

Series HM

Mini cylinders ISO 6432, double acting

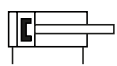
Technical details

Operating pressure	1 ... 10 bar
Temperature range	-30°C ... +80°C (0 ... +150°C for high temperature version)
Medium	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.
Materials	Cylinder tube: stainless steel End caps: Al (anodized) Piston rod: stainless steel Seals: PU, NBR
	Cylinders in accordance with 2014/34/EU (ATEX) available. (Chapter 13)

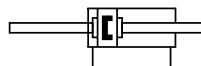


Double acting pneumatic cylinder with magnetic piston and built-in cushioning rings or adjustable cushions. Standard stroke lengths in table below, additional lengths on request.

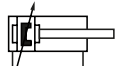
Versions



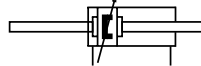
HM, HMS, HMZ
double acting, with magnetic piston



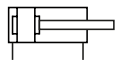
HMDE
double acting, double end piston rod, with magnetic piston



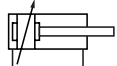
HMP
double acting, adjustable cushioning, with magnetic piston



HMPDE
double acting, double end piston rod, adjustable cushioning, with magnetic piston

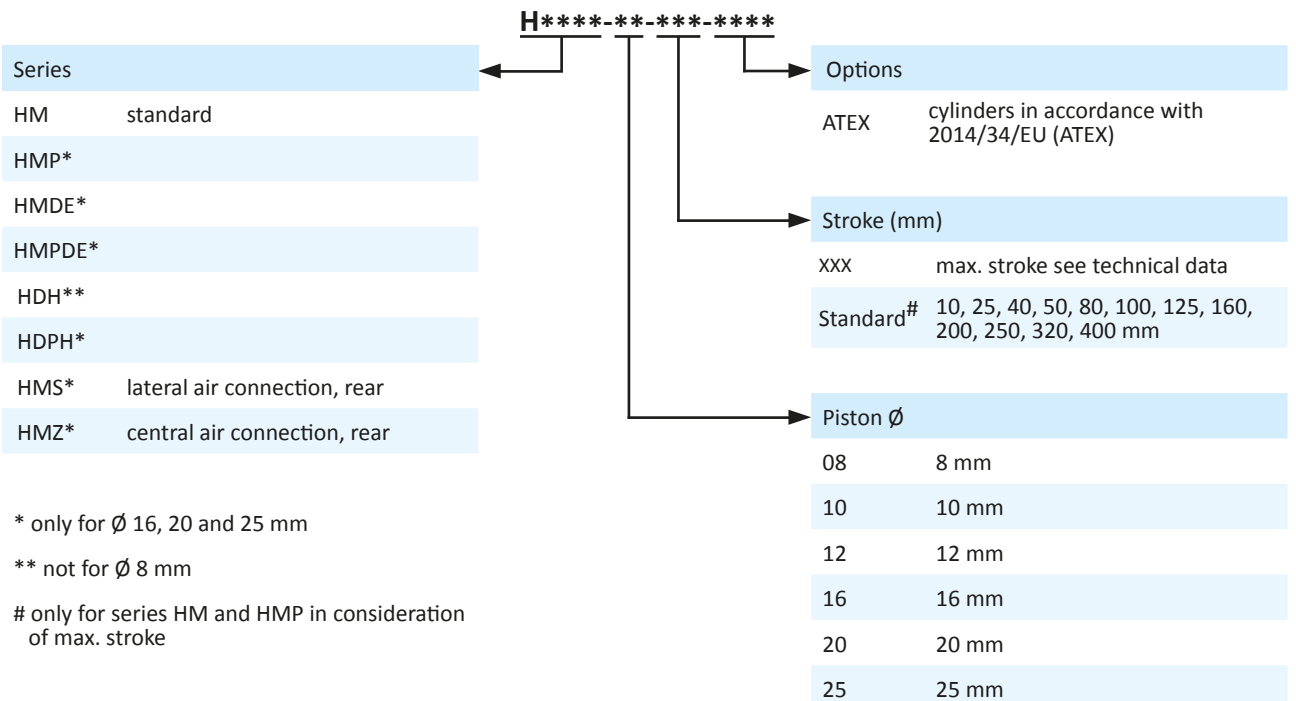


HDH
double acting, high temperature version



HDHP
double acting, adjustable cushioning, high temperature version

Order code



Series HM

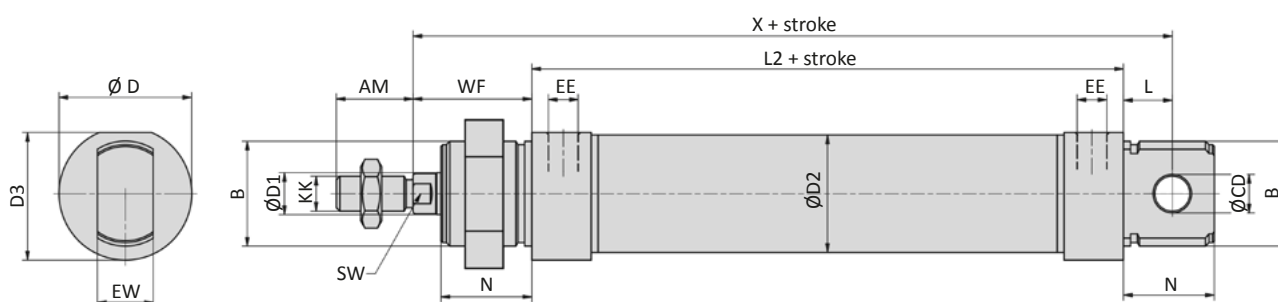
Mini cylinders ISO 6432, double acting

Technical data

Model-no.:	HM-08-...	HM-10-...	HM-12-...	Hxx-16-...	Hxx-20-...	Hxx-25-...
Piston \varnothing (mm)	8	10	12	16	20	25
Force at 6 bar (N)	Extension	27	42	61	109	170
	Retraction	20	36	46	93	142
Connection	M5	M5	M5	M5	G1/8	G1/8
Piston rod thread	M4	M4	M6	M6	M8	M10 x 1.25
Max. stroke (mm)	100	200	500	900	900	900
Cushioning length (mm)*	-	-	-	15.5	17	19.5

* only for series HMP, HMPDE, HDHP

Dimensions series HM, HMP, HDH, HDHP



Piston \varnothing	AM	B	\varnothing CD	\varnothing D	\varnothing D1	\varnothing D2	D3	EE
8	12	M12 x 1.25	4	16	4	9.27	15	M5
10	12	M12 x 1.25	4	16	4	11.27	15	M5
12	16	M16 x 1.5	6	19	6	13.27	18	M5
16	16	M16 x 1.5	6	19*	6	17.27	18	M5
20	20	M22 x 1.5	8	27	8	21.27	25.5	G1/8
25	22	M22 x 1.5	8	30	10	26.5	28.5	G1/8

* 21 mm for HMP, HMPDE, HDHP

Piston \varnothing	EW	KK	L	L2	N	SW	WF	X
8	8	M4	6	46	12	-	16	64
10	8	M4	6	46	12	-	16	64
12	12	M6	9	48	18	5	22	75
16	12	M6	9	53	18*	5	22	82
20	16	M8	12	67	20	7	24	95
25	16	M10 x 1.25	12	68	22	9	28	104

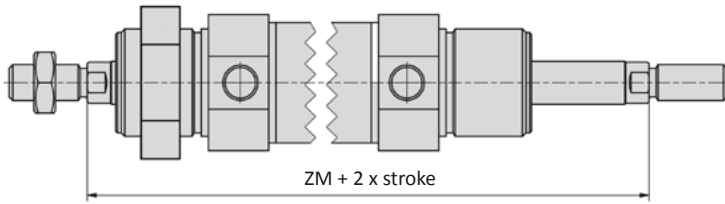
* 17 mm for HMP, HMPDE, HDHP

Series HM

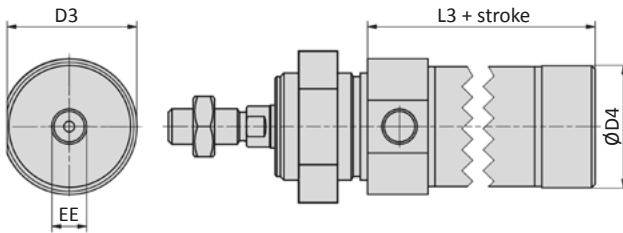
Mini cylinders ISO 6432, double acting

Additional dimensions Series HMDE, HMPDE, HMZ, HMS

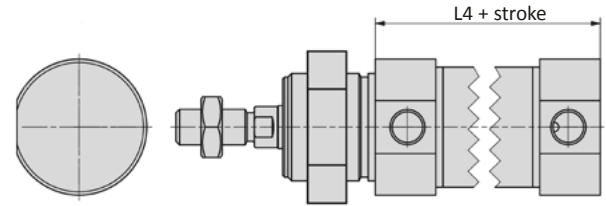
double end piston rod



Series HMZ



Series HMS

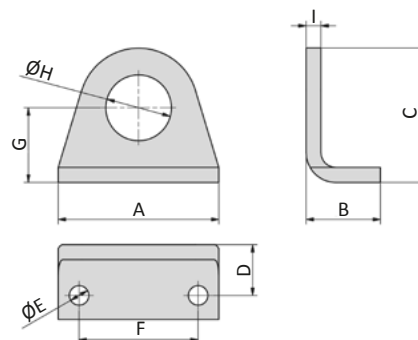


Piston \varnothing	ZM	EE	$\varnothing D$	$\varnothing D4$	L3	L4
16	97	M5	19	17.2	52	52.5
20	115	G1/8	27	22.2	65	67
25	124	G1/8	30	27	66	68

Series HM

Mounting accessories

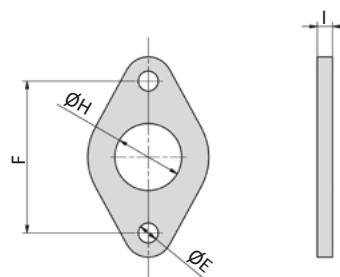
RA-xx Foot mount



Model-no.:	for cylinder \varnothing	A	B	C	D	$\varnothing E$	F	G	$\varnothing H$	I
RA-10	8, 10	35	16	26	11	4.5	25	16	12	3
RA-16	12, 16	42	20	32.5	14	5.5	32	20	16	4
RA-25	20, 25	54	25	45	17	6.6	40	25	22	5

material: steel, zinc plated

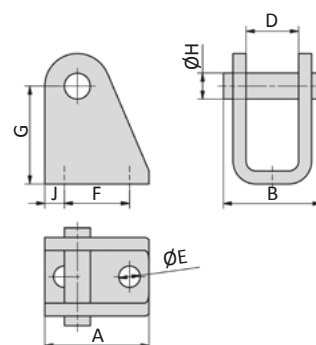
RB-xx Flange mount



Model-no.:	for cylinder \varnothing	$\varnothing E$	F	$\varnothing H$	I
RB-10	8, 10	4.5	30	12	3
RB-16	12, 16	5.5	40	16	4
RB-25	20, 25	6.6	50	22	5

material: steel, zinc plated

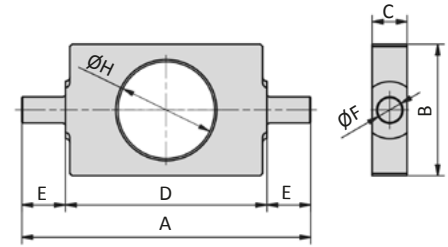
RC-xx Clevis mount



Model-no.:	for cylinder \varnothing	A	B	D	$\varnothing E$	F	G	$\varnothing H$	J
RC-10	8, 10	20	17	8.1	4.5	12.5	24	4	5
RC-16	12, 16	25	23	12.1	5.5	15	27	6	5
RC-30	20, 25	32	30	16.1	6.6	20	30	8	6

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

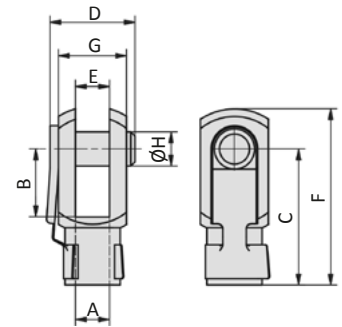
RH-xx Trunnion mount



Model-no.:	for cylinder Ø	A	B	C	D	E	Ø F	Ø H
RH-10	8, 10	38	20	6	26	6	4	12
RH-16	12, 16	58	25	8	38	10	6	16
RH-25	20, 25	66	30	8	46	10	6	22

material: steel, zinc plated

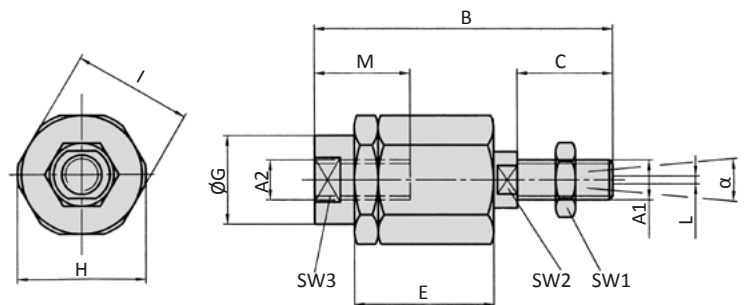
RD-xx Rod clevis



Model-no.:	for cylinder Ø	A	B	C	D	E	F	G	Ø H
RD-10	8, 10	M4	8	16	11.5	4	21	8	4
RD-16	12, 16	M6	12	24	16	6	31	12	6
RD-20	20	M8	16	32	22	8	42	16	8
RD-25	25	M10 x 1.25	20	40	26	10	52	20	10

material: steel, zinc plated

FK-xx Flexible coupling



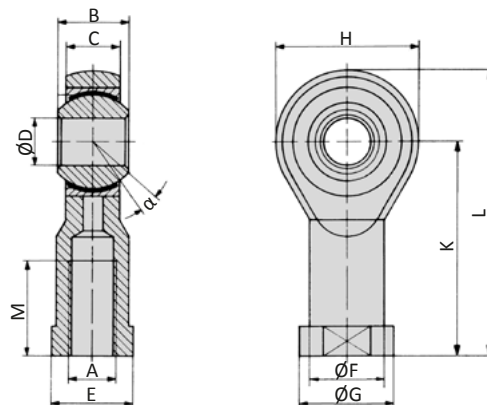
Model-no.:	for cylinder Ø	A1, A2	B	C	D	E	Ø G	H	I	L	M	SW1	SW2	SW3	α
FK-16	12, 16	M6	35	11	2.5	17.5	8.5	14.5	13	1	12.5	10	5	7	6°
FK-20	20	M8	57	21	5	26	12.5	19	17	2	16	13	7	11	8°
FK-32	25	M10 x 1.25	71.5	20	7.5	35	22	32	30	2	22	17	12	19	8°

material: steel, zinc plated

Series HM

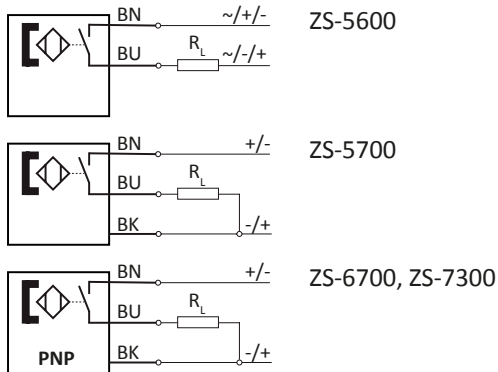
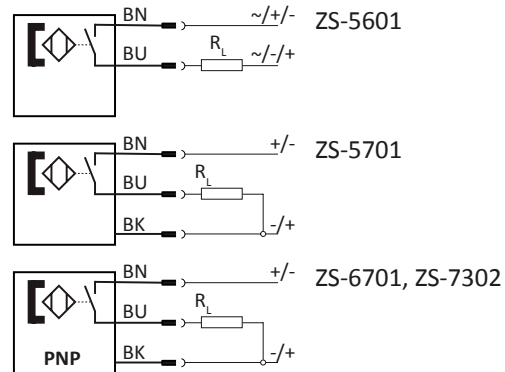
Mounting accessories

RO-xx Rod eye



Model-no.:	for cylinder \varnothing	A	B	C	$\varnothing D$	E	$\varnothing F$	$\varnothing G$	H	K	L	M	α
RO-16	12, 16	M6	9	6.75	6	11	10	13	20	30	40	12	13°
RO-20	20	M8	12	9	8	14	12.5	16	24	36	48	16	14°
RO-25	25	M10 x 1.25	14	10.5	10	17	15	19	28	43	57	20	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
Design				
Contact function	2-pole Reed sensor	2-pole Reed sensor	3-pole Reed sensor	3-pole Reed sensor
Rated operational voltage	5 ... 240 V AC / DC	5 ... 60 V AC / DC	5 ... 30 V DC	5 ... 30 V DC
Rated operational current I_E	3 ... 100 mA	3 ... 100 mA	≤ 500 mA	≤ 500 mA
Max. voltage drop at I_E	≤ 2.5	≤ 2.5	≤ 0.1	≤ 0.1
Breaking capacity	10 W	10 W	10 W	10 W
Cable length	3 m	0.3 m with M8 connection	5 m	0.3 m with M8 connection
Temperature range	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C	-10 ... +70°C
Protection	IP 67	IP 67	IP 67	IP 67
Switching status indication	LED red	LED red	LED yellow	LED yellow

Model-no.:	ZS-6700	ZS-6701	ZS-7300	ZS-7302
Design				
Contact function	3-pole inductive	3-pole inductive	3-pole inductive	3-pole inductive
Output	NO	NO	NO	NO
Rated operational voltage	PNP	PNP	PNP	PNP
Rated operational current I_E	5 ... 30 V DC	5 ... 30 V DC	10 ... 30 V DC	10 ... 30 V DC
Max. voltage drop at I_E	≤ 200 mA	≤ 200 mA	≤ 100 mA	≤ 100 mA
Breaking capacity	≤ 1.0	≤ 1.0	≤ 2.5	≤ 2.5
Cable length	6 W	6 W	3 W	3 W
Temperature range	3 m	0.3 m with M8 connection	6 m	0.3 m with M12 connection
Protection	-10 ... +70°C	-10 ... +70°C	-20 ... +60°C	-20 ... +60°C
Switching status indication	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-250
Design	 <p>Sensor mounting</p>