

## Series HMU Mini cylinders, double acting

### Technical details

<b>Operating pressure</b>	1 ... 10 bar								
<b>Temperature range</b>	-20°C ... +80°C								
<b>Max. stroke</b>	900 mm								
<b>Medium</b>	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.								
<b>Materials</b>	<table border="0"> <tr> <td>Cylinder tube:</td> <td>stainless steel</td> </tr> <tr> <td>End caps:</td> <td>Al (anodized)</td> </tr> <tr> <td>Piston rod:</td> <td>stainless steel</td> </tr> <tr> <td>Seals:</td> <td>PU, NBR</td> </tr> </table>	Cylinder tube:	stainless steel	End caps:	Al (anodized)	Piston rod:	stainless steel	Seals:	PU, NBR
Cylinder tube:	stainless steel								
End caps:	Al (anodized)								
Piston rod:	stainless steel								
Seals:	PU, NBR								

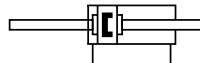


Double acting pneumatic cylinder with magnetic piston and built-in cushioning rings or adjustable cushions.

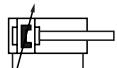
### Versions



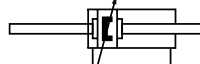
**HMU**  
double acting, with magnetic piston



**HMUDE**  
double acting, double end piston rod, with magnetic piston

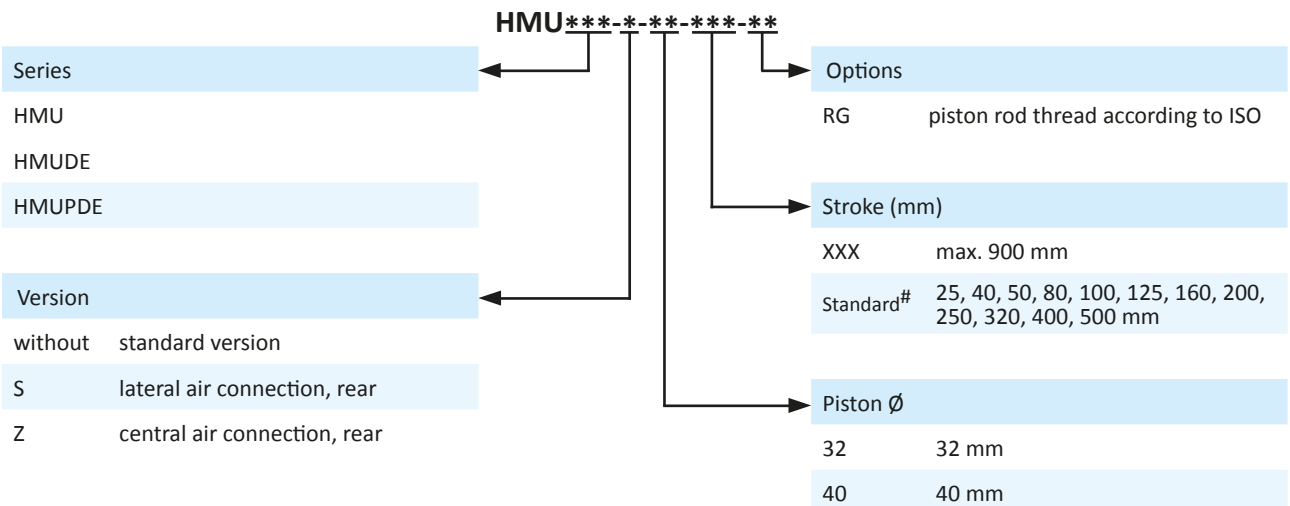


**HMUP**  
double acting, adjustable cushioning, with magnetic piston



**HMUPDE**  
double acting, double end piston rod, adjustable cushioning, with magnetic piston

### Order code



# only for series HMU and HMUP

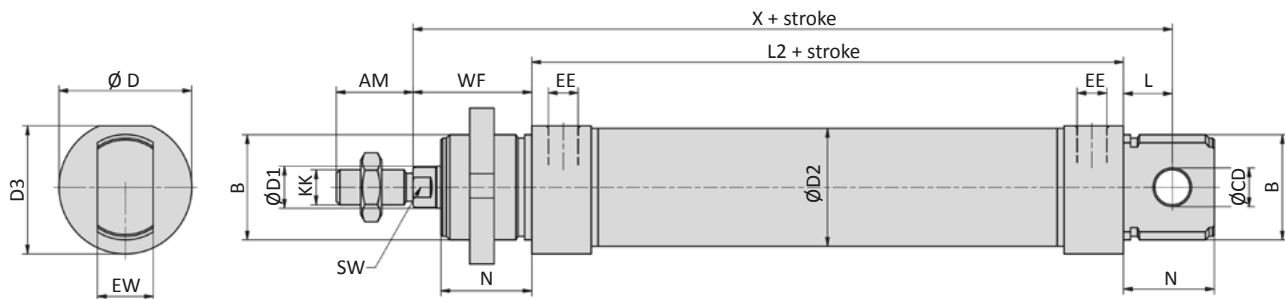
# Series HMU

## Mini cylinders, double acting

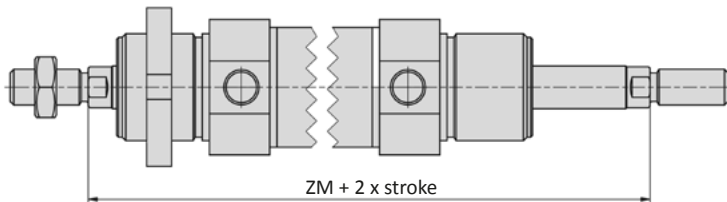
### Technical data

Model-no.:	HMU-32-...	HMU-40-...	HMUP-32-...	HMUP-40-...
Piston $\varnothing$ (mm)	32	40	32	40
Force at 6 bar (N)	Extension	678	434	678
	Retraction	570	373	570
Connection	G1/8	G1/4	G1/8	G1/4
Piston rod thread	M10 x 1.25	M12 x 1.25	M10 x 1.25	M12 x 1.25
Cushioning length (mm)	-	-	22.5	24.5

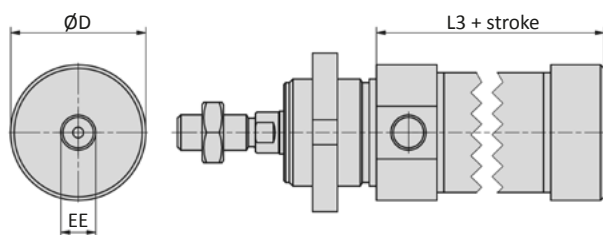
### Dimensions series HMU, HMUP



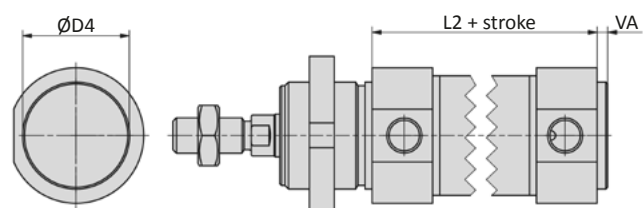
### double end piston rod



### Version -Z



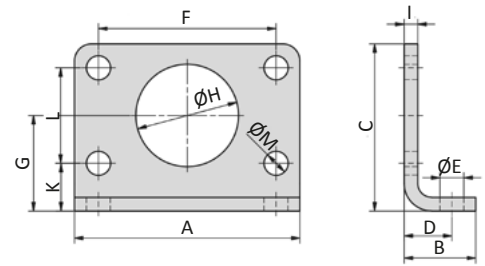
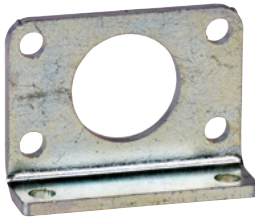
### Version -S



Piston $\varnothing$	AM	B	$\varnothing$ CD	$\varnothing$ D	$\varnothing$ D1	$\varnothing$ D2	D3	$\varnothing$ D4	EE	EW
32	22	M30 x 1.5	10	38	12	33.6	36.5	30	G1/8	16
40	24	M38 x 1.5	12	46	16	41.6	44	38	G1/4	18

Piston $\varnothing$	KK	L	L2	L3	N	SW	VA	WF	X	ZM
32	M10 x 1.25	14	69.5	65.5	26	10	3	34	117.5	137.5
40	M12 x 1.25	16	84.5	77.5	30	13	4	39	139.5	162.5

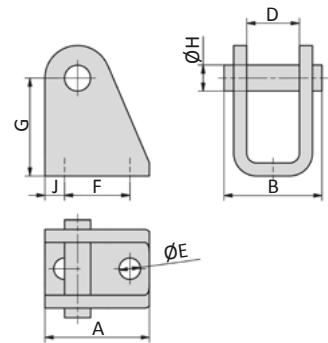
**RA-xx Foot mount**



Model-no.:	A	B	C	D	Ø E	F	G	Ø H	I	K	L	Ø M
RA-32	66	21	49	14	7	52	28	30	4	14	28	7
RA-40	80	30	58	20	9	60	33	38	5	18	30	9

material: steel, zinc plated

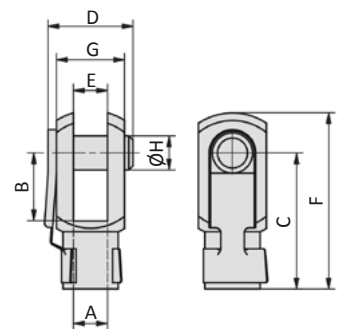
**RC-xx-1 Clevis mount**



Model-no.:	A	B	D	Ø E	F	G	Ø H	J
RC-32-1	35	31.3	16.1	6.6	24	35	10	5.5
RC-40-1	45	35.5	18.1	9	30	40	12	7.5

material: steel, zinc plated, 2 snap rings are included.

**RD-xx, FD-xx Rod clevis**



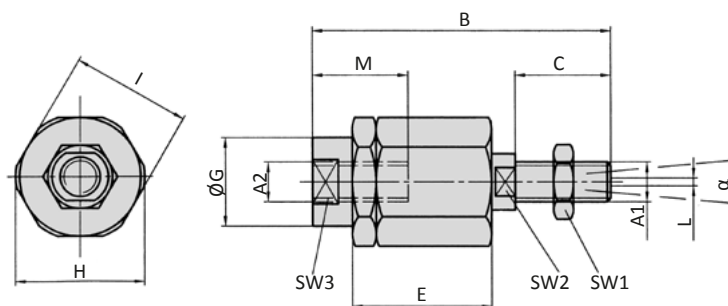
Model-no.:	A	B	C	D	E	F	G	Ø H
RD-25	M10 x 1.25	20	40	26	10	52	20	10
FD-40	M12 x 1.25	24	48	32	12	62	24	12

material: steel, zinc plated

## Series HMU

### Mounting accessories

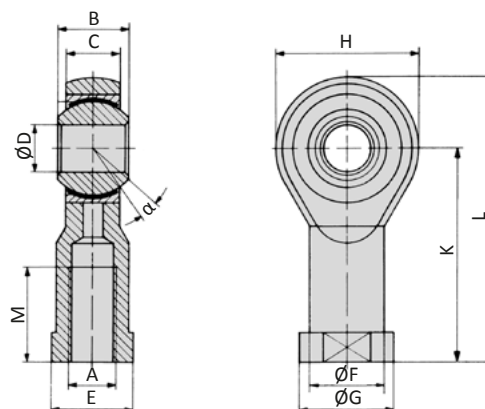
#### FK-xx Flexible coupling



Model-no.:	A1, A2	B	C	D	E	ØG	H	I	L	M	SW1	SW2	SW3	α
FK-32	M10 x 1.25	71.5	20	7.5	35	22	32	30	2	22	17	12	19	8°
FK-40	M12 x 1.25	71.5	20	7.5	35	22	32	30	2	22	19	12	19	8°

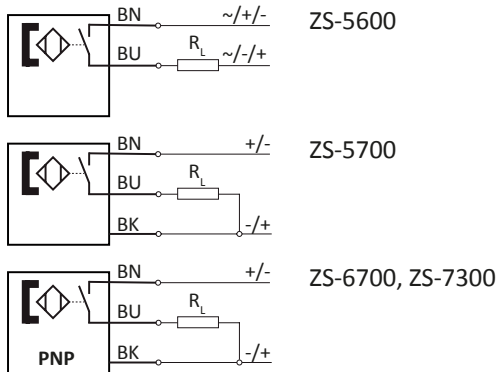
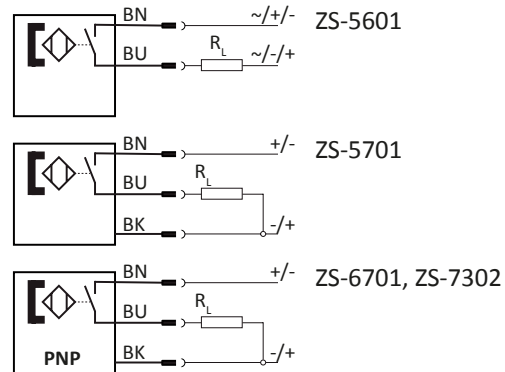
material: steel, zinc plated

#### RO-xx, FO-xx Rod eye



Model-no.:	A	B	C	ØD	E	ØF	ØG	H	K	L	M	α
RO-25	M10 x 1.25	14	10.5	10	17	15	19	28	43	57	20	13°
FO-40	M12 x 1.25	16	12	12	19	17.5	22	32	50	66	22	13°

materials: steel, zinc plated, bearing steel, bronze bushing

**Proximity sensors with cable**

**Proximity sensors with plug**

**Technical data**

Model-no.:	ZS-5600	ZS-5601	ZS-5700	ZS-5701
<b>Design</b>				
<b>Contact function</b>	2-pole Reed sensor	2-pole Reed sensor	3-pole Reed sensor	3-pole Reed sensor
<b>Rated operational voltage</b>	5 ... 240 V AC / DC	5 ... 60 V AC / DC	5 ... 30 V DC	5 ... 30 V DC
<b>Rated operational current I<sub>E</sub></b>	3 ... 100 mA	3 ... 100 mA	≤ 500 mA	≤ 500 mA
<b>Max. voltage drop at I<sub>E</sub></b>	≤ 2.5	≤ 2.5	≤ 0.1	≤ 0.1
<b>Breaking capacity</b>	10 W	10 W	10 W	10 W
<b>Cable length</b>	3 m	0.3 m with M8 connection	5 m	0.3 m with M8 connection
<b>Temperature range</b>	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C
<b>Protection</b>	IP 67	IP 67	IP 67	IP 67
<b>Switching status indication</b>	LED red	LED red	LED yellow	LED yellow

Model-no.:	ZS-6700	ZS-6701	ZS-7300	ZS-7302
<b>Design</b>				
<b>Contact function</b>	3-pole inductive	3-pole inductive	3-pole inductive	3-pole inductive
<b>Output</b>	NO	NO	NO	NO
<b>Rated operational voltage</b>	PNP	PNP	PNP	PNP
<b>Rated operational current I<sub>E</sub></b>	5 ... 30 V DC	5 ... 30 V DC	10 ... 30 V DC	10 ... 30 V DC
<b>Max. voltage drop at I<sub>E</sub></b>	≤ 200 mA	≤ 200 mA	≤ 100 mA	≤ 100 mA
<b>Breaking capacity</b>	≤ 1.0	≤ 1.0	≤ 2.5	≤ 2.5
<b>Cable length</b>	6 W	6 W	3 W	3 W
<b>Temperature range</b>	3 m	0.3 m with M8 connection	6 m	0.3 m with M12 connection
<b>Protection</b>	-10 ... +70°C	-10 ... +70°C	-20 ... +60°C	-20 ... +60°C
<b>Switching status indication</b>	IP 67	IP 67	IP 67	IP 67
	LED green	LED green	LED yellow	LED yellow
	-	-	II 3G Ex nA T4 II 3D Ex tD A22 IP67 T 125°C	II 3D Ex tc IIIC T125°C Dc X

## Series ZS

### Proximity sensors


#### Cable with bushing for proximity sensors

Model-no.:	KA-30	KA-50	KA-51	KA-100	KA-101
Connection	M8, snap-in	M8, snap-in	M8, snap-in	M8, snap-in	M8, snap-in
Version	straight	straight	elbow 90°	straight	elbow 90°
Cable length	3 m	5 m	5 m	10 m	10 m

#### Mounting

For this cylinder series separate mounting brackets are necessary for the sensor mounting.

#### Mounting brackets for proximity sensors

Model-no.:	NT-500
Design	 <p>Sensor mounting</p>