

Series 2 manually operated console minivalves

3/2 NC, NO
Ports M5, Cartridge Ø 4



This series of miniature valves has been especially designed to satisfy all the application requirements of the controls industry with particular attention paid to the operating characteristics required from these components:

- short operational stroke
- small dimensions

GENERAL DATA

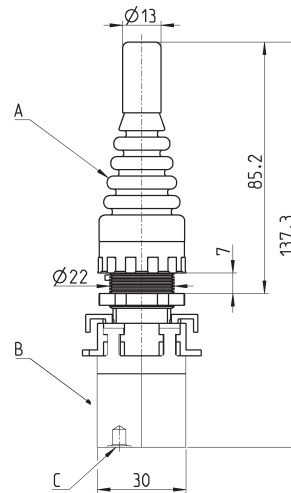
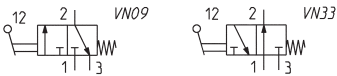
Construction	poppet-type (closed centres)
Valve group	3/2 NC, NO 5/2 and 5/3 CO
Materials	aluminium body, brass plunger, NBR seals
Mounting	panel
Ports	M5 or cartridge dia. 4
Ambient temperature	0°C + 60°C
Medium temperature	0°C + 50°C
Operating pressure	see models

CODING EXAMPLE

2	3	4	-	97	5
2	SERIES				
3	FUNCTION: 3 = 3/2-way NC 4 = 3/2-way NO 8 = 5/3-way CO (function realized with 2x 3/2-way NC valves)				
4	PORTS: 4 = cartridge \varnothing 4 5 = M5				
97	MODE OF OPERATION: 87 = 3 position selector 89 = push button 97 = palm switch 90 = joystick 99 = 2 position selector 92 = pedal 904 = key				
5	RESETTING: 5 = spring return 0 = stable 2 = latching-twist to release 54 = joystick				

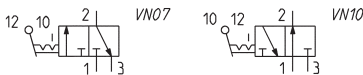
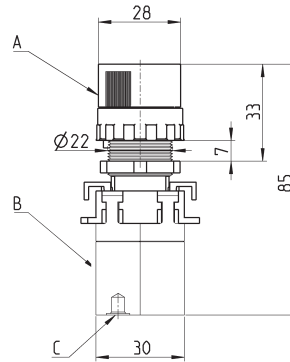
SERIES 2 MANUALLY OPERATED CONSOLE MINIVALVES

Minivalves Mod. 23..-905, 24..-905



Mod.	Operating pressure (bar)	Flow (NL/min)	A	B	C (Supply/port)	Symbols
234-905	2 ÷ 8	60	200-905	234-000	$\varnothing 4/2$	VN09
235-905	2 ÷ 8	60	200-905	235-000	M5	VN09
244-905	2 ÷ 8	60	200-905	244-000	$\varnothing 4/2$	VN33
245-905	2 ÷ 8	60	200-905	245-000	M5	VN33

Minivalves Mod. 23...-990, 24...-990

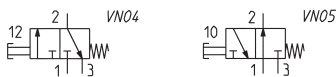
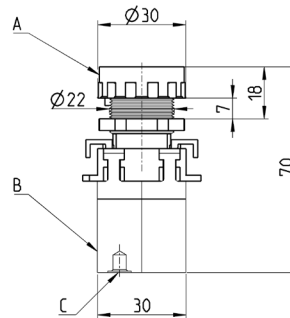


Mod.	Operating pressure (bar)	Flow (NL/min)	A	B	C (Supply/port)	Symbols
234-990	2 ÷ 8	60	200-990	234-000	Ø4/2	VN07
235-990	2 ÷ 8	60	200-990	235-000	M5	VN07
244-990	2 ÷ 8	60	200-990	244-000	Ø4/2	VN10
245-990	2 ÷ 8	60	200-990	245-000	M5	VN10

Minivalves Mod. 23...-895, 24...-895

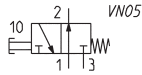
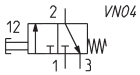
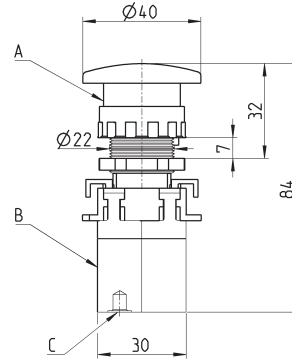


The packaging of the button includes 3 interchangeable disks in the colours red, black and green.



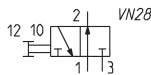
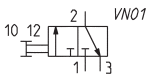
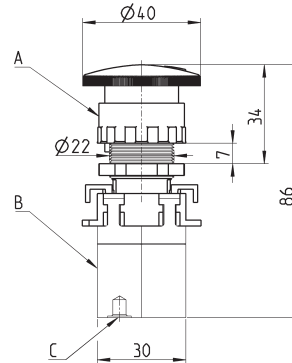
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force at 6 bar (N)	A	B	C (Supply/port)	Symbols
234-895	2 ÷ 8	60	7	200-895	234-000	Ø4/2	VN04
235-895	2 ÷ 8	60	7	200-895	235-000	M5	VN04
244-895	2 ÷ 8	60	7	200-895	244-000	Ø4/2	VN05
245-895	2 ÷ 8	60	7	200-895	245-000	M5	VN05

Minivalves Mod. 23...-975, 24...-975



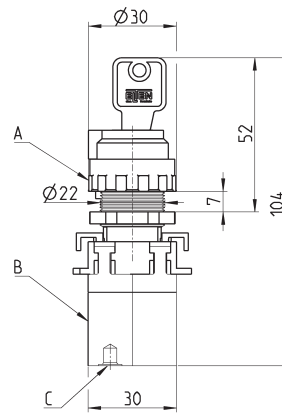
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force at 6 bar (N)	A	B	C (Supply/port)	Symbols
234-975	2 ÷ 8	60	7	200-975	234-000	Ø4/2	VN04
235-975	2 ÷ 8	60	7	200-975	235-000	M5	VN04
244-975	2 ÷ 8	60	7	200-975	244-000	Ø4/2	VN05
245-975	2 ÷ 8	60	7	200-975	245-000	M5	VN05

Minivalves Mod. 23...-972, 24...-972



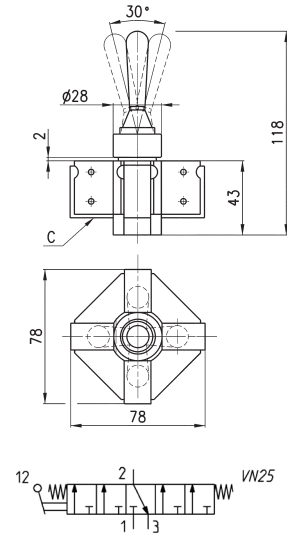
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force at 6 bar (N)	A	B	C (Supply/port)	Symbols
234-972	2 ÷ 8	60	7	200-972	234-000	Ø4/2	VN01
235-972	2 ÷ 8	60	7	200-972	235-000	M5	VN01
244-972	2 ÷ 8	60	7	200-972	244-000	Ø4/2	VN28
245-972	2 ÷ 8	60	7	200-972	245-000	M5	VN28

Minivalves Mod. 23...-904, 24...-904



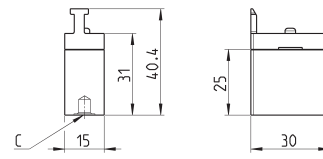
Mod.	Operating pressure (bar)	Flow (NL/min)	A	B	C (Supply/port)	Symbols
234-904	2 ÷ 8	60	200-904	234-000	Ø4/2	VN02
235-904	2 ÷ 8	60	200-904	235-000	M5	VN02
244-904	2 ÷ 8	60	200-904	244-000	Ø4/2	VN31
245-904	2 ÷ 8	60	200-904	245-000	M5	VN31

Joystick valves Mod. 234-9054, 235-9054

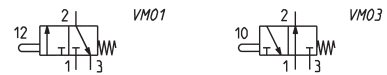


Mod.	Minimum pressure (bar)
234-9054	2
235-9054	2

Minivalves Mod. 234-000, 235-000, 244-000, 245-000



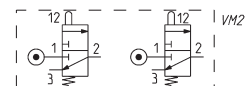
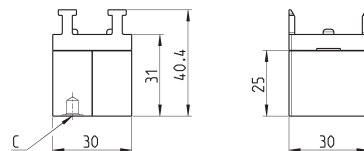
Mod.	Operating pressure (bar)	Flow (Nl/min)	Symbols
234-000	2 ÷ 8	60	VM01
235-000	2 ÷ 8	60	VM01
244-000	2 ÷ 8	60	VM03
245-000	2 ÷ 8	60	VM03



Minivalves Mod. 284-000, 285-000

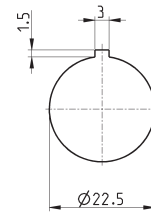


The codes shown in the table are composed by two 3/2-way valves NC which can be operated with the control device Mod. 200-870 only.



Mod.	Operating pressure (bar)	Flow (Nl/min)	Symbols
284-000	2 ÷ 8	60	VM21
285-000	2 ÷ 8	60	VM21

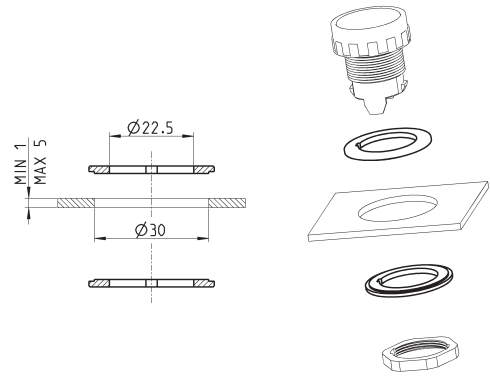
Drilling for mounting



Adaptor

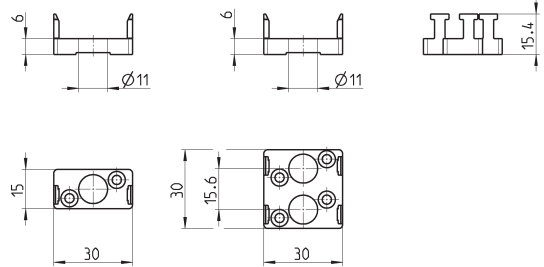


Panel hole adaptor Ø30
 Supplied with:
 2x reduction rings



Mod.
 200-2230

End cover



Mod.
 210-000
 220-000

Series 1, 3, 4 and VMS manually operated valves

Series 1, 3 and 4: 3/2-, 5/2- and 5/3-way CC, CO; ports G1/8, G1/4
Series VMS: 3/2-way; ports M5, G1/8, G1/4, G3/8, G1/2 and G3/4

SERIES 1, 3, 4 AND VMS MANUALLY OPERATED VALVES



Series 3 manual valves (G1/8) and Series 4 (G1/4), 3/2-, 5/2- and 5/3-way, are available with several devices designed to satisfy different needs.

Series 1 is provided with two devices: pushbutton (3/2-way) and lever (3/2 and 5/2-way).

Series VMS valves are 3/2-way slide valves which are available with ports M5, G1/8, G1/4, G3/8, G1/2 and G3/4.

The 3/2-way valves Series 3 and 4 are normally closed when 1 is the inlet and they can also be normally open when 3 is the inlet.

Series 3 and 4 5/2-way valves can be supplied via ports 3 and 5 with two different pressures, if a cylinder has to be operated using a delivery pressure which is different from the return pressure.

GENERAL DATA

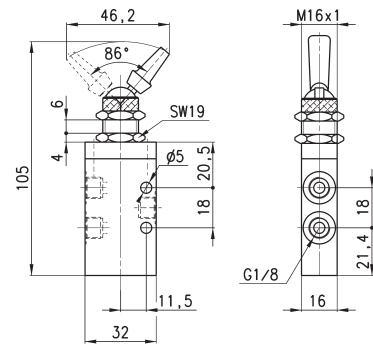
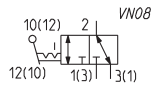
Construction	Series 3 and 4: spool-type Series 1: poppet-type Series VMS: slide
Function	Series 1, 3 and 4: 3/2 - 5/2 - 5/3 ways CC CO Series VMS: 3/2-way
Materials	aluminium body, stainless steel spool, brass poppet, NBR seals
Ports	Series 1, 3 and 4: G1/8, G1/4 Series VMS: M5, G1/8, G1/4, G3/8, G1/2, G3/4
Ambient temperature	0°C ÷ 60°C
Medium temperature	0°C ÷ 50°C
Operating pressure	see the single models
Fluid	Filtered air, without lubrication. If lubricated air is used, it is recommended to use ISO VG32 oil. Once applied the lubrication should never be interrupted.

SERIES 1, 3, 4 CODING EXAMPLE

3	3	8	-	900
3	SERIES: 1 3 4			
5	FUNCTION: 3 = 3/2-way NC 5 = 5/2-way 6 = 5/3-way CC 7 = 5/3-way CO			
8	PORTS: 8 = G1/8 4 = G1/4			
900	RESETTING: 895 = pushbutton, monostable, black 896 = pushbutton, monostable, green 897 = pushbutton, monostable, red 900 = lever, bistable 905 = lever, monostable 910 = knob, bistable 915 = knob, monostable 935 = digital monostable 975 = palm-switch, monostable, black 976 = palm-switch, monostable, green 977 = palm-switch, monostable, red 990 = switch, bistable			

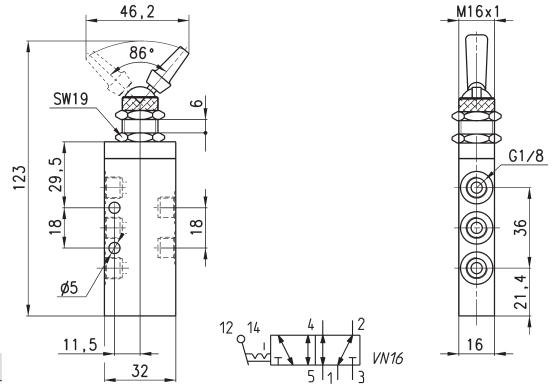
SERIES 1, 3, 4 AND VMS MANUALLY OPERATED VALVES

Valve Mod. 338-990



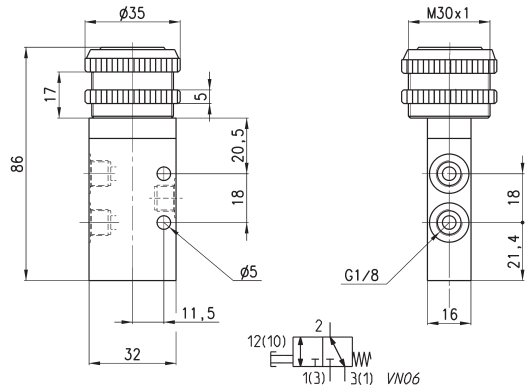
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)
338-990	-0.9 ÷ 10	700	18

Valve Mod. 358-990



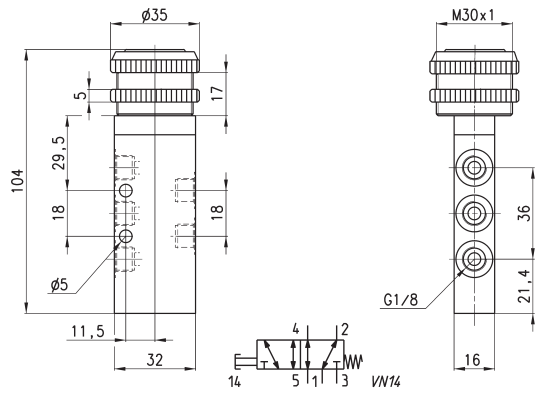
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)
358-990	-0.9 ÷ 10	700	18

Valves Mod. 338-89...



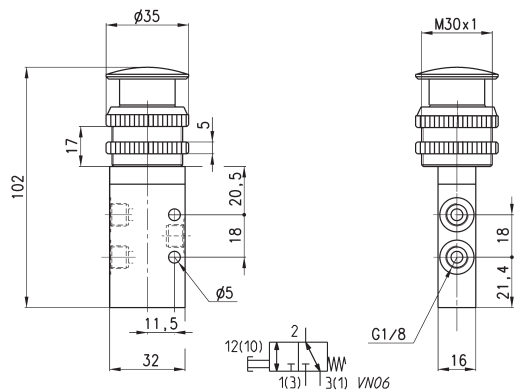
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Colors
338-895	-0.9 ÷ 10	700	35	Black
338-896	-0.9 ÷ 10	700	35	Green
338-897	-0.9 ÷ 10	700	35	Red

Valves Mod. 358-89...



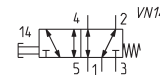
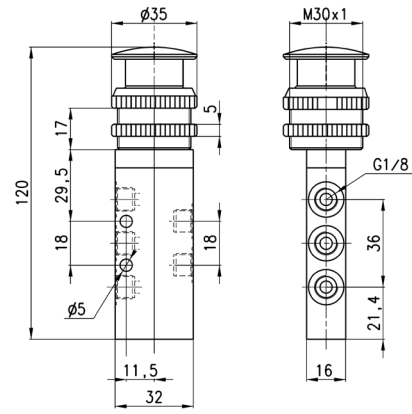
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Colors
358-895	-0.9 ÷ 10	700	35	Black
358-896	-0.9 ÷ 10	700	35	Green
358-897	-0.9 ÷ 10	700	35	Red

Valves Mod. 338-97...



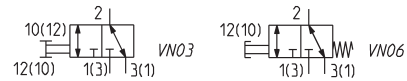
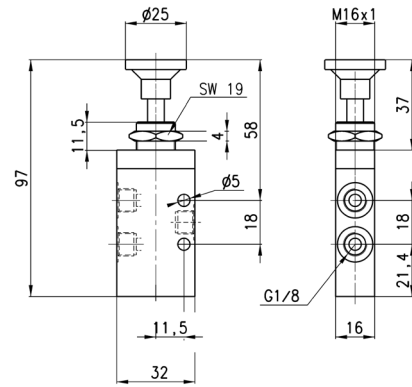
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Colors
338-975	-0.9 ÷ 10	700	35	Black
338-976	-0.9 ÷ 10	700	35	Green
338-977	-0.9 ÷ 10	700	35	Red

Valves Mod. 358-97...



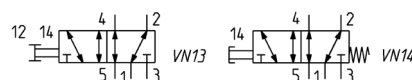
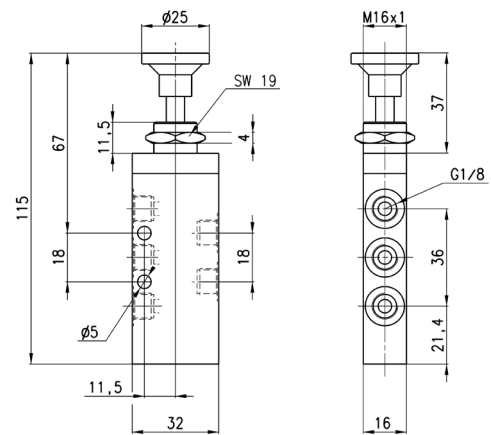
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)	Colors
358-975	-0.9 ÷ 10	700	35	Black
358-976	-0.9 ÷ 10	700	35	Green
358-977	-0.9 ÷ 10	700	35	Red

Valves Mod. 338-91...



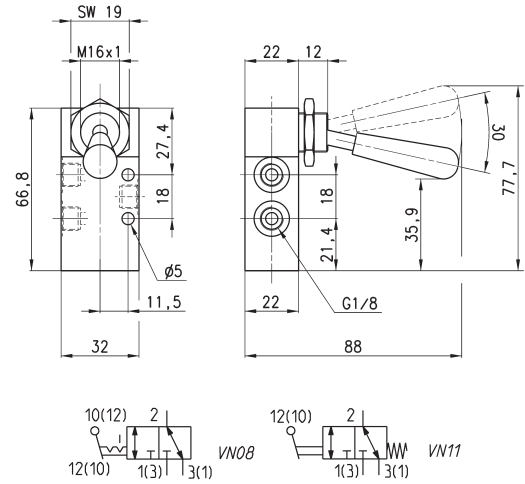
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)	Symbol
338-910	-0.9 ÷ 10	700	6	VN03
338-915	-0.9 ÷ 10	700	35	VN06

Valves Mod. 358-91...



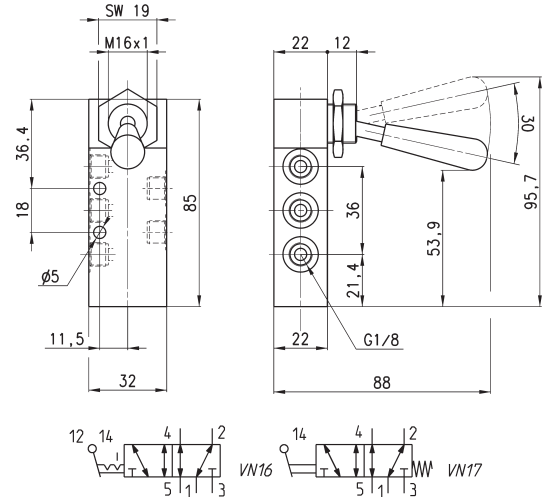
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)	Symbol
358-910	-0.9 ÷ 10	700	6	VN13
358-915	-0.9 ÷ 10	700	35	VN14

Valves Mod. 338-90...



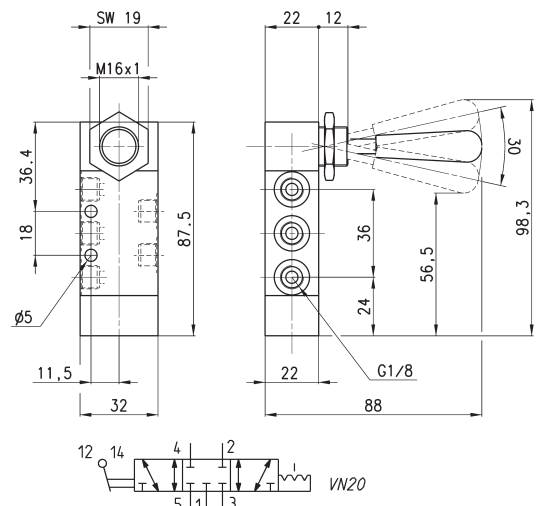
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
338-900	-0.9 ÷ 10	700	5	VN08
338-905	-0.9 ÷ 10	700	22	VN11

Valves Mod. 358-90...



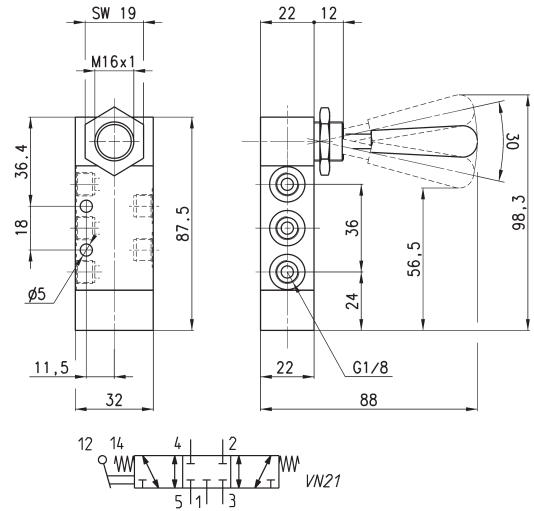
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
358-900	-0.9 ÷ 10	700	5	VN16
358-905	-0.9 ÷ 10	700	22	VN17

Valve Mod. 368-900



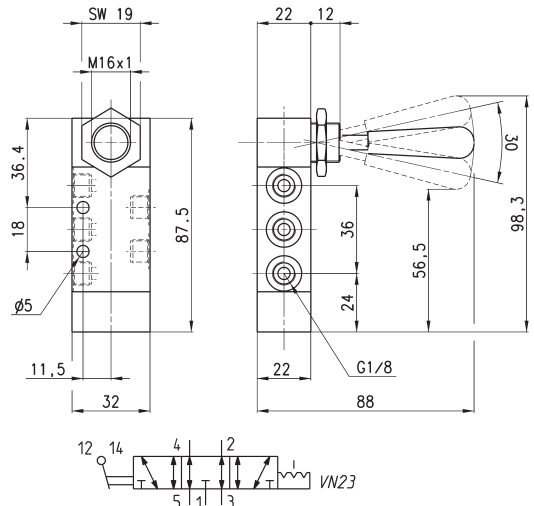
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)
368-900	-0.9 ÷ 10	500	5

Valve Mod. 368-905



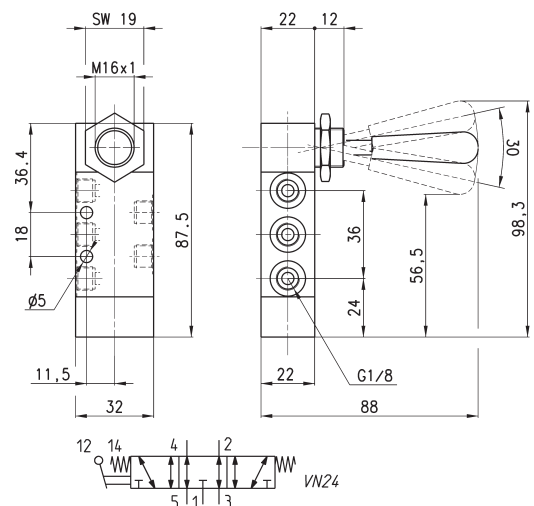
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)
368-905	-0.9 ÷ 10	500	20

Valve Mod. 378-900



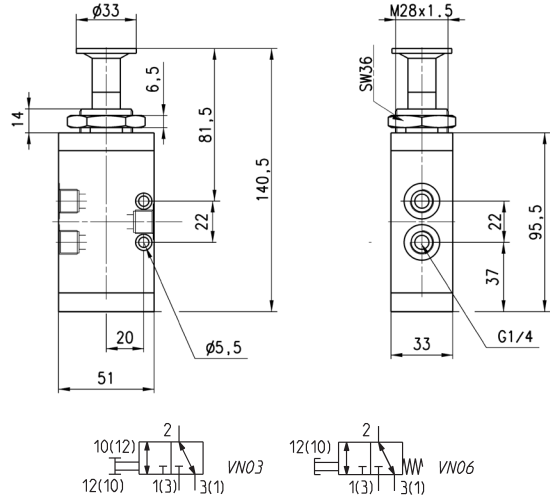
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)
378-900	-0.9 ÷ 10	500	5

Valve Mod. 378-905



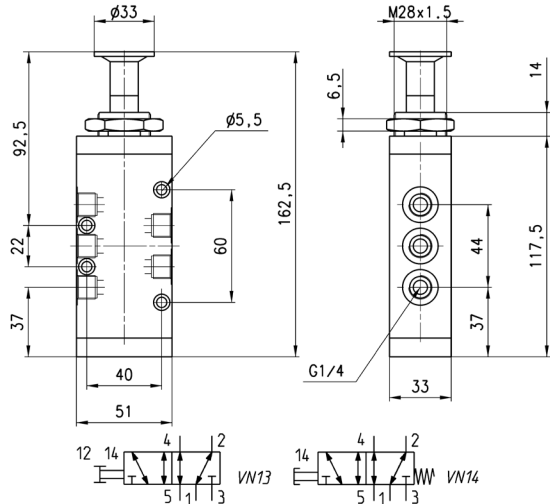
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)
378-905	-0.9 ÷ 10	500	20

Valves Mod. 434-91...



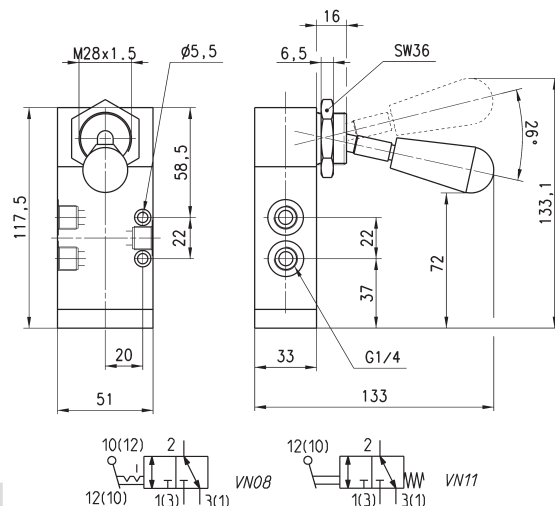
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
434-910	-0.9 ÷ 10	1250	10	VN03
434-915	-0.9 ÷ 10	1250	37	VN06

Valves Mod. 454-91...



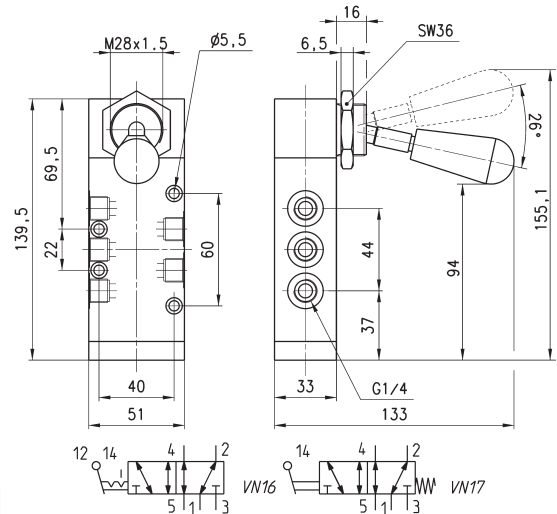
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
454-910	-0.9 ÷ 10	1250	10	VN13
454-915	-0.9 ÷ 10	1250	37	VN14

Valves Mod. 434-90...



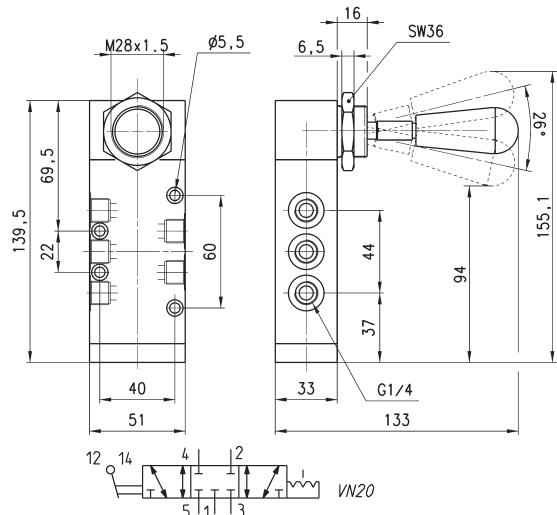
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
434-900	-0.9 ÷ 10	1250	5	VN08
434-905	-0.9 ÷ 10	1250	37	VN11

Valves Mod. 454-90...



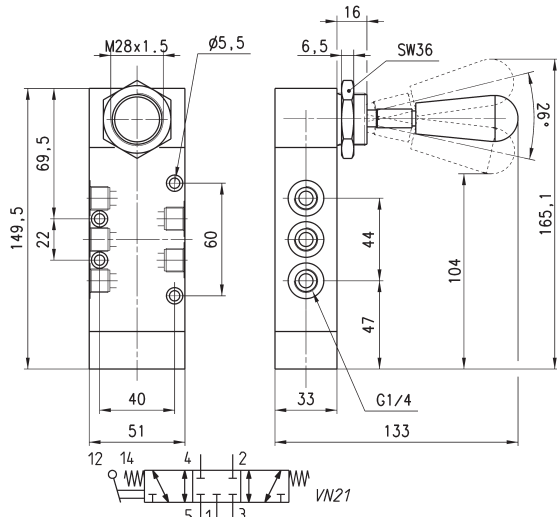
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)	Symbol
454-900	-0.9 ÷ 10	1250	5	VN16
454-905	-0.9 ÷ 10	1250	37	VN17

Valve Mod. 464-900



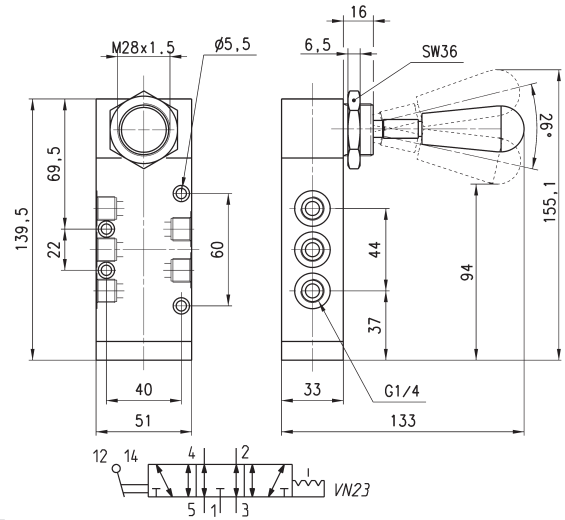
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)
464-900	-0.9 ÷ 10	1250	5

Valve Mod. 464-905



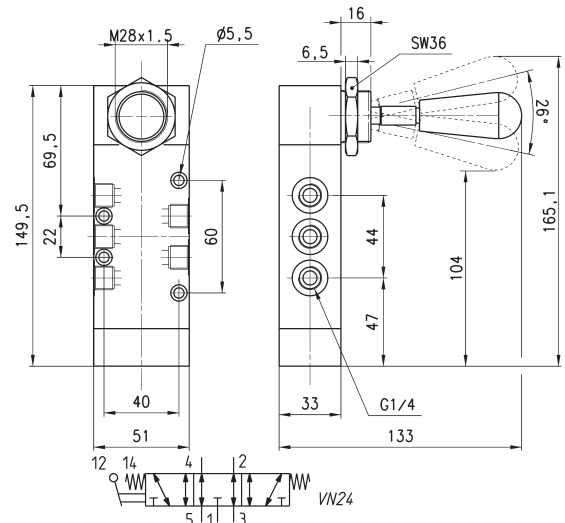
Mod.	Operating pressure (bar)	Flow (NI/min)	Actuating force (N)
464-905	-0.9 ÷ 10	1250	10

Valve Mod. 474-900



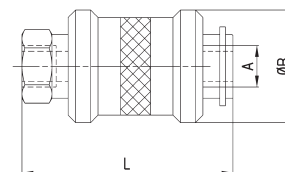
Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)
474-900	-0.9 ÷ 10	1250	5

Valve Mod. 474-905



Mod.	Operating pressure (bar)	Flow (NL/min)	Actuating force (N)
474-905	-0.9 ÷ 10	1250	10

Series VMS slide valves



Mod.	A	ØB	L	Flow at 6 bar 1 (NL/min) 1-2	ΔP	Flow at 6 bar 1 (NL/min) 2-3	ΔP	Operating press. (bar)	Operating temp. (°C)
VMS-105-M5	M5	15	33,5	140		145		0 ÷ 15	-10 ÷ 80
VMS-118-1/8	G1/8	25	48	600		740		0 ÷ 15	-10 ÷ 80
VMS-114-1/4	G1/4	30	58	1200		1780		0 ÷ 15	-10 ÷ 80
VMS-138-3/8	G3/8	35	70	2100		1830		0 ÷ 15	-10 ÷ 80
VMS-112-1/2	G1/2	40	80	3350		4030		0 ÷ 15	-10 ÷ 80
VMS-134-3/4	G3/4	49,5	83	5350		5000		0 ÷ 15	-10 ÷ 80

