

3MN

3 jaws self-centering grippers Ø320-380

ALUMINIUM

Pneumatics - Protected - Quick jaws change



Technical features

- Aluminium body to contain the gripper weight
- Functional parts heat-treated for high precision and long life
- Jaws with calibrated bushings and groove
- Protection class IP64
- Highest rigidity and Repeatability: 0,04 mm
- Prepared for Air purge
- Safety valve SAB-1 STD

OPTIONAL:

- Spring workstop
- Analogic linear stroke control sensor
- Quick change RR jaws

Applications/Customer benefits

- Compact and light design
- O.D. (also with springs) and/or I.D. clamping
- Integrated greasing system on jaws (use SMW-Autoblok K67 grease)

Standard equipment

Grippers without fingers and without sensors.
All screws for the double mounting, all centering bushings, all interface OR and SAB-1 STANDARD safety valve included.

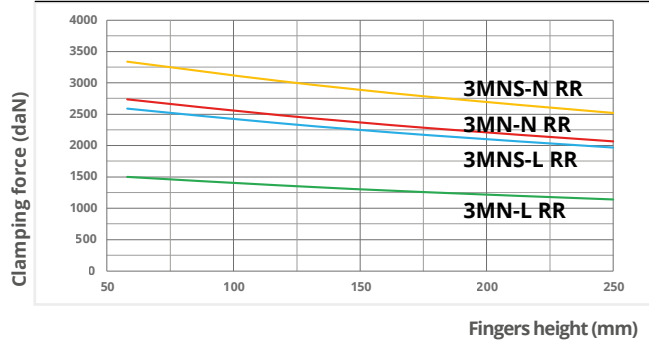
SMW-Autoblok Type	Id. No.	Clamping force (daN) at 6 bar	Spring force min. (daN)	U (mm) jaw stroke	Air volume (cm³)	Pressure (bar) min./max.	Closing/Opening time (s) at 6 bar	Weight (Kg)	Workpiece weight recommended (Kg)	e (mm) min./max.	R (mm) min./max.	R1 (mm) min./max.
3MN-N 320	77920432	2740	----	20,9	2669,5	2/8	1,3/1,3	44	137,0	79,5/100,4	102,5/123,4	173/193,9
3MN-N 320 RR	77920932									----	116,5/137,4	173/193,9
3MNS-N 320	77920532	3340	600	20,9	2669,5	4/6,5	2,5/1,2	45	137,0	79,5/100,4	102,5/123,4	173/193,9
3MNS-N 320 RR	77921032									----	116,5/137,4	173/193,9
3MN-L 320	77920132	1500	----	40	2669,5	2/8	1,3/1,3	44	75,0	79,5/119,5	102,5/142,5	173/213
3MN-L 320 RR	77920732									----	116,5/156,5	173/213
3MNS-L 320	77920232	2590	1090	40	2669,5	4/6,5	2,5/1,2	45	75,0	79,5/119,5	102,5/142,5	173/213
3MNS-L 320 RR	77920832									----	116,5/156,5	173/213
3MN-N 380	77920438	4500	----	26	5405	2/8	2,1/2,1	64	225,0	90/116	122/148	197/223
3MN-N 380 RR	77920938									----	140,5/166,5	197/223
3MNS-N 380	77920538	5850	1350	26	5405	4/6,5	2,9/1,8	66	225,0	90/116	122/148	197/223
3MNS-N 380 RR	77921038									----	140,5/166,5	197/223
3MN-L 380	77920138	2450	----	50	5405	2/8	2,1/2,1	64	122,5	90/140	122/172	197/247
3MN-L 380 RR	77920738									----	140,5/190,5	197/247
3MNS-L 380	77920238	3200	750	50	5405	4/6,5	2,9/1,8	66	122,5	90/140	122/172	197/247
3MNS-L 380 RR	77920838									----	140,5/190,5	197/247

Note: 3MN-N: Normal stroke 3MN-L: Long stroke 3MNS-N: Normal stroke with springs 3MNS-L: Long stroke with springs
3MN-.-RR: Quick change RR jaws

Drawings and data are subject to change by SMW-Autoblok.

320

3MN-RR



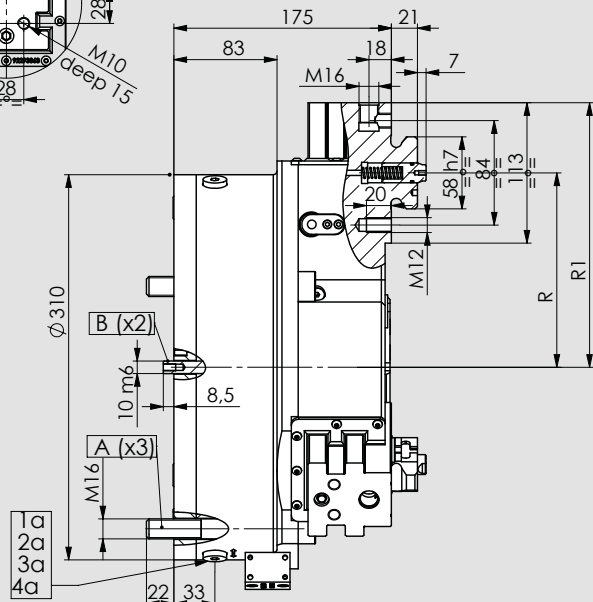
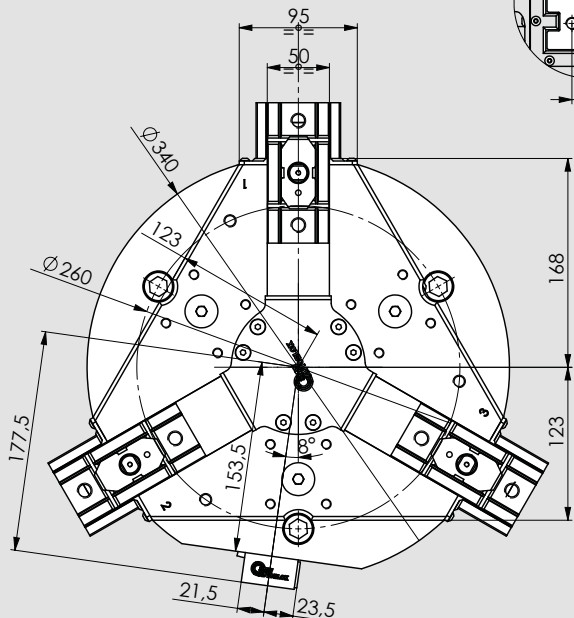
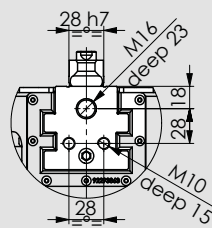
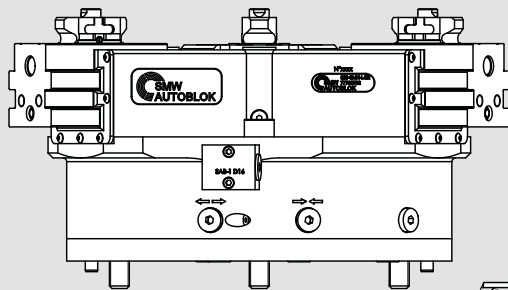
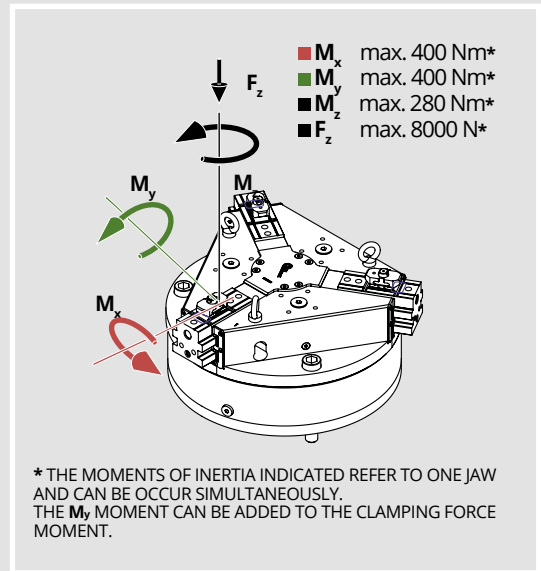
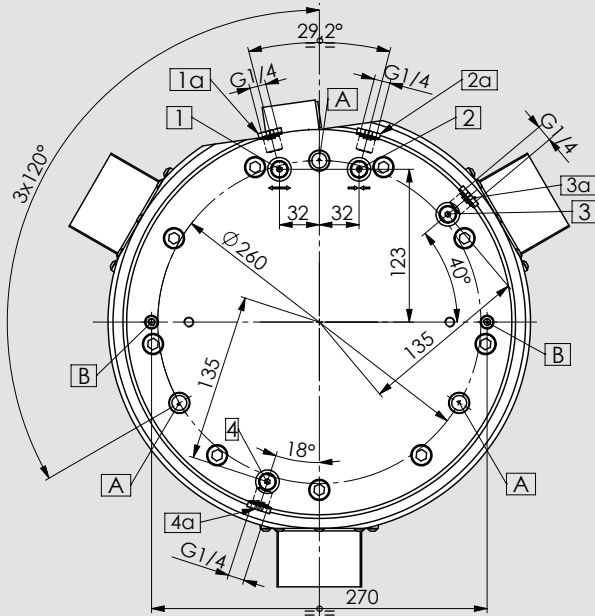
Clamping force calculated at **6 bar**.

Max. recommended fingers height: **250 mm**

Max. Fingers weight: **11,5 Kg**

For I.D. clamping consider **+3%** of the clamping force shown in the diagram.

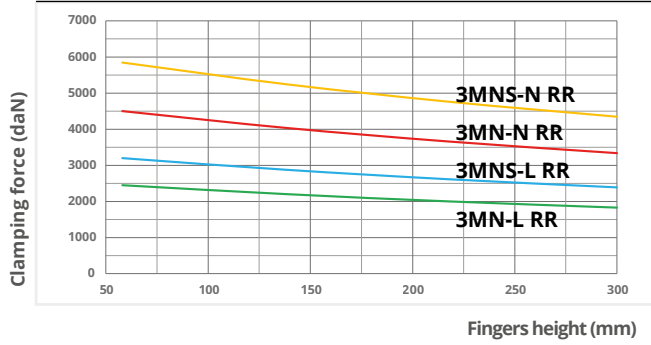
Use connecting screws **class 12.9**



maximum allowed temperature using proximities is 60°C

380

3MN-RR



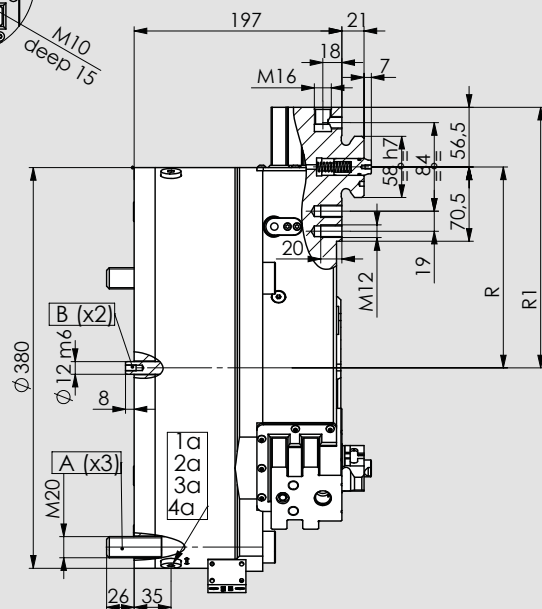
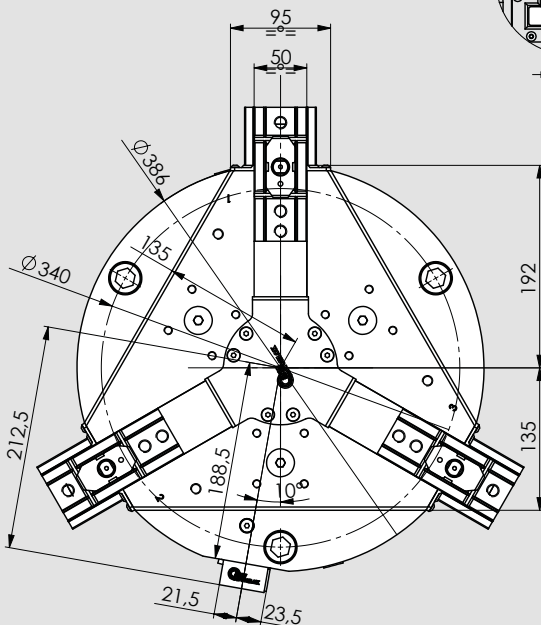
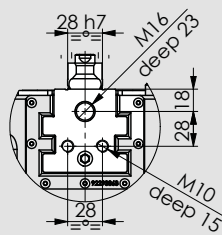
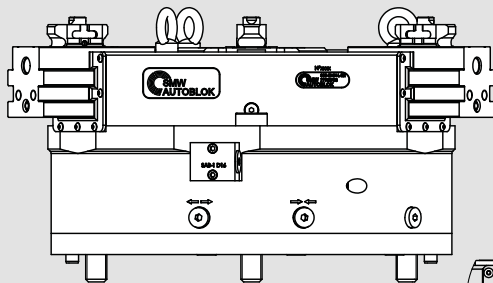
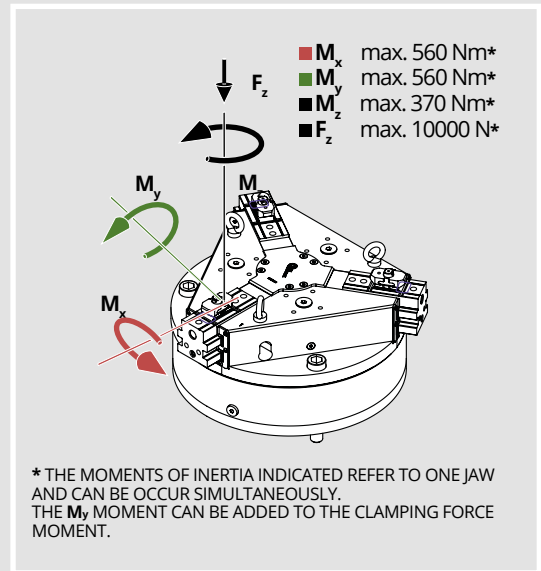
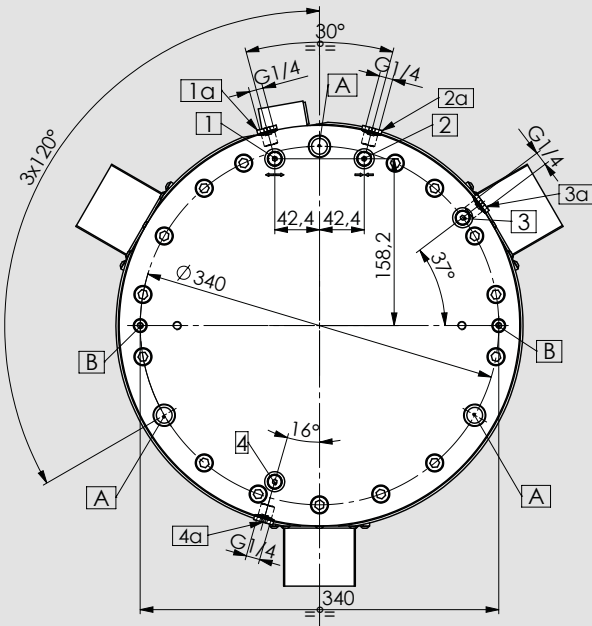
Clamping force calculated at **6 bar**.

Max. recommended fingers height: **300 mm**

Max. fingers weight: **14 Kg**

For I.D. clamping consider **+4%** of the clamping force shown in the diagram.

Use connecting screws **class 12.9**

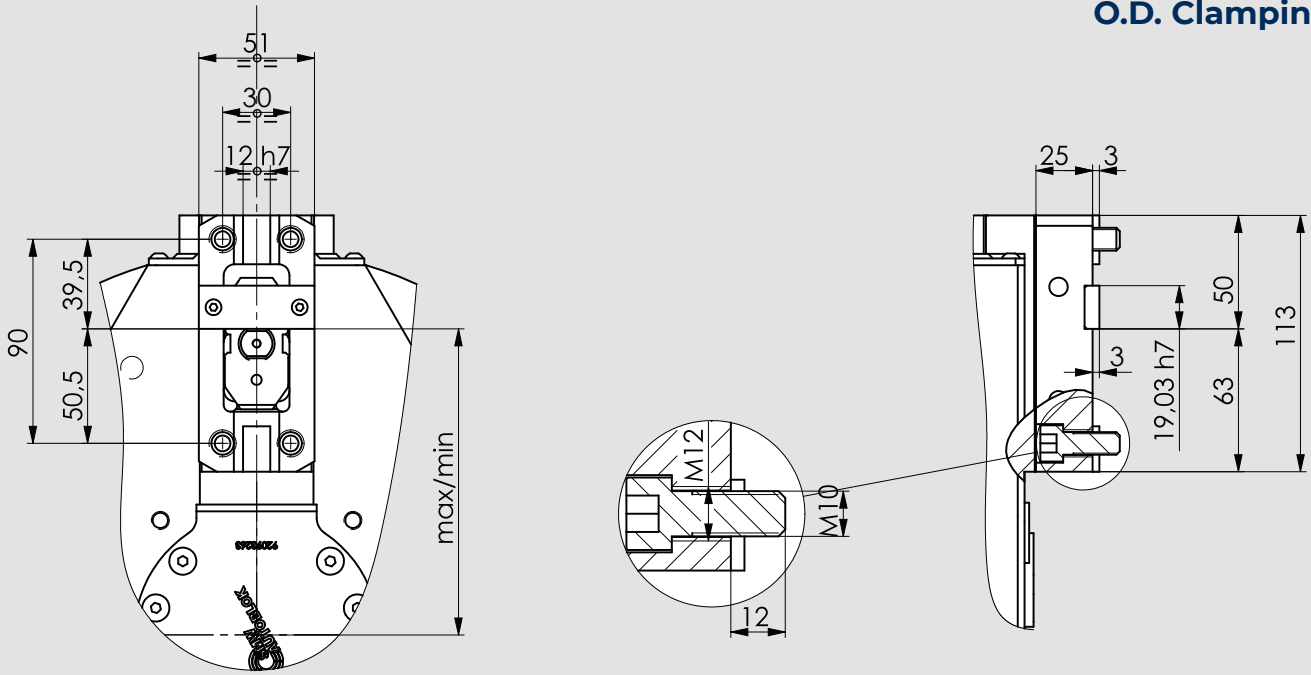


maximum allowed temperature using proximities is 60°C

QUICK PALLET CHANGE

for 320 and 380 grippers sizes

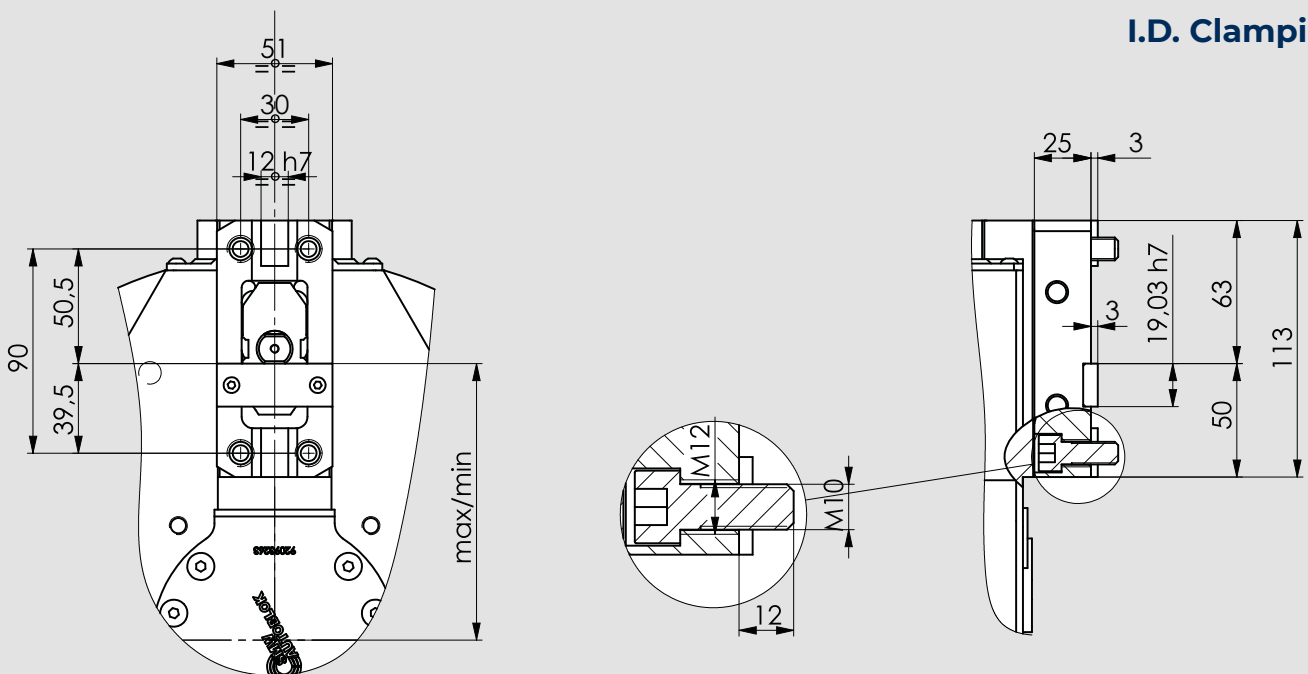
O.D. Clamping



MODEL	PALLET ID.N.(*)	Max / min OD clamping
3MN-L 320 - RR	18762654	163 / 123
3MN-N 320 - RR		143,9 / 123
3MN-L 380 - RR		197 / 147
3MN-N 380 - RR		173,2 / 147

(*) the Id.n. refers to 1 single pallet

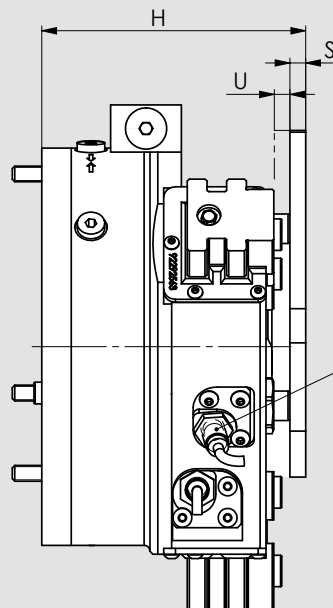
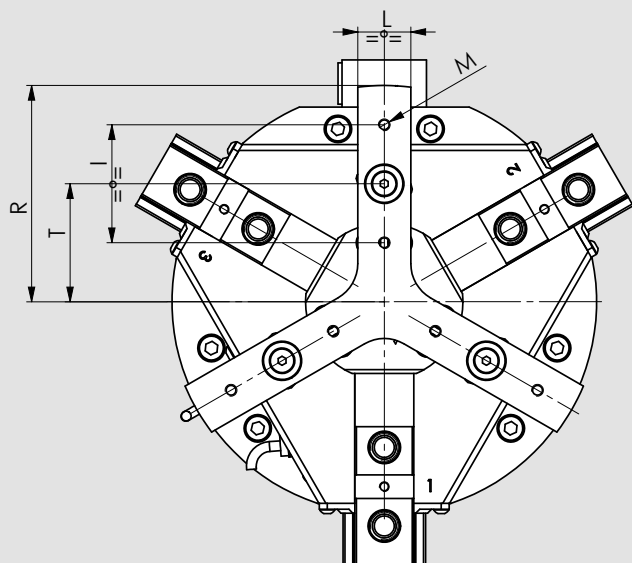
I.D. Clamping



MODEL	PALLET ID.N.(*)	Max / min ID clamping
3MN-L 320 - RR	18762654	150 / 110
3MN-N 320 - RR		130,9 / 110
3MN-L 380 - RR		184 / 134
3MN-N 380 - RR		160,2 / 134

(*) the Id.n. refers to 1 single pallet

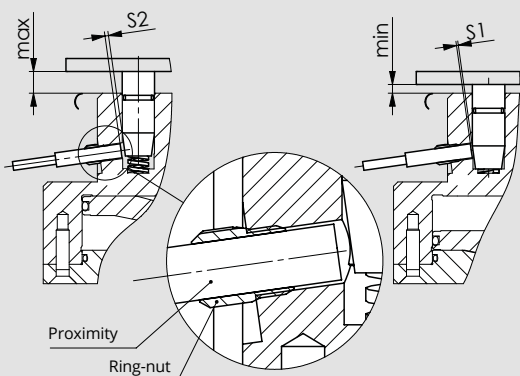
SPRING WORKSTOP optional



STROKE CONTROL
ANALOGIC INDUCTIVE
SENSOR FOR SPRING
WORKSTOP
(OPTIONAL)

MODEL	ID.N. SPRING WORKSTOP KIT	H max/min mm	I mm	L mm	M	R mm	S mm	T mm	U stroke mm	FORCE min/max
64 3MN	92670663	62,5/58,5 mm	16 mm	10 mm	M4	35	4	19	4	10/14 N
80 3MN	92670863	66,5/62,5mm	16 mm	12 mm	M4	40	4	23	4	15/21 N
100 3MN	92671063	73/69 mm	20 mm	12 mm	M5	50	4	29	4	35/51 N
125 3MN	92671263	94,5/88,5 mm	40 mm	20 mm	M6	72,5	6	39	6	110/180 N
160 3MN	92671663	104/98 mm	40 mm	20 mm	M6	72,5	6	39	6	210/300 N
200 3MN	92672563	134/126 mm	60 mm	27 mm	M6	110	8	60	8	360/600 N
250 3MN	92672563	145/137 mm	60 mm	27 mm	M6	110	8	60	8	360/600 N
320 3MN	92673863	190/182 mm	60 mm	35 mm	M6	150	8	90	8	540/900 N
380 3MN	92673863	212/204 mm	60 mm	35 mm	M6	150	8	90	8	540/900 N

64 MN / 80 MN / 100 MN / 125 MN / 160 MN



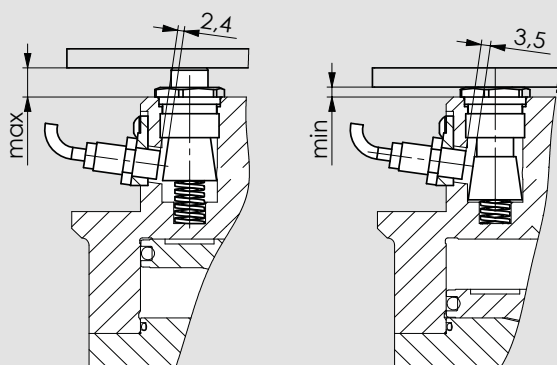
MODEL	BRACKET (not supplied)	PROXIMITY (not supplied)	S1 (±0,1)	S2 (±0,1)
64 3MN	BALLUFF BAM000U	BAUMER * IWRM04U9701 /S05	0,3 mm	0,9 mm
80 3MN			0,3 mm	0,9 mm
100 3MN	BALLUFF BAM000W	BALLUFF * BAW000J	1 mm	1,6 mm
125 3MN			0,8 mm	1,6 mm
160 3MN			0,8 mm	1,6 mm

* OR SIMILAR

200 MN / 250 MN / 320 MN / 380 MN

PROXIMITY BRACKET (OPTIONAL): 90166663

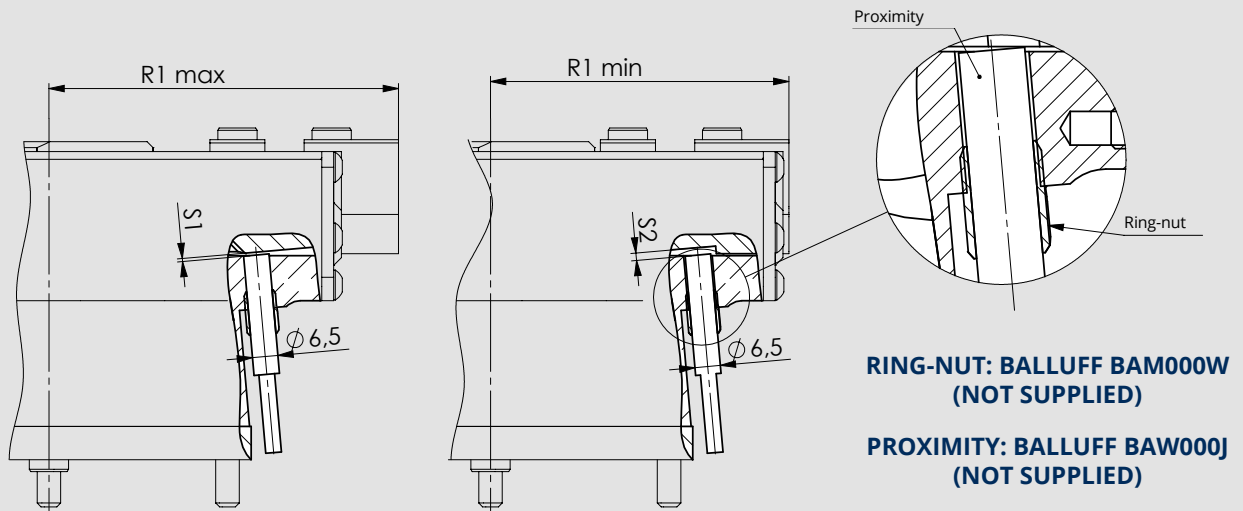
RECOMMENDED PROXIMITY:
BALLUFF M12X1 BAW0011 OR SIMILAR (NOT SUPPLIED)



ANALOGIC INDUCTIVE SENSOR for the linear jaw stroke control (optional)

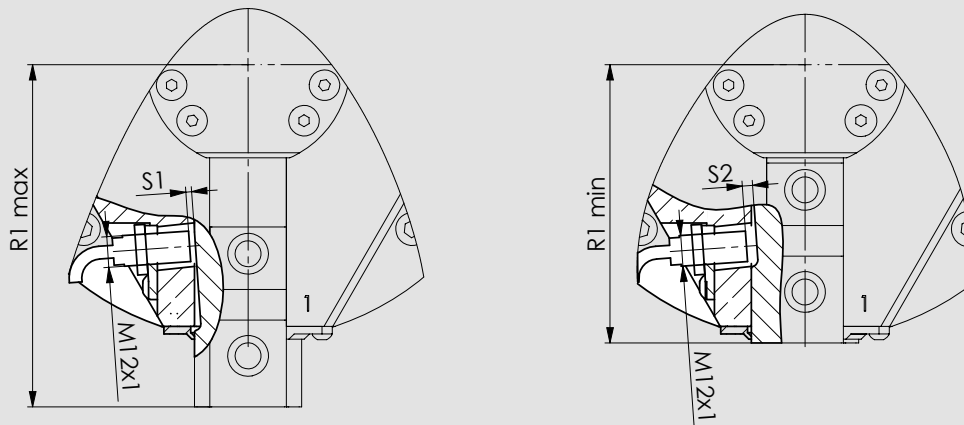
When the jaws are in the maximum open position (R1 max) the sensor must be adjusted so that between the inclined plane and the sensor is the space S1.

64 MN / 80 MN / 100 MN / 125 MN



MODEL	S1 (±0,1)	S2 (±0,1)
64 3MN-L	0,9 mm	1,6 mm
80 3MN-L	0,9 mm	1,6 mm
100 3MN-L	0,8 mm	1,7 mm
125 3MN-L	0,7 mm	1,8 mm
125 3MN-N	1 mm	1,5 mm

160 MN / 200 MN / 250 MN / 320 MN / 380 MN

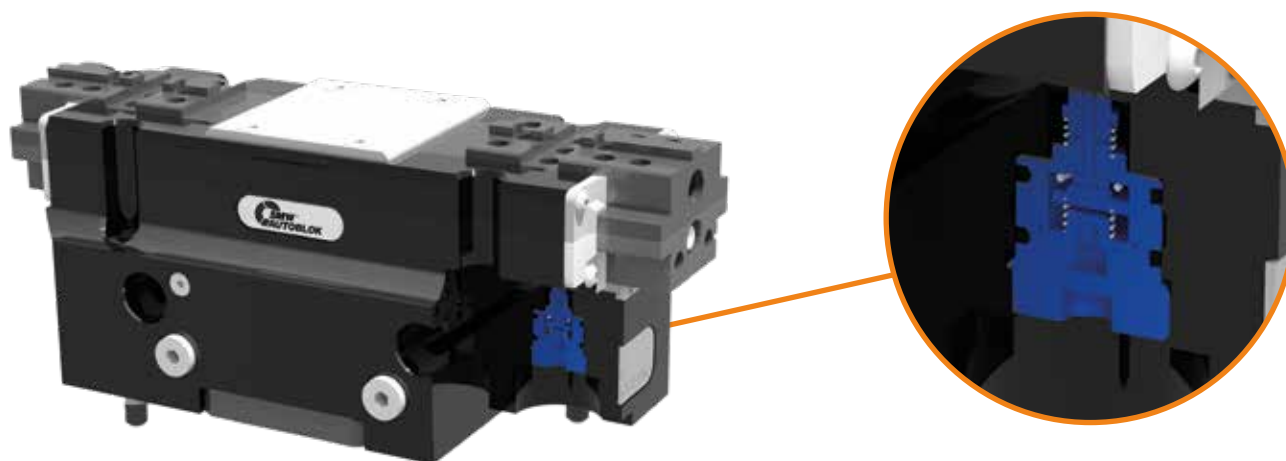


**RECOMMENDED PROXIMITY:
BALLUFF M12X1 BAW0011 OR SIMILAR (NOT SUPPLIED)**

MODEL	BRACKET ID.N. (OPTIONAL)	S1 [±0,1]	S2 [±0,1]
160 3MN-L	90166663	1,9 mm	4,1 mm
160 3MN-N	90166663	2,5 mm	3,6 mm
200 3MN-L	90167563	2,2 mm	3,9 mm
200 3MN-N	90166663	2 mm	4 mm
250 3MN-L	90167563	2 mm	4,1 mm
250 3MN-N	90166663	1,8 mm	4,2 mm
320 3MN-L	90167563	2 mm	4,1 mm
320 3MN-N	90167563	2,3 mm	3,8 mm
380 3MN-L	90167563	1,7 mm	4,3 mm
380 3MN-N	90167563	2,1 mm	3,9 mm

Pneumatic valve (optional)

open/close (stroke control) jaws



The pneumatic open/close stroke control valve signals the locking jaws end-of-stroke positions, both in fully open and fully closed positions.

The valve needs a pneumatic line with **filtered and lubricated air and a pressure of 0,5-1 bar.**

- when the locking jaws are in one of the end stroke position (fully open or closed), the valve is open causing a pressure drop in the pneumatic line or the beginning of an air flow.
- when the locking jaws are in the working stroke, the valve is closed and there is no pressure drop in the pneumatic line and there no air flow.

SMW-AUTOBLOK Id.No. VALVE	GRIPPERS MODEL
90901163	PP - PL 125
90901763	PP - PL 160
97902204	PP - PL 200
97901801	PP - PL 250
90901763	PL 320-380 (RR)

SMW-AUTOBLOK ID.No. VALVE	GRIPPERS MODEL
90902283	3MN 200-250-320-380