

- > **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)

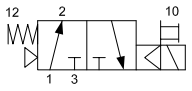
Materials:

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)

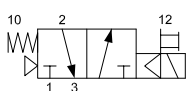
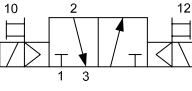
Electrical details for solenoid operators

Voltage tolerance	± 10%
Rating	100% continuous duty
Electrical connection (corresponding to choosen coil)	DIN 43650
Solenoid	2 x 180° for M5 and G1/8, 4 x 90° for G1/4 ... 1/2
Manual override	Push and turn to lock
Protection class	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***

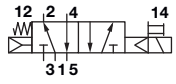
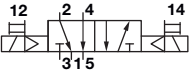
3/2 directional control valves, Normally Close (NC)

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***
	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***

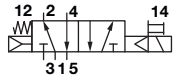
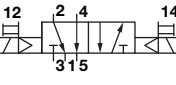
*3/2 NAMUR function can be achieved by applying conversion plate on 5/2 NAMUR valve.

*NC = Normally Closed, NO = Normally Open

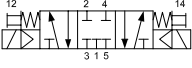
5/2 directional control valves, in-line version

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***

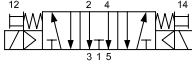
5/2 directional control valves, NAMUR version

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***

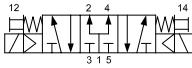
5/3 directional control valves, All Ports Blocked (APB)

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 size	Substitute
18 mm	A
22 mm	B
27 mm	C
34 mm	D
Function	Substitute
3/2 NO	3
3/2 NC	4
5/2	5
5/3 APB	6
5/3 COE	7
5/3 COP	8
Actuation	Substitute
Sol/sol	11
Sol/spring	17
Operator	Substitute
15 mm solenoid coil (18 mm only)	D-C
22 mm solenoid coil	A-A

Voltage (for VCB22A)	Substitute
24 V d.c.	13A
220 V a.c.	19A
Voltage (for VCB22B/C/D)	Substitute
24 V d.c.	13L
24 V a.c.	14J
110 V a.c.	18J
220 V a.c.	19L
240 V a.c.	20J
Manual override	Substitute
Push and turn to lock	2
Thread *1)	Substitute
M5	5
G1/8 (18 mm only)	A
G1/4 (22 mm only)	B
G3/8 (27 mm only)	C
G1/2 (34 mm only)	D
G1/4 NAMUR (27 mm)	E
G3/8 NAMUR (27 mm)	F

*1) NPT thread is on request

* Please contact engineering for 3/2 way and 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)
VCB22D	VCB22D**	VCB22D0551	VCB22D/3**	VCB22D0351	-

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

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

15 mm coil

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

22 mm coil

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

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

Coil connector

15mm DIN EN 175301-803 (DIN43650) Form C	22mm DIN EN 175301-803 (DIN43650) Form B	22mm industrial standard
VCB22-13A 24 V d.c.	VCB22-13L 24 V d.c.	M/P24121/1 24 V a.c./d.c.
-	-	M/P24121/2 90 - 130 V a.c.
VCB22-19A 220 V a.c.	VCB22-19C 220 V a.c.	M/P24121/3 150 - 250 V a.c.

*Connector with LED light is offered as standard

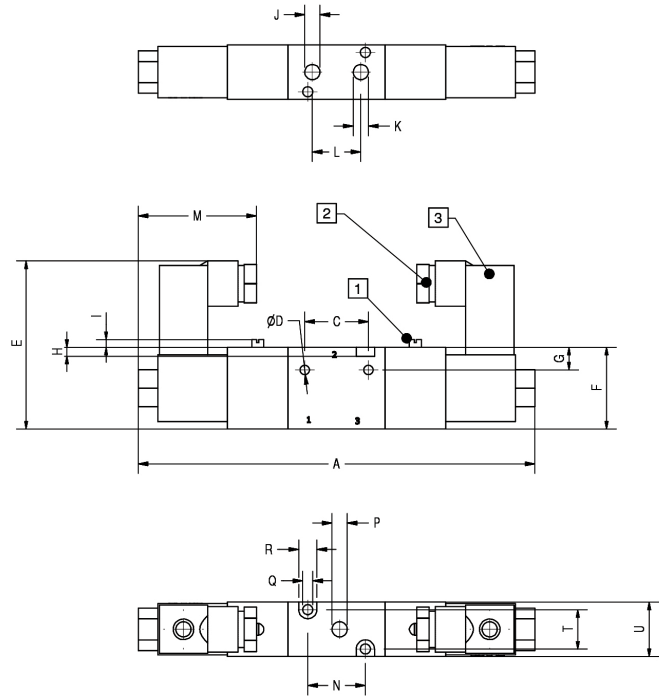
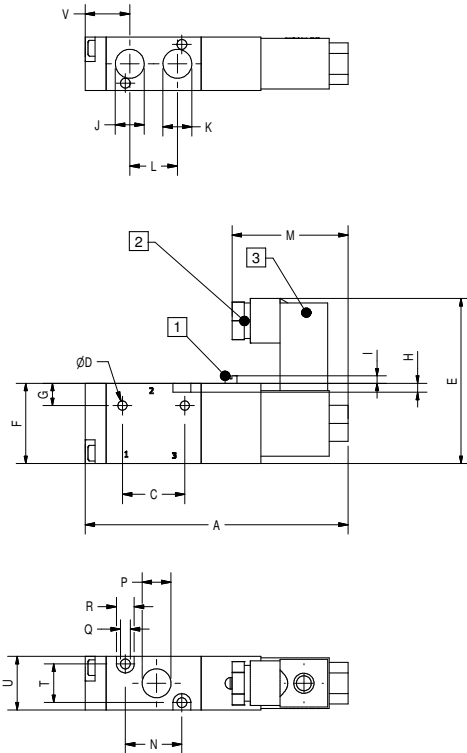
Dimensions

Dimensions in mm
Projection/First angle



1 3/2 single solenoid valve
spring return

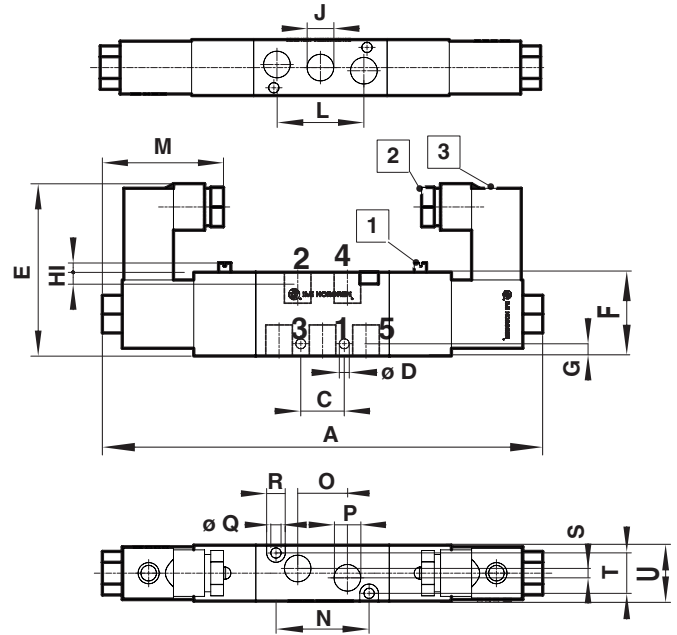
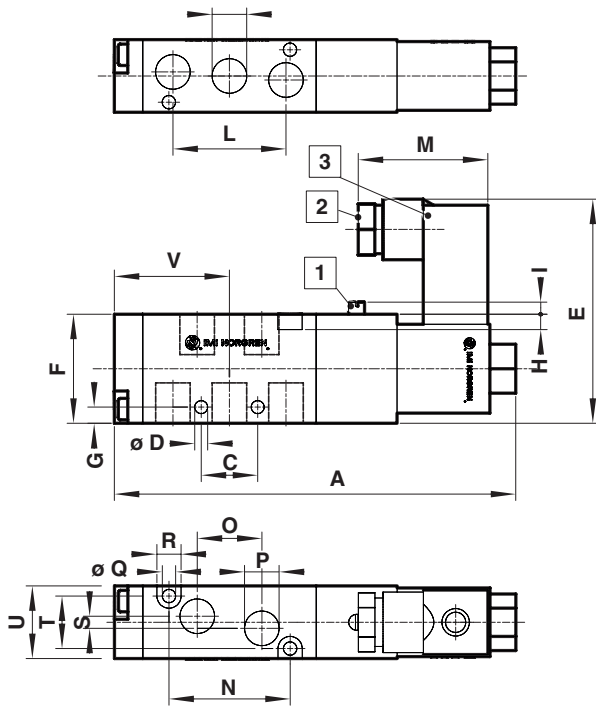
2 3/2 double solenoid valve



- 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 1/2

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)

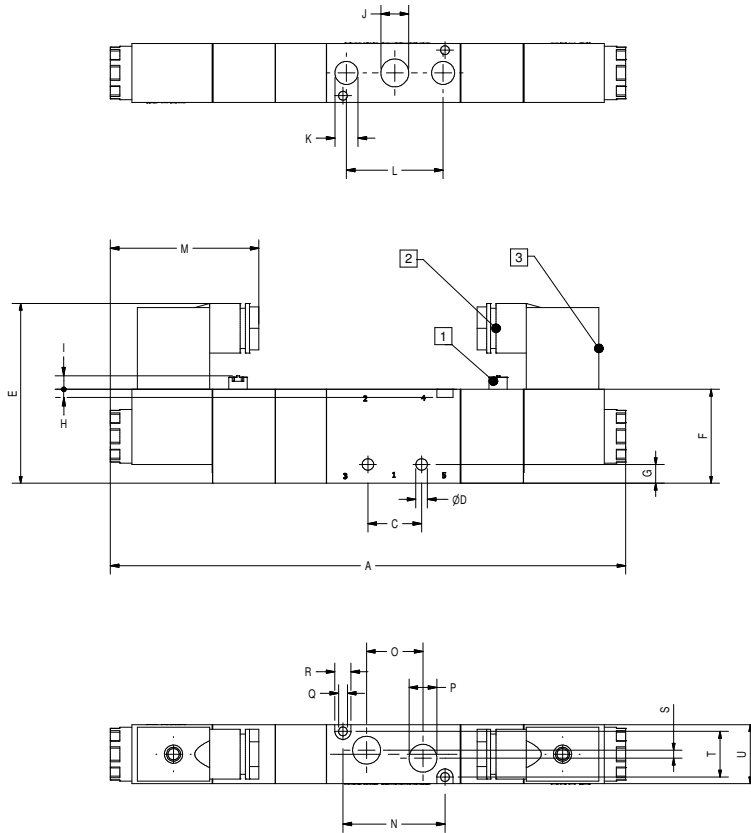
2 Gland Size Pg 9

3 2 x 180° for M5 and G1/8
4 x 90° for G1/4 and 1/2

No.	A	C	ø D	E	F	G	H	I	J	K	L	M	N	O	P	ø Q	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 5/3 Double solenoid valve

Dimensions in mm
Projection/First angle



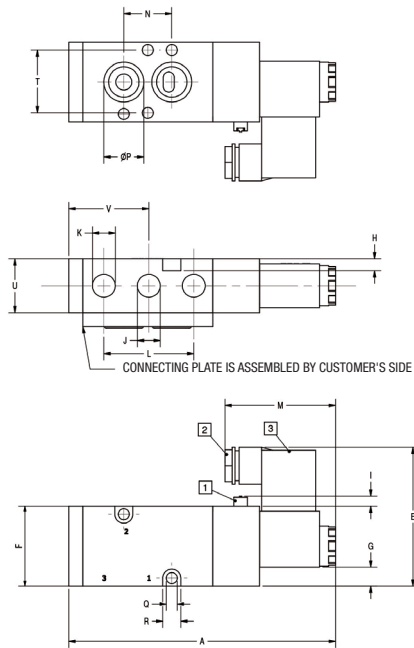
- 1 Manual override (Push & turn to lock)
- 2 Gland Size Pg 9
- 3 2 x 180° for M5 and G1/8
4 x 90° for G1/4 and 1/2

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***

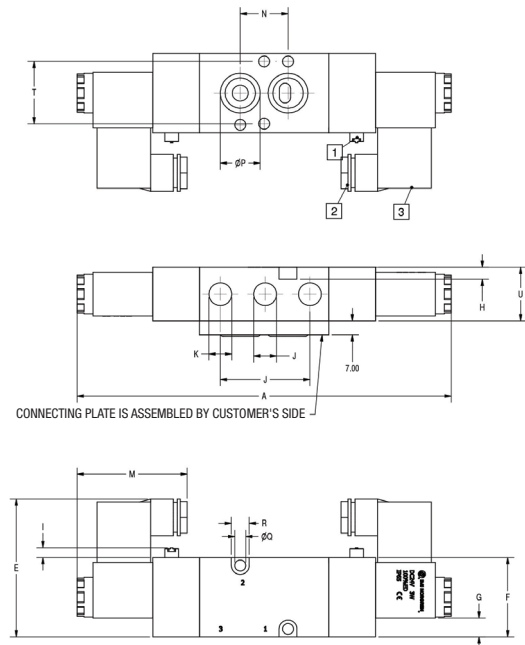
Dimensions in mm
Projection/First angle



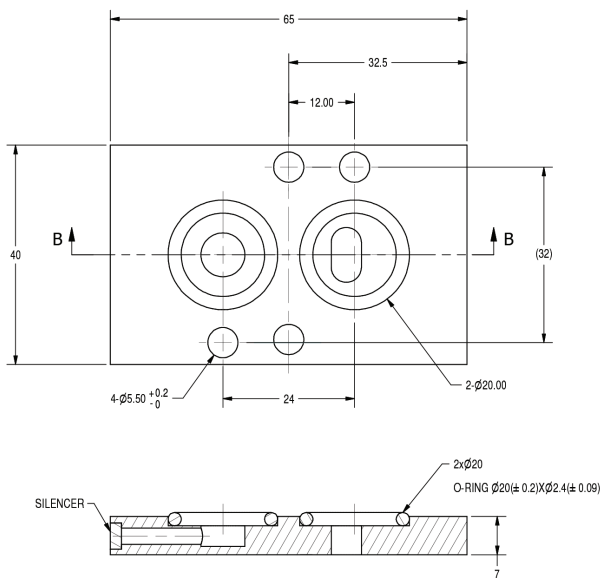
6 5/2 & 3/2 single solenoid valve, NAMUR



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



8 Conversion plate



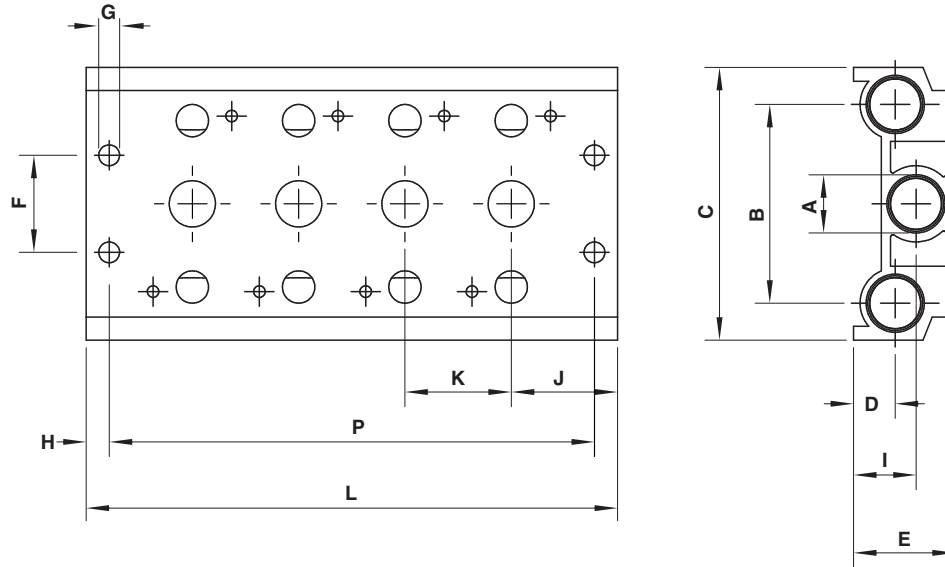
- 1 Manual override (Push & turn to lock)
- 2 Gland Size Pg 9
- 3 2 x 180° for M5 and G1/8
4 x 90° for G1/4 and 1/2

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	-	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	-	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. Conversion plate drawing number is 8

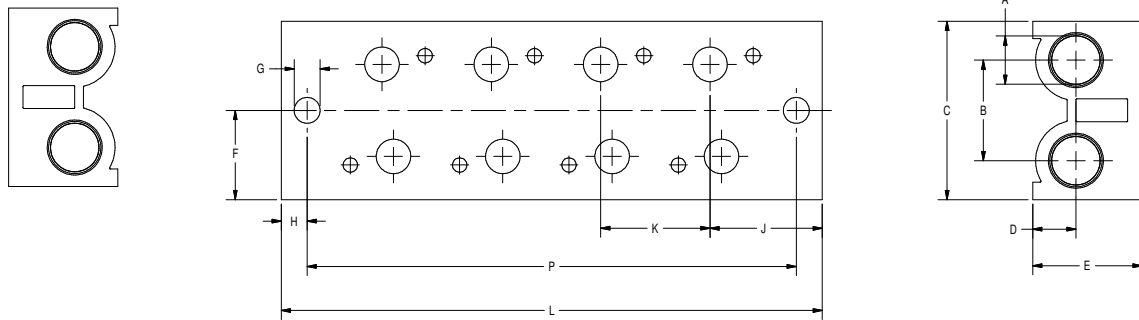
9 5/2 & 5/3 Sub-base

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**

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.