

Clamping modules type NSMD2

The clamping modules type NSMD2 are used to actuate power-operated clamping devices such as hydraulically actuated hollow or solid clamping cylinders for automatic lathes. They are available as manifold mounting valves with a standard connection diagram according to DIN 24340-A6. The clamp/release functions of the clamping cylinder, pressure control and, if required, the electrical pressure monitoring are combined in one device. The clamping pressure at the consumer side A or A and B and the pressure switch can be adjusted simultaneously with a manual, mechanical or electro-proportional adjustment device. A special safety circuit monitors the switching position of the valve. 4/3- or 4/2-way directional functions with spring-centred actuation, the latter also with detent actuation, allows for adjustment to the respective application.

The throttling options in the spool end position as well as the rapid and creeping movements are available as an additional function for one or both consumer ports.

Features and benefits:

- Directional valve, pressure-reducing valve and pressure switch in one device
- Adjustment of pressure-reducing valve and pressure switch with an adjustment device (manual or electro-proportional)
- The controlled pressure is picked up directly at the consumer port
- Valve with connection diagram according to DIN 24340-A4

Intended applications:

- Machine tools (cutting)
- Machine tools (non-cutting) - forming and cutting
- Handling and mounting technology (industrial robots, etc.)



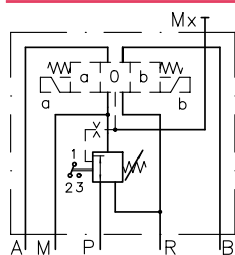
Nomenclature:	Valve combination consisting of: <ul style="list-style-type: none"> ■ Directional spool valve (4/3-, 4/2-way function) ■ Pressure reducing valve with tracked pressure switch
Design:	Individual valve for sub-plate mounting (Valve banks with sub-plates type BA are available)
Actuation:	Solenoid
p_{max}:	120 bar
Q_{max}:	25 lpm

Design and order coding example

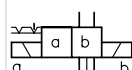
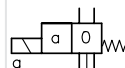
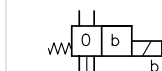
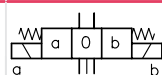
NSMD 2	D1	60	R	- G24
<p>Solenoid voltage 12V DC, 24V DC, 110V AC, 230V AC Solenoids with various plug versions</p> <p>Means of adjustment for the clamping pressure</p> <ul style="list-style-type: none"> ■ Slotted head screw + hexagon nut ■ Wing screw + wing nut ■ Lockable turning handle ■ Electro-proportional adjustment with/without additional function monitoring <p>Additional functions</p> <ul style="list-style-type: none"> ■ Throttle ■ Rapid and creeping movement (one or both directions) <p>Function</p> <ul style="list-style-type: none"> ■ With pressure switch ■ With orifice (flow limitation in accumulator mode) <p>Basic type, size Type NSMD size 2 with connection hole pattern conf. NG 6</p>				

Function

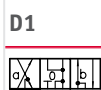
Basic symbols



D, E, G, D1, E1, G1



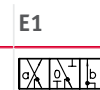
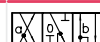
Symbols



B, W, K



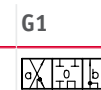
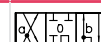
E



B1, W1, K1



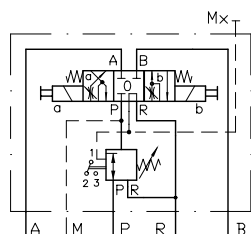
G



Further functions:

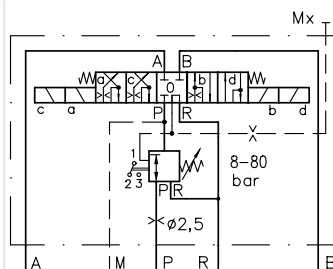
G1/MD

Pressure reducing function and throttle in switching positions a and b



G/MM6

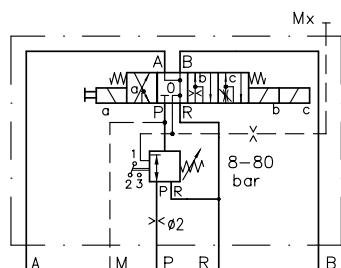
Rapid traverse and creeping in both directions



G/MMDA7

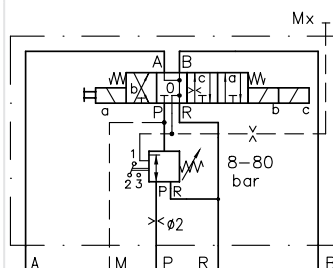
Rapid traverse and creeping in one direction featuring also a limitation for rapid traverse (switching position a, c) rapid traverse in opposing direction (switching position b)

Switching position a, speed limitation is possible by means of a throttle with pressure reduction and pressure monitoring

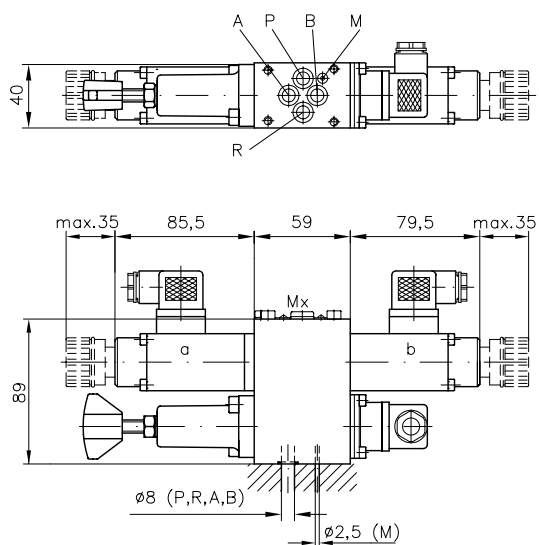
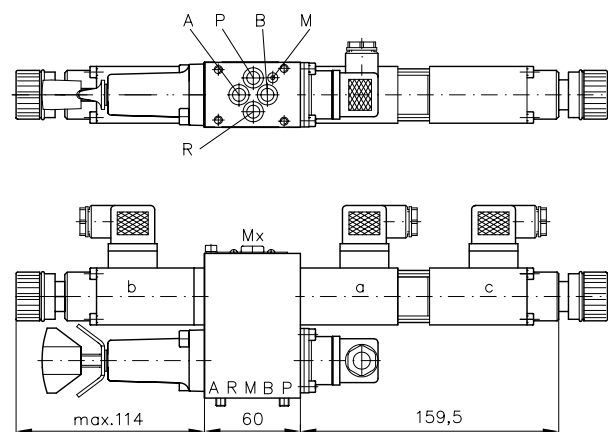


G/MMA7

Switching position with fixed rapid traverse speed without pressure reduction and pressure monitoring.



General parameters and dimensions

NSMD2 K...

NSMD2 G...


	Q_{\max} [lpm]	p_{\max} [bar]	Clamping pressure range [bar]	Trigger flow [lpm]	Connection hole pattern ¹⁾	Dimensions [mm]			m [kg]	
						H	B	T		
NSMD2	25	120	5 ... 50 8 ... 80	2 ... 4 3 ... 5 4 ... 6	Hole pattern conf. DIN 24340-A6	see illustration			2.2 ... 3.8	+ 0.6 ... 1.1

1) Port Mx; G 1/8 (BSPP)

2) Depending on flow pattern symbol and actuation mode

Circuit example:

NSMD2K/M/GDK/B2,5-G24

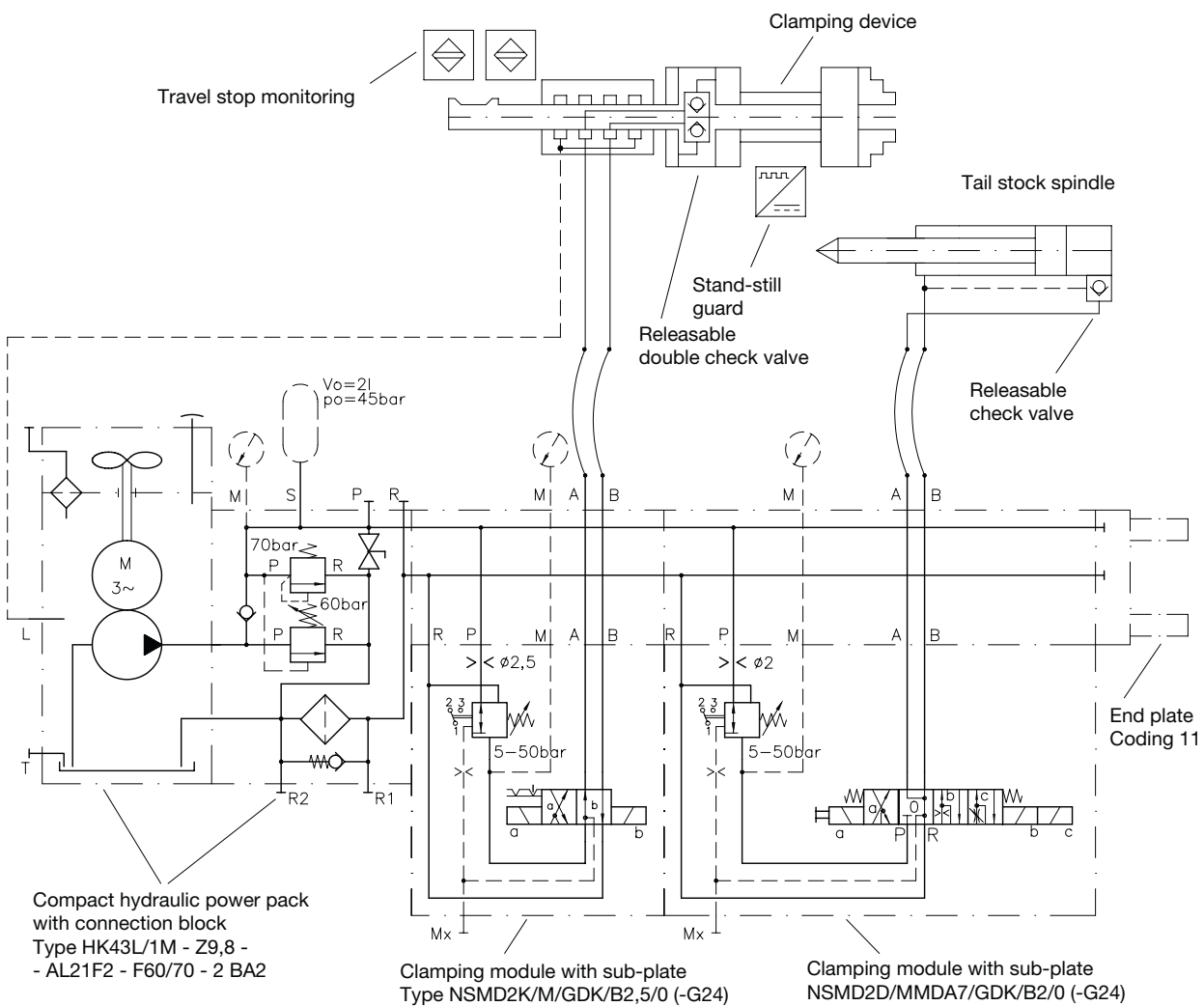
Clamping module type NSMD size 2 with industrial standard (DIN 24340- A6) connection hole pattern, flow pattern symbol K, detented version, clamping pressure range G, 5-50 bar and min. operational flow 2-4 lpm. The actuation for the adjustment of the clamping pressure and tracked pressure switch takes place by means of wing screw and wing nut. An orifice \varnothing 2.5 mm is installed in the P gallery, solenoid voltage 24V DC

NSMD2G1/MD/E4VK/B1-G12

Clamping module type NSMD size 2 with industrial standard connection hole pattern conf. DIN 24340-A6, flow pattern symbol G1 with pressure monitoring at port A, adjustable throttle setting for switching position a and b. Valve for clamping pressure range E, 8-80 bar and min. operational flow 4-6 lpm. The actuation for the adjustment of the clamping pressure and tracked pressure switch takes place with self-locking turn knob. An orifice \varnothing 1 mm is installed in the P gallery, solenoid voltage 12V DC

Circuit example:

HK 43L/1M-Z 9,8-AL 21F2-F60/70-2-BA 2 - NSMD2K/M/GDK/B2,5/0
- NSMD2D/MMDA7/GDK/B2/0-G24



Associated technical data sheets:

- Clamping modules type NSMD: [D 7787](#)

Products:

- Directional valves type NSWP2: [D 7451 N](#)
- Directional seated valves type NBVP16: [D 7765 N](#)

Plates:

- Valve banks type BA2: [D 7788](#)
- Intermediate plate NG6 type NZZ: [D 7788 Z](#)

Plugs:

- With LEDs or to support the EMV etc.: [D 7163](#)
- With economy circuit: [D 7813](#), [D 7833](#)