

**High quality sliding bearings ensure long durable life and high guidance performance**

**Double piston rod provides high bending and torsional rigidity**

**Alternative port connections for mounting options**



### Technical data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operating pressure:  
1 to 8 bar

Operation:  
Double acting with rubber buffer cushioning, optional shock absorbers available for Ø 16 mm to Ø 40 mm bore

Cylinder diameter:  
10, 16, 25, 32, 40 mm

Operating temperature:  
80°C max.

Maximum load:  
See details overleaf

Standard strokes:  
M/60111/M – 25, 50, 75, 100 mm  
M/60116/M – 25, 50, 75, 100, 125, 150 mm  
M/60125/M – 50, 75, 100, 125, 150, 175 mm  
M/60132/M – 75, 100, 125, 150, 175, 200 mm  
M/60140/M – 100, 125, 150, 175, 200, 225 mm

Non-standard strokes:  
On request

### Materials:

Piston: hard chromed steel piston,  
Body and end covers: anodised aluminium

### Ordering information

See page 2

### Accessories

Stop screw see page 4



## Theoretical forces, air consumption, weights

Type	Theoretical forces at 6 bar		Weight (kg) stroke (mm)								
	(N)	(l/cm stroke)	25	50	75	100	125	150	175	200	225
M/60111/M	60	0,040	0,39	0,40	0,41	0,42	–	–	–	–	–
M/60116/M	147	0,172	0,77	0,80	1,08	1,11	1,39	1,42	–	–	–
M/60125/M	348	0,406	–	1,96	2,00	2,46	2,50	2,96	3,00	–	–
M/60132/M	588	0,686	–	–	3,74	3,80	4,51	4,57	5,28	5,34	–
M/60140/M	918	1,072	–	–	–	6,70	6,80	7,84	7,93	8,97	9,10

## Switches

Type	With cable		With connector (M8x1)				LED	Features	Cable/ Connector length	Cable type	Cable with Connector	Datasheet
	Reed	Solid state	Voltage V a.c.	V d.c.	Current max.	Temperature °C						
M/50/LSU/*V	–	–	10 to 240	10 to 170	180 mA	-20 to +80	•	–	2, 5, 10 m	PVC 2 x 0,25	–	N/UK 4.3.005
M/50/LSU/5U	–	–	10 to 240	10 to 170	180 mA	-20 to +80	•	–	5 m	PUR 2 x 0,25	–	N/UK 4.3.005
TM/50/RAU/2S	–	–	10 to 240	10 to 170	180 mA	-20 to +150	–	–	2 m	Silicone 2 x 0,25	–	N/UK 4.3.005
M/50/RAC/5V	–	–	10 to 240	10 to 170	180 mA	-20 to +80	–	Changeover	5 m	PVC 3 x 0,25	–	N/UK 4.3.005
M/50/LSU/CP	–	–	10 to 60	10 to 75	180 mA	-20 to +80	•	Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 4.3.005
–	M/50/EAP/*V	–	–	10 to 30	150 mA	-20 to +80	•	PNP	2, 5, 10 m	PVC 3 x 0,25	–	N/UK 4.3.007
–	M/50/EAP/CP	–	–	10 to 30	150 mA	-20 to +80	•	PNP, Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 4.3.007
–	M/50/EAP/CC	–	–	10 to 30	150 mA	-20 to +80	•	PNP, Plug M12x1	5 m	PVC 3 x 0,25	M/P34614/5	N/UK 4.3.007
–	M/50/EAN/*V	–	–	10 to 30	150 mA	-20 to +80	•	NPN	2, 5, 10 m	PVC 3 x 0,25	–	N/UK 4.3.007
–	M/50/EAN/CP	–	–	10 to 30	150 mA	-20 to +80	•	NPN, Plug M8x1	5 m	PVC 3 x 0,25	M/P73001/5	N/UK 4.3.007

\* Please insert cable length  
Further information (technical data, cable material, dimensions) see datasheet.

## Ordering information

Slide unit Ø 25 mm, stroke 75 mm

Quote: **M/60125/M/75**

Please order magnetically operated switch separately.

## 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.

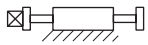
The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

**System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.**

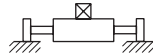
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

**Permissible cushion loads**

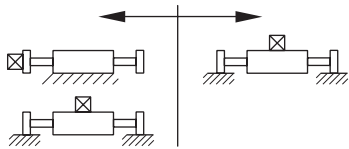
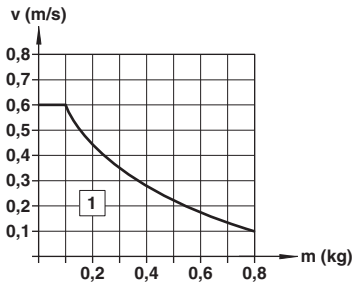
Application: slide mounting



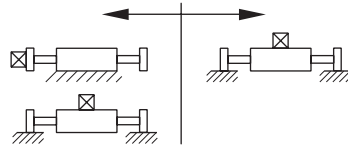
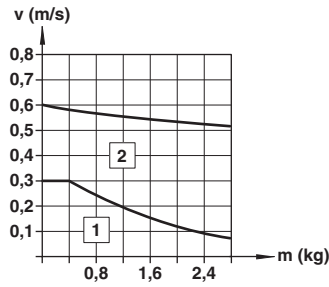
Application: end mounting



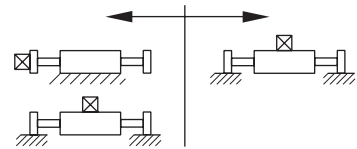
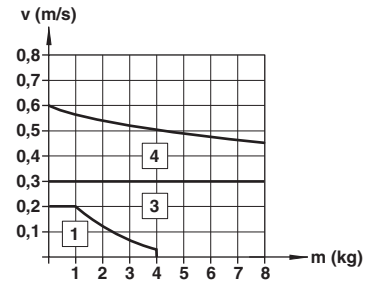
**M/60111/M**



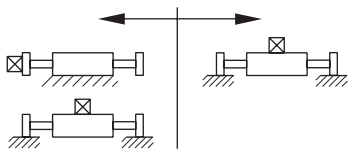
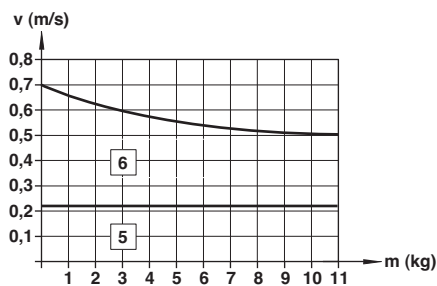
**M/60116/M**



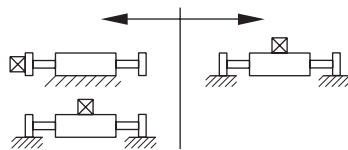
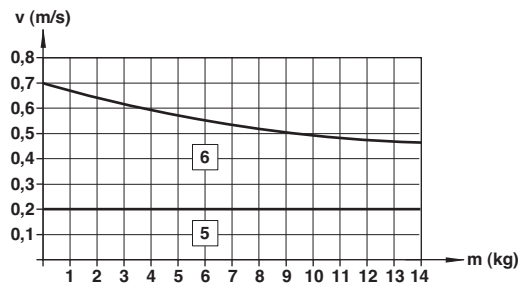
**M/60125/M**



**M/60132/M**



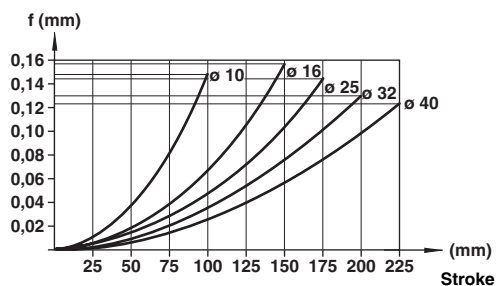
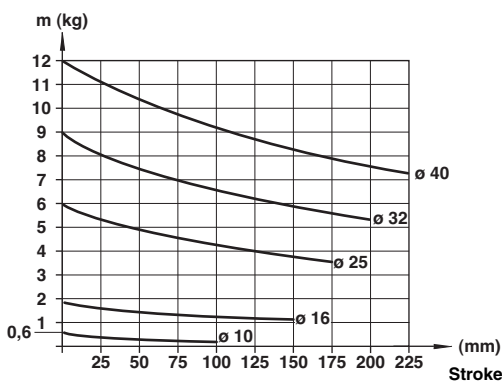
**M/60140/M**



- 1 Buffer
- 2 Shock absorber MC75M-3-NB
- 3 Shock absorber MC150MH2
- 4 Shock absorber MC150MH
- 5 Shock absorber MC225MH2
- 6 Shock absorber MC225MH

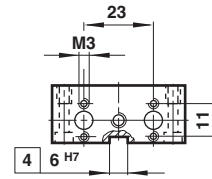
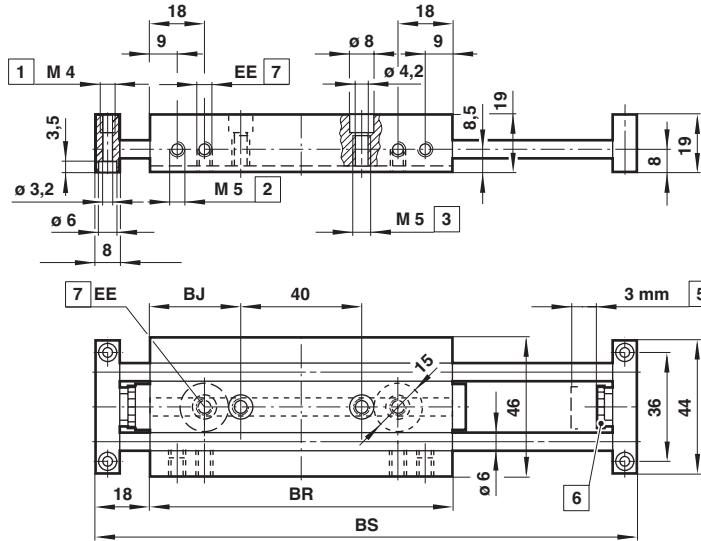
**Max. load (with constant bearing load)**

**Deflection (with maximum load)**



Dimensions

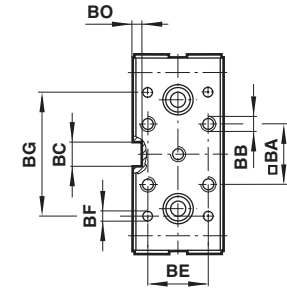
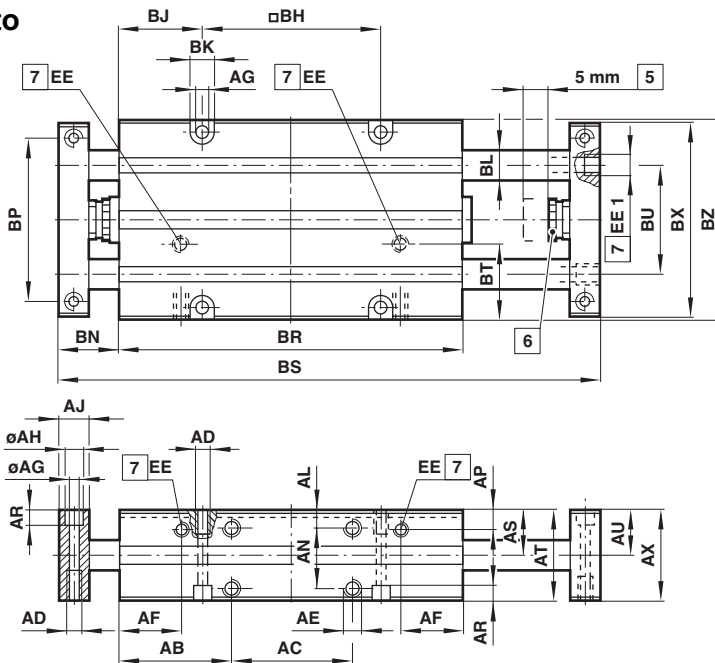
M/60111/M



- 1 6 deep
- 2 5,5 deep
- 3 10 deep
- 4 2 deep
- 5 V3 mm control range both ends
- 6 Stop screw
- 7 Port size

Stroke	25	50	75	100
BJ	30	30	55	55
BR	100	100	150	150
BS	161	186	261	286

M/60116/M to M/60140/M



- 5 5 mm control range both ends
- 6 Stop screw
- 7 Port size

Type	AB	AC	AD	AE	AF	Ø AG	Ø AH	AJ	AL	AN	AP	AR
M/60116/M	37	40	M5 x 8 deep	M5 x 7 deep	20,5	4,2	8	10	6	20	6,5	5
M/60125/M	46	60	M6 x 12 deep	M6 x 8 deep	22,5	5,3	10	12	9,5	24	7,5	6
M/60132/M	55	80	M8 x 16 deep	M8 x 10 deep	33	6,8	12	15	12,5	30	10	7
M/60140/M	68,5	100	M10 x 18 deep	M10 x 12 deep	36	8,5	15	20	14,5	36	11	9
Type	AS	AT	AU	AX	Ø BA	BB	BC	BD	BE	Ø BF	BG	BH
M/60116/M	16	30	15	30	20	M5	8 H7	3	16	3,2	40	59
M/60125/M	21,5	40	20,5	40	30	M5	8 H7	3	30	5,3	59	82
M/60132/M	27,5	50	26,5	50	36	M6	12 +0,12	5	36	6,4	82	104
M/60140/M	32,5	60	31,5	60	40	M8	12 +0,12	5	40	8,4	104	128
Type	BJ	BK	Ø BL	BN	BP	BT	BU	BX	BZ	EE	EE1	
M/60116/M	27,5	8	10	20	54	25	36	64	66	M 5	M 5	
M/60125/M	35	10	16	22	76	35	48	90	92	M 5	M 5	
M/60132/M	43	11	20	28	102	46	62	116	118	G 1/8	M 5	
M/60140/M	54,5	15	25	31	126	57	74,5	144	146	G 1/8	G 1/8	
Type	Hub	25	50	75	100	125	150	175	200	225		
M/60116/M	BR	113,5	113,5	163,5	163,5	213,5	213,5	-	-	-		
	BS	179	204	279	304	379	404	-	-	-		
M/60125/M	BR	-	152	152	202	202	252	252	-	-		
	BS	-	246	271	346	371	446	471	-	-		
M/60132/M	BR	-	-	190	190	240	240	290	290	-		
	BS	-	-	321	346	421	446	521	546	-		
M/60140/M	BR	-	-	-	236,5	236,5	286,5	286,5	336,5	336,5		
	BS	-	-	-	398	423	498	523	598	623		

## Intermediate stroke length screw

Type	Control range (mm)				
	5	10	15	20	25
M/60111/M	M/P70870/1	M/P70870/2	M/P70870/3	M/P70870/4	M/P70870/5
M/60116/M	M/P70870/1	M/P70870/2	M/P70870/3	M/P70870/4	M/P70870/5
M/60125/M	M/P70870/1	M/P70870/2	M/P70870/3	M/P70870/4	M/P70870/5
M/60132/M	M/P70870/6	M/P70870/7	M/P70870/8	M/P70870/9	M/P70870/10
M/60140/M	M/P70870/6	M/P70870/7	M/P70870/8	M/P70870/9	M/P70870/10

## Spares

Type	Spares kit
M/60111/M	QM/60111/M/00
M/60116/M	QM/60116/M/00
M/60125/M	QM/60125/M/00
M/60132/M	QM/60132/M/00
M/60140/M	QM/60140/M/00