

# Our highlighted product for you

## Magnetic gripper MHM-X6400 Series

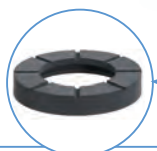
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*Performs optimally, where others don't*



Auto switches can be mounted on 4 surfaces



Holding force can be adjusted with a bumper with 3 types of thicknesses

- 6 mm
- 7 mm
- 8 mm



Mountable on 3 surfaces



- ▶ Holding force up to 120 N
- ▶ Holds workpieces even when air is shut off
- ▶ Residual holding force 0.3 N or less

- ▶ MHM performs optimally in applications where vacuum pads or grippers are not performing efficiently, e.g. due to porous or uneven surfaces.



## Rotary gripper

### MRHQ Series



- Ø 10, 16, 20, 25
- Compact combination of gripping and rotating function
- Simple piping/wiring from one side
- Length approx. 20 % shorter compared to previous product-combination with adapter plate
- Rotation angles of 90° and 180° are available
- The standard model with magnets allows the retrofitting of auto switches
- Both and positions adjustable by ±5°.

Part number	Rotary actuator			Gripper		Thread connection
	Rotation angle	Angle adjustment	Allowable kinetic energy [J]	Cylinder bore [mm]	Opening/Closing stroke [mm]	
MRHQ10D-90S-N ●	90°	±10°	0.0046	10	4	M5
MRHQ10D-180S-N ●	180°					
MRHQ16D-90S-N ●	90°	±10°	0.014	16	6	
MRHQ16D-180S-N ●	180°					
MRHQ20D-90S-N ●	90°	±10°	0.034	20	10	
MRHQ20D-180S-N ●	180°					
MRHQ25D-90S-N ●	90°	±10°	0.074	25	14	
MRHQ25D-180S-N ●	180°					

Single acting gripper optional

### Possible auto switches (for rotary actuators)

3 wire solid state	NPN: D-M9NL-746, PNP: D-M9PL-746
2 wire solid state	D-M9BL-746

### Possible auto switches (for gripper)

3 wire solid state	NPN: D-M9NVL, PNP: D-M9PVL
2 wire solid state	D-M9BVL



## Parallel air gripper

### MHZ2/MHZ Series



- Ø 6, 10, 16, 20, 25, 32, 40
- New mini gripper size Ø 6
- High repeatability ±0,01 mm.

See next page for characteristics table.

Action		Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches
Double acting		MHZA2-6D ●	6	3.3 (6.1) <sup>2)</sup>	4	Without auto switch
Single acting (N.O.)		MHZA2-6S ●	6	1.9	4	
Single acting (N.C.)		MHZA2-6C	6	3.7	4	
Double acting		MHZ2-6D ●	6	3.3 (6.1) <sup>2)</sup>	4	
		MHZ2-10D ●	10	11 (17) <sup>2)</sup>	4	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
		MHZ2-16D ●	16	34 (45) <sup>2)</sup>	6	
		MHZ2-20D ●	20	42 (66) <sup>2)</sup>	10	
		MHZ2-25D ●	25	65 (104) <sup>2)</sup>	14	
		MHZ2-32D ●	32	158 (193) <sup>2)</sup>	22	
		MHZ2-40D ●	40	254 (318) <sup>2)</sup>	30	
Single acting	Normally open	MHZ2-6S ●	6	1.9	4	
		MHZ2-10S ●	10	7.1	4	
		MHZ2-16S ●	16	27	6	
		MHZ2-20S ●	20	33	10	
		MHZ2-25S ●	25	45	14	
	Normally closed	MHZ2-32S ●	32	131	22	
		MHZ2-40S ●	40	217	30	
		MHZ2-6C ●	6	(3.7) <sup>2)</sup>	4	
		MHZ2-10C ●	10	(13) <sup>2)</sup>	4	
		MHZ2-16C ●	16	(38) <sup>2)</sup>	6	
		MHZ2-20C ●	20	(57) <sup>2)</sup>	10	
		MHZ2-25C ●	25	(83) <sup>2)</sup>	14	
		MHZ2-32C ●	32	(161) <sup>2)</sup>	22	
		MHZ2-40C ●	40	(267) <sup>2)</sup>	30	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.

2) Value in ( ) for internal gripping.

## Air gripper, wide type

### MHZL2 Series



- Ø 10, 16, 20, 25.
- Nearly double the standard stroke.

Action		Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches
Double acting long stroke		MHZL2-10D ●	10	11 (17) <sup>2)</sup>	8	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
		MHZL2-16D ●	16	34 (45) <sup>2)</sup>	12	
		MHZL2-20D ●	20	42 (66) <sup>2)</sup>	18	
		MHZL2-25D ●	25	65 (104) <sup>2)</sup>	22	
Single acting	Normally open	MHZL2-10S ●	10	7.1	8	
		MHZL2-16S ●	16	27	12	
		MHZL2-20S ●	20	33	18	
		MHZL2-25S ●	25	45	22	
	Normally closed	MHZL2-10C ●	10	(13) <sup>2)</sup>	8	
		MHZL2-16C ●	16	(38) <sup>2)</sup>	12	
		MHZL2-20C ●	20	(57) <sup>2)</sup>	18	
		MHZL2-25C ●	25	(85) <sup>2)</sup>	22	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.

2) Value in ( ) for internal gripping.

## Parallel air gripper with dust cover

### MHZAJ2/MHZJ2 Series



- Ø 6, 10, 16, 20, 25
- Applicable in assembly lines, machine tool, etc
- Dust tight, drip proof construction
- Dust cover material selectable.

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches	Dust cover material	
Double acting	MHZAJ2-6D	6	3.3 (6.1) <sup>2)</sup>	4	Without auto switch	Chloroprene rubber (CR)	
Single acting (N.O.)	MHZAJ2-6S	6	1.9	4			
Single acting (N.C.)	MHZAJ2-6C	6	3.7	4			
Double acting	MHZJ2-6D ●	6	3.3 (6.1) <sup>2)</sup>	4	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL		
	MHZJ2-10D ●	10	9.8 (17) <sup>2)</sup>	4			
	MHZJ2-16D ●	16	30 (40) <sup>2)</sup>	6			
	MHZJ2-20D ●	20	42 (66) <sup>2)</sup>	10			
	MHZJ2-25D ●	25	65 (104) <sup>2)</sup>	14			
Single acting	Normally open	MHZJ2-6S	6	1.9			4
		MHZJ2-10S ●	10	6.3			4
		MHZJ2-16S	16	24			6
		MHZJ2-20S ●	20	28			10
		MHZJ2-25S ●	25	45			14
	Normally closed	MHZJ2-6C	6	(3.7) <sup>2)</sup>			4
		MHZJ2-10C	10	(12) <sup>2)</sup>			4
		MHZJ2-16C	16	(31) <sup>2)</sup>		6	
		MHZJ2-20C	20	(56) <sup>2)</sup>		10	
		MHZJ2-25C	25	(83) <sup>2)</sup>		14	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.  
2) Value in ( ) for internal gripping.

## Low profile air gripper

### MHF2 Series



- Sizes: Ø 8, 12, 16, 20 mm
- Repeatability up to: ± 0.05 mm
- Low profile means minimal mounting space needed
- Choose from 3 different finger strokes
- High precision linear guide
- Double acting.

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches
Short stroke	MHF2-8D ●	8	19	8	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHF2-12D ●	12	48	12	
	MHF2-16D ●	16	90	16	
	MHF2-20D ●	20	141	20	
Medium stroke	MHF2-8D1 ●	8	19	16	
	MHF2-12D1 ●	12	48	24	
	MHF2-16D1 ●	16	90	32	
	MHF2-20D1 ●	20	141	40	
Long stroke	MHF2-8D2 ●	8	19	32	
	MHF2-12D2 ●	12	48	48	
	MHF2-16D2 ●	16	90	64	
	MHF2-20D2 ●	20	141	80	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.

## Wide type parallel style air gripper

### MHL2 Series



- Sizes Ø 10, 16, 20, 25, 32, 40 mm
- 3 gripper strokes are possible for each size
- Synchronised gripper movement via rack pinion
- Repeatability  $\pm 0.1$  mm
- Compact auto switches can be directly mounted without accessories
- A scraper with a dust lip is adopted for all rod rotating parts.

Stroke	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Effective opening/Closing stroke [mm]			Possible auto switch
				L2-L1	L1	L2	
Short stroke	MHL2-10DZ ●	10	14	20	56	76	3 wire solid state/ 2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/ 2 colour D-M9BWL
	MHL2-16DZ ●	16	45	30	68	98	
	MHL2-20DZ ●	20	74	40	82	122	
	MHL2-25DZ ●	25	131	50	100	150	
	MHL2-32D ●	32	228	70	150	220	
	MHL2-40D ●	40	396	100	188	288	
Medium stroke	MHL2-10D1Z ●	10	14	40	78	118	
	MHL2-16D1Z ●	16	45	60	110	170	
	MHL2-20D1Z ●	20	74	80	142	222	
	MHL2-25D1Z ●	25	131	100	182	282	
	MHL2-32D1 ●	32	228	120	198	318	
	MHL2-40D1 ●	40	396	160	246	406	
Long stroke	MHL2-10D2Z ●	10	14	60	96	156	
	MHL2-16D2Z ●	16	45	80	130	210	
	MHL2-20D2Z ●	20	74	100	162	262	
	MHL2-25D2Z ●	25	131	120	200	320	
	MHL2-32D2 ●	32	228	160	242	402	
	MHL2-40D2 ●	40	396	200	286	486	

1) Values based on pressure of 0.5 MPa, gripping point L=40 mm, at centre of stroke.

## Rotary actuated air gripper, 2 fingers

### MHR2/MDHR2 Series



- Ø 10, 15, 20, 30.
- Model has parallel gripper movement for external and internal gripping
- Gripper finger movement guided with precision by cross roller bearing
- Driven by vane type rotary actuator
- 4 sizes for handling smaller components
- Double acting
- Repeatability of  $\pm 0.01$  mm
- Auto switch for end position detection can be integrated into the body (Ø 15 to Ø 30).

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches
Double acting without magnet	MHR2-10R ●	10	12 (12)	6	Without auto switch
	MHR2-15R ●	15	24 (25)	8	
	MHR2-20R ●	20	33 (34)	12	
	MHR2-30R ●	30	58 (59)	18	
Double acting with magnet	MDHR2-10R ●	10	12 (12)	6	3 wire solid state NPN: D-M9NL PNP: D-M9PL 2 wire solid state D-M9BL
	MDHR2-15R ●	15	24 (25)	8	
	MDHR2-20R ●	20	33 (34)	12	
	MDHR2-30R ●	30	58 (59)	18	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.  
Value in ( ) for internal gripping.

## Rotary actuated air gripper, 3 fingers

### MHR3/MDHR3 Series



- Ø 10, 15
- Driven by vane type rotary actuator
- 2 sizes for handling small components
- Gripper movement guided with precision by cross roller bearing
- Repeatability of ±0.01 mm
- Low profile, all types of mounting options
- Auto switch for end position detection can be integrated into the body.

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches
Double acting without magnet	<b>MHR3-10R</b> ●	10	7 (6.5)	6	Without auto switch
	<b>MHR3-15R</b> ●	15	13 (12)	8	
Double acting with magnet	<b>MDHR3-10R</b> ●	10	7 (6.5)	6	3 wire solid state NPN: D-M9NL PNP: D-M9PL 2 wire solid state D-M9BL
	<b>MDHR3-15R</b> ●	15	13 (12)	8	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.  
Value in ( ) for internal gripping.

## Wedge cam operation slide guide air gripper

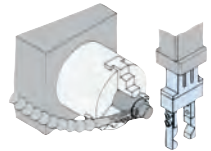
### MHK2/MHKL2 Series



- Ø 12, 16, 20, 25
- Gripper fingers have robust slide bearing
- Elastic guide cover in 3 different materials as protection against soiling by dust, chips, liquids, etc
- 2 series: MHK2 standard, MHKL2 larger finger opening stroke.

### Standard

Action	Part number	Bore size [mm]	Gripping force [N] external (internal) <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches	
Double acting	<b>MHK2-12D</b> ●	12	15 (16)	4	3 wire solid state NPN: D-M9NL PNP: D-M9PL 2 wire solid state D-M9BL	
	<b>MHK2-16D</b> ●	16	31 (36)	6		
	<b>MHK2-20D</b> ●	20	46 (56)	10		
	<b>MHK2-25D</b> ●	25	80 (86)	14		
Single acting	Normally open	<b>MHK2-12S</b> ●	12	9		4
		<b>MHK2-16S</b> ●	16	23		6
		<b>MHK2-20S</b> ●	20	34		10
		<b>MHK2-25S</b> ●	25	58		14
	Normally closed	<b>MHK2-12C</b> ●	12	(12)		4
		<b>MHK2-16C</b> ●	16	(25)		6
		<b>MHK2-20C</b> ●	20	(44)	10	
		<b>MHK2-25C</b> ●	25	(73)	14	



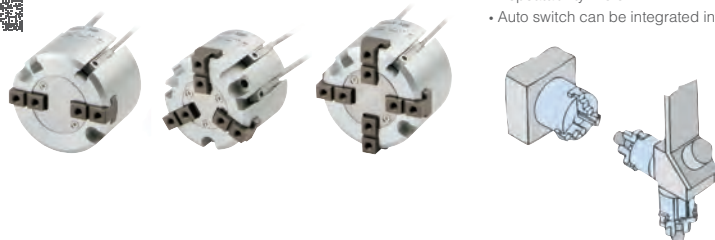
### Long opening stroke

Action	Part number	Bore size [mm]	Gripping force [N] external (internal) <sup>1)</sup>	Opening/Closing stroke [mm]	Possible auto switches	
Double acting	<b>MHKL2-12D</b> ●	12	14 (16)	11	3 wire solid state NPN: D-M9NL PNP: D-M9PL 2 wire solid state D-M9BL	
	<b>MHKL2-16D</b> ●	16	27 (30)	14		
	<b>MHKL2-20D</b> ●	20	45 (53)	18		
	<b>MHKL2-25D</b> ●	25	79 (90)	22		
Single acting	Normally open	<b>MHKL2-12S</b> ●	12	9		11
		<b>MHKL2-16S</b> ●	16	17		14
		<b>MHKL2-20S</b> ●	20	32		18
		<b>MHKL2-25S</b> ●	25	53		22
	Normally closed	<b>MHKL2-12C</b> ●	12	(11)		11
		<b>MHKL2-16C</b> ●	16	(22)		14
		<b>MHKL2-20C</b> ●	20	(40)	18	
		<b>MHKL2-25C</b> ●	25	(63)	22	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm, at centre of stroke.  
Value in ( ) for internal gripping.

## 2, 3, 4 finger air gripper

### MHS2/MHS3/MHS4 Series



- Ø 16, 20, 25, 32, 40, 50, 63 (2 and 4 finger)
- Ø 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 (3 finger)
- For internal and external gripping
- Repeatability  $\pm 0.01$  mm
- Auto switch can be integrated into body.

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup> external (internal)	Opening/closing stroke (dia.) [mm]	Possible auto switches
Double acting 2 finger	MHS2-16D ●	16	21 (23)	4	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHS2-20D ●	20	37 (42)	4	
	MHS2-25D ●	25	63 (71)	6	
	MHS2-32D ●	32	111 (123)	8	
	MHS2-40D ●	40	177 (195)	8	
	MHS2-50D ●	50	280 (306)	12	
Double acting 3 finger	MHS2-63D ●	63	502 (537)	16	
	MHS3-16D ●	16	14 (16)	4	
	MHS3-20D ●	20	25 (28)	4	
	MHS3-25D ●	25	42 (47)	6	
	MHS3-32D ●	32	74 (82)	8	
	MHS3-40D ●	40	118 (130)	8	
	MHS3-50D ●	50	187 (204)	12	
	MHS3-63D ●	63	335 (359)	16	
Double acting 4 finger	MHS3-80D ●	80	500 (525)	20	
	MHS3-100D ●	100	750 (780)	24	
	MHS3-125D ●	125	1270 (1320)	32	
	MHS4-16D ●	16	10 (12)	4	
	MHS4-20D ●	20	19 (21)	4	
	MHS4-25D ●	25	31 (35)	6	
	MHS4-32D ●	32	55 (61)	8	
Double acting 4 finger	MHS4-40D ●	40	88 (97)	8	
	MHS4-50D ●	50	140 (153)	12	
	MHS4-63D ●	63	251 (268)	16	

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm (Ø 16 to Ø 25), L= 30 mm (Ø 32 to Ø 63), L= 50 mm (Ø 80 to Ø 125), value in ( ) for internal gripping.

## 3 finger parallel air gripper with long opening/Closing stroke

### MHSL3 Series



- Ø 16, 20, 25, 32, 40, 50, 63, 80, 100, 125
- Opening/closing stroke over double the standard - MHS3 series
- Same mounting holes as MHS3, so interchangeable (lengths and Ø differ)
- Repeatability ±0.01 mm.

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>		Opening/Closing stroke (dia.) [mm]	Possible auto switches
			External	Internal		
Double acting 3 finger	MHSL3-16D ●	16	14	16	10	3 wire solid state NPN: D-M9NL PNP: D-M9PL 2 wire solid state D-M9BL
	MHSL3-20D ●	20	25	28	10	
	MHSL3-25D ●	25	42	47	12	
	MHSL3-32D ●	32	74	82	16	
	MHSL3-40D ●	40	118	130	20	
	MHSL3-50D ●	50	187	204	28	
	MHSL3-63D ●	63	335	359	32	
	MHSL3-80D ●	80	500	525	40	
	MHSL3-100D ●	100	750	780	48	
MHSL3-125D	125	1270	1320	64		

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm (Ø 16 to Ø 25), L= 30 mm (Ø 32 to Ø 63), L= 50 mm (Ø 80 to Ø 125)

## 3 finger parallel air gripper with dust cover

### MHSJ3 Series



Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup>		Opening/Closing stroke (dia.) [mm]
			External gripping	Internal gripping	
3 finger parallel gripper	MHSJ3-16D ●	16	9	16	4
	MHSJ3-20D ●	20	21	28	4
	MHSJ3-25D ●	25	36	47	6
	MHSJ3-32D ●	32	62	82	8
	MHSJ3-40D	40	97	130	8
	MHSJ3-50D ●	50	155	204	12
	MHSJ3-63D ●	63	280	359	16
	MHSJ3-80D ●	80	400	525	20

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm (Ø 16 to Ø 25), L= 30 mm (Ø 32 to Ø 63), L= 50 mm (Ø 80).

### Possible auto switches

3 wire solid state/2 colour PNP	D-M9PWL
3 wire solid state/2 colour NPN	D-M9NWL

### Dust cover

—	Chloroprene rubber (CR) standard
F	Fluoro rubber (FKM)
S	Silicone rubber (SI)

Depending on the cover's material, the order code is after the model number.

● Stocked items. ● Partly stocked items, the stocked options are highlighted in green. Stocked items and product information could be subject to change without prior notice.



## 3 finger parallel air gripper through hole type

### MHSH3 Series



- Through holes are standard, cover cap and centre pusher can be attached individually
- Centre pusher can be operated pneumatically or using spring force
- Dust cover cap same as MHSJ3.

#### Possible auto switches

3 wire solid state/2 colour PNP	D-M9PWL
3 wire solid state/2 colour NPN	D-M9NWL

Action	Part number	Bore size [mm]	Gripping force [N] <sup>1)</sup> External gripping	Gripping force [N] <sup>1)</sup> Internal gripping	Opening/Closing stroke (dia.) [mm]
3 finger parallel gripper	MHSH3-16D ●	16	9	15	4
	MHSH3-20D ●	20	21	26	4
	MHSH3-25D ●	25	36	45	6
	MHSH□3-32D	32	62	77	8
	MHSH□3-40D	40	97	118	8
	MHSH□3-50D	50	155	187	12
	MHSH□3-63D	63	280	329	16
	MHSH□3-80D	80	400	490	20

□ J...for version with dust cover.

1) Values based on pressure of 0.5 MPa, gripping point L=20 mm (Ø 16 to Ø 25), L = 30 mm (Ø 32 to Ø 63), L= 50 mm (Ø 80).

## 2 finger angular air gripper

### MHC2 Series



- Ø 10, 16, 20, 25
- Repeatability ± 0.01 mm
- Compact body design
- Auto switch can be integrated into body.

Action	Part number	Bore size [mm]	Gripping moment per finger [Nm] <sup>1)</sup>	Opening/Closing angle	Possible auto switches
Double acting	MHC2-10D ●	10	0.1	+30° ~ -10°	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHC2-16D ●	16	0.39		
	MHC2-20D ●	20	0.70		
	MHC2-25D ●	25	1.36		
Single acting (normally open)	MHC2-10S ●	10	0.07		
	MHC2-16S ●	16	0.31		
	MHC2-20S ●	20	0.54		
	MHC2-25S ●	25	1.08		

1) Per finger at 0.5 MPa

## 2 finger angular air gripper

### MHC2/MHCA2/MHCM2 Series



- Angular style air gripper Series MHC now also available in Ø 6 size
- Series MHCM2 now available for further miniaturization.

Action	Part number	Bore size [mm]	Gripping moment per finger [Nm] <sup>1)</sup>	Opening/Closing angle	Possible auto switches
Double acting	MHC2-6D ●	6	0.038	+30° ~ -10°	(Perp., In-line) 3 wire solid state NPN: M9NV, M9N PNP: M9PV, M9P 2 wire solid state M9BV, M9B
Single acting (normally open)	MHC2-6S	6	0.024		
Double acting	MHCA2-6D ●	6	0.038	+30° ~ -10°	Without auto switch
Single acting (normally open)	MHCA2-6S	6	0.024		
	MHCM2-7S ●	7	0.017	+20° ~ -7°	

1) Per finger at 0.5 MPa

## Toggle type air gripper

### MHT2 Series



- The toggle mechanism holds workpiece even when pressure drops.

Action	Part number	Bore size [mm]	Gripping moment per finger [Nm] <sup>1)</sup>	Opening/Closing angle	Possible auto switches
Double acting	MHT2-32TFDZ ●	32	12.4	+28° ~ -3°	Reed: D-A93L 3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHT2-40TFDZ ●	40	36	+27° ~ -3°	
	MHT2-50TFDZ ●	50	63	+23° ~ -2°	
	MHT2-63TFDZ ●	63	106	+23° ~ -2°	

1) Per finger at 0.5 MPa

## 180° angular air gripper, cam type

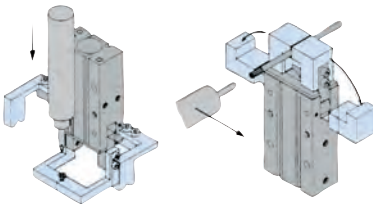
### MHY2 Series



- Synchronous rotary movement via crank drive with large holding moment
- Auto switch can be integrated into body.

Action	Part number	Bore size [mm]	Gripping moment per finger [Nm] <sup>1)</sup>	Opening/Closing angle	Possible auto switches
Double acting 180° opening angle	MHY2-10D ●	10	0.16	+180° ~ -3°	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHY2-16D ●	16	0.54	+180° ~ -3°	
	MHY2-20D ●	20	1.10	+180° ~ -3°	
	MHY2-25D ●	25	2.28	+180° ~ -3°	

1) Per finger at 0.5 MPa



## 180° angular air gripper, rack and pinion type

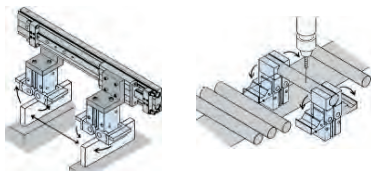
### MHW2 Series



- Robust, rack and pinion actuator for synchronous rotary movements of the gripper fingers
- Auto switch can be integrated into body
- Insensitive to dirt as body is almost completely enclosed.

Action	Part number	Bore size [mm]	Gripping moment per finger [Nm] <sup>1)</sup>	Opening/Closing angle	Possible auto switches
Double acting 180° opening angle	MHW2-20D ●	20	0.30	+180° ~ -5°	3 wire solid state/2 colour NPN: D-M9NWL PNP: D-M9PWL 2 wire solid state/2 colour D-M9BWL
	MHW2-25D ●	25	0.73	+180° ~ -6°	
	MHW2-32D ●	32	1.61	+180° ~ -5°	
	MHW2-40D ●	40	3.70	+180° ~ -5°	
	MHW2-50D ●	50	8.27	+180° ~ -4°	

1) Per finger at 0.5 MPa



## Rotary gripper

### MRHQ Series



- Ø 10, 16, 20, 25
- Compact combination of gripping and rotating function
- Simple piping/wiring from one side
- Length approx. 20 % shorter compared to previous product-combination with adapter plate
- Rotation angles of 90° and 180° are available
- The standard model with magnets allows the retrofitting of auto switches
- Both and positions adjustable by ±5°.

Part number	Rotary actuator			Gripper		Thread connection
	Rotation angle	Angle adjustment	Allowable kinetic energy [J]	Cylinder bore [mm]	Opening/Closing stroke [mm]	
MRHQ10D-90S-N ●	90°	±10°	0.0046	10	4	M5
MRHQ10D-180S-N ●	180°					
MRHQ16D-90S-N ●	90°	±10°	0.014	16	6	
MRHQ16D-180S-N ●	180°					
MRHQ20D-90S-N ●	90°	±10°	0.034	20	10	
MRHQ20D-180S-N ●	180°					
MRHQ25D-90S-N ●	90°	±10°	0.074	25	14	
MRHQ25D-180S-N ●	180°					

Single acting gripper optional

### Possible auto switches (for rotary actuators)

3 wire solid state	NPN: D-M9NL-746, PNP: D-M9PL-746
2 wire solid state	D-M9BL-746

### Possible auto switches (for gripper)

3 wire solid state	NPN: D-M9NVL, PNP: D-M9PVL
2 wire solid state	D-M9BVL

## Our highlighted product for you

### Magnetic gripper MHM-X6400 Series



- Holding force up to 120 N
- Holds workpieces even when air is shut off
- Residual holding force 0.3 N or less
- Holding force can be adjusted changing the bumper
- Bumper is made of fluororubber
- Mountable on 3 surfaces
- Auto switches can be mounted.

Part number	Thread port	Holding force <sup>1)</sup>
<b>MHM-32D1-X6400</b> ●	R 1/8	80 N
<b>MHM-32D2-X6400</b>		50 N
<b>MHM-32D3-X6400</b>		30 N

1) Workpiece thickness: 6 mm

### Possible auto switches

Solid state switch	D-M9BV
	D-M9NV
	D-M9PV
Solid state switch (2-colour indication)	D-M9BWW
	D-M9NWW
	D-M9PWW
Solid state switch Water resistant (2-colour indication)	D-M9BAV
	D-M9NAV
	D-M9PAV
Magnetic field resistant 2-colour indication type Solid state auto switch	D-P3DWA
	D-P3DWASC
	D-P3DWASE

### Bumper order number

Model	Holding force
<b>MHM-A3201-1-X6400</b>	80 N
<b>MHM-A3201-2-X6400</b>	50 N
<b>MHM-A3201-3-X6400</b>	30 N