

**Ideal for handling wide components**  
**Smooth, accurate movement**  
**Long, uninterrupted service life**  
**Low weight**  
**Compact size**  
**Integral magnets for positional feedback**

**Technical data**

Medium:  
Compressed air, filtered, lubricated or non-lubricated  
Operating pressure:  
2 to 7 bar  
Operating temperature:  
0°C to +60°C

\* Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Mounting:  
Mounting holes on two faces

**Materials**

Body: aluminium alloy  
Piston rods: stainless steel  
External nuts: carbon steel  
Elastomers: nitrile

**Ordering information**

To order a gripper with an effective closing grip force of up to 55N at 5 bar quote:

**M/160395/M/12**

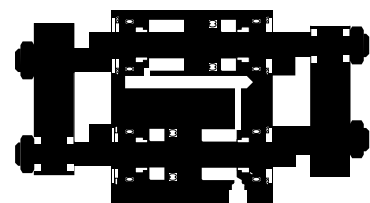
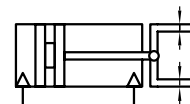
Order magnetically operated switches separately

**Accessories**

Switch M/344

**See page**

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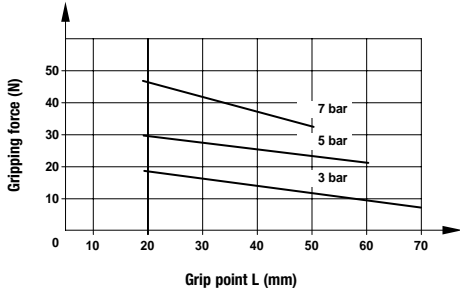
**Standard models • Effective gripping force • Air consumption**

Model	Effective gripping force (N) at 5 bar*		Air consumption (cm <sup>3</sup> ) at 5 bar**
	Opening	Closing	
M/160394/M/12	27	27	4,0
M/160395/M/12	55	55	9,5
M/160396/M/12	85	85	18,8
M/160397/M/12	135	135	38,0

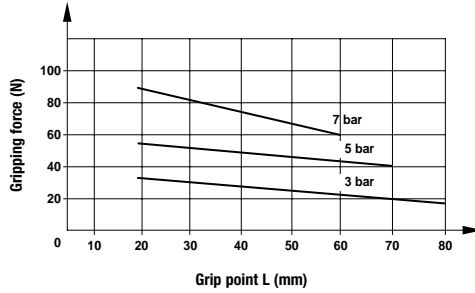
\* Grip point L = 30 mm  
\*\* per cycle

**Effective gripping forces**

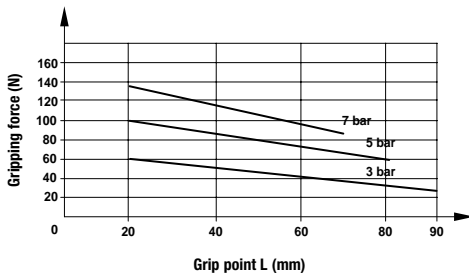
M/160394/M/12



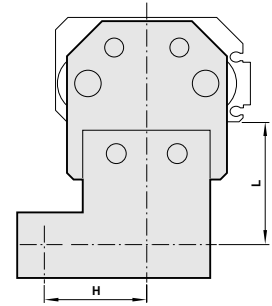
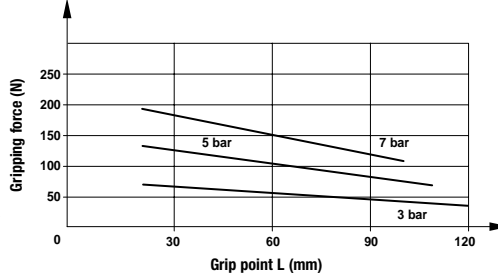
M/160395/M/12



M/160396/M/12

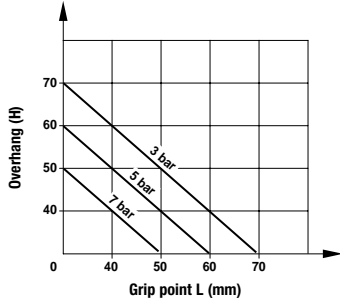


M/160397/M/12

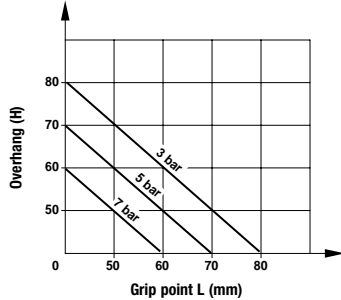


**Grip point limitation range**

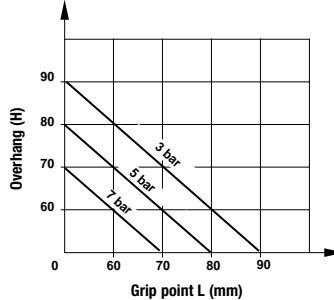
M/160394/M/12



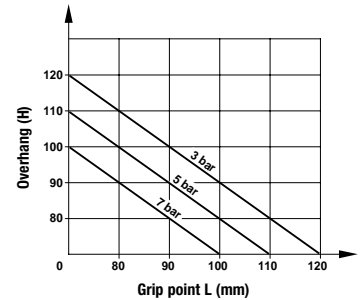
M/160395/M/12



M/160396/M/12



M/160397/M/12

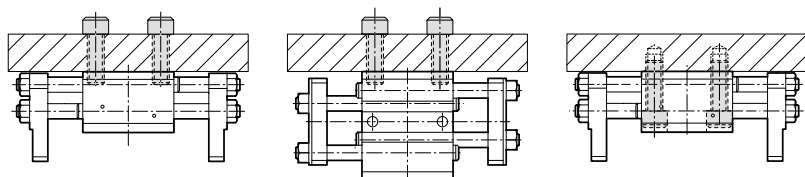


**Switches with LED indication**

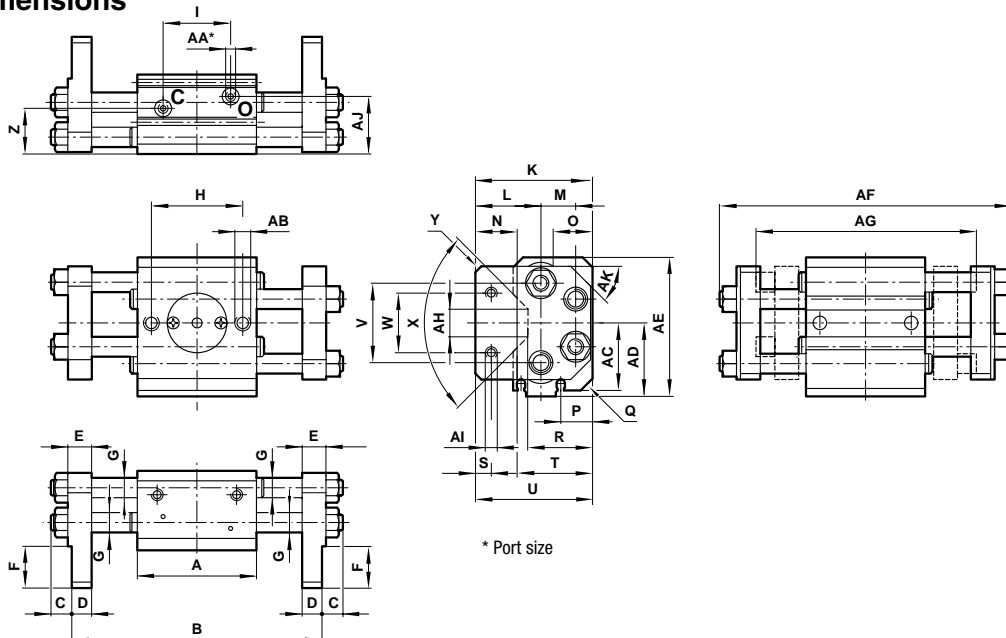
Model	Voltage V d.c.	Current max.	Temperature °C	LED	Features	Cable length	Cable type	Straight cable connection	90° elbow cable connection
M/344/EAU/1APV	10 ... 28	20 mA	0° ... +60°	●	–	1 m	PVC	–	●
M/344/EAU/1PV	10 ... 28	20 mA	0° ... +60°	●	–	1 m	PVC	●	–
M/344/EAU/3APV	10 ... 28	20 mA	0° ... +60°	●	–	3 m	PVC	–	●
M/344/EAU/3PV	10 ... 28	20 mA	0° ... +60°	●	–	3 m	PVC	●	–
M/344/EAN/1APV	4,5 ... 28	50 mA	0° ... +60°	●	NPN	1 m	PVC	–	●
M/344/EAN/1PV	4,5 ... 28	50 mA	0° ... +60°	●	NPN	1 m	PVC	●	–
M/344/EAN/3APV	4,5 ... 28	50 mA	0° ... +60°	●	NPN	3 m	PVC	–	●
M/344/EAN/3PV	4,5 ... 28	50 mA	0° ... +60°	●	NPN	3 m	PVC	●	–
M/344/EAP/1APV	4,5 ... 28	50 mA	0° ... +60°	●	PNP	1 m	PVC	–	●
M/344/EAP/1PV	4,5 ... 28	50 mA	0° ... +60°	●	PNP	1 m	PVC	●	–
M/344/EAP/3APV	4,5 ... 28	50 mA	0° ... +60°	●	PNP	3 m	PVC	–	●
M/344/EAP/3PV	4,5 ... 28	50 mA	0° ... +60°	●	PNP	3 m	PVC	●	–



### Mounting examples



### Dimensions



	Ø	A	B	C	D	E	F	G	H	I	K		
M/160394/M/12	12	44	84,4 + 1,4/-1,0 (open) 60 + 1,0/-0,9 (closed)	6,5	6	8	12	Ø 6	34	21	38,5		
M/160395/M/12	16	50	102,4 + 1,4/-1,0 (open) 70 + 1,0/-1,8 (closed)	8	8	10	13,5	Ø 8	38	28	43,5		
M/160396/M/12	20	60	124,4 + 1,5/-1,1 (open) 84 + 1,1/-1,9 (closed)	10,5	10	12	21	Ø 10	46	34	58		
M/160397/M/12	25	66	145 + 1,5/-1,1 (open) 94,6 + 1,1/-1,9 (closed)	11	12	14	26	Ø 10 & Ø 12	52	39	67,5		
	Ø	L	M	O	P	Q	R	S	T	U	V		
M/160394/M/12	12	21	11,5	15	9,5	3,5	24	4	27	39	29		
M/160395/M/12	16	23,5	14	15	11	3,5	27	5	32	45	34		
M/160396/M/12	20	33	17,5	-	16	5	32,5	8	40	59	40		
M/160397/M/12	25	41	18,5	-	16,5	10	35,5	10	44	69	49		
	Ø	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
M/160394/M/12	12	20	90°	1	16	M5 x 0,8	M5 x 0,8	22,7	27	50	99	76	16
M/160395/M/12	16	20	90°	1	19,5	M5 x 0,8	M6 x 1	27,5	32,5	60	123	93	9,5
M/160396/M/12	20	30	90°	3	23	M5 x 0,8	M8 x 1,25	34	37	70	147	112	14
M/160397/M/12	25	30	90°	3	25	M5 x 0,8	M10 x 1,5	40,5	44	84	169	124	14
	Ø	AI	AJ	AK	kg								
M/160394/M/12	12	M4 x 0,7	20	30°	0,23								
M/160395/M/12	16	M5 x 0,8	23,5	30°	0,40								
M/160396/M/12	20	M6 x 1	29	45°	0,76								
M/160397/M/12	25	M8 x 1,25	31	45°	1,10								

### 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.