

**3/2 and 5/2 directional control valves**  
**Actuation: electromagnetic**  
**Indirectly controlled soft seal spool valves**  
**Port size: G 1/4, 1/4 NPT**  
**NAMUR Interface**

**For single and double acting actuators**

**3/2 or 5/2 way function in one valve**

**Easily interchangeable solenoid**

**Compact design**

**Monostable (fail close) & Bistable (fail last position) versions**

**Crossover-free switching, switch-over function guaranteed even with small cross section air supply**

**Manual override with detent**

**Solenoids certified to ATEX, Ex ia and Ex m.**  
**For details refer to solenoid information pages 2 & 3**

**Solenoids approved to IEC Ex, UL, FM etc available on request**



### Technical data

Medium:

Filtered, lubricated or non-lubricated and dry compressed air

Operation:

Solenoid, indirectly acting

Flow direction:

Fixed

Mounting position:

Optional

Port size:

G1/4, 1/4 NPT

Electrical connection:

See solenoid table

Operating pressure:

2 ... 8 bar (below -10°C must be > 2,5 bar)

Temperature:

Valve: -15 to +50°C

Check the air quality for applications below +2°C

Solenoid: see solenoid table

### Materials:

Housing: Aluminium anodized

Pilot flange: Plastic (PBT)

Flange plate: Aluminium

Seals: NBR (Perbunan)

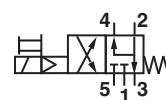
### Ordering example

5/2 solenoid/spring control valve, port size G 1/4, solenoid 24 V d.c., with connector DIN EN 175 301-803 form B, protection class IP 65

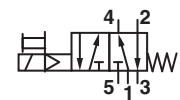
**Type: 9730000.3050.02400**

**connector: 0680003**

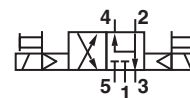
3/2



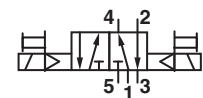
5/2



3/2

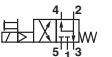

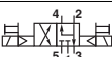

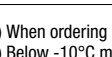


5/2



## 3/2, 5/2 directional valves, standard design





5/2 way or 3/2 way function (see conversion instructions page 6)

Symbol	Type *1)	port size			Actuation	Operation pressure (bar) *2)	Flow (l/min)	Weight (kg)	Dimensions No.
		1	3, 5	2, 4					
	9730000	G 1/4	G 1/4	Flange	Solenoid/Spring	2 ... 8	1230	0,42	1
	9730010	1/4 NPT	1/4 NPT	Flange					
	Ex ia version, solenoid 3039 only				Solenoid/Spring	2 ... 8	1230	0,42	1
	9730002	G 1/4	G 1/4	Flange					
	9730012	1/4 NPT	1/4 NPT	Flange	Solenoid/Solenoid	2 ... 8	1250	0,50	2
	9731000	G 1/4	G 1/4	Flange					
	Ex ia version, solenoid 3039 only				Solenoid/Solenoid	2 ... 8	1250	0,50	2
	9731002	G 1/4	G 1/4	Flange					
	9731010	1/4 NPT	1/4 NPT	Flange	Solenoid/Solenoid	2 ... 8	1250	0,50	2
	9731012	1/4 NPT	1/4 NPT	Flange					

\*1) When ordering please indicate solenoid, voltage and current type (frequency).

\*2) Below -10°C must be > 2,5 bar

### Solenoid actuators

	Type	Power consumption		Ex Protection Category	Protection class	Temperature Ambient Fluid (°C)	Weight (kg)	Dimensions No.	Circuit diagram No.
		24 V DC (W)	230 V AC (VA)						
	3050	1,7	4,3	-	IP 65 (with connector) DIN EN 175301-803 Form B *3)	-15 ... +50	0,054	4	1
	3036	1,6	3,5	-	IP 65 (with connector) DIN EN 175301-803 Form A *3)	-15 ... +50	0,090	5	1
	3046	2	-	II3G II3D	Ex nA II T5 Ex tD A22 IP65 T 95°C with special connector design DIN EN 175301-803 Form A	-15 ... +50	0,300	5	1
	3047	-	4,0	II3G II3D	Ex nA II T5 Ex tD A22 IP65 T 95°C with special connector design DIN EN 175301-803 Form A	-15 ... +50	0,300	5	1
	3062 *4)	2,7	-	II2G II2D	Ex mb II T5 Ex tD A21 IP65 T 95°C Standard wire, 3 m long	-20 ... +50	0,300	6	14
	3063 *4)	-	2,1	II2G II2D	Ex mb II T5 Ex tD A21 IP65 T 95°C Standard wire, 3 m long	-20 ... +50	0,300	6	15
	3071	2,7	-	-	IP 66 in combination with Connector M12x1 (yellow LED) DIN IEC 61076-2-101 *5)	-10 ... +50	0,300	7	16

Standard voltages 24 V DC, 230 V AC. Other voltages on request.

\*3) Connector is not included in delivery; Required connectors 0680003 form B or 0570275 form A

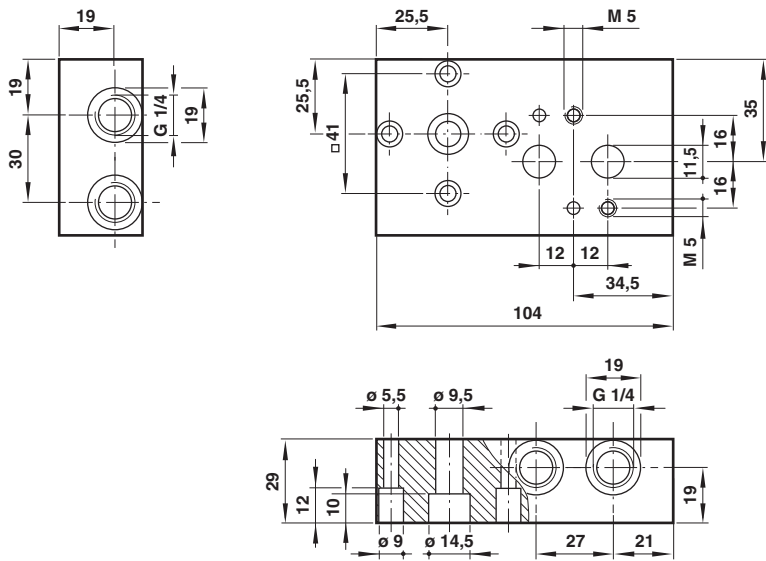
\*4) Certificate of Conformity PTB No. PTB 03 ATEX 2015X

\*5) Connector acc. DIN IEC 61076-2-101 not included in delivery



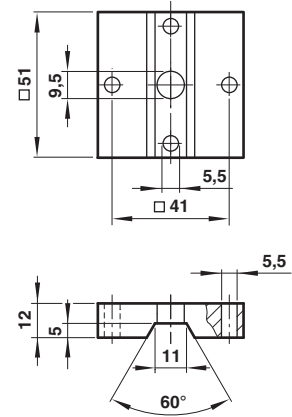
Single connection plate

Type: 0612790



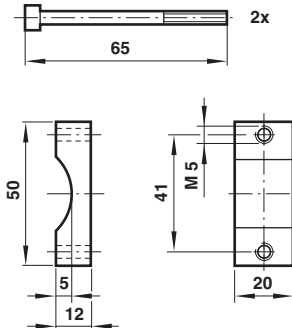
NAMUR slot

Type: 0612791



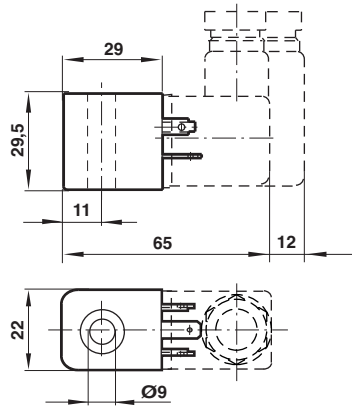
Yoke

Type: 0540593

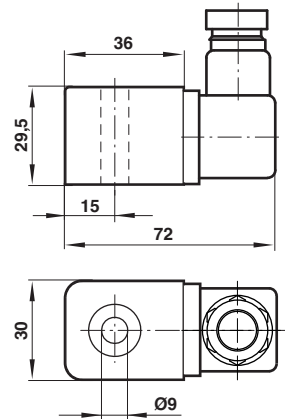


**Basic dimensions for solenoid operators**

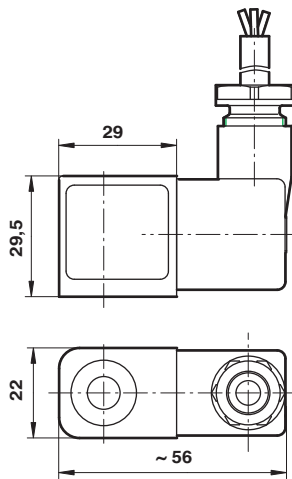
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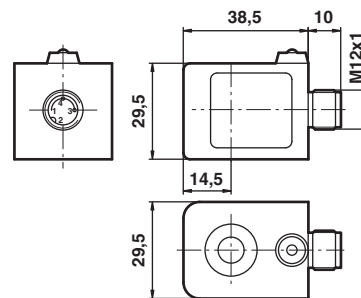
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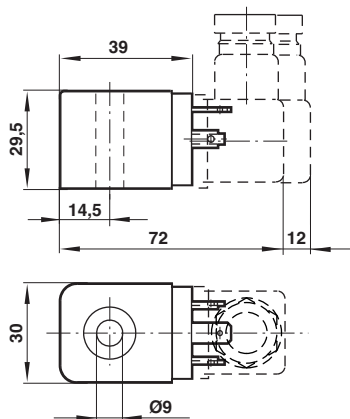
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⑦

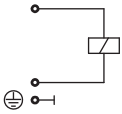


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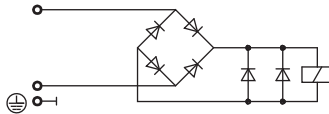


**Circuit diagrams**

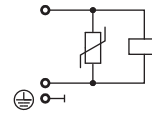
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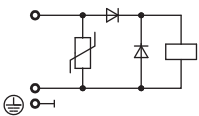
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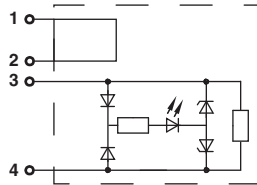
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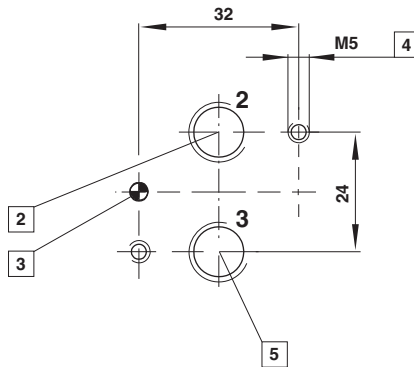
⑮



⑯



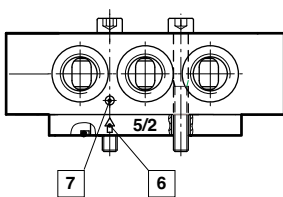
**NAMUR hole pattern**



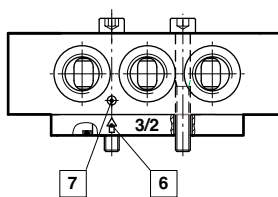
- ② Port 2 (A)
- ③ Coding stud threaded
- ④ M5 (10 deep)
- ⑤ Port 3 (R)

**Conversion instructions of 5/2 into 3/2 way function**

**5/2 way function**



**3/2 way function**



3/2 resp. 5/2 way function can be achieved just by swapping enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing. Original mode of supply: 5/2 function.

- ⑥ Arrow
- ⑦ Marker

**Warning**

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'. Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN. Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power

systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

**System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.**

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products where applicable.

- > **Port size:**  
In-line:  
M5, 1/8 ... 1/2 (ISO G)  
NAMUR:  
1/4, 3/8 (ISO G)
- > **High flow rate**
- > **Connector with LED light as standard**
- > **3/2, 5/2, 5/3 way**
- > **Robust design**
- > **Sub-base system for easy assembly**
- > **NAMUR option available**



### Technical features

#### Medium:

Compressed air, filtered to 40 µm, lubricated or non lubricated

#### Operation:

Solenoid

#### Operating pressure:

1,5 ... 8 bar (22 ... 116 psi)

#### Flow:

245 ... 3350 l/min  
at inlet pressure 6 bar (87 psi)  
with 1 bar (14,5 psi) drop

#### Mounting position:

Optional, preferred horizontal

#### Ambient/Media temperature:

-5 ... +70°C (+23 ... +158°F)  
Air supply must be dry enough to  
avoid ice formation at temperatures  
below +2°C (+35°F)

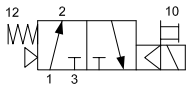
#### Materials:

Housing and sub-bases: Aluminium  
Blanking plate: Zinc plated steel  
Spool: Aluminium  
Seals: NBR  
Screws: Nickel plated steel  
Springs: Stainless steel  
Manual override:  
Metal (M5, G1/8),  
Plastic (G1/4 ... 1/2)

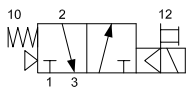
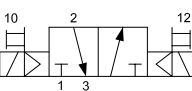
### Electrical details for solenoid operators

<b>Voltage tolerance</b>	± 10%
<b>Rating</b>	100% continuous duty
<b>Electrical connection (corresponding to chosen coil)</b>	Industrial Standard; 22 mm
<b>Solenoid</b>	2 x 180° for M5 and G1/8, 4 x 90° for G1/4 ... 1/2
<b>Manual override</b>	Push and turn to lock
<b>Protection class</b>	IP65

### 3/2 directional control valves, Normally Open (NO)

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/spring	-5...+70	Internal	240	1,5 ... 8	0.13	1	VCB22A317D-C52***
	G1/8	Solenoid/spring	-5...+70	Internal	600	1,5 ... 8	0.13	1	VCB22A317D-CA2***
	G1/4	Solenoid/spring	-5...+70	Internal	1050	1,5 ... 8	0.2	1	VCB22B317A-AB2***
	G3/8	Solenoid/spring	-5...+70	Internal	1500	1,5 ... 8	0.27	1	VCB22C317A-AC2***
	G1/2	Solenoid/spring	-5...+70	Internal	3300	1,5 ... 8	0.3	1	VCB22D317A-AD2***

### 3/2 directional control valves, Normally Close (NC)

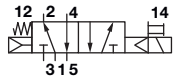
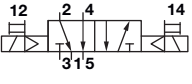
Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/spring	-5...+70	Internal	240	1,5 ... 8	0.13	1	VCB22A417D-C52***
	G1/8	Solenoid/spring	-5...+70	Internal	600	1,5 ... 8	0.13	1	VCB22A417D-CA2***
	G1/4	Solenoid/spring	-5...+70	Internal	1050	1,5 ... 8	0.2	1	VCB22B417A-AB2***
	G3/8	Solenoid/spring	-5...+70	Internal	1500	1,5 ... 8	0.27	1	VCB22C417A-AC2***
	G1/2	Solenoid/spring	-5...+70	Internal	3300	1,5 ... 8	0.38	1	VCB22D417A-AD2***
	M5	Solenoid/ solenoid	-5...+70	Internal	240	1,5 ... 8	0.18	2	VCB22A411D-C52***
	G1/8	Solenoid/ solenoid	-5...+70	Internal	600	1,5 ... 8	0.18	2	VCB22A411D-CA2***
	G1/4	Solenoid/ solenoid	-5...+70	Internal	1050	1,5 ... 8	0.3	2	VCB22B411A-AB2***
	G3/8	Solenoid/ solenoid	-5...+70	Internal	1500	1,5 ... 8	0.32	2	VCB22C411A-AC2***
	G1/2	Solenoid/ solenoid	-5...+70	Internal	3300	1,5 ... 8	0.51	2	VCB22D411A-AD2***

\*3/2 NAMUR function can be achieved by applying conversion plate on 5/2 NAMUR valve

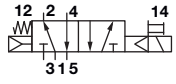
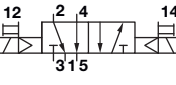
\*NC = Normally Closed, NO = Normally Open



**5/2 directional control valves, in-line version**

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/spring	0 ... +70	Internal	245	1,5 ... 8	0,13	3	VCB22A517D-C52***
	G1/8	Solenoid/spring	0 ... +70	Internal	600	1,5 ... 8	0,13	3	VCB22A517D-CA2***
	G1/4	Solenoid/spring	-5 ... +70	Internal	1050	1,5 ... 8	0,2	3	VCB22B517A-AB2***
	G3/8	Solenoid/spring	-5 ... +70	Internal	1800	1,5 ... 8	0,28	3	VCB22C517A-AC2***
	G1/2	Solenoid/spring	-5 ... +70	Internal	3350	1,5 ... 8	0,5	3	VCB22D517A-AD2***
	M5	Solenoid/ solenoid	0 ... +70	Internal	245	1,5 ... 8	0,19	4	VCB22A511D-C52***
	G1/8	Solenoid/ solenoid	0 ... +70	Internal	600	1,5 ... 8	0,19	4	VCB22A511D-CA2***
	G1/4	Solenoid/ solenoid	-5 ... +70	Internal	1050	1,5 ... 8	0,31	4	VCB22B511A-AB2***
	G3/8	Solenoid/ solenoid	-5 ... +70	Internal	1800	1,5 ... 8	0,39	4	VCB22C511A-AC2***
	G1/2	Solenoid/ solenoid	-5 ... +70	Internal	3350	1,5 ... 8	0,62	4	VCB22D511A-AD2***

**5/2 directional control valves, NAMUR version**

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	G1/4	Solenoid/spring	0...+70	Internal	1050	1,5 ... 8	0,29	6	VCB22C517A-AE2***
	G3/8	Solenoid/spring	0...+70	Internal	1800	1,5 ... 8	0,29	6	VCB22C517A-AF2***
	G1/4	Solenoid/ solenoid	-5...+70	Internal	1050	1,5 ... 8	0,39	7	VCB22C511A-AE2***
	G3/8	Solenoid/ solenoid	-5...+70	Internal	1800	1,5 ... 8	0,39	7	VCB22C511A-AF2***

### 5/3 directional control valves, All Ports Blocked (APB)

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/ solenoid	-5...+70	Internal	240	1,5 ... 8	0.21	5	VCB22A611D-C52***
	G1/8	Solenoid/ solenoid	-5...+70	Internal	470	1,5 ... 8	0.21	5	VCB22A611D-CA2***
	G1/4	Solenoid/ solenoid	-5...+70	Internal	700	1,5 ... 8	0.36	5	VCB22B611A-AB2***
	G3/8	Solenoid/ solenoid	-5...+70	Internal	1200	1,5 ... 8	0.46	5	VCB22C611A-AC2***
	G1/2	Solenoid/ solenoid	-5...+70	Internal	2400	1,5 ... 8	0.71	5	VCB22D611A-AD2***

### 5/3 directional control valves, Centre Open Exhaust (COE)

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/ solenoid	-5...+70	Internal	240	1,5 ... 8	0.21	5	VCB22A711D-C52***
	G1/8	Solenoid/ solenoid	-5...+70	Internal	470	1,5 ... 8	0.21	5	VCB22A711D-CA2***
	G1/4	Solenoid/ solenoid	-5...+70	Internal	700	1,5 ... 8	0.36	5	VCB22B711A-AB2***
	G3/8	Solenoid/ solenoid	-5...+70	Internal	1200	1,5 ... 8	0.46	5	VCB22C711A-AC2***

### 5/3 directional control valves, Centre Open Pressure (COP)

Symbol	Port size	Actuation	Fluid/ Ambient (°C)	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	M5	Solenoid/ solenoid	-5...+70	Internal	240	1,5 ... 8	0.21	5	VCB22A811D-C52***
	G1/8	Solenoid/ solenoid	-5...+70	Internal	470	1,5 ... 8	0.21	5	VCB22A811D-CA2***
	G1/4	Solenoid/ solenoid	-5...+70	Internal	700	1,5 ... 8	0.36	5	VCB22B811A-AB2***
	G3/8	Solenoid/ solenoid	-5...+70	Internal	1200	1,5 ... 8	0.46	5	VCB22C811A-AC2***

**Option selector**
**VCB22\*\*\*\*\*-\*\*\*\*\***

Valve width	Substitute
18mm - M5 or G1/8 thread	<b>A</b>
22mm - G1/4 thread	<b>B</b>
27mm - G3/8 thread	<b>C</b>
34mm - G1/2 thread	<b>D</b>
Function	Substitute
3/2 NO	<b>3</b>
3/2 NC	<b>4</b>
5/2	<b>5</b>
5/3 APB	<b>6</b>
5/3 COE	<b>7</b>
5/3 COP	<b>8</b>
Actuation	Substitute
Sol/sol	<b>11</b>
Sol/spring	<b>17</b>
Operator	Substitute
15 mm solenoid coil (18 mm only)	<b>D-C</b>
22 mm solenoid coil	<b>A-A</b>

Voltage (for VCB22A)	Substitute
24 V d.c.	<b>13F</b>
220 V a.c.	<b>19F</b>
Voltage (for VCB22B/C/D)	Substitute
24 V d.c.	<b>13J</b>
24 V a.c.	<b>14J</b>
110 V a.c.	<b>18J</b>
220 V a.c.	<b>19J</b>
240 V a.c.	<b>20J</b>
Manual override	Substitute
Push and turn to lock	<b>2</b>
Thread	Substitute
M5 (18mm width)	<b>5</b>
G1/8 (18mm width)	<b>A</b>
G1/4 (22mm width)	<b>B</b>
G3/8 (27mm width)	<b>C</b>
G1/2 (34mm width)	<b>D</b>
G1/4 NAMUR (27mm width)	<b>E</b>
G3/8 NAMUR (27mm width)	<b>F</b>
1/8 NPT (18mm width)	<b>P</b>
1/4 NPT (22mm width)	<b>R</b>
3/8 NPT (27mm width)	<b>S</b>
1/2 NPT (34mm width)	<b>T</b>
1/4 NPT NAMUR (27mm width)	<b>U</b>
3/8 NPT NAMUR (27mm width)	<b>V</b>

\* 3/2 NAMUR function can be achieved by applying conversion plate on 5/2 NAMUR valve

\*\* Please contact engineering for 5/3 way G1/2 port size

### Sub-bases and accessories


Series	Sub-bases 5/2 and 5/3 valves *2)	Blanking plate 5/2 and 5/3 subbase	Sub-base for 3/2 way valves *2)	Blanking plate 3/2 way subbase	NAMUR conversion plate
VCB22A	VCB22A**	VCB22A0551	VCB22A/3**	VCB22A0351	–
VCB22B	VCB22B**	VCB22B0551	VCB22B/3**	VCB22B0351	–
VCB22C	VCB22C**	VCB22C0551	VCB22C/3**	VCB22C0351	VCB22C-Z01 *3) *4)
VCB22D	VCB22D**	VCB22D0551	VCB22D/3**	VCB22D0351	–

\*2) Insert station code after model numbers\*\*: 01 ... 17



\*3) For G1/4 & G3/8 models

\*4) 3/2 NAMUR function can be achieved by applying conversion plate on 5/2 NAMUR valve

### 15 mm coil (for VCB22A)




	Voltage	Power inrush/ hold	Connec- tor form	Code	Part number (to order as accessory)
	24 V d.c.	2,8 W	Industrial standard	13F	VCB22-15-13F
	220 V a.c.	2,5 VA	Industrial standard	19F	VCB22-15-19F

### 22 mm coil (for VCB22 B/C/D)

	Voltage	Power inrush/ hold	Connec- tor form	Code	Part number (to order as accessory)
 	24 V d.c.	3 W	Industrial standard	13J	VCB22-22-13J
	24 V a.c.	4/2.5 VA	Industrial standard	14J	309902450
	110 V a.c.	4/2.5 VA	Industrial standard	18J	309911050
	220 V a.c.	3,5 VA	Industrial standard	19J	VCB22-22-19J
	240 V a.c.	6/5.0 VA	Industrial standard	20J	309923050

\*Please consult technical engineer for application of Coil 14J, 18J, 19J above +40°C

### Coil connector

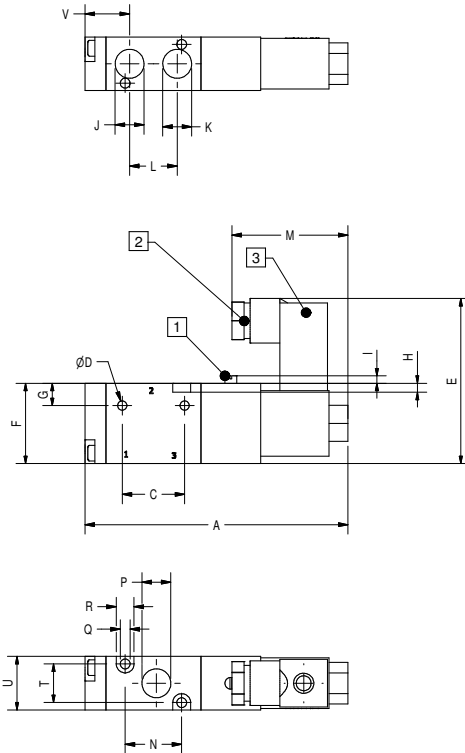
15 mm Industrial Standard	22 mm industrial standard	22 mm industrial standard
		
VCB22-13F 24 V d.c.	VCB22-13J 24 V d.c.	M/P24121/1 24 V a.c./d.c.
–	–	M/P24121/2 90 - 130 V a.c.
VCB22-19F 220 V a.c.	VCB22-19J 220 V a.c.	M/P24121/3 150 - 250 V a.c.

\*Connector with LED light is offered as standard

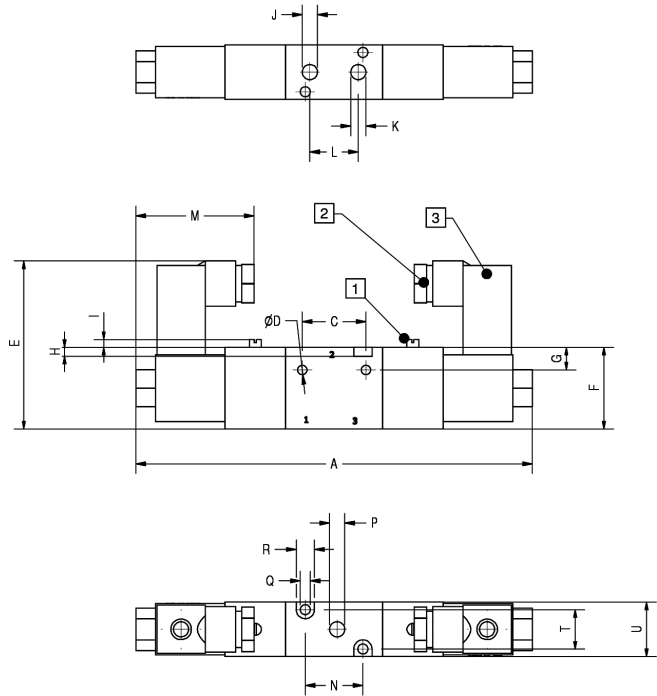
## Dimensions

 Dimensions in mm  
Projection/First angle


### 1 3/2 single solenoid valve spring return



### 2 3/2 double solenoid valve



1 Manual override (Push & turn to lock)

2 Gland Size Pg 9

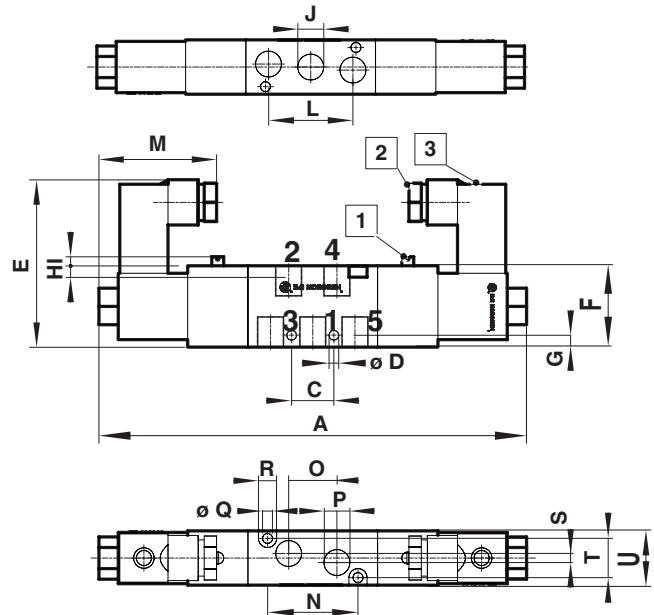
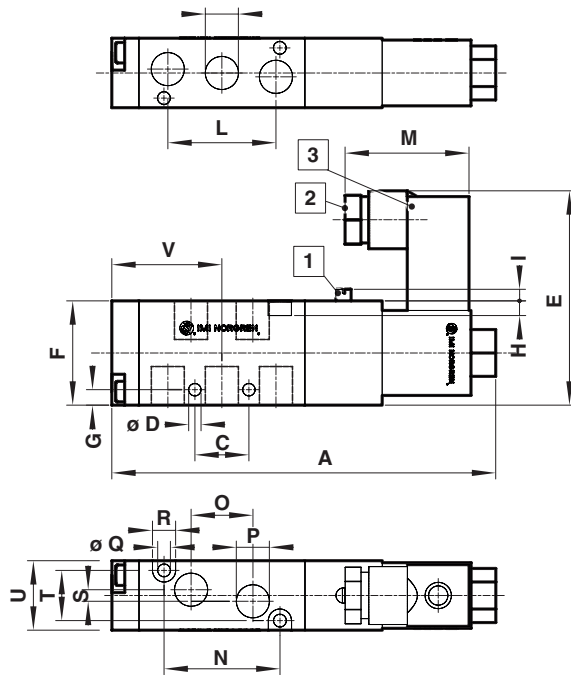
3 2 x 180° for M5 and G1/8  
4 x 90° for G1/4 and G1/2

No.	A	C	øD	E	F	G	H	I	J	K	L	M	N	O	øP	øQ	R	S	T	U	V	Model
1	88	21	3.2	54	27	7.5	3	2.5	M5	M5	16	39	19	-	M5	3.3	6	-	13	18	-	VCB22A317D-C52*** VCB22A417D-C52***
1	88	21	3.2	54	27	7.5	3	2.5	G1/8	G1/8	16	39	19	-	G1/8	3.3	6	-	13	18	-	VCB22A317D-CA2*** VCB22A417D-CA2***
1	110	25	4.3	67	35	8.2	3	5	G1/4	G1/4	22.5	55	30	-	G1/4	3.3	6	-	17	22	-	VCB22B317A-AB2*** VCB22B417A-AB2***
1	118	30	4.3	70	40	10.5	3	5	G3/8	G3/8	24	55	35	-	G3/8	4.3	8	-	20	27	-	VCB22C317A-AC2*** VCB22C417A-AC2***
2	131	21	3.2	54	27	7.5	3	2.5	M5	M5	16	39	19	-	M5	3.3	6	-	13	18	-	VCB22A411D-C52***
2	131	21	3.2	54	27	7.5	3	2.5	G1/8	G1/8	16	39	19	-	G1/8	3.3	6	-	13	18	-	VCB22A411D-CA2***
2	165	25	4.3	67	35	8.2	3	5	G1/4	G1/4	22.5	55	30	-	G1/4	3.3	6	-	17	22	-	VCB22B411A-AB2***
2	173	24	4.3	70	40	10.5	4	5	G3/8	G3/8	24	55	35	-	G3/8	4.3	8	-	20	27	-	VCB22C411A-AC2***

**3** 5/2 Single solenoid valve,  
spring return

**4** 5/2 Double solenoid valve

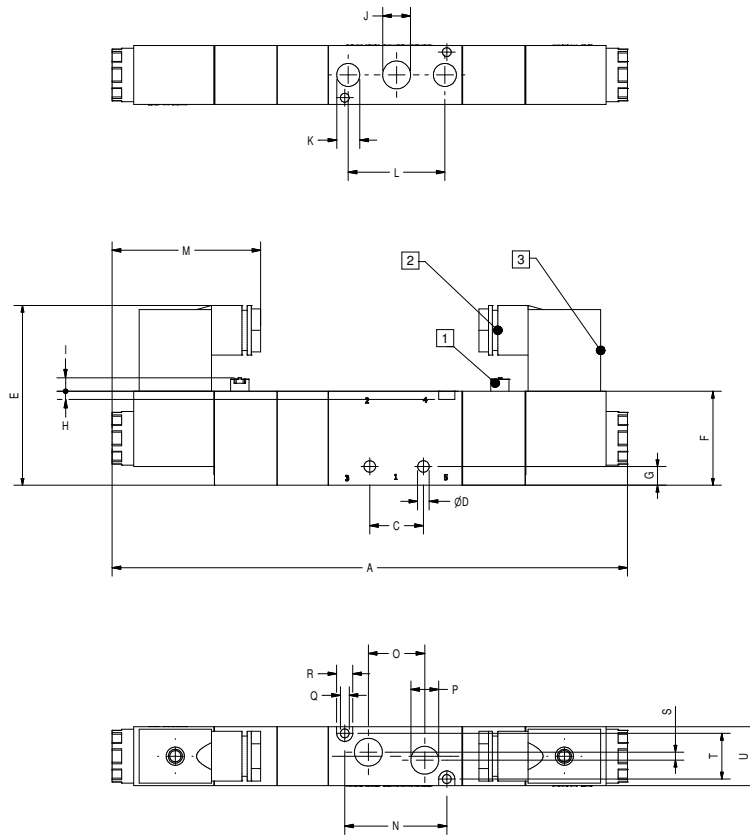
Dimensions in mm  
Projection/First angle



- 1** Manual override (Push & turn to lock)
- 2** Gland Size Pg 9
- 3** 2 x 180° for M5 and G1/8  
4 x 90° for G1/4 and G1/2

No.	A	C	øD	E	F	G	H	I	J	K	L	M	N	O	P	øQ	R	S	T	U	V	Model
3	99	14	3,2	54	27	4	3	2,5	M5	–	27,1	39	30	13,9	M5	3,3	6	–	13	18	28,5	VCB22A517D-C52***
3	99	14	3,2	54	27	4	3	2,5	G1/8	–	28	39	30	16	G1/8	3,3	6	3	13	18	28,5	VCB22A517D-CA2***
3	118	20	4,3	67	35	7	3	5	G1/4	G1/8	36	55	38	21	G1/4	3,3	6	3	17	22	32	VCB22B517A-AB2***
3	135	24	4,3	70	40	6,5	4	5	G3/8	G1/4	45	55	50	24	G3/8	4,3	8	4	20	27	40	VCB22C517A-AC2***
3	170	28	5,5	74	50	7,5	4	5	G1/2	G1/2	63	55	72	36	G1/2	4,3	8	4	27	34	58	VCB22D517A-AD2***
4	142	14	3,2	54	27	4	3	2,5	M5	–	27,1	39	30	13,9	M5	3,3	6	–	13	18	–	VCB22A511D-C52***
4	142	14	3,2	54	27	4	3	2,5	G1/8	–	28	39	30	16	G1/8	3,3	6	3	13	18	–	VCB22A511D-CA2***
4	117	20	4,3	67	35	7	3	5	G1/4	G1/8	36	55	38	21	G1/4	3,3	6	3	17	22	–	VCB22B511A-AB2***
4	190	24	4,3	70	40	6,5	4	5	G3/8	G1/4	45	55	50	24	G3/8	4,3	8	4	20	27	–	VCB22C511A-AC2***
4	225	28	5,5	74	50	7,5	4	5	G1/2	G1/2	63	55	72	36	G1/2	4,3	8	4	27	34	–	VCB22D511A-AD2***

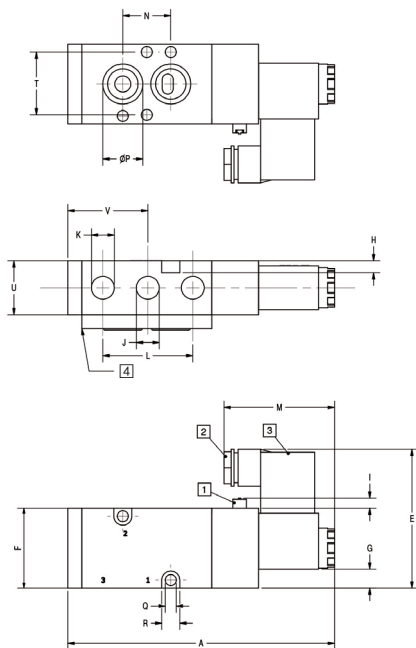
**5**

 Dimensions in mm  
Projection/First angle


- 1 Manual override (Push & turn to lock)
- 2 Gland Size Pg 9
- 3 2 x 180° for M5 and G1/8  
4 x 90° for G1/4 and G1/2

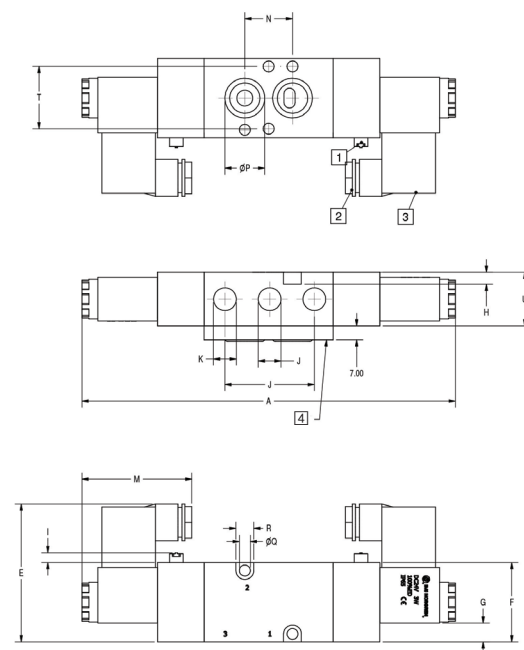
No.	A	C	øD	E	F	G	H	I	J	K	L	M	N	O	øP	øQ	R	S	T	U	V	Model
5	157	14	3.2	54	27	4	3	2.5	M5	M5	27.1	39	30	13.9	M5	3.3	6	-	13	18	-	VCB22A611D-C52*** VCB22A711D-C52*** VCB22A811D-C52***
5	157	14	3.2	54	27	4	3	2.5	G1/8	G1/8	29.1	39	30	13.9	G1/8	3.3	6	-	13	18	-	VCB22A611D-CA2*** VCB22A711D-CA2*** VCB22A811D-CA2***
5	192	20	4.3	67	35	7	3	5	G1/4	G1/8	36	55	38	21	G1/4	3.3	6	3	17	22	-	VCB22B611A-AB2*** VCB22B711A-AB2*** VCB22B811A-AB2***
5	207	24	4.3	70	40	6.5	4	5	G3/8	G1/4	45	55	50	24	G3/8	4.3	8	4	20	27	-	VCB22C611A-AC2*** VCB22C711A-AC2*** VCB22C811A-AC2***
5	248	28	5.5	74	50	7.5	4	5	G1/2	G1/2	63	55	72	36	G1/2	4.3	8	4	27	34	-	VCB22D611A-AD2*** VCB22D711A-AD2*** VCB22D811A-AD2***

**6** 5/2 & 3/2 single solenoid valve, NAMUR

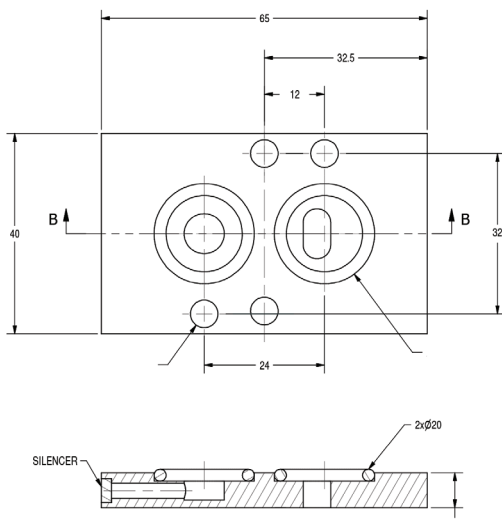


**7** 5/2 & 3/2 double solenoid valve, NAMUR

Dimensions in mm  
Projection/First angle



**8** Conversion plate (5/2 to 3/2 function)\*



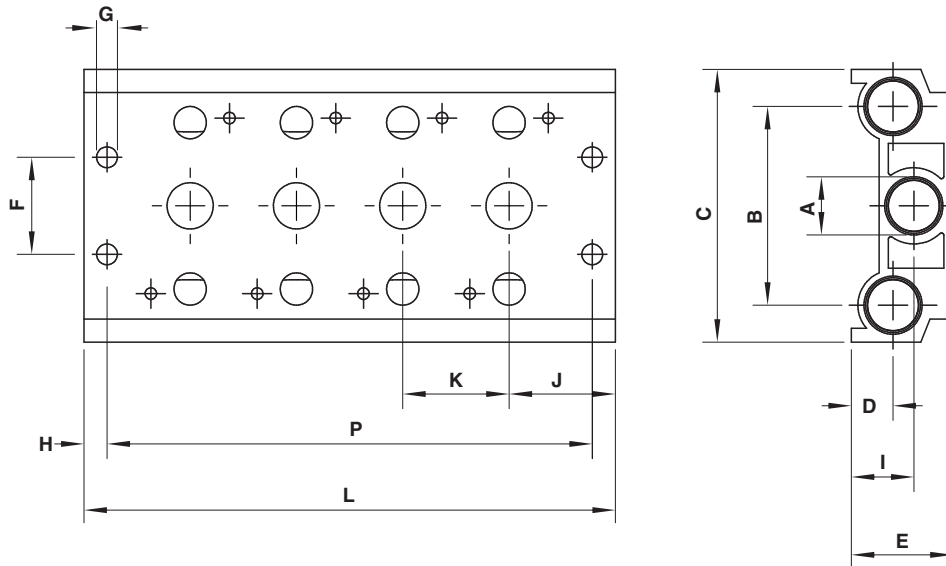
- 1** Manual override (Push & turn to lock)
- 2** Gland Size Pg 9
- 3** 2 x 180° for M5 and G1/8  
4 x 90° for G1/4 and G1/2
- 4** Connecting plate is assembled by customer's side
- 5** Connecting plate is part of the scope of supply of the valve and is assembled by user

No.	A	C	D	E	F	G	H	I	J	K	L	M	N	O	øP	øQ	R	S	T	U	V	Model
6	135	-	-	70	40	9.5	6	5	G1/4	G1/4	45	55	24	-	20	5.5	9	-	32	27	40	VCB22C517A-AE2***
6	135	-	-	70	40	9.5	6	5	G3/8	G1/4	45	55	24	-	20	5.5	9	-	32	27	40	VCB22C517A-AF2***
7	190	-	-	70	40	9.5	6	5	G1/4	G1/4	45	55	24	-	20	5.5	9	-	32	27	-	VCB22C511A-AE2***
7	190	-	-	70	40	9.5	6	5	G3/8	G1/4	45	55	24	-	20	5.5	9	-	32	27	-	VCB22C511A-AF2***

\*3/2 NAMUR function can be achieved by applying conversion plate on 5/2 NAMUR valve



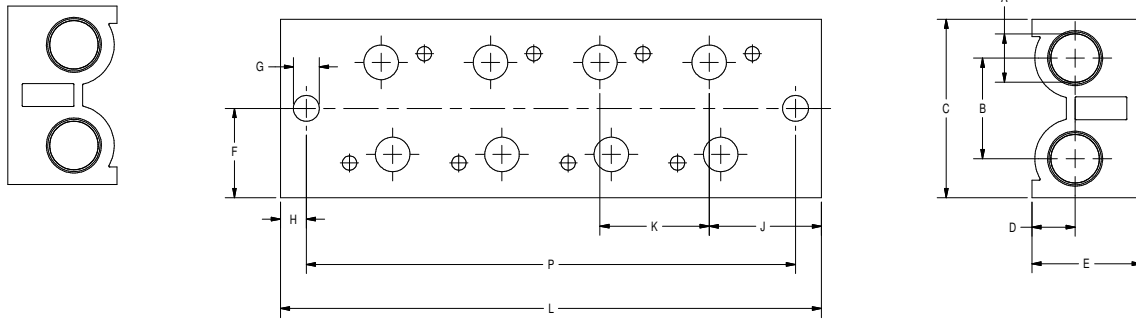
**9 5/2 & 5/3 Sub-base**

 Dimensions in mm  
Projection/First angle


No.	A	B	C	D	E	F	ø G	H	I	J	K	L	P	Model
9	G1/4	40	56,5	9	22	20	4,5	5	13,5	19	19	19+(N x 19)	9+(N x 19)	VCB22A**
9	G1/4	43	59	9	22	21	4,5	6	13,5	23	23	23+(N x 23)	11+(N x 23)	VCB22B**
9	G3/8	53	73	11,7	27	26	4,5	6	17	27	28	26+(N x 28)	14+(N x 28)	VCB22C**
9	G1/2	70	98	16,5	36	32	5,5	7	24	31,5	35	28+(N x 35)	14+(N x 35)	VCB22D**

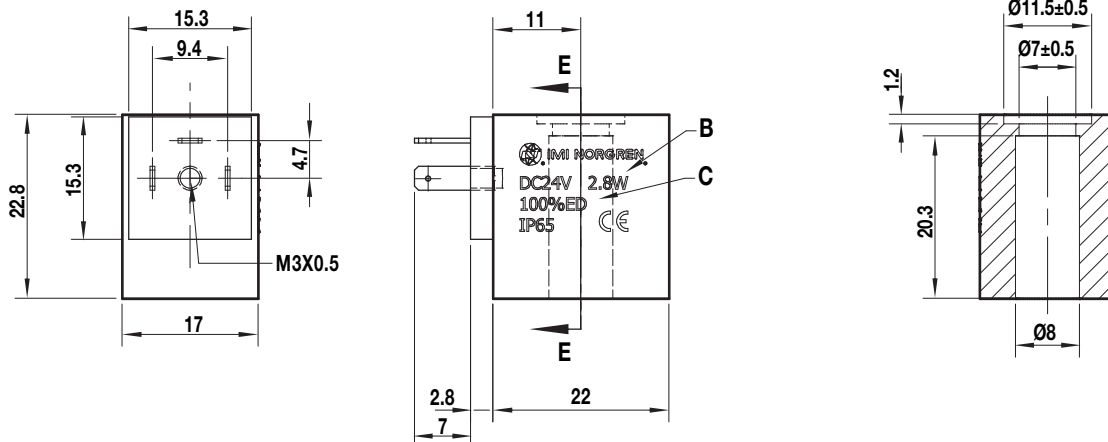
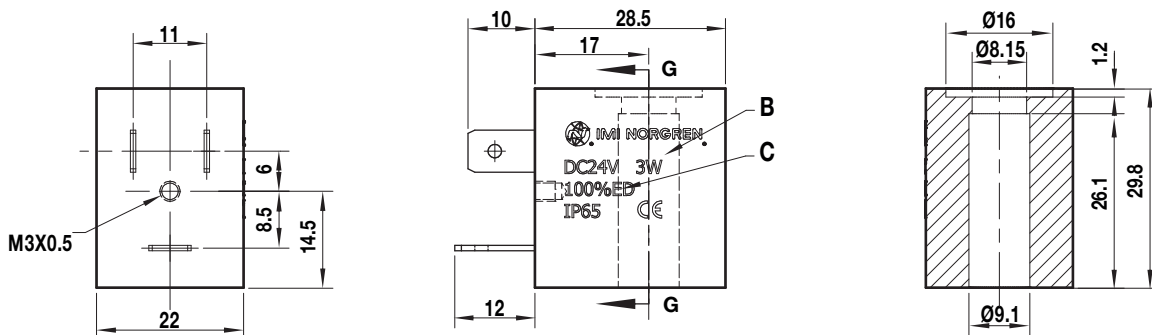
**10 3/2 Sub-base**

Dimensions in mm  
Projection/First angle



No.	A	B	C	D	E	F	ø G	H	J	K	L	P	Model
10	1/8	17.5	31	6	19	15.5	4.5	4.5	19.5	19	18+(N x 19)	9+(N x 19)	VCB22A/3**
10	1/4	23	45	8.5	22.5	22.5	4.5	6	23	23	23+(N x 23)	11+(N x 23)	VCB22B/3**
10	3/8	29	50	12	28	25	4.5	6	27	28	26+(N x 28)	14+(N x 28)	VCB22C/3**
10	1/2	35.5	62.5	16	35	31	5.5	7	31.5	32	28+(N x 35)	14+(N x 35)	VCB22D/3**

**11 Coil – 15 mm**

 Dimensions in mm  
Projection/First angle

**12 Coil – 22 mm**

**Warning**

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features/data**«. Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Norgren Ltd.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

**High flow in-line valves****Compact and robust design****Low power energy efficient solenoids****High cycle life****Flexible in-line and fixed length manifold mounting options****Technical data****Connections:**

1/8", 1/4", 3/8", and 1/2" NPT and ISO G

**Medium:**

Compressed air, filtered to 40 µm, lubricated or non-lubricated

**Operation:**

Softseal spool valve, solenoid and air pilot actuated

**Mounting:**

In-line or fixed length manifold

Maximum operating pressure:

116 psi (8 bar)

(Refer to Valve Selection Table for

Minimum operating pressures.)

**Flow Characteristics:**

Size	Function	l/min	Cv
1/8	3/2 & 5/2	480	0.48
1/8	5/3	270	0.27
1/4	3/2 & 5/2	1020	1.02
1/4	5/3	755	0.75
3/8	3/2 & 5/2	1705	1.70
3/8	5/3	1190	1.19
1/2	3/2 & 5/2	2480	2.48
1/2	5/3	1910	1.91

**Ambient & medium****temperature:**

23°F to 140°F (-5°C to 60°C) pilot models

23°F to 122°F (-5°C to 50°C)

solenoid models

(consult our Technical Service for

use below 36°F (2°C)

**Materials**

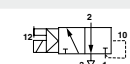
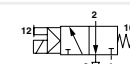
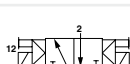
Body/sub-base: die-cast aluminum alloy or aluminum alloy

Softseal spool: NBR/aluminum alloy

Mounting screws: Plated steel

Springs: stainless steel

**3/2 Air pilot valves**

Symbol	Model	Port size (NPT)	Function*	Operator/operator	Flow Cv	Operating pressure (psi)	Pilot pressure (psi)	Weight (lbs)	Drawing No.
	V50P4D3A-XP0900	1/8	3/2 NC	Air/ Air spring	0.48	0 to 116	22 to 116	0.13	12
	V51R4D7A-XP0900	1/4	3/2 NC	Air/Spring	1.02	0 to 116	22 to 116	0.27	13
	V52S4D7A-XP0900	3/8	3/2 NC	Air/Spring	1.70	0 to 116	29 to 116	0.65	13
	V53T4D7A-XP0900	1/2	3/2 NC	Air/Spring	2.48	0 to 116	29 to 116	0.66	13
	V50P4DDA-XP0200	1/8	3/2	Air/Air	0.48	0 to 116	22 to 116	0.16	14
	V51R4DDA-XP0200	1/4	3/2	Air/Air	1.02	0 to 116	22 to 116	0.30	15
	V52S4DDA-XP0200	3/8	3/2	Air/Air	1.70	0 to 116	29 to 116	0.71	15
	V53T4DDA-XP0200	1/2	3/2	Air/Air	2.48	0 to 116	29 to 116	0.72	15

\* NC = Normally Closed

NO = Normally Open

## 3/2 Solenoid pilot valves

Symbol	Model	Port size (NPT)	Function*	Pilot supply	Operator	Flow Cv	Operating pressure (psi)	Manual override	Weight (lbs)	Drawing No.
	V50P413A-A2***†	1/8	3/2 NC	Internal	Solenoid	0.48	29 to 116	Push & turn	0.26	1
	V51R417A-A2***†	1/4	3/2 NC	Internal	Solenoid/spring	1.02	29 to 116	Push & turn	0.45	2
	V52S417A-A2***†	3/8	3/2 NC	Internal	Solenoid/spring	1.70	29 to 116	Push & turn	0.77	2
	V53T417A-A2***†	1/2	3/2 NC	Internal	Solenoid/spring	2.48	29 to 116	Push & turn	0.79	2
	V50P411A-A2***†	1/8	3/2	Internal	Solenoid/solenoid	0.48	29 to 116	Push & turn	0.38	3
	V51R411A-A2***†	1/4	3/2	Internal	Solenoid/solenoid	1.02	29 to 116	Push & turn	0.65	4
	V52S411A-A2***†	3/8	3/2	Internal	Solenoid/solenoid	1.70	29 to 116	Push & turn	0.97	4
	V53T411A-A2***†	1/2	3/2	Internal	Solenoid/solenoid	2.48	29 to 116	Push & turn	0.96	4

\* NC = Normally closed

\*\*\* Insert coil code. † Insert Connector code.

## 5/2 Solenoid pilot valves

Symbol	Model	Port size (NPT)	Function	Pilot supply	Operator	Flow Cv	Operating pressure (psi)	Manual override	Weight (lbs)	Drawing No.
	V50P513A-A2***†	1/8	5/2	Internal	Solenoid/air	0.48	29 to 116	Push & turn	0.27	5
	V51R517A-A2***†	1/4	5/2	Internal	Solenoid/spring	1.02	29 to 116	Push & turn	0.41	6
	V52S517A-A2***†	3/8	5/2	Internal	Solenoid/spring	1.70	29 to 116	Push & turn	0.65	6
	V53T517A-A2***†	1/2	5/2	Internal	Solenoid/spring	2.48	29 to 116	Push & turn	0.67	6
	V50P511A-A2***†	1/8	5/2	Internal	Solenoid/solenoid	0.48	29 to 116	Push & turn	0.39	7
	V51R511A-A2***†	1/4	5/2	Internal	Solenoid/solenoid	1.02	29 to 116	Push & turn	0.64	8
	V52S511A-A2***†	3/8	5/2	Internal	Solenoid/solenoid	1.70	29 to 116	Push & turn	1.0	8
	V53T511A-A2***†	1/2	5/2	Internal	Solenoid/solenoid	2.48	29 to 116	Push & turn	0.42	8

\*\*\* Insert coil code. † Insert Connector code.

## 5/3 Solenoid pilot valves

Symbol	Model	Port size (NPT)	Function***†	Pilot supply	Operator	Flow Cv	Operating pressure (psi)	Manual override	Weight (lbs)	Drawing No.
	V50P611A-A2***†	1/8	5/3 APB	Internal	Solenoid/solenoid	0.27	44 to 116	Push & turn	0.75	9
	V51R611A-A2***†	1/4	5/3 APB	Internal	Solenoid/solenoid	0.75	44 to 116	Push & turn	0.85	10
	V52S611A-A2***†	3/8	5/3 APB	Internal	Solenoid/solenoid	1.19	44 to 116	Push & turn	1.25	11
	V53T611A-A2***†	1/2	5/3 APB	Internal	Solenoid/solenoid	1.91	44 to 116	Push & turn	1.40	11
	V50P711A-A2***†	1/8	5/3 COE	Internal	Solenoid/solenoid	0.27	44 to 116	Push & turn	0.75	9
	V51R711A-A2***†	1/4	5/3 COE	Internal	Solenoid/solenoid	0.75	44 to 116	Push & turn	0.85	10
	V52S711A-A2***†	3/8	5/3 COE	Internal	Solenoid/solenoid	1.19	44 to 116	Push & turn	1.25	11
	V53T711A-A2***†	1/2	5/3 COE	Internal	Solenoid/solenoid	1.91	44 to 116	Push & turn	1.40	11
	V50P811A-A2***†	1/8	5/3 COP	Internal	Solenoid/solenoid	0.27	44 to 116	Push & turn	0.75	9
	V51R811A-A2***†	1/4	5/3 COP	Internal	Solenoid/solenoid	0.75	44 to 116	Push & turn	0.85	10
	V52S811A-A2***†	3/8	5/3 COP	Internal	Solenoid/solenoid	1.19	44 to 116	Push & turn	1.25	11
V53T811A-A2***†	1/2	5/3 COP	Internal	Solenoid/solenoid	1.91	44 to 116	Push & turn	1.40	11	

\* APB = All Ports Blocked, COE = Center Open Exhaust, COP = Center Open Pressure.

\*\*\* Insert coil code. † Insert Connector code.

## V50 series

## \*\*\* Voltage codes and spare solenoid kits

Voltage	Code	Power Inrush / hold	Replacement Coil Model
12 VDC	12A	2.5 W	V12958-A12
24 VDC	13A	2.5 W	V12958-A13
110/120 VAC 50/60 Hz	18A	3.7/3.1 VA	V12958-A18

## † V50 solenoid connectors

Connectors, 15 mm, DIN 43650, Form 'C'



Code	Model	Description
B	V10027-D00	0 to 240 VAC/VDC
C	V10013-D03	0 to 240 VAC/VDC, 6 ft. molded cable
H	V10012-D13	12 to 24 VAC/VDC w/indicator light
J	V10012-D18	120 VAC/VDC w/indicator light

## V51 to V53 series

## \*\*\* Voltage codes and spare solenoid kits

Voltage	Code	Power Inrush / hold	Replacement Coil Model
12 VDC	12J	2.0 W	54469-01
24 VDC	13J	2.0 W	54469-02
110/120 VAC 50/60 Hz	18J	4.0/2.5 VA	54469-03

## † V51, V52, and V53 solenoid connectors

Connectors, 22 mm, industrial standard



Code	Model	Description
B	54934-01	0 to 240 VAC/VDC.
C	54934-21	0 to 240 VAC/VDC, 6 ft. [1m] molded cable
H	54934-08	12 to 24 VAC/VDC w/indicator light
J	54934-02	120 VAC/VDC w/indicator light

Solenoid Valve Options selector

Thread size	Substitute
1/8"	0
1/4"	1
3/8"	2
1/2"	3
Thread type	Substitute
1/8 NPT	P
1/4 NPT	R
3/8 NPT	S
1/2 NPT	T
G 1/8	A
G 1/4	B
G 3/8	C
G 1/2	D

Ordering example

To order a 5/2 solenoid valve, 1/4 NPT ports, spring return, 24 VDC, with DIN connector.

quote: **V51R517A-A213JB**

V5★ ★ ★ ★ 1★ A-A2★ ★ ★ ★

Connectors, 15 mm, DIN 43650, Form 'C'	Substitute
No connector	A
0 to 240 VAC/DC w/ cable grip	B
0 to 240 VAC/DC. w/ 6 ft.molded cable	C
12 to 24 VAC/VDC w/indicator light and cable grip	H
120 VAC/VDC w/indicator light and cable grip	J
Connectors, 22 mm industrial standard	Substitute
No connector	A
0 to 240 VAC/DC	B
0 to 240 VAC/DC, 6 ft. [1m] molded cable	C
12 to 24 VAC/VDC w/indicator light and cable grip	H
120 VAC/VDC w/indicator light and cable grip	J
Voltage (V50 valve series)	Substitute
12 VDC 2.5 W	12A
24 VDC 2.5 W	13A
110/120 VAC (50/60 Hz) 3.7/3.2 VA	18A
Voltage (V51 to V53 valve series)	Substitute
12 VDC 2.0 W	12J
24 VDC 2.0 W	13J
110/120 VAC (50/60 Hz) 4.0/2.5 VA	18J
Actuation	Substitute
Solenoid/ Air Spring (V50 only)	3
Solenoid/Spring	7
Solenoid/Solenoid	1
Function	Substitute
3/2 Normally closed	4
5/2	5
5/3 All ports blocked	6
5/3 Center open exhaust	7
5/3 Center open pressure	8

Electrical details for V50 solenoid operators

Voltage tolerances	+/- 10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Materials	PPS (body, FKM and NBR (seal)
Insulation class	F class
Connector type	DIN 43650 Table "C"
Protection class	IP65 (with sealed plugs)

Electrical details for V51 to V53 solenoid operators

Voltage tolerances	+/- 10%
Rating	100 % Continuous duty
Inlet orifice	0.8 mm
Materials	PPS (body), FKM and NBR (seal)
Insulation class	F class
Connector type	22 mm industrial standard
Protection class	IP65 (with sealed plugs)

**Manifold system and blanking plates**

	Manifold for 3 port valves		Blanking plate for 3 port valves	Silencers plastic		Silencers sintered bronze	
Series	NPT	BSPP		NPT	BSP	NPT	BSP
V50 (1/4")	V50P3**	V50A3**	V500351	C/S2	M/S2	MS002A	T40C2800
V51 (1/4")	V51R3**	V51B3**	V510351	C/S2	M/S2	MS002A	T40C2800
V52 (3/8")	V52S3**	V52C3v*	V520351	C/S3	M/S3	MS003A	T40C3800
V53 (1/2")	V53T3**	V53D3**	V530351	C/S4	M/S4	MS004A	T40C4800

\*\* Number of station 02 to 10 stations

Example: 5 station manifold part number V51R305

	Manifold for 5 port valves		Blanking plate for 5 port valves	Silencers plastic		Silencers sintered bronze	
Series	NPT	BSPP		NPT	BSP	NPT	BSP
V50 (1/4")	V50P5**	V50A5**	V500551	C/S2	M/S2	MS002A	T40C2800
V51 (1/4")	V51R5**	V51B5**	V510551	C/S2	M/S2	MS002A	T40C2800
V52 (3/8")	V52S5**	V52C5**	V520551	C/S3	M/S3	MS003A	T40C3800
V53 (1/2")	V53T5**	V53D5**	V530551	C/S4	M/S4	MS004A	T40C4800

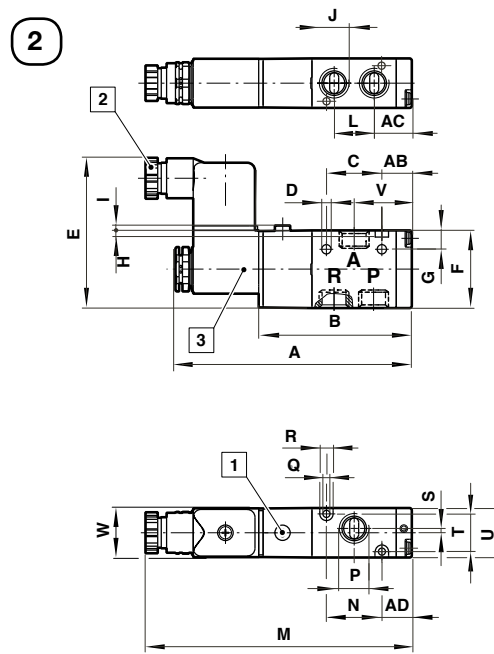
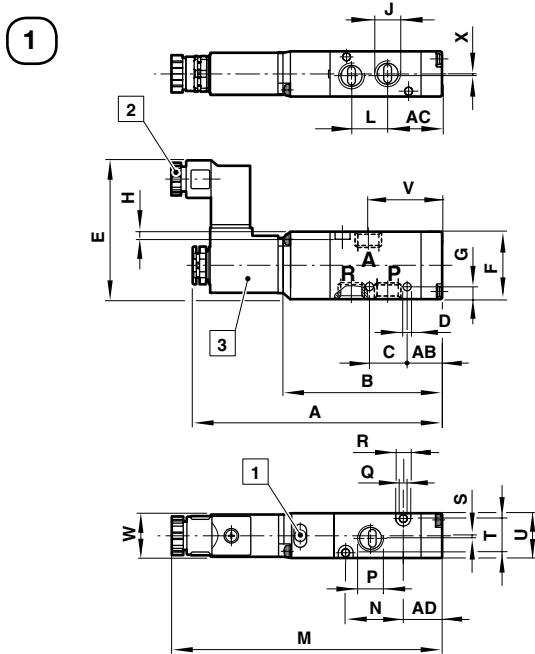
\*\* Number of station 02 to 10 stations

Example: 4 station manifold part number V50P504

Valve dimensions

3/2 Single solenoid pilot valve,  
 1/8" port  
 Air Spring return

3/2 Single solenoid pilot valve,  
 1/4" to 1/2" ports  
 Mechanical spring return



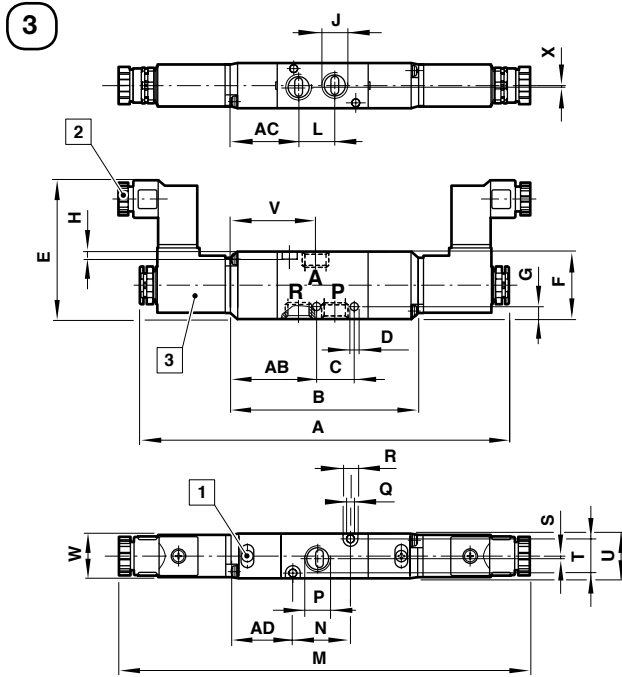
- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates  
2 x 180° (V50) 4 x 90° (V51toV53)
- 4 6-8 mm cable dia.

Series	Drawing	A	AB	AC	AD	B	C	D	E	F	G	H	I	J
V50	1	3.92	0.53	0.85	0.59	2.56	0.59	0.13	2.19	1.06	0.20	0.12	-	1/8"
V51	2	4.23	0.53	0.67	0.53	2.72	0.98	0.17	2.68	1.38	0.33	0.12	0.12	1/4"
V52	2	4.98	0.51	1.02	0.59	3.50	1.02	0.18	2.87	1.83	1.56	0.16	0.12	3/8"
V53	2	5.24	0.49	1.06	0.59	3.78	1.14	0.18	2.87	1.83	1.56	0.16	0.12	1/2"
Series	Drawing	L	M	N	P	Q	R	S	T	U	V	W	X	
V50	1	0.57	4.25	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.63	0.02	
V51	2	0.71	4.72	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	0.87	-	
V52	2	1.02	5.49	1.61	3/8"	0.18	0.31	-	0.91	1.18	1.61	0.87	-	
V53	2	1.14	5.75	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	0.87	-	

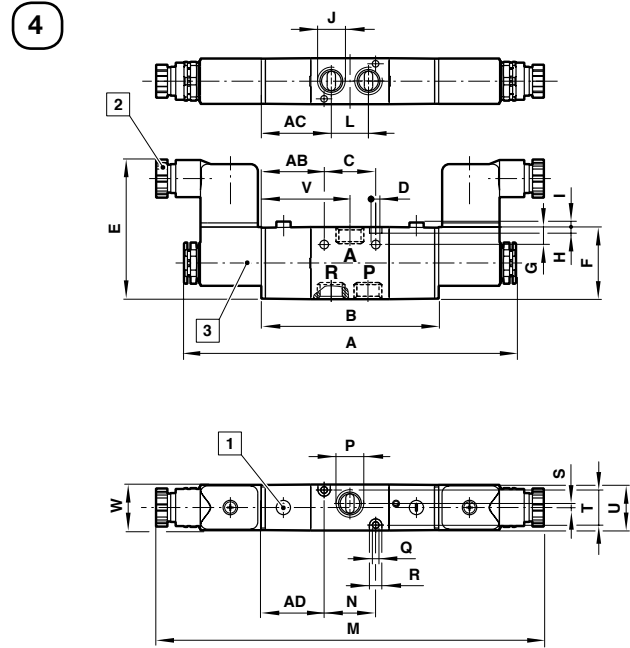
Dimensions in inches



3/2 Double solenoid pilot valve,  
1/8" port



3/2 Double solenoid pilot valve,  
1/4" to 1/2" ports

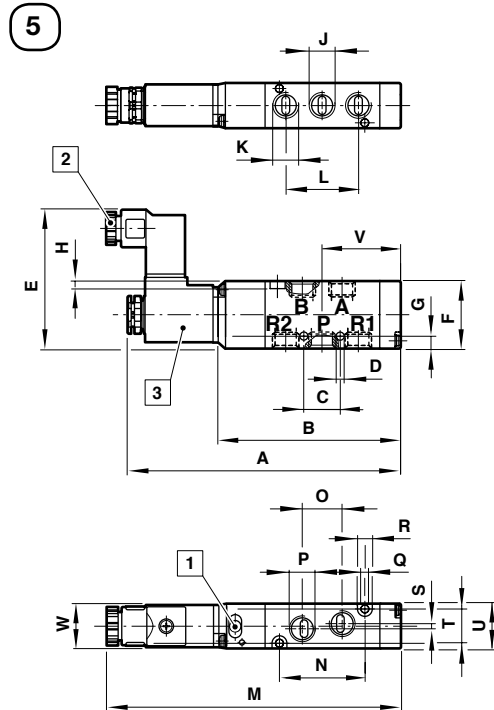


- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates 2 x 180° (V50) 4 x 90° (V51toV53)
- 4 6-8 mm cable dia.

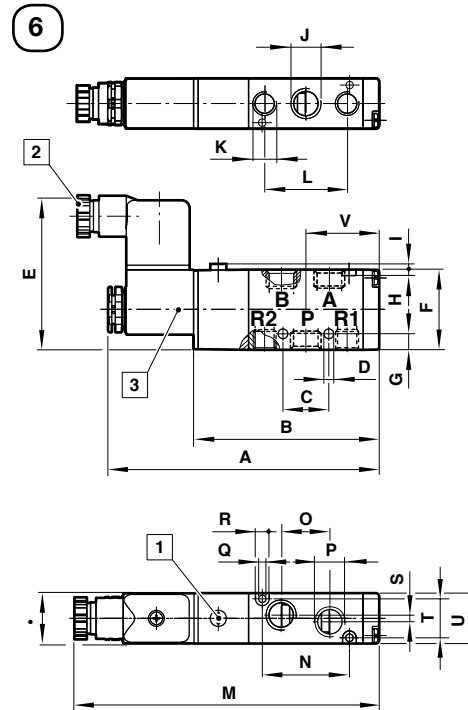
Series	Drawing	A	AB	AC	AD	B	C	D	E	F	G	H	I	J
V50	3	5.69	1.44	1.14	1.06	3.01	0.59	0.13	2.19	1.06	0.20	0.12	-	1/8"
V51	4	5.75	1.20	1.34	1.20	3.39	0.98	0.17	2.68	1.38	0.33	0.12	0.12	1/4"
V52	4	7.17	1.22	1.73	1.30	4.21	1.02	0.18	2.87	1.83	1.56	0.16	0.12	3/8"
V53	4	7.40	1.20	1.77	1.30	4.49	1.14	0.18	2.87	1.83	1.56	0.16	0.12	1/2"
Series	Drawing	L	M	N	P	Q	R	S	T	U	V	W	X	
V50	3	0.58	6.46	0.92	1/8"	0.13	0.24	0.04	0.52	0.72	1.42	0.64	0.02	
V51	4	0.72	7.52	1.00	1/4"	0.13	0.24	0.08	0.68	0.90	1.72	0.88	-	
V52	4	1.04	8.32	1.64	3/8"	0.18	0.32	-	0.92	1.20	2.38	0.88	-	
V53	4	1.16	8.56	1.92	1/2"	0.17	0.32	0.10	0.92	1.20	2.34	0.88	-	

Dimensions in inches

**5/2 Single solenoid pilot valve,  
 1/8" port  
 Air spring return**



**6/2 Single solenoid pilot valve,  
 1/4" to 1/2" ports  
 Mechanical spring return**

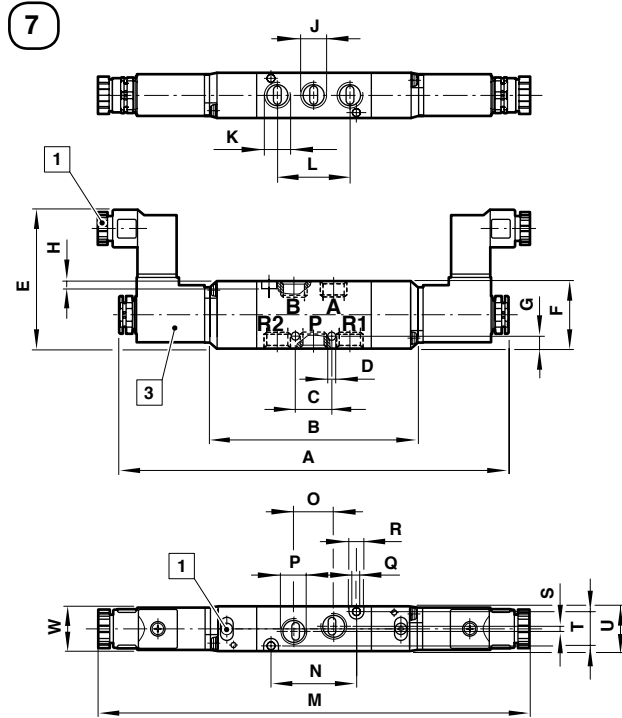


- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates  
2 x 180° (V50) 4 x 90° (V51toV53)
- 4 6-8 mm cable dia.

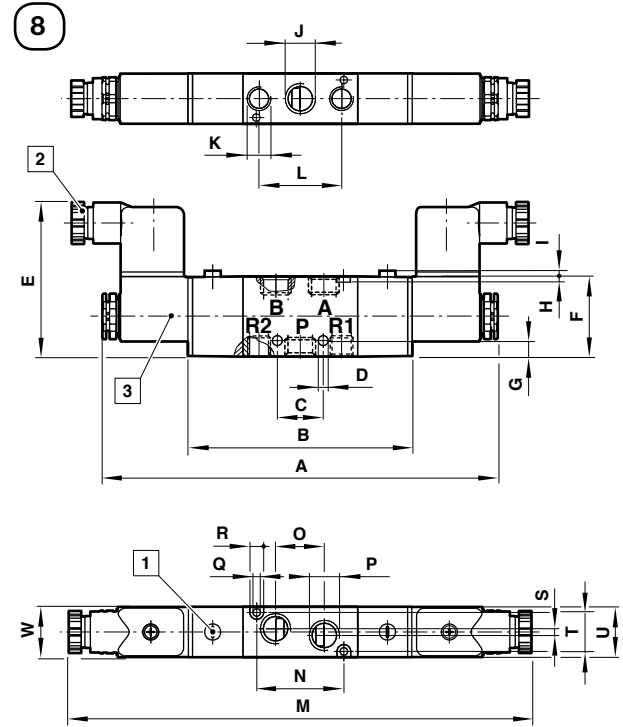
Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	5	4.25	2.99	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	6	4.55	3.19	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	6	5.59	4.25	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	6	6.18	4.72	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	V	W	
V50	5	4.72	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	0.63	
V51	6	5.12	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.26	0.87	
V52	6	6.14	0.51	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	0.87	
V53	6	6.69	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	0.87	

Dimensions in inches

5/2 Double solenoid pilot valve,  
1/8" port



5/2 Double solenoid pilot valve,  
1/4" to 1/2" ports

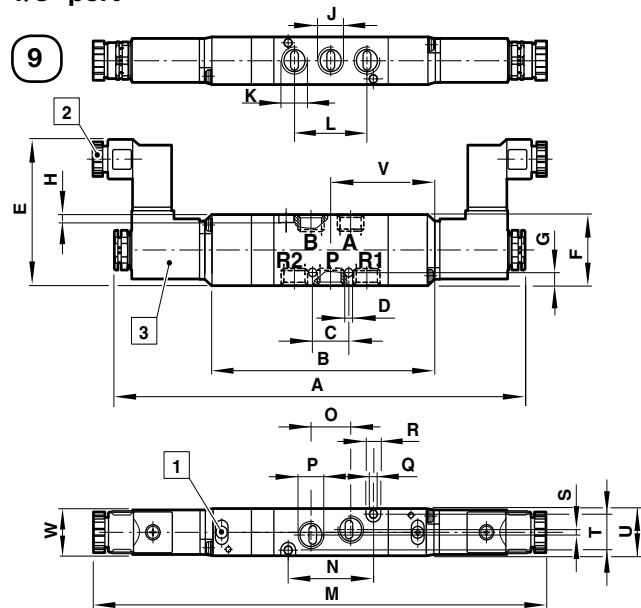


- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates  
2 x 180° (V50) 4 x 90° (V51toV53)
- 4 6-8 mm cable dia.

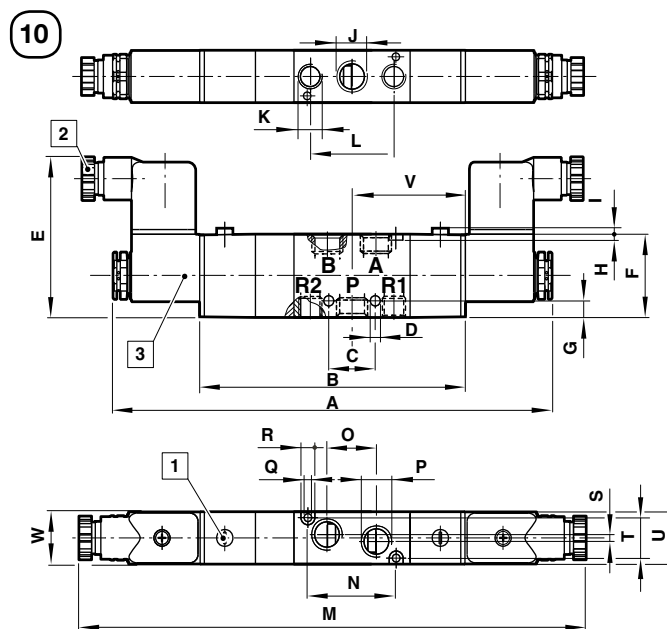
Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	7	6.06	3.43	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	8	6.57	3.82	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	8	7.64	4.96	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	8	8.35	5.43	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	W		
V50	7	6.89	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	0.63		
V51	8	7.80	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	0.87		
V52	8	8.74	0.51	1.18	3/8"	0.18	0.31	-	0.91	1.18	0.87		
V53	8	9.37	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	0.87		

Dimensions in inches

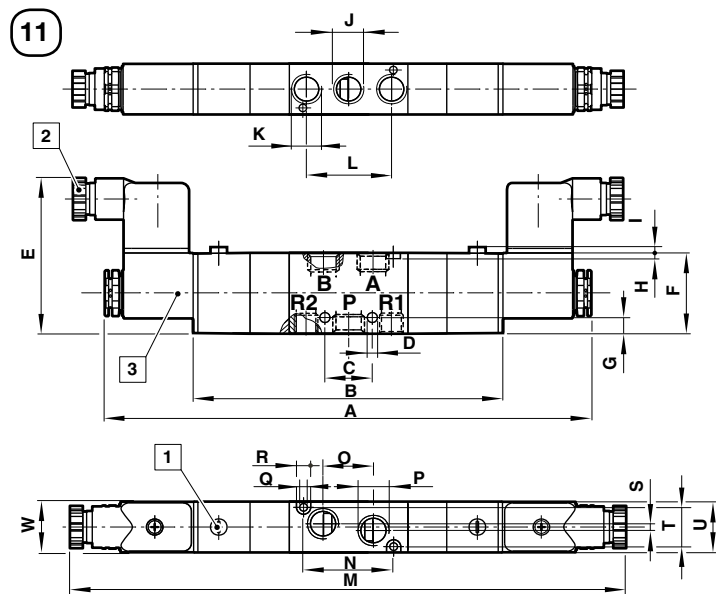
5/3 Double solenoid pilot valve,  
 1/8" port



5/3 Double solenoid pilot valve,  
 1/4" ports



5/3 Double solenoid pilot valve,  
 3/8" and 1/2" ports



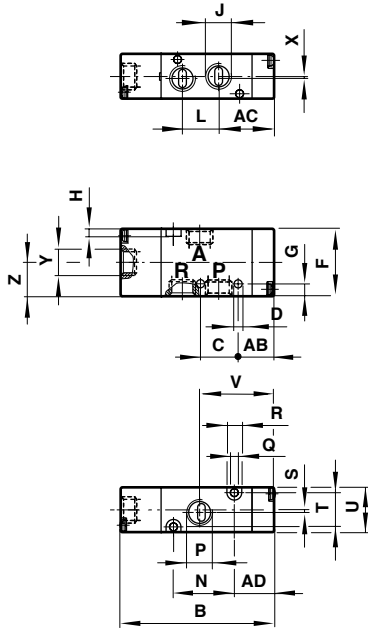
- 1 Manual override (Push and Turn)
- 2 4-6 mm cable dia.
- 3 Solenoid rotates  
 2 x 180° (V50) 4 x 90° (V51toV53)
- 4 6-8 mm cable dia.

Series	Drawing	A	B	C	D	E	F	G	H	I	J	K	L
V50	9	6.42	3.78	0.57	0.13	2.17	1.06	0.20	0.12	-	1/8"	1/8"	1.14
V51	10	7.40	4.69	0.79	0.17	2.64	1.38	0.28	0.12	0.12	1/4"	1/8"	1.42
V52	11	9.61	7.07	1.02	0.22	2.83	1.83	0.18	0.16	0.12	3/8"	3/8"	2.05
V53	11	10.45	7.54	1.14	0.18	2.87	1.83	0.28	0.16	0.12	1/2"	1/2"	2.28
Series	Drawing	M	N	O	P	Q	R	S	T	U	V	W	
V50	9	7.24	1.34	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.71	0.63	
V51	10	8.62	1.50	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.91	0.87	
V52	11	10.83	0.51	1.18	3/8"	0.18	0.31	-	0.91	1.18	-	0.87	
V53	11	11.48	2.83	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	-	0.87	

Dimensions in inches

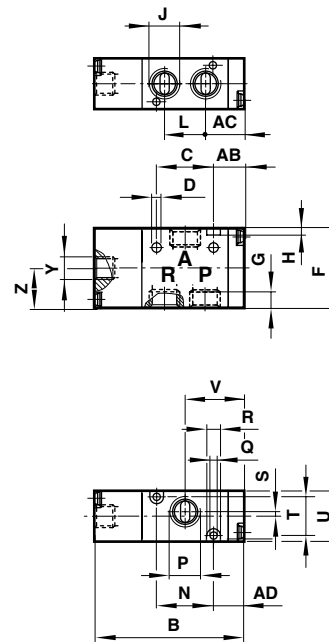
**3/2 Single air pilot valve,  
1/8" port  
Air spring return**

12



**3/2 Single air pilot valve,  
1/4" to 1/2" ports  
Mechanical spring return**

13

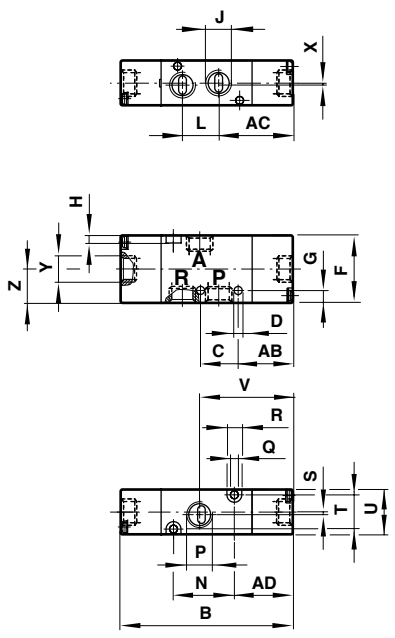


Series	Drawing	AB	AC	AD	B	C	D	F	G	H	J	L
V50	12	0.53	0.85	0.59	2.44	0.59	0.13	1.06	0.20	0.12	1/8"	0.57
V51	13	0.53	0.67	0.53	2.58	0.98	0.17	1.38	0.33	0.12	1/4"	0.71
V52	13	0.51	1.02	0.59	3.43	1.02	0.18	1.83	1.56	0.16	3/8"	1.02
V53	13	0.49	1.06	0.59	0.16	1.14	0.18	1.83	1.56	0.16	1/2"	1.14
Series	Drawing	N	P	Q	R	S	T	U	V	X	Y	Z
V50	12	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.02	1/8"	0.53
V51	13	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	-	1/8"	0.69
V52	13	1.61	3/8"	0.18	0.31	-	0.91	1.18	1.61	-	1/8"	0.67
V53	13	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	-	1/8"	0.79

Dimensions in inches

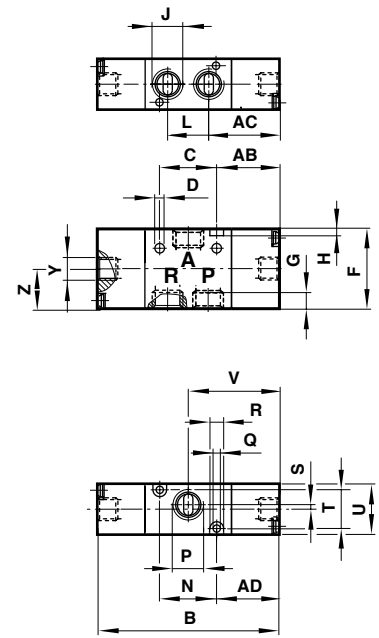
3/2 Double air pilot valve,  
 1/8" port

14



3/2 Double air pilot valve,  
 1/4" to 1/2" ports

15

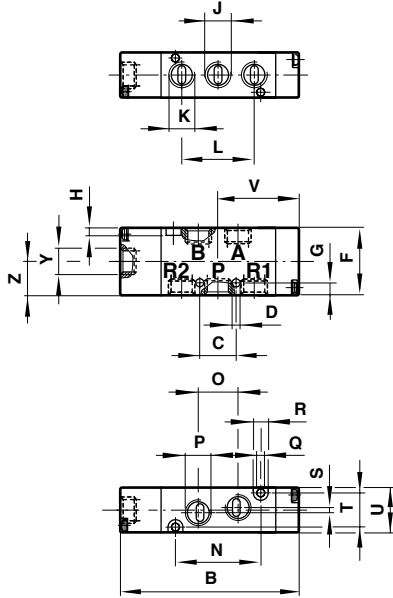


Series	Drawing	AB	AC	AD	B	C	D	F	G	H	J	L
V50	14	0.54	0.86	0.62	2.74	0.60	0.13	1.07	0.20	0.12	1/8"	0.58
V51	15	0.54	0.68	0.54	3.14	0.99	0.17	1.39	0.34	0.12	1/4"	0.72
V52	15	0.52	1.03	0.60	4.10	1.03	0.18	1.85	1.57	0.16	3/8"	1.03
V53	15	0.50	1.07	0.60	4.38	1.15	0.18	1.85	1.57	0.16	1/2"	1.15
Series	Drawing	N	P	Q	R	S	T	U	V	X	Y	Z
V50	14	0.91	1/8"	0.13	0.24	0.04	0.51	0.71	1.16	0.02	1/8"	0.53
V51	15	0.98	1/4"	0.13	0.24	0.08	0.67	0.89	1.02	-	1/8"	0.69
V52	15	1.61	3/8"	0.18	0.31	0.00	0.91	1.18	1.61	-	1/8"	0.67
V53	15	1.89	1/2"	0.17	0.31	0.10	0.91	1.18	1.59	-	1/8"	0.67

Dimensions in inches

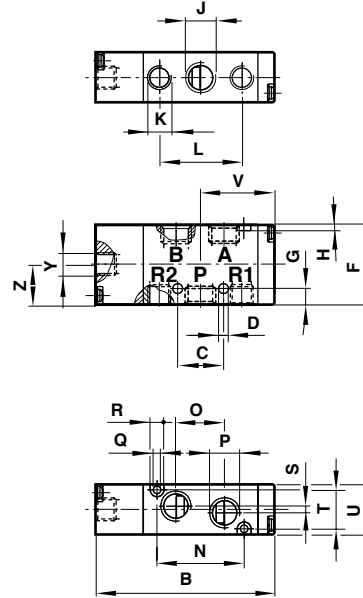
**5/2 Single air pilot valve,  
1/8" port  
Air spring return**

16



**5/2 Single air pilot valve,  
1/4" to 1/2" ports  
Mechanical spring return**

17

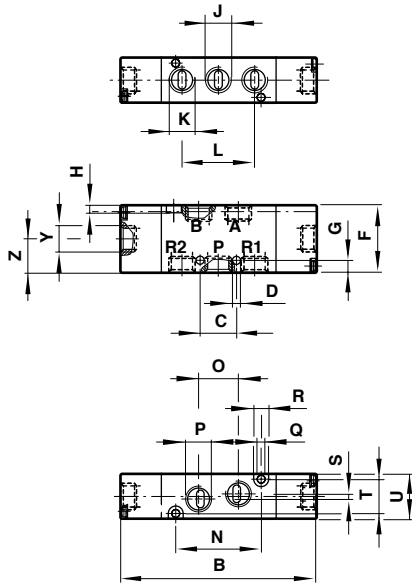


Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	16	2.87	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	17	3.05	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	17	4.17	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	17	4.65	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	V	Y	Z
V50	16	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	1/8"	0.53
V51	17	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.26	1/8"	0.69
V52	17	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	1/8"	0.67
V53	17	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	1/8"	0.79

Dimensions in inches

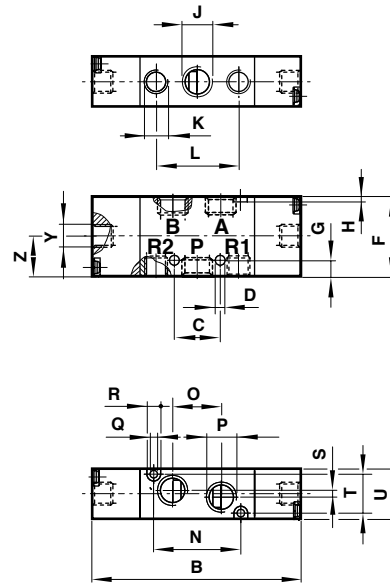
5/2 Double air pilot valve,  
 1/8" port

18



5/2 Double air pilot valve,  
 1/4" to 1/2" ports

19



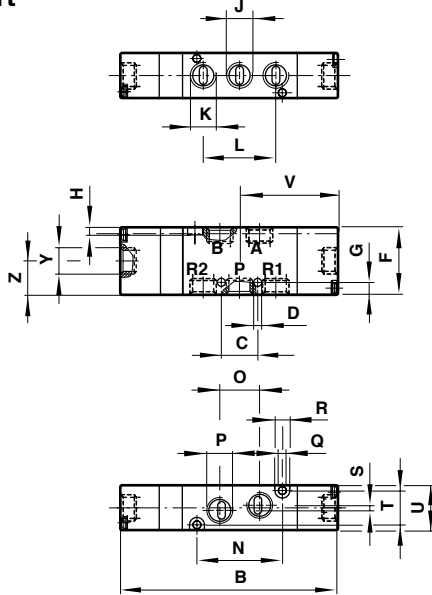
Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	18	3.15	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	19	3.58	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	19	4.80	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	19	5.28	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	Y	Z	
V50	18	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1/8"	0.53	
V51	19	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1/8"	0.69	
V52	19	1.18	3/8"	0.18	0.31	-	0.91	1.18	1/8"	0.67	
V53	19	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	1/8"	0.79	

Dimensions in inches



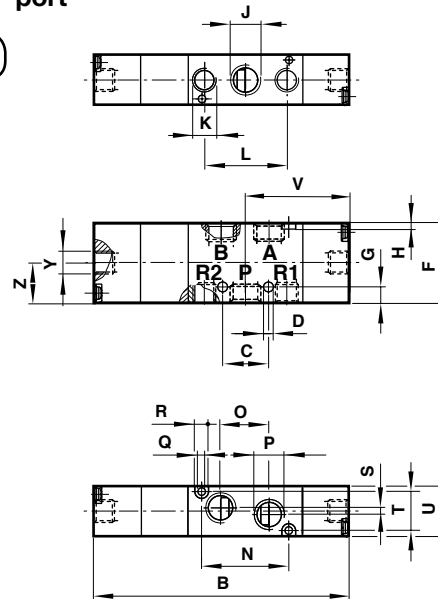
5/3 Double air pilot valve,  
1/8" port

20



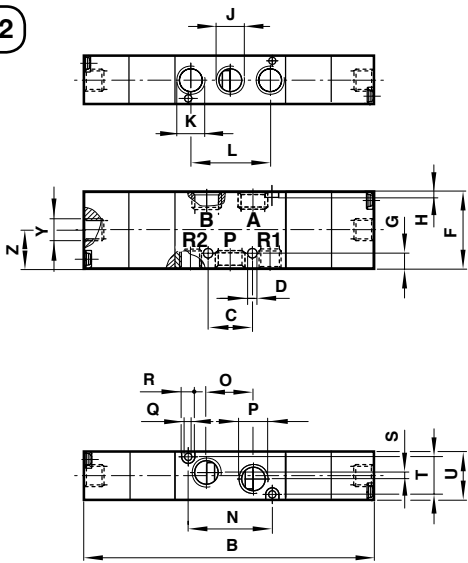
5/3 Double air pilot valve,  
1/4" port

21

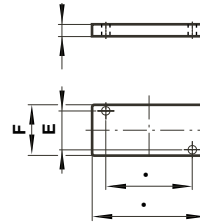


5/3 Double air pilot valve,  
3/8" and 1/2" ports

22



Blanking plate

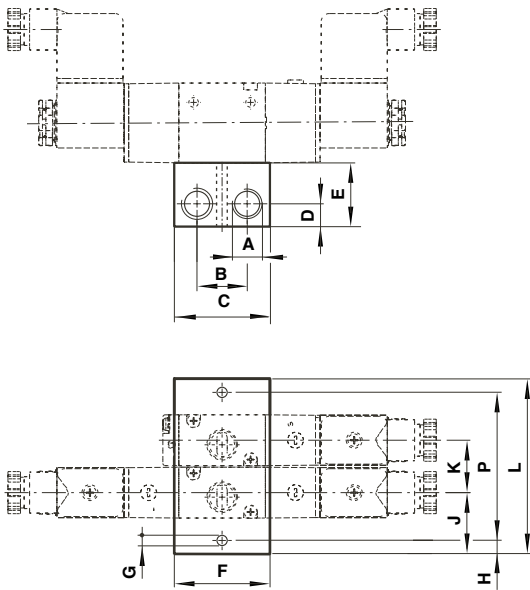


Type	Function	A	B	C	E	F	Weight (lb)
V500351	3/2	0.91	1.38	0.08	0.51	0.71	0.02
V510351	3/2	0.98	1.50	0.08	0.67	0.89	0.03
V520351	3/2	1.61	2.17	0.08	0.91	1.18	0.07
V530351	3/2	1.89	2.44	0.08	0.91	1.18	0.13
V500551	5/2	1.33	1.69	0.08	0.51	0.71	0.02
V510551	5/2	1.50	2.0	0.08	0.67	0.89	0.04
V520551	5/2	0.51	2.91	0.08	0.91	1.18	0.07
V530551	5/2	2.83	3.39	0.08	0.91	1.20	0.18

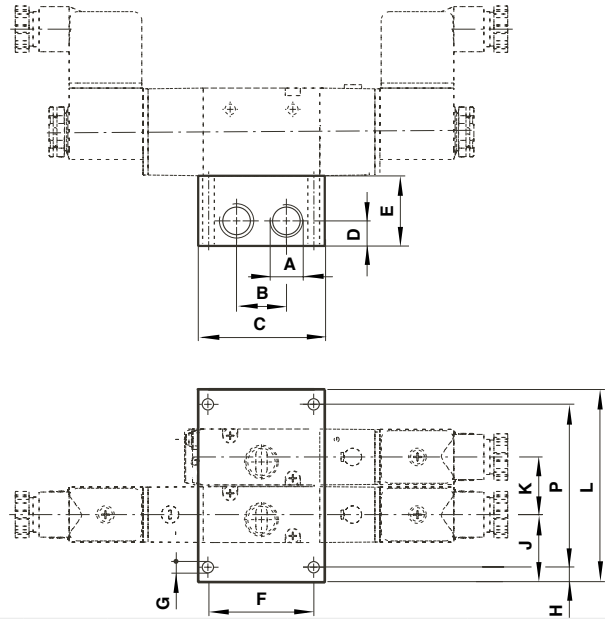
Series	Drawing	B	C	D	F	G	H	J	K	L	N
V50	20	3.50	0.57	0.13	1.06	0.20	0.12	1/8"	1/8"	1.14	1.34
V51	21	4.41	0.79	0.17	1.38	0.28	0.12	1/4"	1/8"	1.42	1.50
V52	22	6.91	1.02	0.22	1.83	0.18	0.16	3/8"	3/8"	2.05	0.51
V53	22	7.38	1.14	0.18	1.83	0.28	0.16	1/2"	1/2"	2.28	2.83
Series	Drawing	O	P	Q	R	S	T	U	V	Y	Z
V50	20	0.63	1/8"	0.13	0.24	0.08	0.51	0.71	1.30	1/8"	0.53
V51	21	0.83	1/4"	0.13	0.24	0.12	0.67	0.89	1.30	1/8"	0.69
V52	22	1.18	3/8"	0.18	0.31	-	0.91	1.18	1.77	1/8"	0.67
V53	22	1.10	1/2"	0.17	0.31	0.18	0.91	1.18	2.01	1/8"	0.79

Dimensions in inches

**Manifold system, 3/2 valves**  
 For V50 and V51



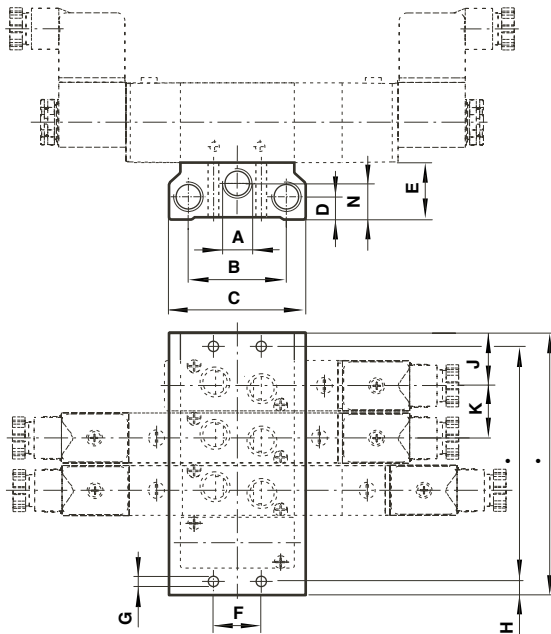
**for V52 and V53**



Series	A	B	C	D	E	Ø G	H	J	K	L	P	Weight (lb)
V50	1/4"	0.87	1.65	0.39	1.10	0.18	0.20	0.75	0.75	0.75 + (N x 0.75)	0.35 + (N x 0.75)	0.11 + (N x 0.11)
V51	1/4"	0.87	1.65	0.39	1.10	0.18	0.24	1.06	0.91	1.22 + (N x 0.91)	0.75 + (N x 0.91)	0.18 + (N x 0.13)
V52	3/8"	1.02	2.60	0.45	1.06	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.13 + (N x 0.24)
V53	1/2"	1.18	2.83	0.59	1.26	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.15 + (N x 0.31)

N = Number of stations 2 to 10

**Manifold system, 5/2 valves**



Dimensions in inches

Series	A	B	C	D	E	F	Ø G	H	J	K	L	P	Weight (lb)
V50	1/4"	1.57	2.28	0.43	0.98	0.79	0.18	0.20	0.75	0.75	0.75 + (N x 0.75)	0.35 + (N x 0.75)	0.89 + (N x 0.89)
V51	1/4"	1.69	2.36	0.39	0.98	0.83	0.18	0.24	0.91	0.91	0.91 + (N x 1.22)	0.43 + (N x 0.91)	0.15 + (N x 0.13)
V52	3/8"	2.40	3.31	0.47	1.06	1.18	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.13 + (N x 0.20)
V53	1/2"	2.28	3.78	0.51	1.18	1.18	0.18	0.20	0.98	1.22	0.75 + (N x 1.22)	0.35 + (N x 1.22)	0.18 + (N x 0.33)

N = Number of stations 2 to 10