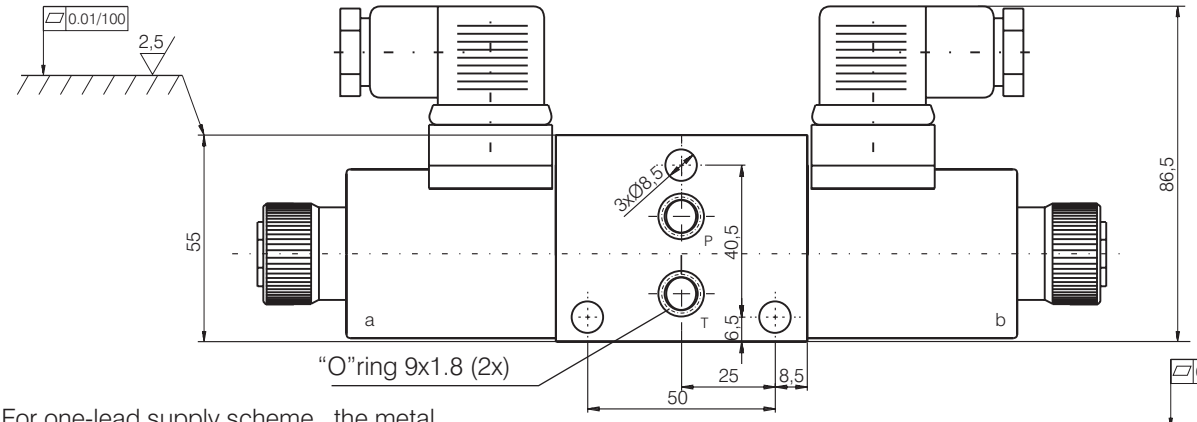


The other dimensions are the same as double solenoid valve.
This valve is useful only for vertical building up SVM06-... see pages 17/20 , 18/20 and 19/20.

All dimensions are shown in mm.

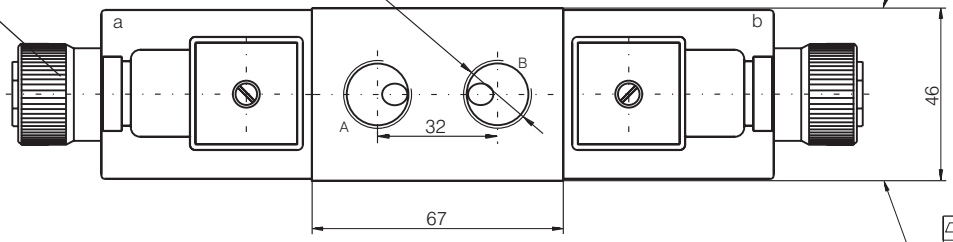
with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"

RH06...1-.../...GFST...

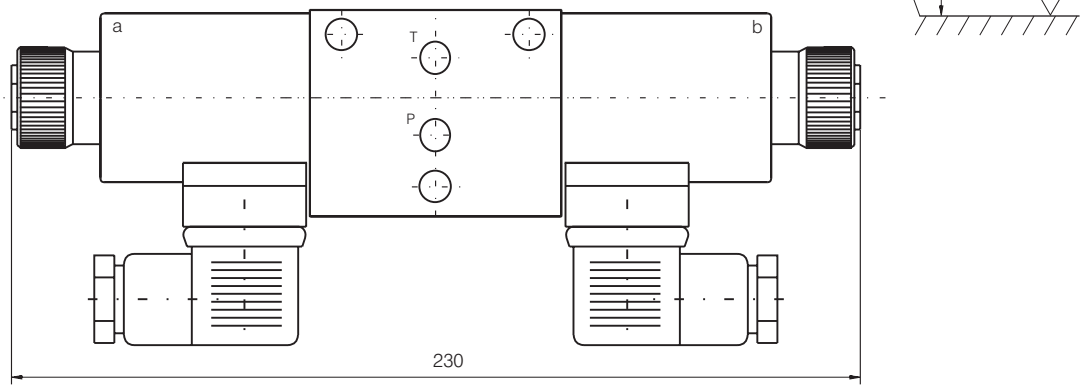


For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

see page 4/20.

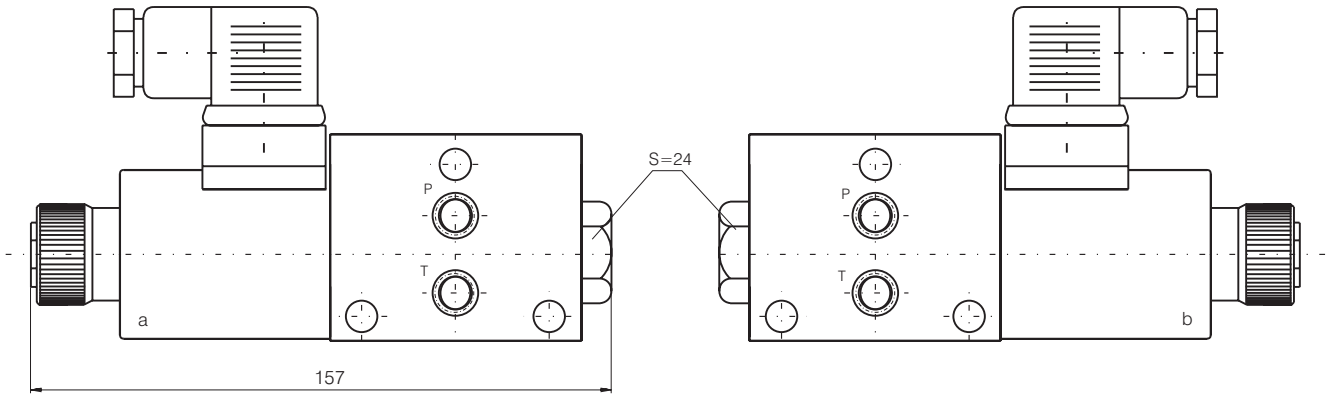


The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.



with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

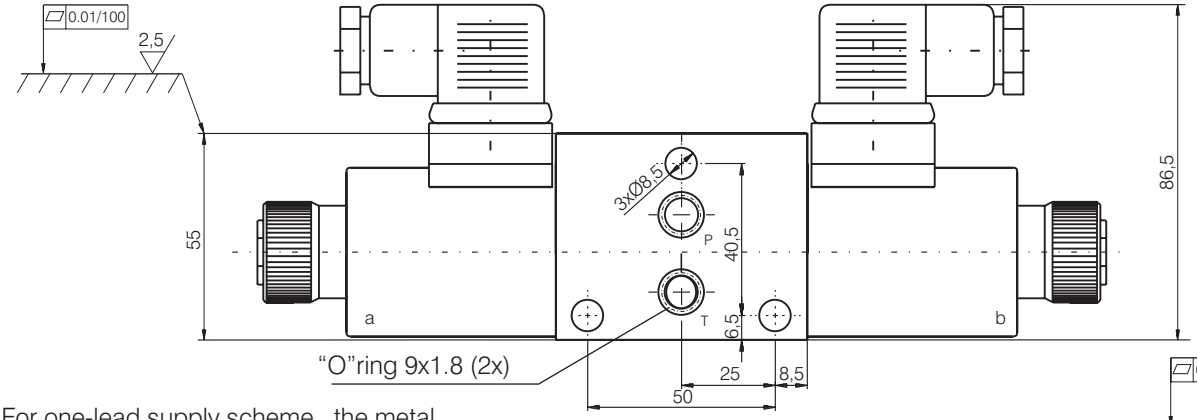


The other dimensions are the same as double solenoid valve.

All dimensions are shown in mm.

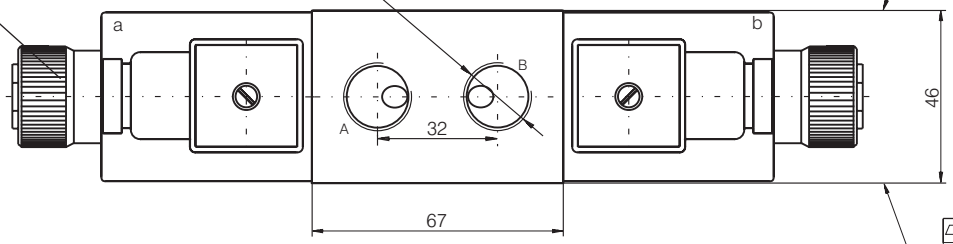
with solenoids "a" & "b"
for symbols: "00" , "01" , "02" , "04" , "05" , "08" and "20"

RH06...1-.../...GFSTS...

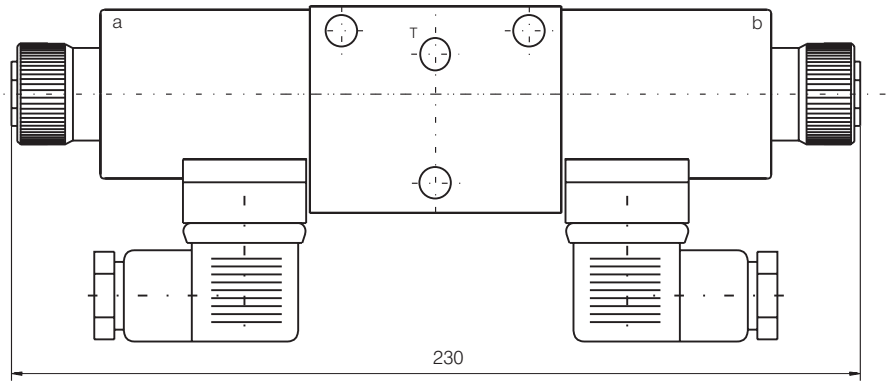


For one-lead supply scheme , the metal screw cap should be used-code M-see page 4/20.

see page 4/20.

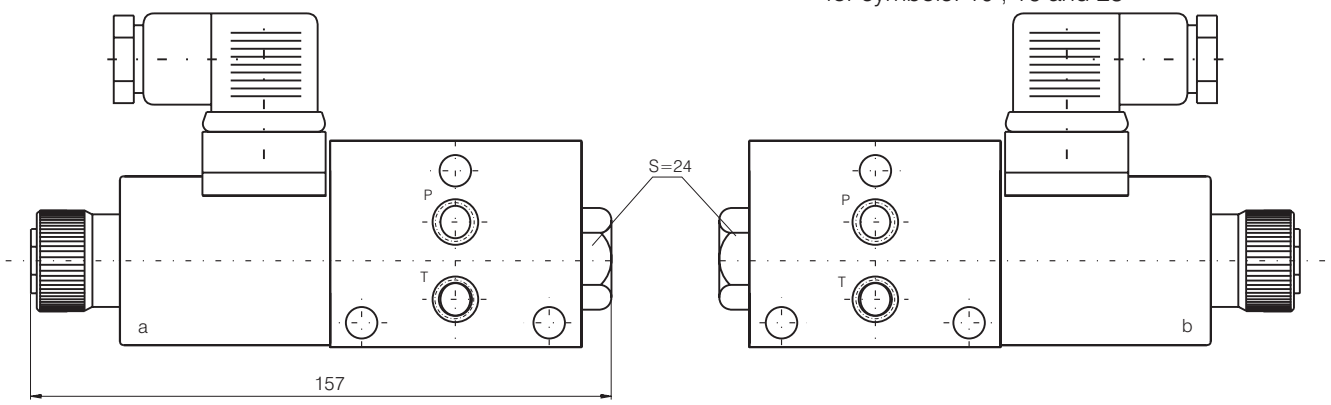


The plug connectors are grey or white for solenoid "a", black for solenoid "b" and transparent for solenoids with light indicator.



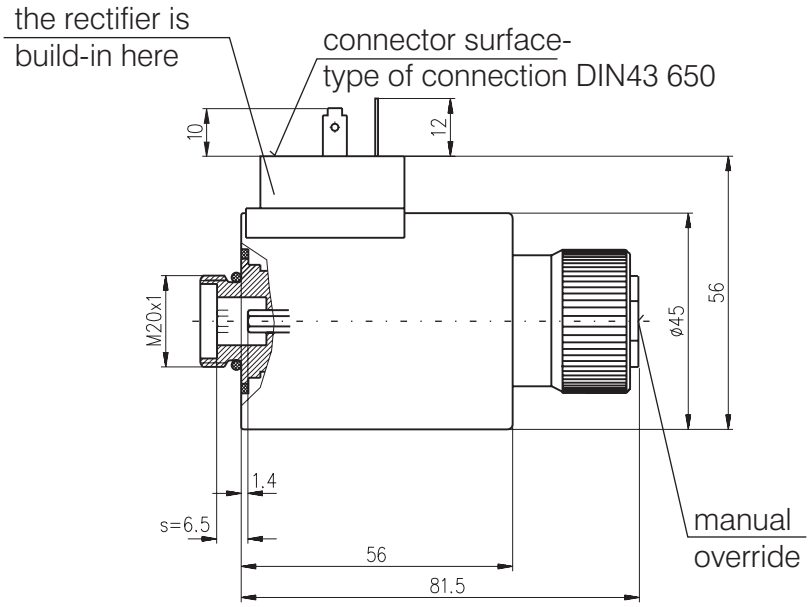
with solenoid "a"
for symbols: 11 , 12 , 14 , 17 , 24 , 33 and 45

with solenoid "b"
for symbols: 10 , 16 and 28

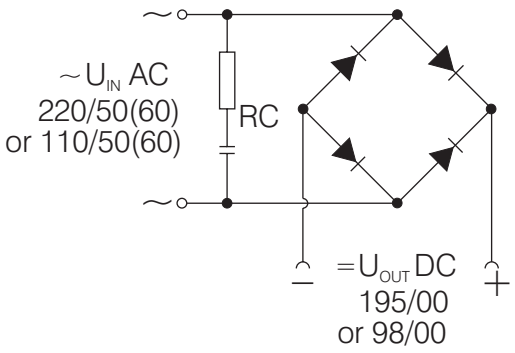


The other dimensions are the same as double solenoid valve.

All dimensions are shown in mm.

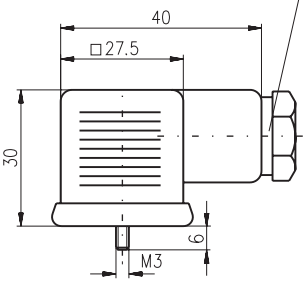
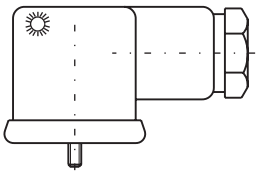
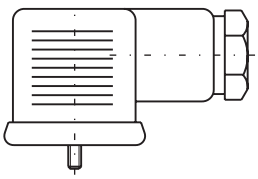
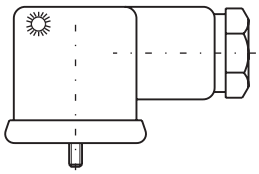


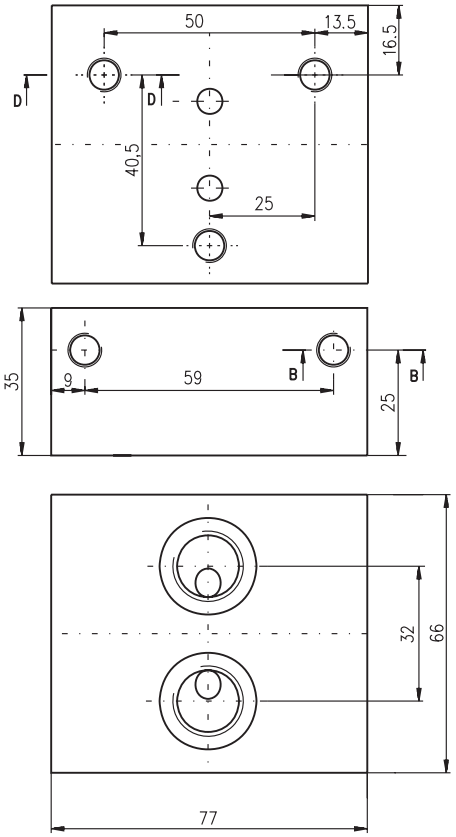
AC and DC solenoids have one and the same dimensions , connections and characteristics. The difference between AC and DC solenoids is in the integrated rectifier into the AC type. The solenoids can be used for 50Hz and 60Hz. The type of rectifier is shown here.
The supply voltages are as follows: 12V DC , 24V DC , 110V AC/50(60)Hz and 220V AC/50(60)Hz. RC filter is integrated into the connector(see below) and is used only with AC solenoids.



CONNECTORS

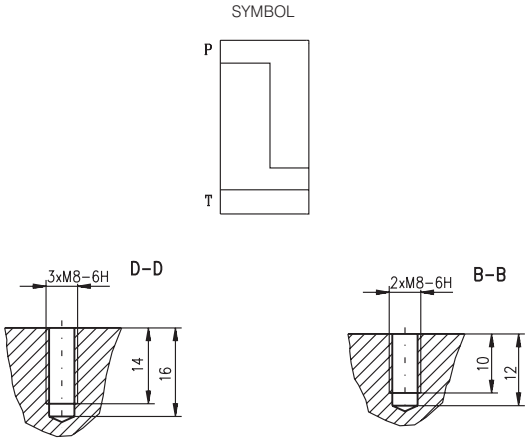
CODE/TYPE

C1	C2 (for DC type) Pg 11	C3 (for DC type)	C4 (for AC type)	C5 (for AC type)
Without connector	 With standard connector - DIN 43 650	 Connector with light indicator (transparent)	 Connector with integrated “RC” filter	 Connector with light indicator and “RC” filter (transparent)

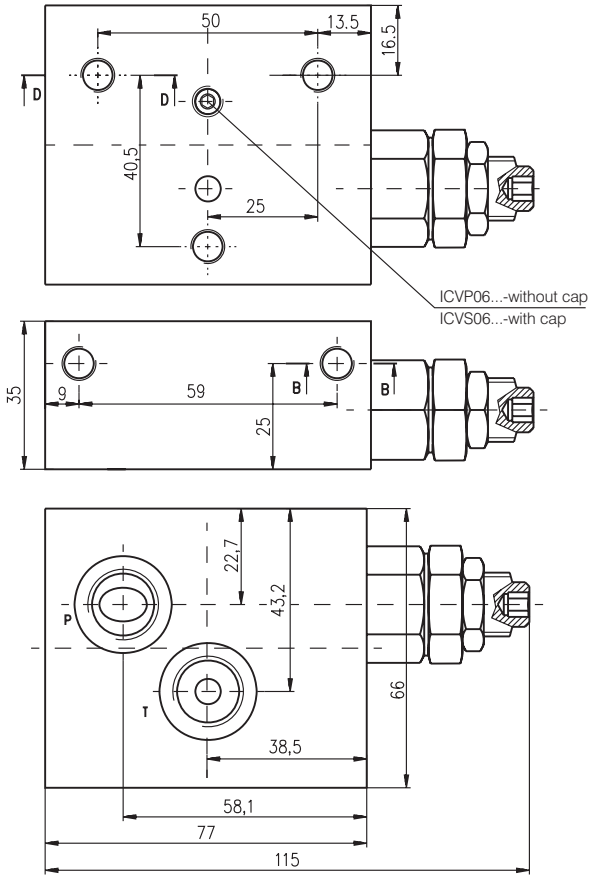


Inlet covers are available only with GFS , GFST & GFSTS modification (horizontal stackable control blocks).

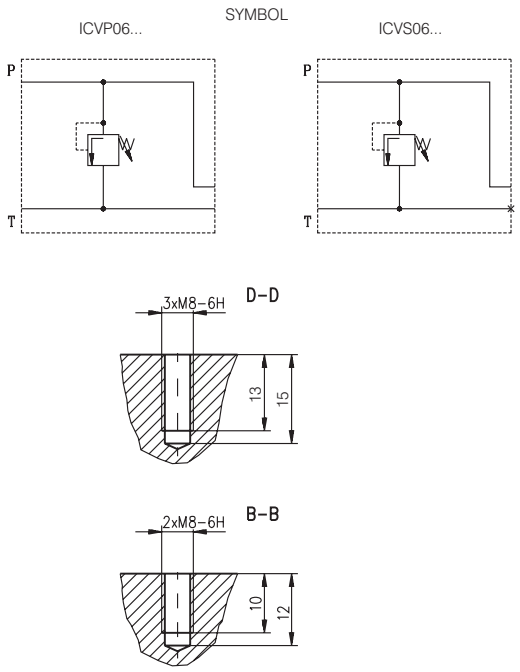
Code IC06... see page 16/20

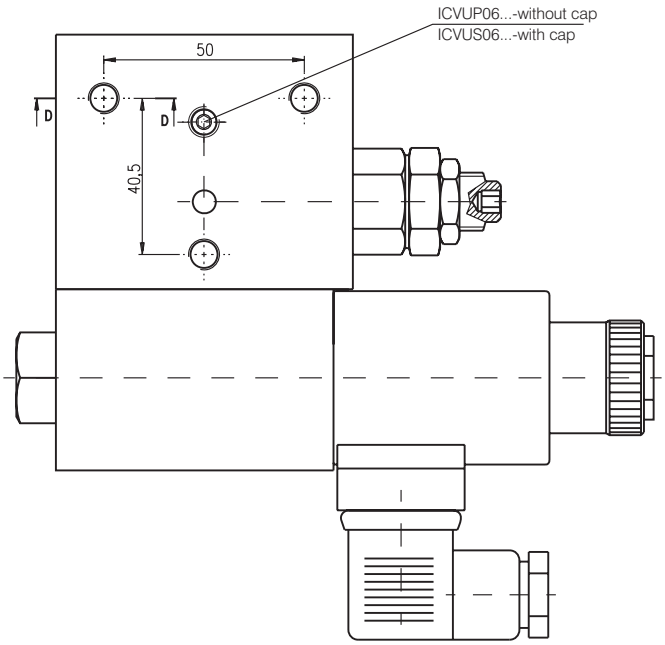


Different configurations on request



Code ICVP06.../ICVS06... see page 16/20



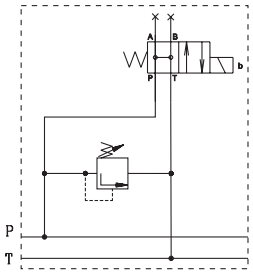


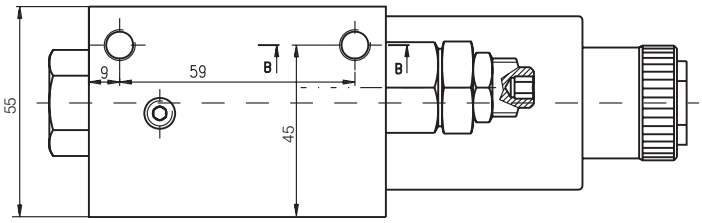
Inlet covers are available only with GFS , GFST & GFSTS modification (horizontal stackable control blocks).

Code ICVUP06.../ICVUS... see page 16/20

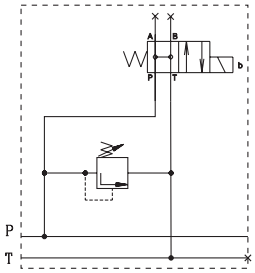
SYMBOL

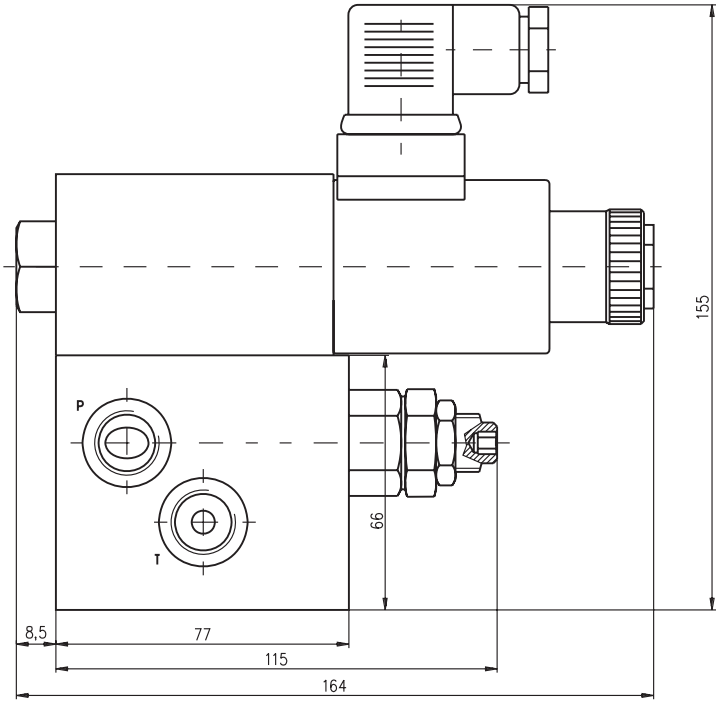
ICVUP06...

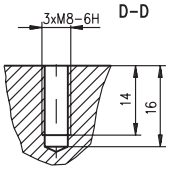


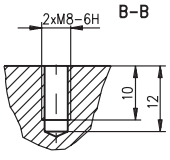


ICVUS06...

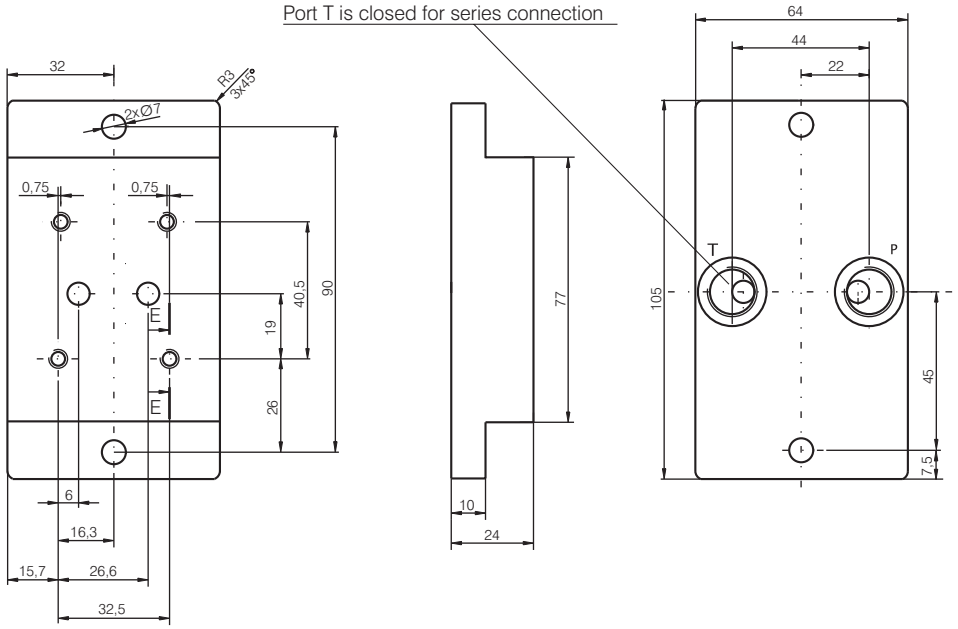




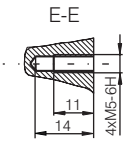




All dimensions are shown in mm. Subplates are available with GF , GFM and GFMS modification (vertical stackable control blocks).



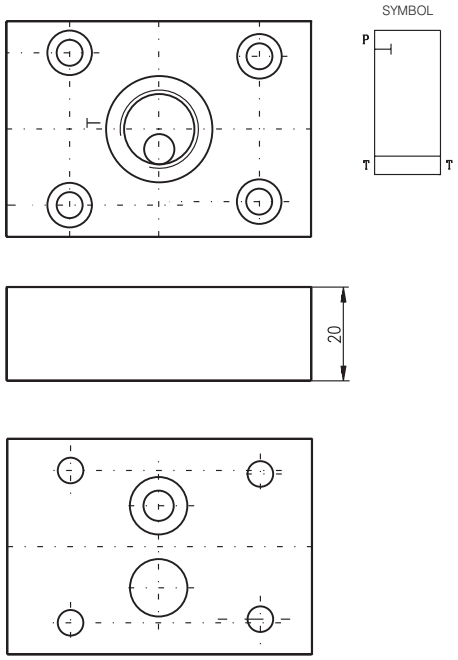
CODE	Threaded connections
M14	M14x1,5
G14	G1/4"
G38	G3/8"
M18-06	M18x1,5



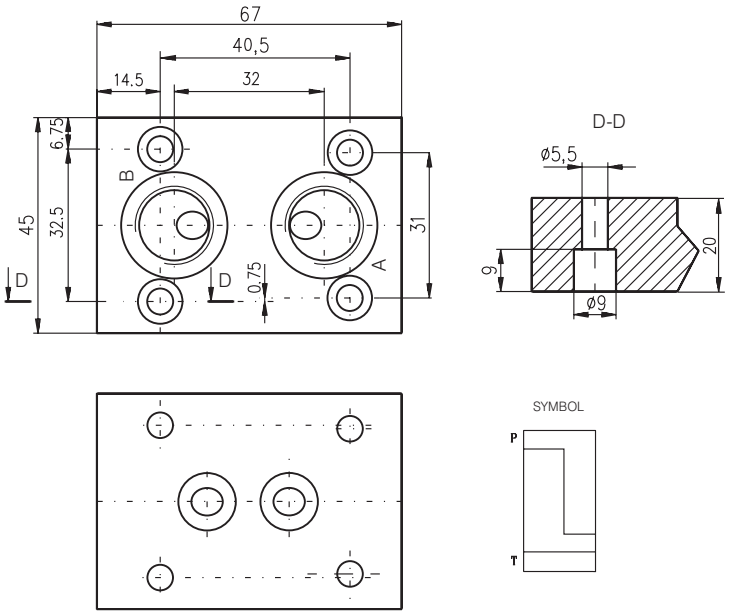
OUTLET COVER

Outlet covers are available with horizontal stackable control blocks with vertical building up - OC06... and with vertical stackable control blocks as peak plate when we realized series connection - OCVS06....

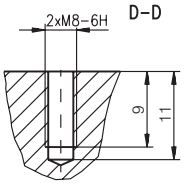
Code OCVS06 see page 16/20



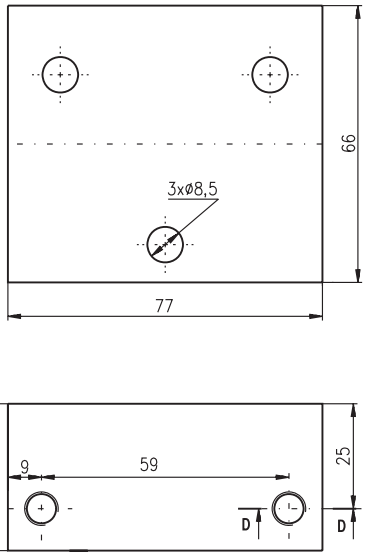
Code OC06... see page 16/20



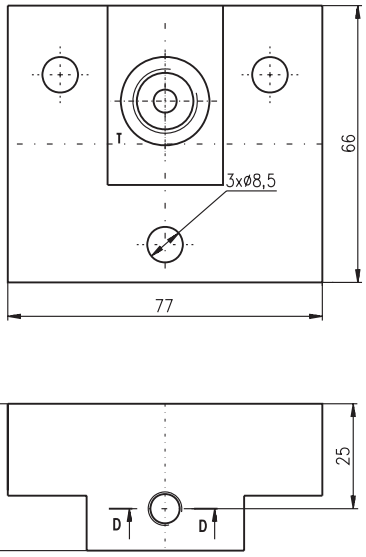
Covers are available only with GFS , GFST and GFSTS modifications (horizontal stackable control blocks).



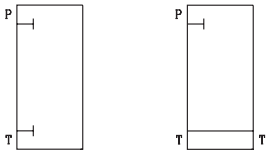
Code CP06 see below

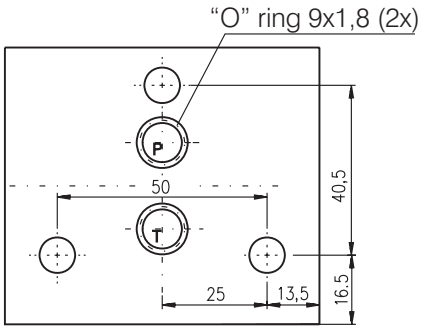


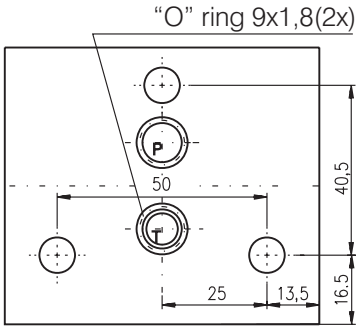
Code CS06... see below



SYMBOL







ORDERING CODE FOR ALL COVERS

...	06		

Cover: inlet cover(for horizontal stacking) - without valves **-IC**
- with relief valve for parallel connection **-ICVP**
- with relief valve for series connection **-ICVS**
- with relief & unloading valves for series connection **-ICVUS**
- with relief & unloading valves for parallel connection **-ICVUP**

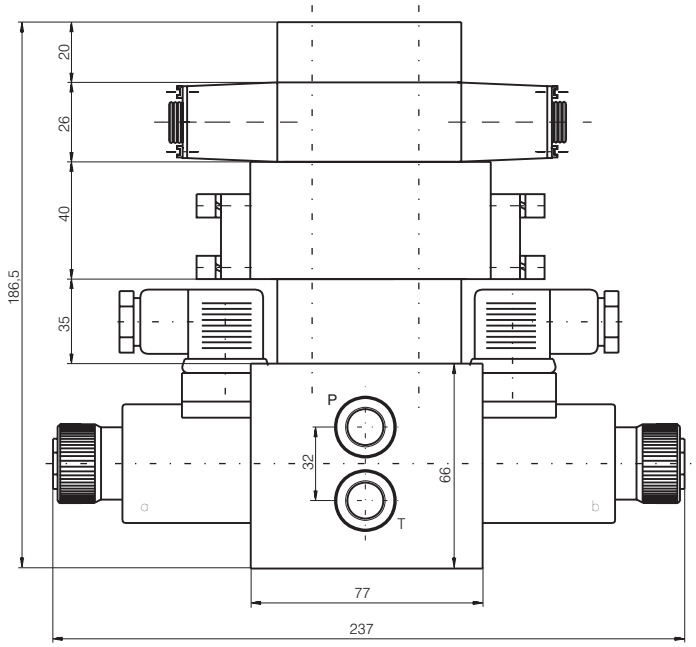
outlet cover(for horizontal stacking and vertical building up) **-OC**
outlet cover(for vertical stacking and series connection) **-OCVS**
cover(for horizontal stacking) - parallel **-CP**
- series **-CS**

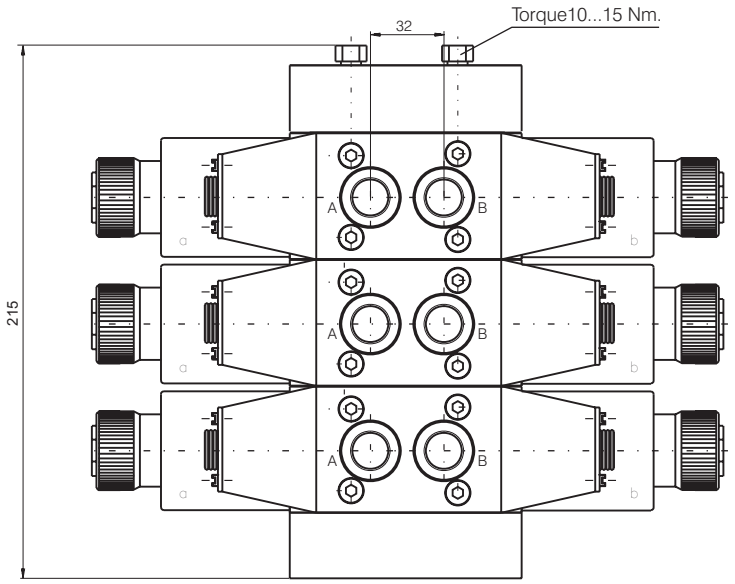
Additional information

Nominal size

Connection threads:
M14x1,5 **-Omit**
M16x1,5 **-M1**
G3/8" **-G1**
G1/4" **-G2**

GENERAL DESCRIPTION





Valve assembly:
SVM06...-...

✓ 4/2 and 4/3 - way directional control valves with solenoid operation made up with inlet cover , outlet cover and cover.

✓ Thread connection of ports “A” , “B” “P” and “T”.

✓ Possibility of vertical building up with pilot operated check valve , throttle check valve or both standard component.

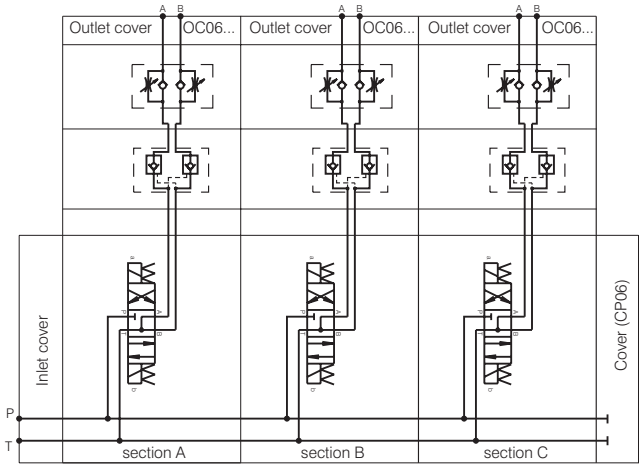
✓ Up to 8 sections without vertical building up.
Up to 6 sections with vertical building up.

✓ Possibility of parallel and series connection.

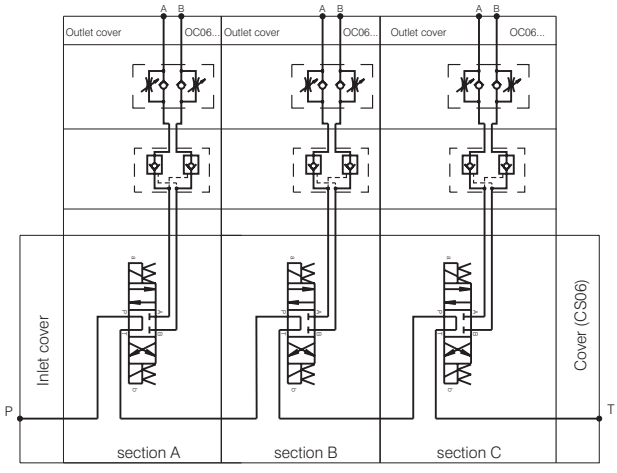
Directional control valves are stackable type RH06...1-.../...GFS...-for vertical building up , and RH06...1-.../...GFST...& RH06...1-.../...GFSTS... - for horizontal stacking.

The stackable valves for vertical building up are standard version CETOP 3 modular valves.

Parallel connection

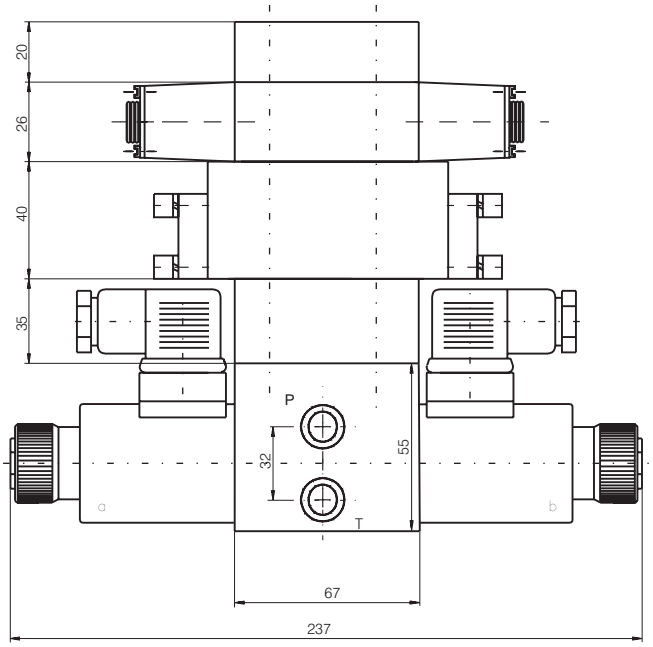


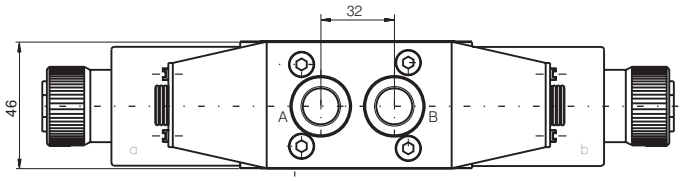
Series connection



GENERAL DESCRIPTION

Valve assembly:
SVM06...-...





Every section can have the following configurations as shown below:

-directional control valve with pilot operated check valve and adjustable throttle check valve ,

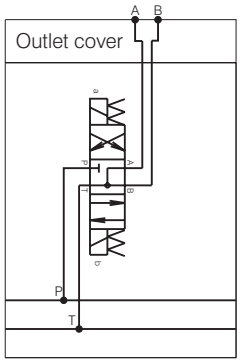
-directional control valve with pilot operated check valve ,

-directional control valve with adjustable throttle check valve.

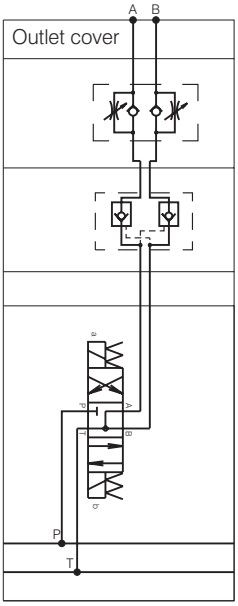
-directional control valve without valves.

POSSIBLE CONFIGURATIONS*

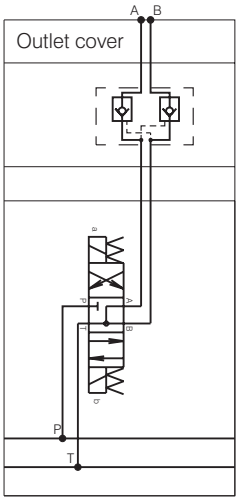
A(B,C,D,E,F)...-without symbol



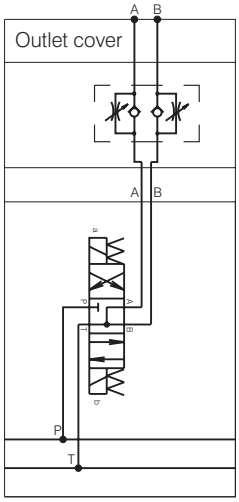
A(B,C,D,E,F)...-KD



A(B,C,D,E,F)...-K



A(B,C,D,E,F)...-D



Codifications-see page 19/20 “ORDERING CODE” marked with.

SVM06 - ... ... - .../... - /... - ... .../* - ... ...

Stackable valve nominal size 06

Number of section - up to 8

Inlet cover: without cover - **Omit**
without valve - **IC06**
with pressure relief valve - **ICVP06 or ICVS06**
with pressure relief & unloading valves - **ICVUP06 or ICVUS06**

see page 16/20

Modification of directional control valve: GFS - **GFS**
GFST - **GFST**
GFSTS - **GFSTS**

see pages 9/20...11/20

Supply voltage/current frequency:
012/00
024/00
110/50
220/50

see page 12/20

Stackable valves: repeat for each section
first section - **A**
second section - **B**
third section - **C**
fourth section - **D**
fifth section - **E**
sixth section - **F**

functional symbol of directional control valve

see page 4/20

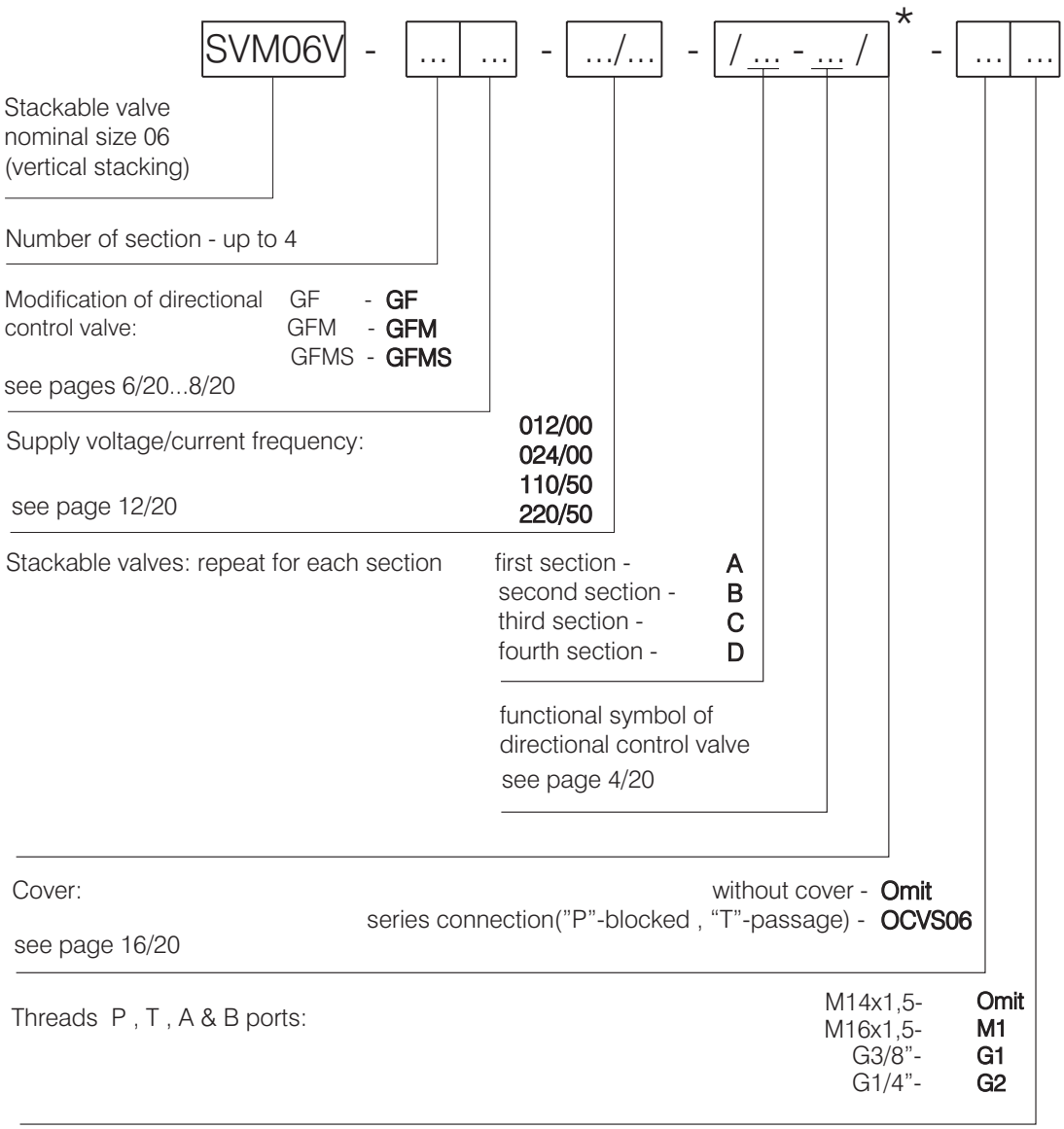
without valves - **Omit**
with pilot operated check valve & throttle check valve - **KD**
with pilot operated check - **K**
with throttle check valve - **D**

see page 18/20

Cover:
without cover - **Omit**
"P" & "T" - blocked - **CP06**
"P" -blocked , "T" -passage - **CS06**

see page 16/20

Threads P , T , A & B ports:
M14x1,5- **Omit**
M16x1,5- **M1**
G3/8"- **G1**
G1/4"- **G2**


SVM06V - ... ... - .../... - / ... - ... / * - ... ...
Stackable valve nominal size 06 (vertical stacking)
Number of section - up to 4
Modification of directional control valve:
GF - GF
GFM - GFM
GFMS - GFMS
see pages 6/20...8/20
Supply voltage/current frequency:
012/00
024/00
110/50
220/50
see page 12/20
Stackable valves: repeat for each section
first section - A
second section - B
third section - C
fourth section - D
functional symbol of directional control valve
see page 4/20
Cover:
without cover - Omit
series connection("P"-blocked , "T"-passage) - OCVS06
see page 16/20
Threads P , T , A & B ports:
M14x1,5- Omit
M16x1,5- M1
G3/8"- G1
G1/4"- G2