

Pinza pneumatica a 2 griffe ad azione parallela autocentrante (serie PE)

- Azionamento a doppio effetto (a semplice effetto su richiesta per PE-25... e PE-45...).
- Assenza di organi di trasmissione: elevato rendimento e affidabilità.
- Possibilità di scelta su un'ampia gamma di corse.
- Forza di serraggio costante su tutta la corsa in apertura ed in chiusura.
- Basso peso ottenuto con una costruzione interamente in lega leggera.

2-jaw parallel self-centering pneumatic gripper (series PE)

- Double acting (single acting upon request for PE-25... and PE-45...).
- High efficiency and reliability due to the lack of driving parts.
- Wide choice of stroke length options.
- The gripping force is constant on both directions along total stroke.
- Light weight; due to its alloy construction.

**PE-4580****PE-4560****PE-4540****PE-4520****PE-45200****PE-25100****PE-25200****PE-2560****PE-2540****PE-2520****PE-16200****PE-16150****PE-1680****PE-1640****PE-1625****PE-1610**

	PE-1610	PE-1625	PE-1640	PE-1680	PE-16150	PE-16200
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Operating pressure range	2÷8 bar					
Temperatura di esercizio Operating temperature range	5÷60 °C.					
Forza di serraggio per griffa a 6 bar Gripping force at 6 bar on each jaw	100 N					
Forza di serraggio totale a 6 bar Total gripping force at 6 bar	200 N					
Corsa Stroke (±0.25 mm)	2x5 mm	2x12.5 mm	2x20 mm	2x40 mm	2x75 mm	2x100 mm
Frequenza max funzionamento Maximum working frequency	3 Hz	2 Hz	2 Hz	2 Hz	1 Hz	1 Hz
Consumo d'aria per ciclo Cycle air consumption	7 cm ³	14 cm ³	21 cm ³	39 cm ³	71 cm ³	97 cm ³
Tempo di chiusura senza carico Closing time without load	0.02 s	0.05 s	0.1 s	0.2 s	0.4 s	0.5 s
Ripetibilità Repetition accuracy	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm	0.03 mm
Peso Weight	200 g	250 g	350 g	500 g	900 g	1200 g

Forza di serraggio

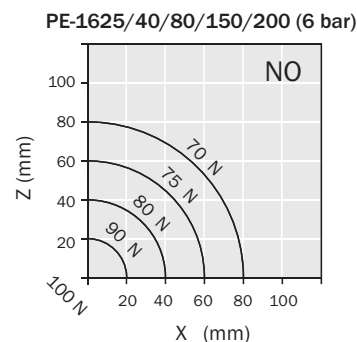
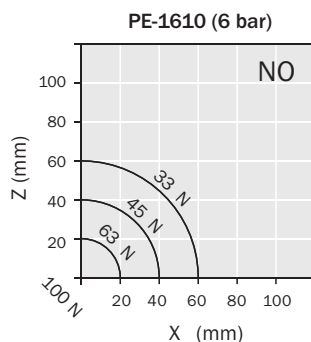
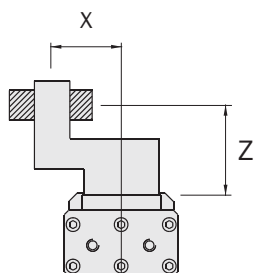
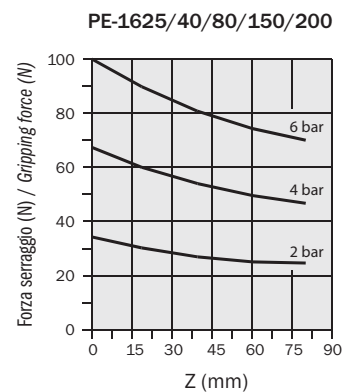
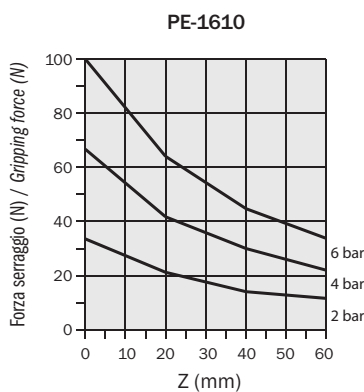
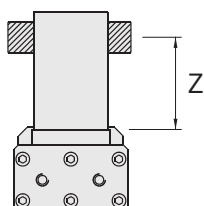
I grafici mostrano la forza per griffa espressa dalla pinza in funzione della pressione, del braccio Z e del disassamento del punto di presa X.

Gripping force

The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length Z and the overhanging X.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

The force shown in these graphs refers to one jaw.
The total force is double.



	PE-2520	PE-2540	PE-2560	PE-25100	PE-25200
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air				
Pressione di esercizio Operating pressure range	2÷8 bar				
Temperatura di esercizio Operating temperature range	5÷60 °C.				
Forza di serraggio per griffa a 6 bar Gripping force at 6 bar on each jaw	230 N				
Forza di serraggio totale a 6 bar Total gripping force at 6 bar	460 N				
Corsa (±0.25 mm) Stroke	2x10 mm	2x20 mm	2x30 mm	2x50 mm	2x100 mm
Frequenza max funzionamento Maximum working frequency	3 Hz	2 Hz	2 Hz	1 Hz	1 Hz
Consumo d'aria per ciclo Cycle air consumption	44 cm ³	74 cm ³	102 cm ³	146 cm ³	263 cm ³
Tempo di chiusura senza carico Closing time without load	0.02 s	0.04 s	0.06 s	0.08 s	0.17 s
Ripetibilità Repetition accuracy	0.04 mm	0.04 mm	0.04 mm	0.04 mm	0.04 mm
Peso Weight	700 g	980 g	1285 g	1235 g	2080 g

Forza di serraggio

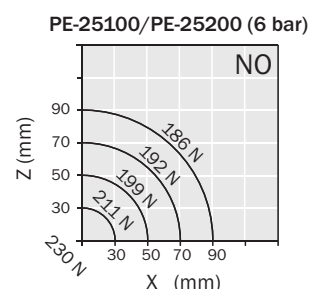
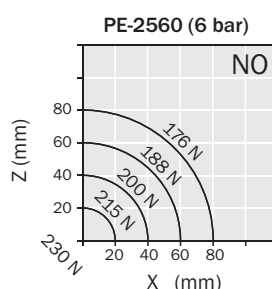
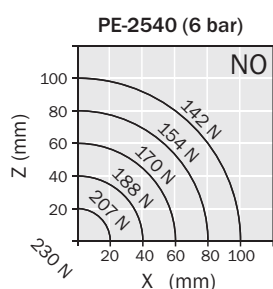
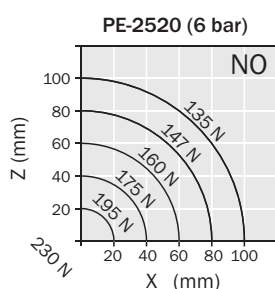
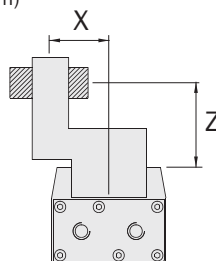
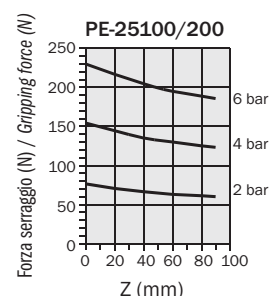
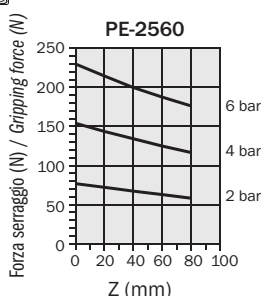
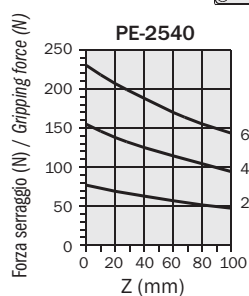
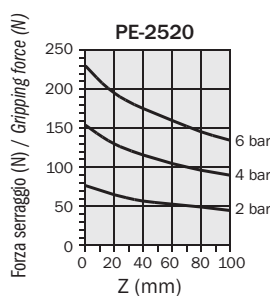
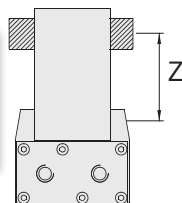
I grafici mostrano la forza per griffa espressa dalla pinza in funzione della pressione, del braccio Z e del disassamento del punto di presa X.

Gripping force

The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length Z and the overhanging X.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

The force shown in these graphs refers to one jaw.
The total force is double.



	PE-4520	PE-4540	PE-4560	PE-4580	PE-45200
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air				
Pressione di esercizio Operating pressure range	2÷8 bar				
Temperatura di esercizio Operating temperature range	5÷60 °C.				
Forza di serraggio per griffa a 6 bar Gripping force at 6 bar on each jaw	700 N	700 N	700 N	700 N	900 N
Forza di serraggio totale a 6 bar Total gripping force at 6 bar	1400 N	1400 N	1400 N	1400 N	1800 N
Corsa Stroke (±0.25 mm)	2x10 mm	2x20 mm	2x30 mm	2x40 mm	2x100 mm
Frequenza max funzionamento Maximum working frequency	3 Hz	2 Hz	1 Hz	1 Hz	1 Hz
Consumo d'aria per ciclo Cycle air consumption	132 cm ³	208 cm ³	257 cm ³	371 cm ³	940 cm ³
Tempo di chiusura senza carico Closing time without load	0.05 s	0.1 s	0.15 s	0.2 s	0.2 s
Ripetibilità Repetition accuracy	0.04 mm	0.04 mm	0.04 mm	0.04 mm	0.04 mm
Peso Weight	1840 g	2250 g	2715 g	3300 g	3800 g

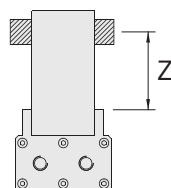
Forza di serraggio

I grafici mostrano la forza per griffa espressa dalla pinza in funzione della pressione, del braccio Z e del disassamento del punto di presa X.

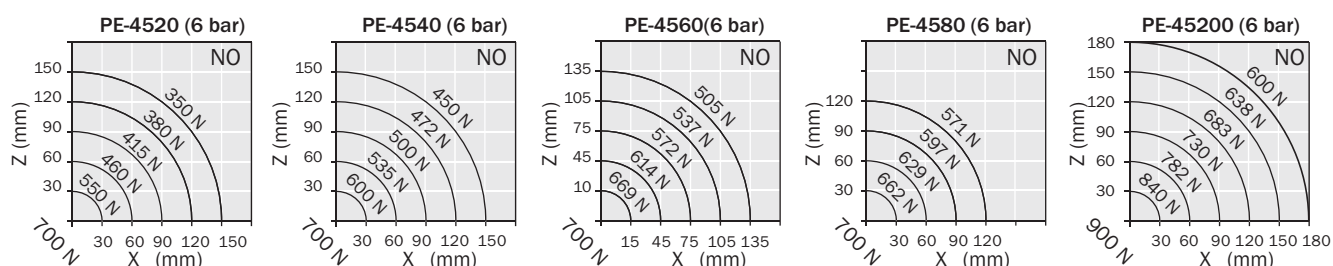
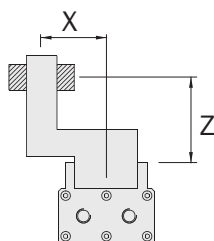
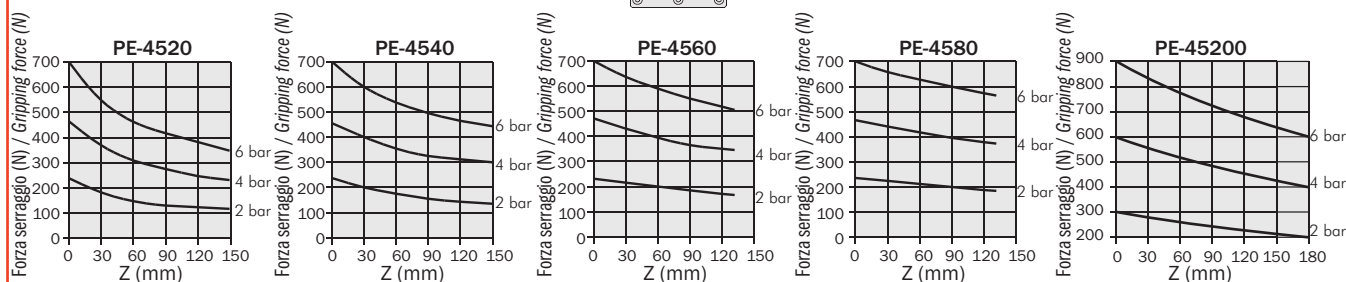
Gripping force

The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length Z and the overhanging X.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

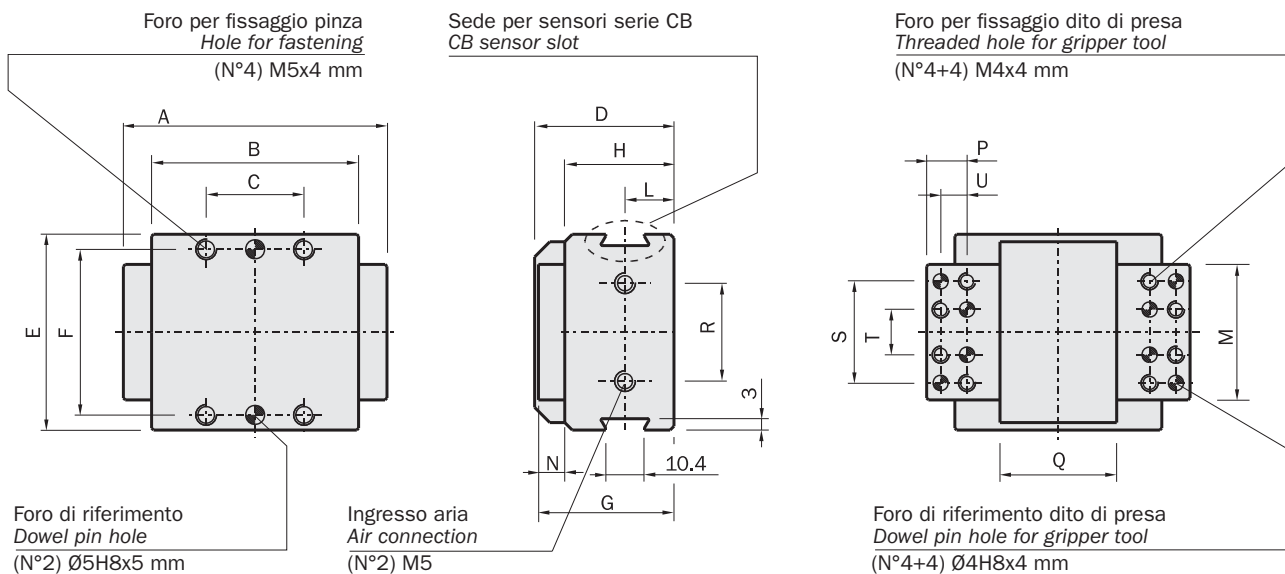


The force shown in these graphs refers to one jaw.
The total force is double.

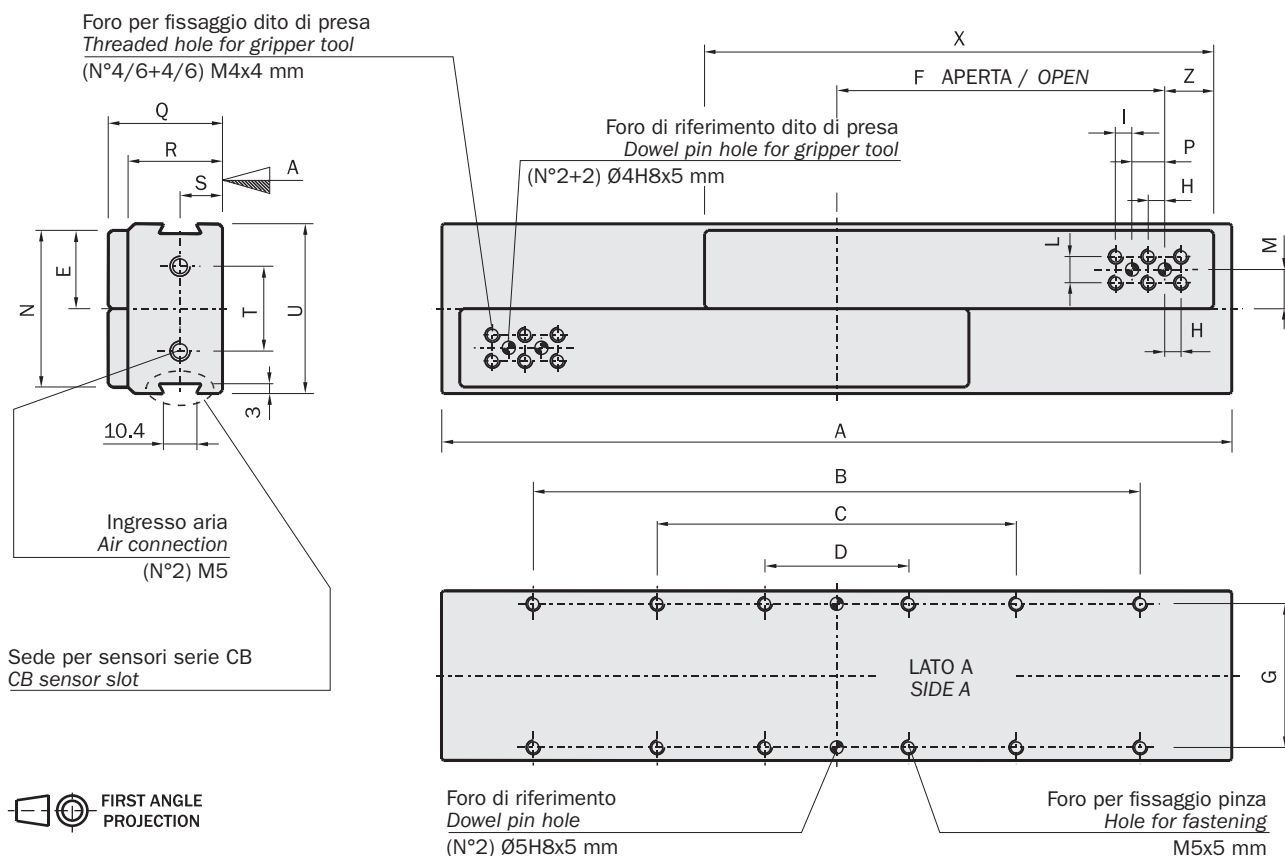


Dimensioni (mm) / Dimensions (mm)

	A	B	C	D	E	F ±0.02	G	H	L	M	N	P	Q	R ±0.02	S ±0.02	T ±0.02	U ±0.02
PE-1610	62	60	26	37	52	44	36	29	13	36	7	11.75	31	26	27	12	7



	A	B	C	D	E	F	G ±0.02	H	I	L	M	N	P ±0.02	Q	R	S	T	U	X	Z
PE-1625	70	-	-	26	24	12.5	44	5	-	12	12	48	12	37	29	13	26	52	41.5	14.5
PE-1640	99	-	-	60	24	26.5	44	5	-	8	12	48	10	37	29	13	26	52	63	15
PE-1680	155	-	-	60	24	54.5	44	5	5	8	12	48	10	37	29	13	26	52	99	15
PE-16150	263	-	200	60	24	108.5	44	5	5	8	12	48	10	37	29	13	26	52	172	15
PE-16200	337	280	200	60	24	145.5	44	5	5	8	12	48	10	37	29	13	26	52	221	15



Fissaggio della pinza

La pinza PE-16... può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

Per fissare la pinza utilizzare i due fori calibrati (A) ed almeno quattro fori filettati (B) presenti sulla base inferiore del corpo pinza.

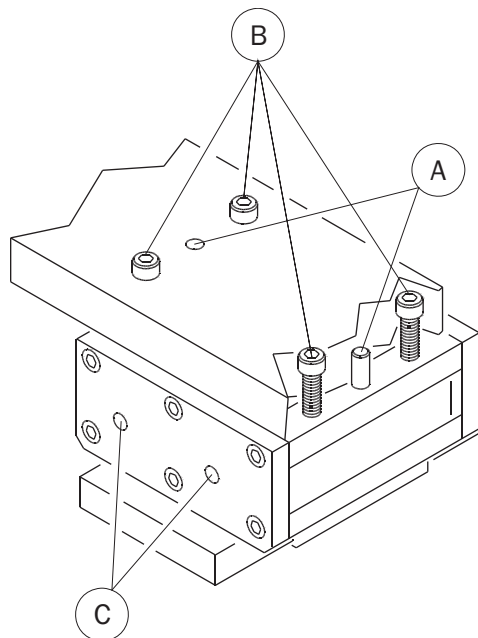
Lasciare lo spazio necessario per i raccordi dell'aria (C) e per il posizionamento dei sensori nelle cave laterali.

Fixage de la pince

La pince PE-16... peut être montée en position fixe ou sur des pièces mobiles. Dans ce cas il faut considérer la force d'inertie à laquelle la pince et sa charge sont soumises.

Le fixage est obtenu avec deux trous calibrés (A) et quatre trous taraudés (B) placés sur la base inférieure du corps.

Laisser un espace nécessaire pour les raccords de l'air (C) et les capteurs.

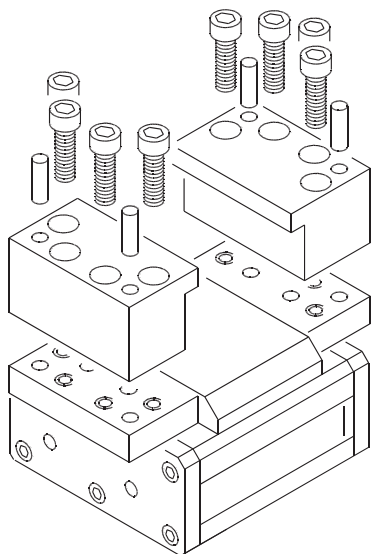


		PE-16...
A	Fori calibrati Dowel pin holes	Ø5H8x5 mm
B	Fori filettati Threaded holes	M5x5 mm
C	Fori filettati per raccordi aria Threaded holes for air fittings	M5

Fissaggio delle estremità di presa

Costruire le dita di presa il più possibile corte e leggere.

Fissarle su ciascuna griffa utilizzando almeno due viti e due spine di centraggio.

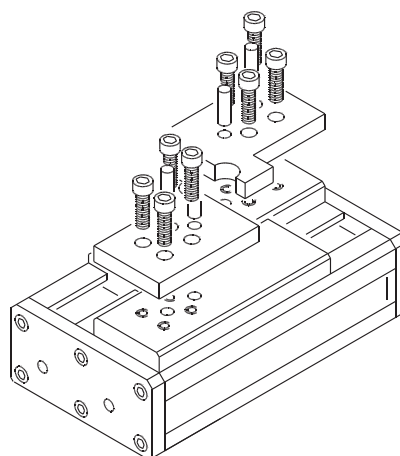


	PE-1610
Fori calibrati Dowel pin holes	Ø4H8x4 mm
Fori filettati Threaded holes	M4x4 mm

Gripping tool fastening

The gripping tools must be as short and light as possible.

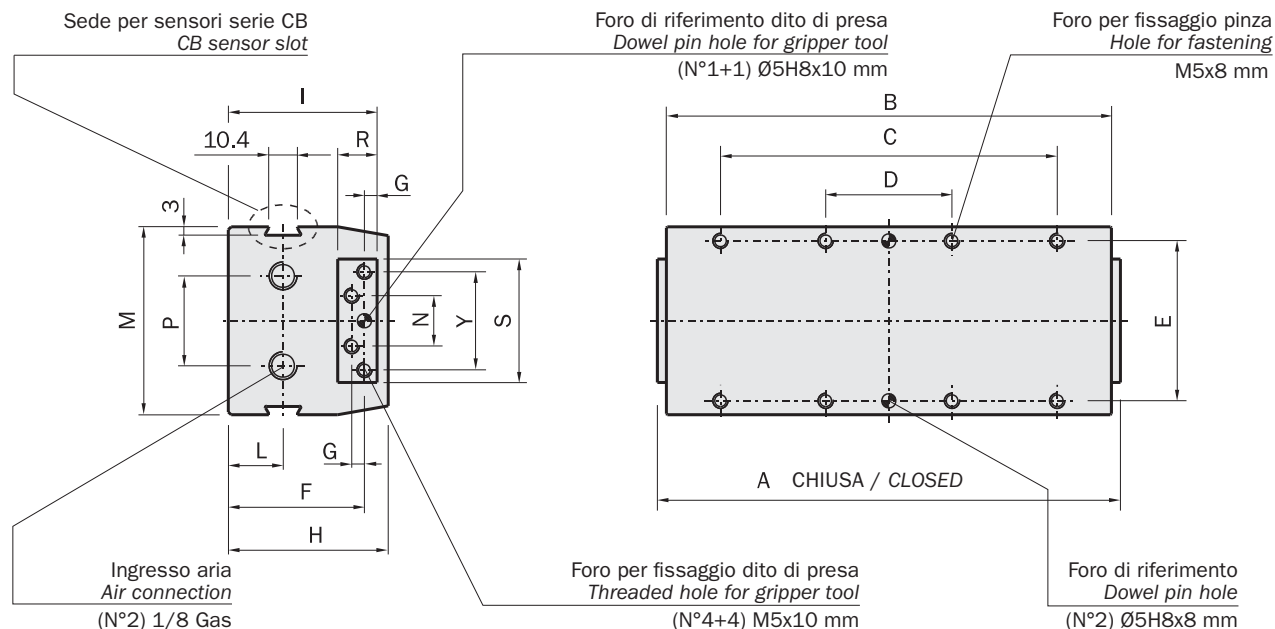
They must be mounted using at least two screws and two dowel pins per jaw.



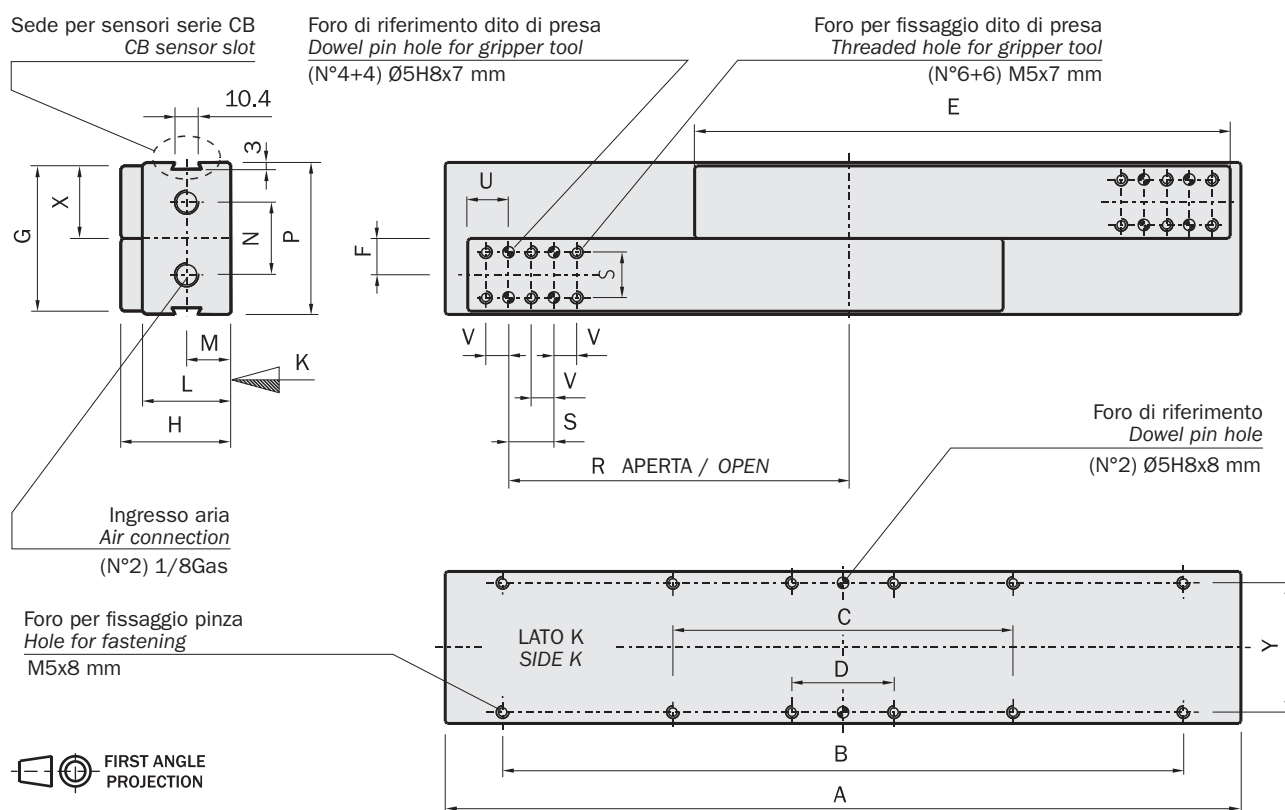
	PE-1625/40/80/150/200
Fori calibrati Dowel pin holes	Ø4H8x5 mm
Fori filettati Threaded holes	M4x4 mm

Dimensioni (mm) / Dimensions (mm)

	A	B	C	D	E ± 0.02	F	G ± 0.02	H	I	L	M	N	P	Y	R -0.05	S -0.05
PE-2520	90	83.6	-	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44
PE-2540	130	123.6	-	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44
PE-2560	165	158.6	120	45	57	48.5	4.5	57	53	19.5	67	18	32	35	14	44



	A	B	C	D	E	F	G	H	L	M	N	P	Y ± 0.02	R	S ± 0.02	U	X	V
PE-25100	200.6	-	150	45	136	16	64	48.5	39	19.5	32	67	57	75	20	18	32	10
PE-25200	350.6	300	150	45	236	16	64	48.5	39	19.5	32	67	57	150	20	18	32	10



Fissaggio della pinza

La pinza PE-25... può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

Per fissare la pinza utilizzare i due fori calibrati (A) ed almeno quattro fori filettati (B) presenti sulla base inferiore del corpo pinza.

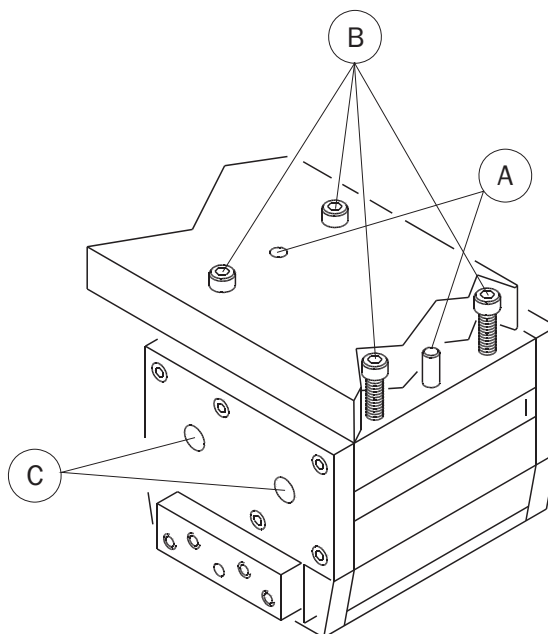
Lasciare lo spazio necessario per i raccordi dell'aria (C) e per il posizionamento dei sensori nelle cave laterali.

Gripper fastening

The gripper PE-25... can be fastened to a static or moving part. When on a moving part, you must pay attention to the forces created by inertia on the gripper and its load.

To fasten the gripper, use the two dowel pin holes (A) and at least four threaded holes (B) on the base of the gripper. Allow room to mount the air fittings (C) and the sensors.

		PE-25...
A	Fori calibrati Dowel pin holes	Ø5H8x8 mm
B	Fori filettati Threaded holes	M5x8 mm
C	Fori filettati per raccordi aria Threaded holes for air fittings	G1/8



Fissaggio delle estremità di presa

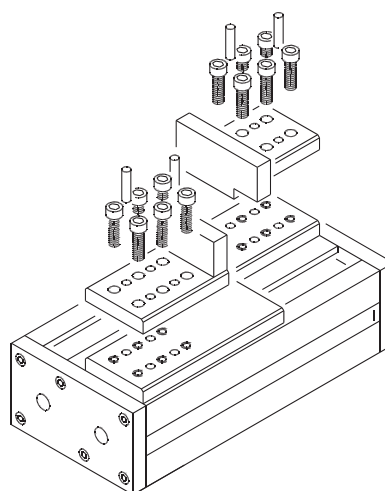
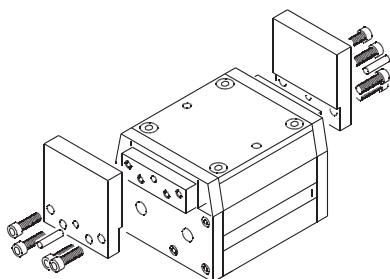
Costruire le dita di presa il più possibile corte e leggere.

Fissarle su ciascuna griffa utilizzando almeno due viti e due spine di centraggio.

Gripping tool fastening

The gripping tools must be as short and light as possible.

They must be mounted using at least two screws and two dowel pins per jaw.

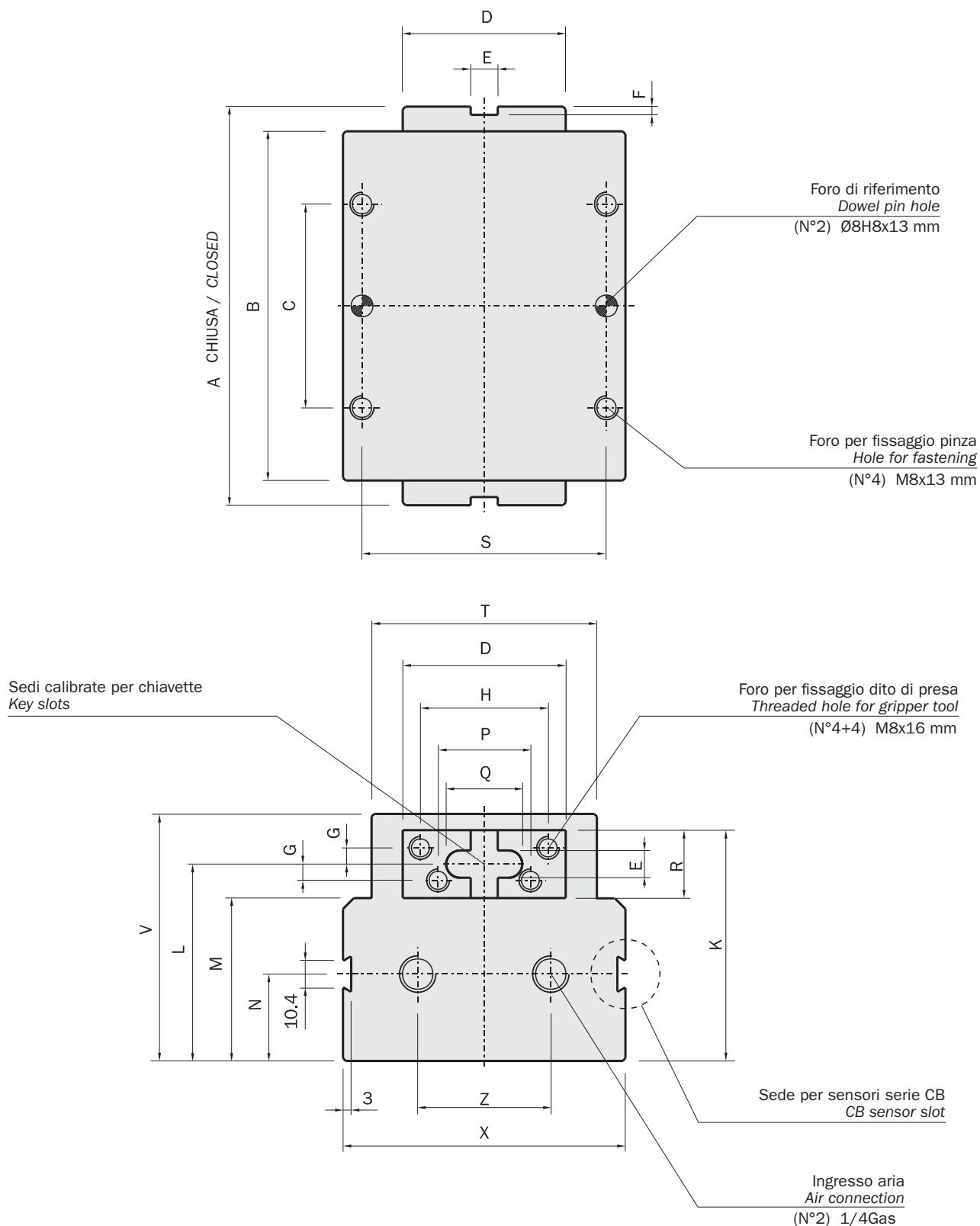


	PE-2520/2540/2560
Fori calibrati Dowel pin holes	Ø5H8x10 mm
Fori filettati Threaded holes	M5x10 mm

	PE-25100/25200
Fori calibrati Dowel pin holes	Ø5H8x7 mm
Fori filettati Threaded holes	M5x7 mm

Dimensioni (mm) / Dimensions (mm)

	A	B	C	D -0.05	E +0.05	F	G	H	L	M	N	P	Q	R -0.05	S ±0.02	T	V	X	K	Z
PE-4520	110	100.6	50	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4540	140	128.6	75	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4560	170	160.6	90	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49
PE-4580	210	200.6	90	60	10	3	6	47	72.5	60	32	34	28	25	90	83	91	104	85	49



Fissaggio della pinza

La pinza PE-45... può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

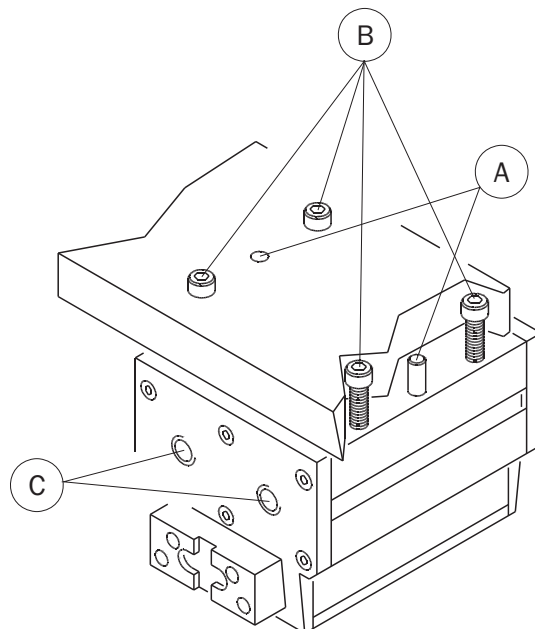
Per fissare la pinza utilizzare i due fori calibrati (A) ed almeno quattro fori filettati (B) presenti sulla base inferiore del corpo pinza.

Lasciare lo spazio necessario per i raccordi dell'aria (C) e per il posizionamento dei sensori nelle cave laterali.

Gripper fastening

The gripper PE-45... can be fastened to a static or moving part. When on a moving part, you must pay attention to the forces created by inertia on the gripper and its load.

To fasten the gripper, use the two dowel pin holes (A) and at least four threaded holes (B) on the base of the gripper. Allow room to mount the air fittings (C) and the sensors.



		PE-45...
A	Fori calibrati Dowel pin holes	Ø8H8x13 mm
B	Fori filettati Threaded holes	M8x13 mm
C	Fori filettati per raccordi aria Threaded holes for air fittings	G1/4

Fissaggio delle estremità di presa

Costruire le dita di presa il più possibile corte e leggere.

Fissarle su ciascuna griffa utilizzando almeno due viti delle 4 viti.

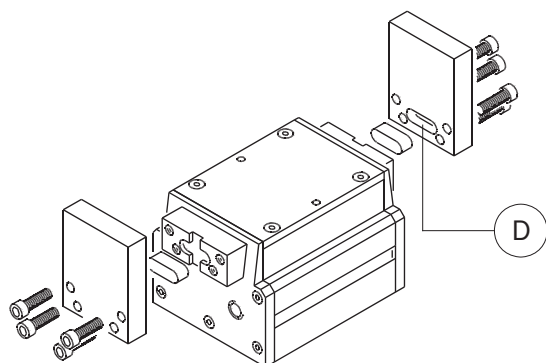
Per il centraggio di precisione posizionare le linguette nelle sedi sulle griffe.

Gripping tool fastening

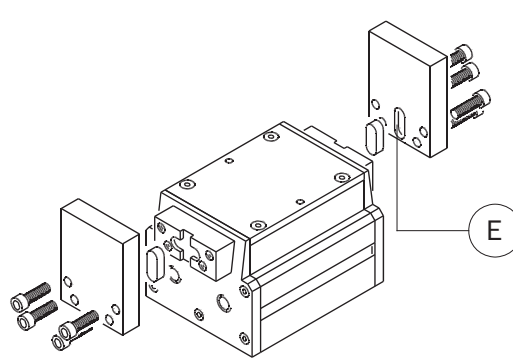
The gripping tools must be as short and light as possible.

They must be mounted using at least two of four screws.

They must be centered using the key-slots on the jaws.



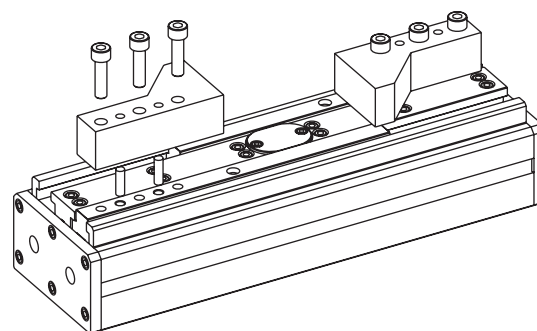
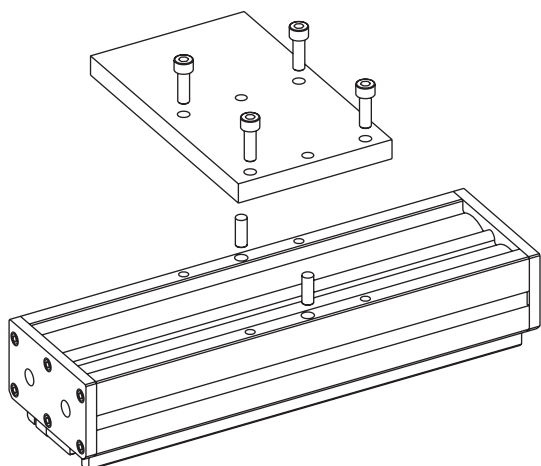
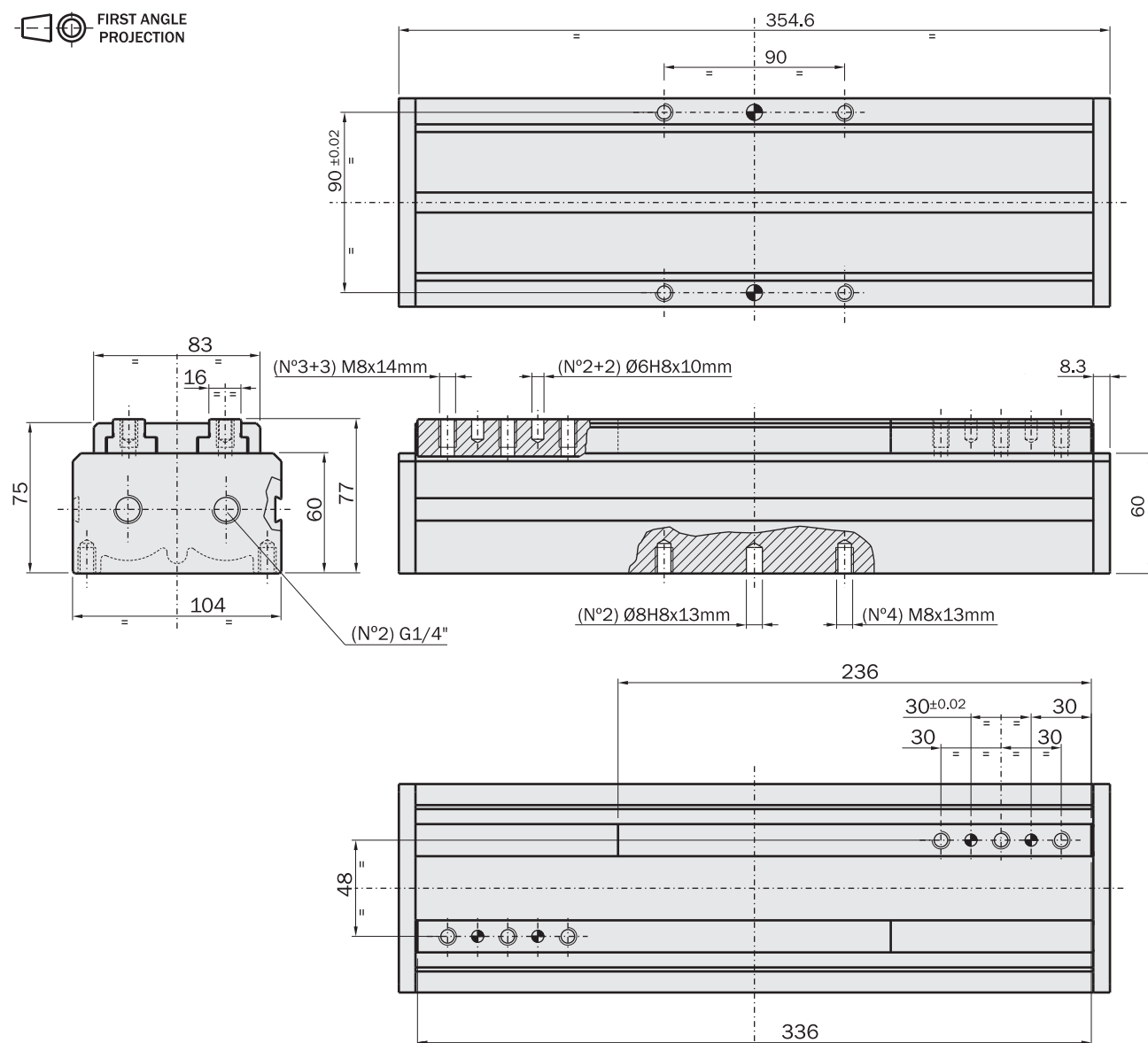
Sede linguetta D Key-slot D	10 ^{+0.05} x 28 x 3 mm
Fori filettati Threaded holes	M8x16 mm



Sede linguetta E Key-slot E	10 ^{+0.05} x 25 x 3 mm
Fori filettati Threaded holes	M8x16 mm

Dimensioni (mm) / Dimensions (mm)

PE-45200



Carichi di sicurezza

Consultare la tabella per i carichi massimi ammissibili. Forze e coppie eccessive possono danneggiare la pinza e causare difficoltà di funzionamento compromettendo la sicurezza dell'operatore.

F_s , $M_x s$, $M_y s$, $M_z s$, sono i carichi massimi ammissibili in condizioni statiche, cioè con le griffe ferme.

F_d , $M_x d$, $M_y d$, $M_z d$, sono i carichi massimi ammissibili in condizioni dinamiche, cioè con le griffe in movimento.

Inoltre sono riportate le masse ammissibili (m) per ogni dito di presa in funzione del tempo di apertura o chiusura. Usare i regolatori di flusso (non forniti) per ottenere la velocità desiderata.

Safety loads

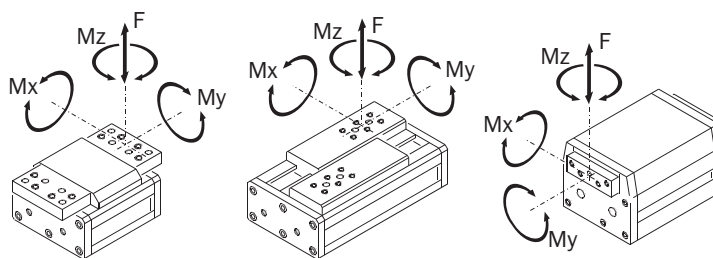
Check the table for maximum permitted loads.

Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.

F_s , $M_x s$, $M_y s$, $M_z s$, are maximum permitted static loads. Static means motionless jaws.

F_d , $M_x d$, $M_y d$, $M_z d$, are maximum permitted dynamic loads. Dynamic means running jaws.

The following tables show the specified maximum loads (m) on each gripping tool as function of closing or opening time. Use flow controllers (not supplied) to get the proper speed.



	PE-1610	PE-1625	PE-1640	PE-1680	PE-16150	PE-16200
F_s	48 N	166 N	166 N	163 N	163 N	163 N
$M_x s$	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
$M_y s$	2.4 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm	2.9 Nm
$M_z s$	2.4 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm	5.6 Nm
F_d	0.48 N	1.7 N	1.7 N	1.6 N	1.6 N	1.6 N
$M_x d$	2.4 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm	5.6 Ncm
$M_y d$	2.4 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm	2.9 Ncm
$M_z d$	2.4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm	4 Ncm
m 0.8s	-	166 g	166 g	163 g	163 g	163 g
m 0.5s	-	108 g	108 g	106 g	106 g	106 g
m 0.3s	48 g	93 g	93 g	91 g	-	-
m 0.2s	31 g	83 g	83 g	81 g	-	-
m 0.1s	24 g	60 g	60 g	-	-	-

	PE-2520	PE-2540	PE-2560	PE-25100	PE-25200	
F_s	326 N	326 N	326 N	300 N	300 N	
$M_x s$	14 Nm	15 Nm	18 Nm	21 Nm	21 Nm	
$M_y s$	5 Nm	5 Nm	5 Nm	6 Nm	6 Nm	
$M_z s$	14 Nm	15 Nm	18 Nm	21 Nm	21 Nm	
F_d	3.3 N	3.3 N	3.3 N	3 N	3 N	
$M_x d$	14 Ncm	15 Ncm	18 Ncm	21 Ncm	21 Ncm	
$M_y d$	5 Ncm	5 Ncm	5 Ncm	6 Ncm	6 Ncm	
$M_z d$	14 Ncm	15 Ncm	18 Ncm	21 Ncm	21 Ncm	
m 0.5s	-	-	-	300 g	300 g	
m 0.3s	326 g	326 g	326 g	195 g	195 g	
m 0.2s	212 g	212 g	212 g	150 g	150 g	
m 0.1s	163 g	163 g	163 g	105 g	-	

	PE-4520	PE-4540	PE-4560	PE-4580	PE-45200	
F_s	730 N	730 N	730 N	730 N	700 N	
$M_x s$	69 Nm	86 Nm	88 Nm	88 Nm	110 Nm	
$M_y s$	41 Nm	41 Nm	41 Nm	41 Nm	40 Nm	
$M_z s$	69 Nm	86 Nm	88 Nm	88 Nm	110 Nm	
F_d	7 N	7 N	7 N	7 N	14 N	
$M_x d$	69 Ncm	86 Ncm	88 Ncm	88 Ncm	110 Ncm	
$M_y d$	41 Ncm	41 Ncm	41 Ncm	41 Ncm	80 Ncm	
$M_z d$	69 Ncm	86 Ncm	88 Ncm	88 Ncm	110 Ncm	
m 0.5s	-	-	-	700 g	1400 g	
m 0.4s	-	700 g	700 g	450 g	1000 g	
m 0.3s	700 g	450 g	450 g	350 g	700 g	
m 0.2s	450 g	350 g	350 g	300 g	500 g	
m 0.1s	350 g	300 g	300 g	-	-	

Sensori

Il rilevamento della posizione di lavoro è affidato a uno o più sensori magnetici di prossimità (opzionali), che rilevano la posizione attraverso i magneti sui pistoni. Quindi, per un corretto funzionamento, è da evitare l'impiego in presenza di forti campi magnetici od in prossimità di grosse masse di materiale ferromagnetico.

Per il montaggio:

- 1- Inserire il dado quadrato (A) nella propria sede sull'adattatore "S 00".
- 2- Infilare l'adattatore nella guida sulla pinza.
- 3- Calzare il sensore sull'adattatore.
- 4- Fare scorrere nella guida fino a raggiungere la posizione di lavoro desiderata (led acceso).
- 5- Bloccare con la vite (B), facendo attenzione a non serrarla eccessivamente.

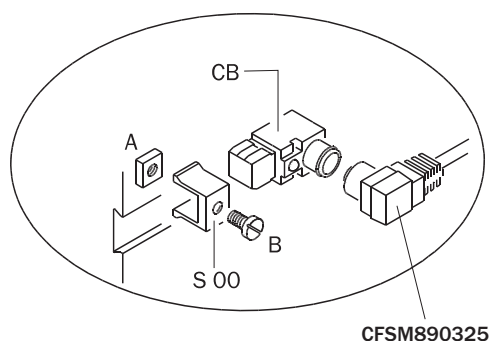
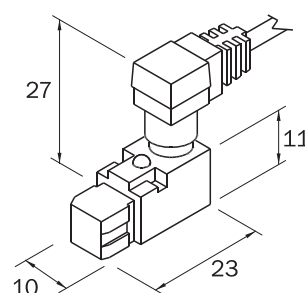
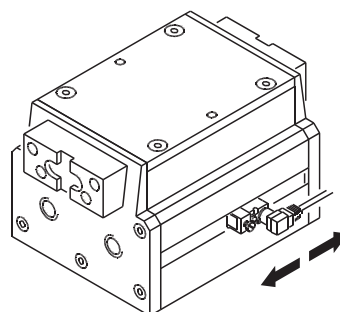
Sensors

The operating position can be checked by magnetic sensors (optional), that detect the magnets on the pistons inside. Therefore a near big mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.

For mounting:

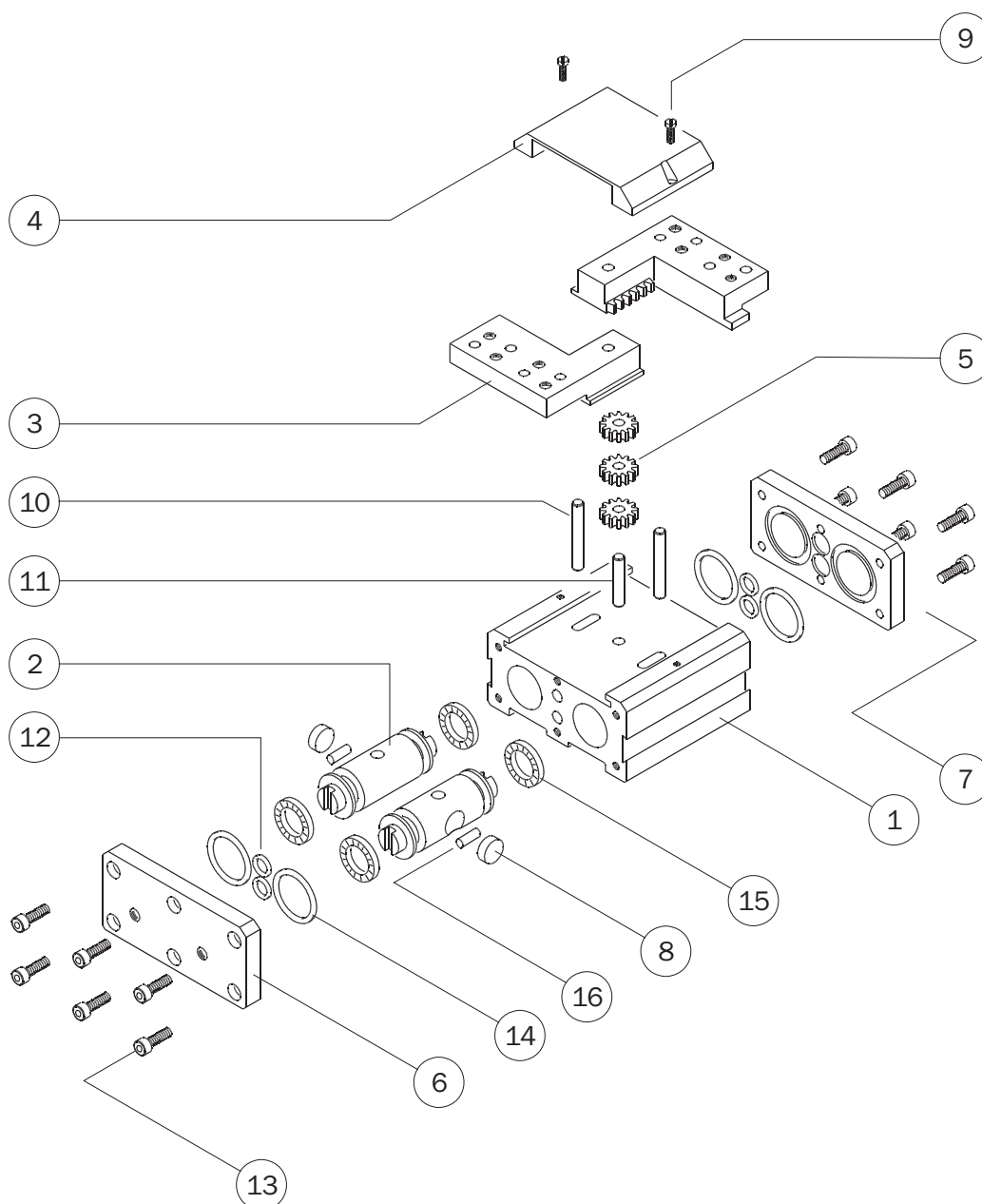
- 1- Insert the square nut (A) in its seat on the "S 00" bracket.
- 2- Insert the bracket into the groove.
- 3- Insert the sensor into the bracket.
- 4- Run the sensor until the lamp is on.
- 5- Lock the bracket with the screw (B) but don't over-tighten it.

	CB3N2-G	CB3M2-G
Tensione di alimentazione (DC) DC power supply	6 ÷ max 30 V	
Tipo sensore Sensor type	PNP	NPN
Massima corrente Max current	250 mA	
Potenza Power	6 W	
Temperatura di esercizio Operating temperature	-10° ÷ +70° C.	
Tempo di eccitazione Response time "ON"	0.8 µs	
Tempo di diseccitazione Response time "OFF"	0.3 µs	
Valore di eccitazione Operate point	40 GAUSS	
Valore di diseccitazione Dropout point	35 GAUSS	
Vita elettrica Life time	10 ⁹ IMP	
Resistenza di contatto Contact resistance	-	
Resistenza agli urti Max admitted shock	30 G	
Grado di protezione Environmental protection degree	IP 67	
Caduta di tensione diretta Voltage drop	1 V	



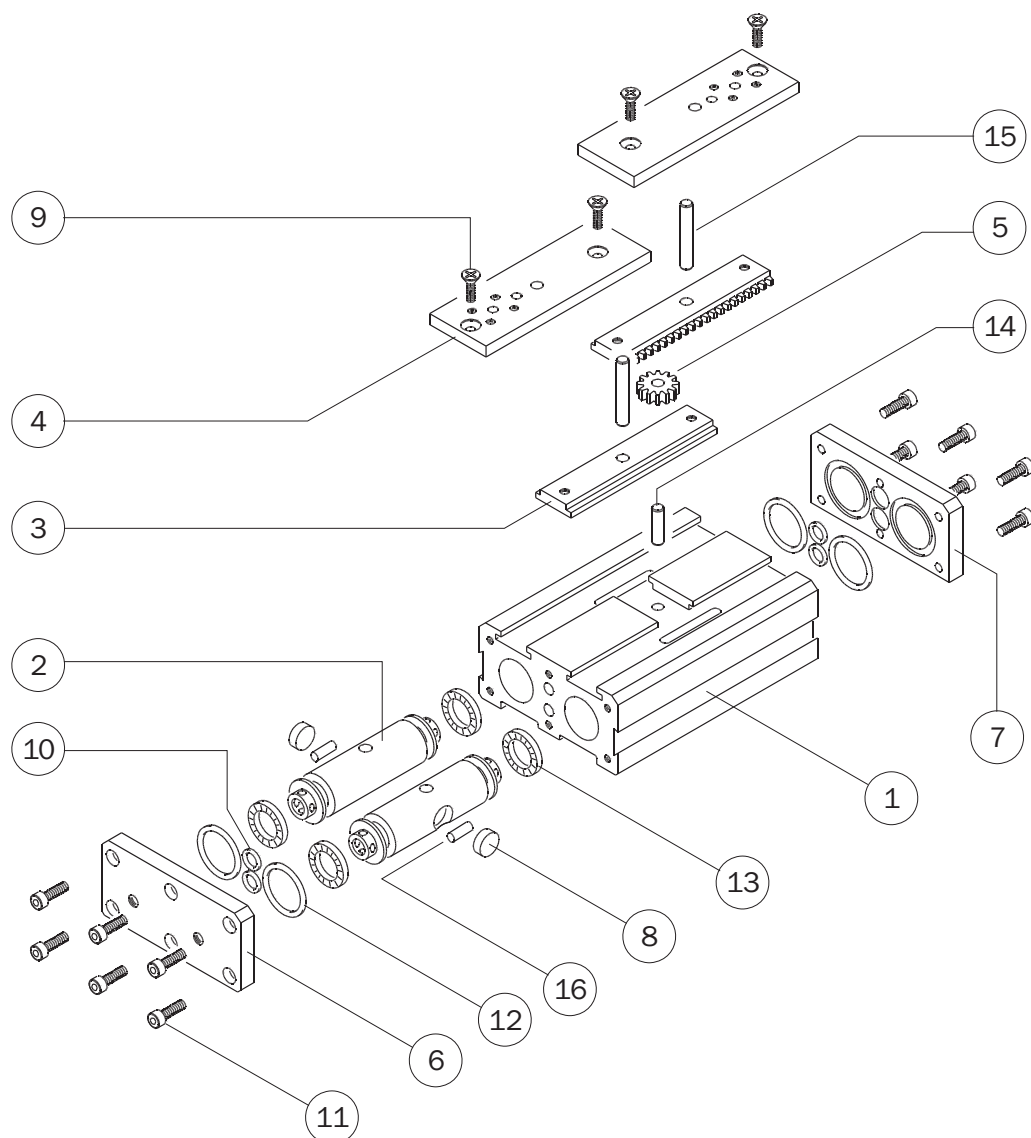
CFSM890325

Elenco delle parti / Parts list



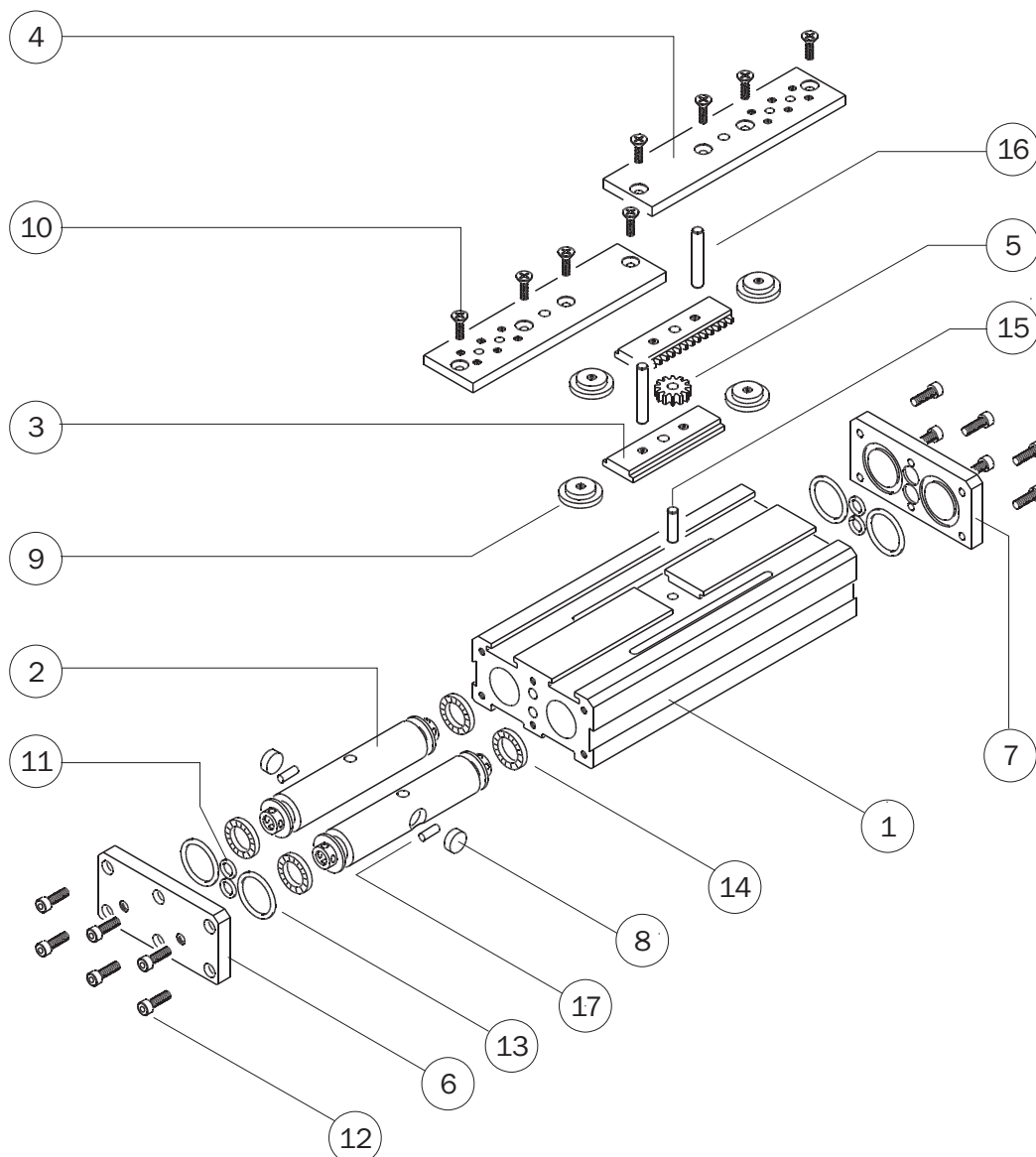
		PE-1610		
1	Corpo pinza	PE-1610-01	Gripper housing	1
2	Pistone	PE-1610-02	Piston	2
3	Griffa	PE-1610-03	Jaw	3
4	Protezione	PE-1610-04	Protection	4
5	Pignone	PE-1640-06	Pinion	5
6	Testata aperta	PE-1680-05AL	Open end plate	6
7	Testata chiusa	PE-1680-05ALC	Closed end plate	7
8	Inserto portamagnete	PE-1610-05	Magnet housing	8
9	Vite	VITE-056 (M2x5 mm DIN84A INOX A2)	Screw	9
10	Spina di riferimento	SPINA-012 (Ø4x20 mm DIN6325)	Dowel pin	10
11	Spina di riferimento	SPINA-019 (Ø4x14 mm DIN6325)	Dowel pin	11
12	O-Ring	GUAR-029 (Ø1.78x4.48)	O-Ring	12
13	Vite	VITE-031 (M3x8 mm DIN912 INOX A2)	Screw	13
14	O-Ring	GUAR-023 (Ø1.78x15.6)	O-Ring	14
15	Guarnizione dinamica	GUAR-002P (16x9x2.5)	Dynamic gasket	15
16	Magnete	PAR-06-7	Magnet	16

Elenco delle parti / Part list



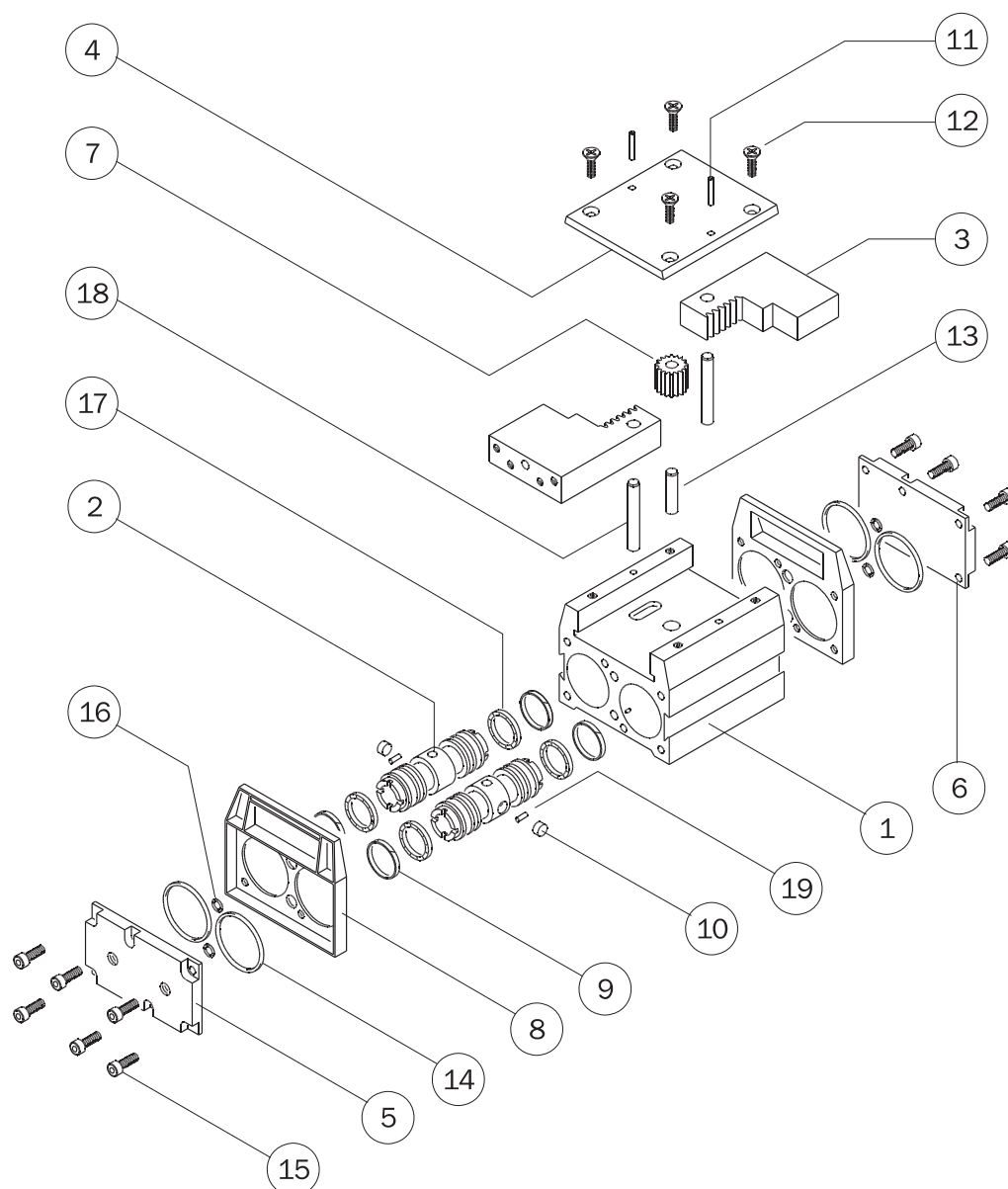
		PE-1625	PE-1640		
1	Corpo pinza	PE-1625-01	PE-1640-01	Gripper housing	1
2	Pistone	PE-1625-02	PE-1640-02	Piston	2
3	Cremagliera	PE-1625-03	PE-1640-03	Rack	3
4	Griffa	PE-1625-04	PE-1640-04	Jaw	4
5	Pignone	PE-16150-06		Pinion	5
6	Testata aperta	PE-1680-05AL		Open end plate	6
7	Testata chiusa	PE-1680-05ALC		Closed end plate	7
8	Inserto portamagnete	PE-1610-05		Magnet housing	8
9	Vite	VITE-012 (M3x10 mm DIN965A INOX A2)		Screw	9
10	O-Ring	GUAR-029 (Ø1.78x4.48)		O-Ring	10
11	Vite	VITE-031 (M3x8 mm DIN912 INOX A2)		Screw	11
12	O-Ring	GUAR-023 (Ø1.78x15.6)		O-Ring	12
13	Guarnizione dinamica	GUAR-002P (16x9x2.5)		Dynamic gasket	13
14	Spina di riferimento	SPINA-034 (Ø4x8 mm DIN6325)		Dowel pin	14
15	Spina di riferimento	SPINA-033 (Ø4x25 mm DIN6325)		Dowel pin	15
16	Magnete	PAR-06-7		Magnet	16

Elenco delle parti / Part list



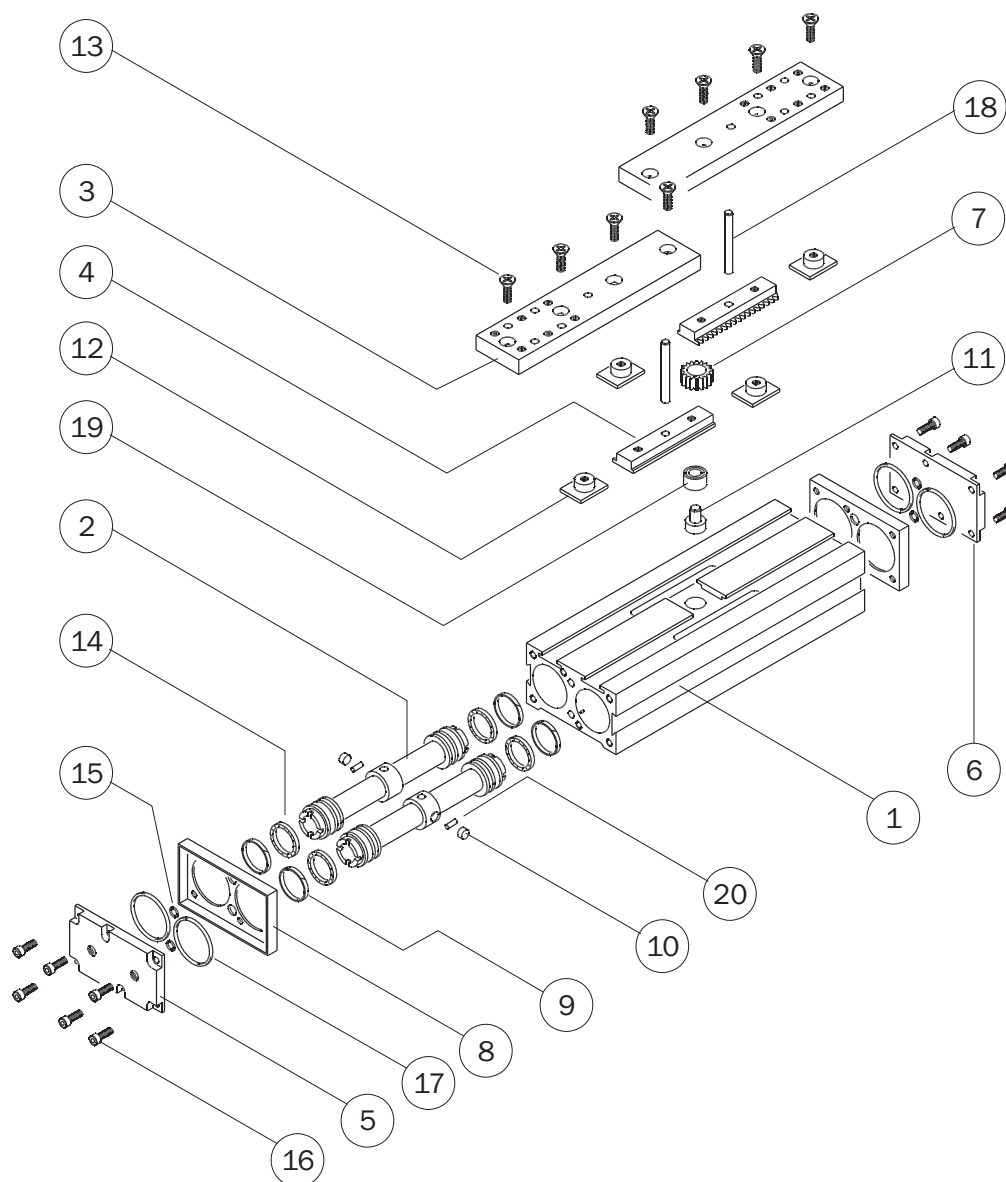
		PE-1680	PE-16150	PE-16200		
1	Corpo pinza	PE-1680-01	PE-16150-01	PE-16200-01	Gripper housing	1
2	Pistone	PE-1680-02	PE-16150-02	PE-16200-02	Piston	2
3	Cremagliera	PE-1680-03	PE-16150-03	PE-16200-03	Rack	3
4	Griffa	PE-1680-04	PE-16150-04	PE-16200-04	Jaw	4
5	Pignone		PE-16150-06		Pinion	5
6	Testata aperta		PE-1680-05AL		Open end plate	6
7	Testata chiusa		PE-1680-05ALC		Closed end plate	7
8	Inserto portamagnete		PE-1610-05		Magnet housing	8
9	Pattino guida		PE-1680-08		Guide profile	9
10	Vite		VITE-012 (M3x10 mm DIN965A INOX A2)		Screw	10
11	O-Ring		GUAR-029 (Ø1.78x4.48)		O-Ring	11
12	Vite		VITE-031 (M3x8 mm DIN912 INOX A2)		Screw	12
13	O-Ring		GUAR-023 (Ø1.78x15.6)		O-Ring	13
14	Guarnizione dinamica		GUAR-002P (16x9x2.5)		Dynamic gasket	14
15	Spina di riferimento		SPINA-034 (Ø4x8 mm DIN6325)		Dowel pin	15
16	Spina di riferimento		SPINA-033 (Ø4x25 mm DIN6325)		Dowel pin	16
17	Magnete		PAR-06-7		Magnet	17

Elenco delle parti / Part list



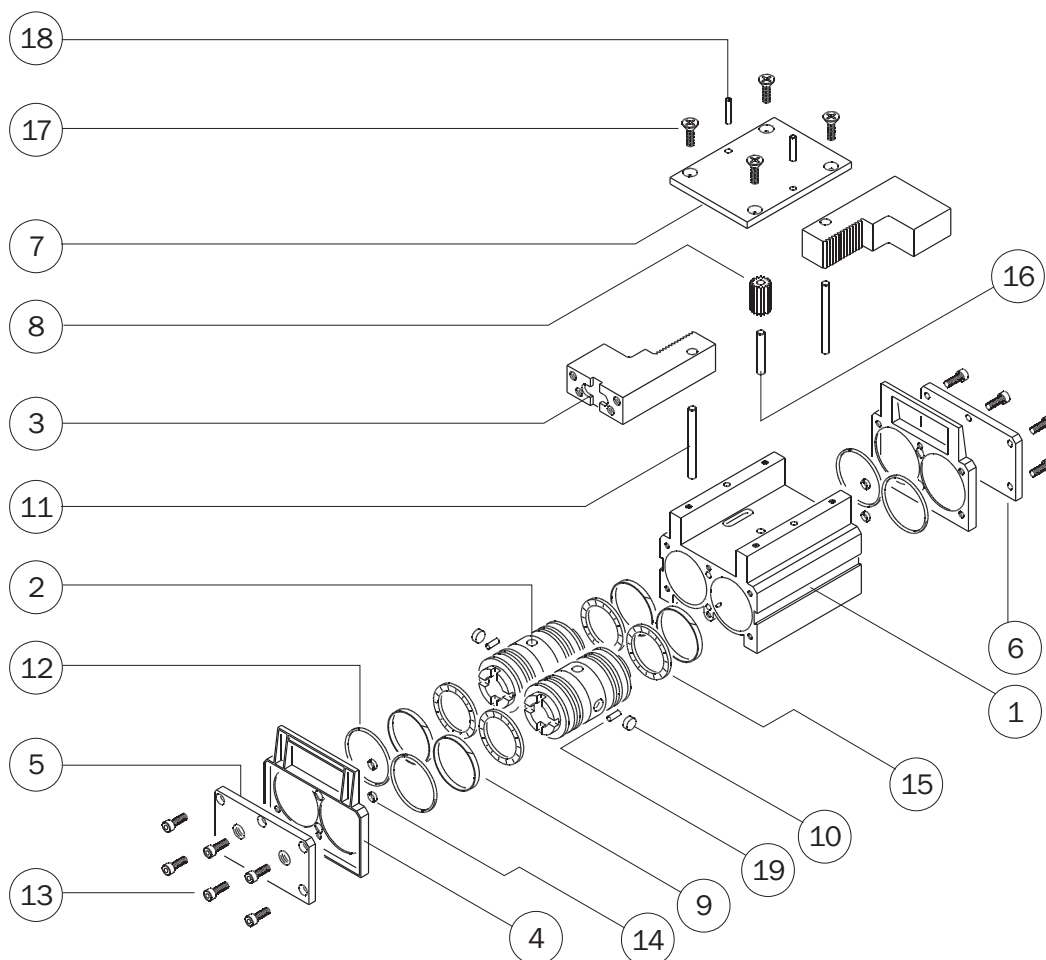
		PE-2520	PE-2540	PE-2560		
1	Corpo pinza	PE-2520-01	PE-2540-01	PE-2560-01	Gripper housing	1
2	Pistone	PE-2520-02	PE-2540-02	PE-2560-02	Piston	2
3	Griffa	PE-2520-03	PE-2540-03	PE-2560-03	Jaw	3
4	Copertura	PE-2520-04	PE-2540-04	PE-2560-04	Cover plate	4
5	Testata aperta	PE-2520-05A			Open end plate	5
6	Testata chiusa	PE-2520-05C			Closed end plate	6
7	Pignone	PE-2520-07			Pinion	7
8	Profilo	PE-2520-08			Seal profile	8
9	Fascia di guida	PE-25100-08			Piston guidance ring	9
10	Inserto portamagnete	PE-2520-09			Magnet housing	10
11	Spina di riferimento	SPINA-016 (Ø4x10 mm DIN6325)			Dowel pin	11
12	Vite	VITE-390 (M4x8 mm DIN84A INOX A2)			Screw	12
13	Spina di riferimento	SPINA-018 (Ø8x20 mm DIN5402)			Dowel pin	13
14	O-Ring	GUAR-030 (Ø1.78x25.12)			O-Ring	14
15	Vite	VITE-020 (M4x10 mm DIN912 INOX A2)			Screw	15
16	O-Ring	GUAR-029 (Ø1.78x4.48)			O-Ring	16
17	Guarnizione dinamica	GUAR-003M (25x18x2.4)			Dynamic gasket	17
18	Spina di riferimento	SPINA-032 (Ø6x40 mm DIN6325)			Dowel pin	18
19	Magnete	PAR-06-7			Magnet	19

Elenco delle parti / Part list



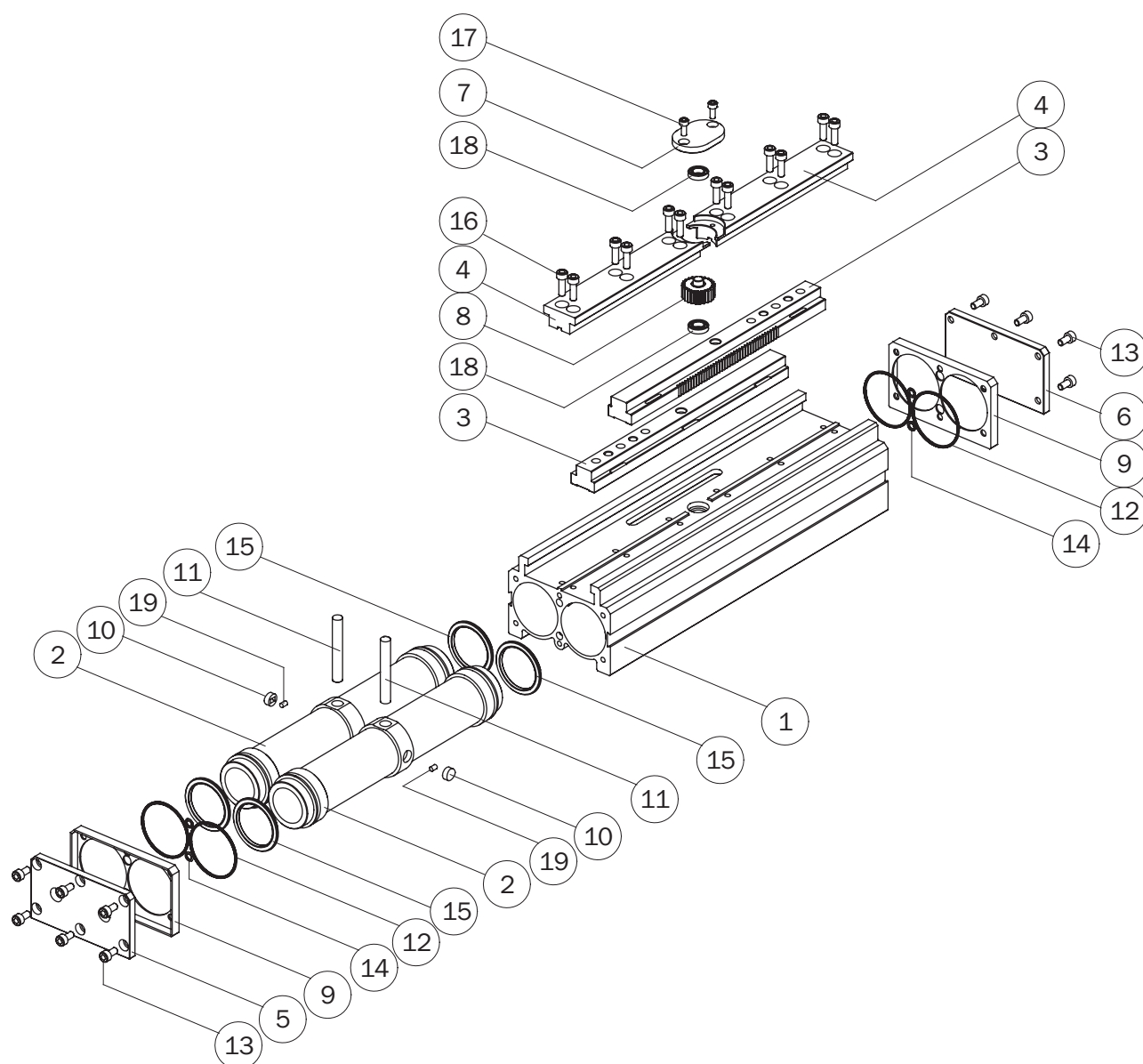
		PE-25100	PE-25200		
1	Corpo pinza	PE-25100-01	PE-25200-01	Gripper housing	1
2	Pistone	PE-25100-02	PE-25200-02	Piston	2
3	Griffa	PE-25100-03	PE-25200-03	Jaw	3
4	Cremagliera	PE-25100-07	PE-25200-07	Rack	4
5	Testata aperta	PE-2520-05A		Open end plate	5
6	Testata chiusa	PE-2520-05C		Closed end plate	6
7	Pignone	PE-25100-05		Pinion	7
8	Profilo	PS-0025-P09		Seal profile	8
9	Fascia di guida	PE-25100-08		Piston guidance ring	9
10	Inserto portamagnete	PE-2520-09		Magnet housing	10
11	Perno	PE-25100-10		Pin	11
12	Pattino guida	PE-25100-09		Guide profile	12
13	Vite	VITE-030 (M5x12 mm DIN965 INOX A2)		Screw	13
14	Guarnizione dinamica	GUAR-003M (25x18x2.4)		Dynamic gasket	14
15	O-Ring	GUAR-029 (Ø1.78x4.48)		O-Ring	15
16	Vite	VITE-020 (M4x10 mm DIN912 INOX A2)		Screw	16
17	O-Ring	GUAR-030 (Ø1.78x25.12)		O-Ring	17
18	Spina di riferimento	SPINA-030 (Ø6x36 mm DIN6325)		Dowel pin	18
19	Cuscinetto radiale	CUSC-045 (Ø3x10x4)		Radial ball bushing	19
20	Magnete	PAR-06-7		Magnet	20

Elenco delle parti / Part list



		PE-4520	PE-4540	PE-4560	PE-4580		
1	Corpo pinza	PE-4520-01	PE-4540-01	PE-4560-01	PE-4580-01	Gripper housing	1
2	Pistone	PE-4520-02	PE-4540-02	PE-4560-02	PE-4580-02	Piston	2
3	Griffa	PE-4520-03	PE-4540-03	PE-4560-03	PE-4580-03	Jaw	3
4	Profilo	PE-4520-04				Seal profile	4
5	Testata aperta	PE-4520-05A				Open end plate	5
6	Testata chiusa	PE-4520-05A				Closed end plate	6
7	Copertura	PE-4520-06	PE-4540-04	PE-4560-04	PE-4580-04	Cover plate	7
8	Pignone	PE-4520-09				Pinion	8
9	Fascia di guida	PE-45120-08				Piston guidance ring	9
10	Inserto portamagnete	PE-4520-10				Magnet housing	10
11	Spina di riferimento	SPINA-029 (Ø8x40 mm DIN6325)				Dowel pin	11
12	O-Ring	GUAR-028 (Ø1.78x44.17)				O-Ring	12
13	Vite	VITE-027 (M5x10 mm DIN912 INOX A2)				Screw	13
14	O-Ring	GUAR-029 (Ø1.78x4.48)				O-Ring	14
15	Guarnizione dinamica	GUAR-026P (45x36x3)				Dynamic gasket	15
16	Spina di riferimento	SPINA-030 (Ø6x36 mm DIN6325)				Dowel pin	16
17	Vite	VITE-026 (M5x16 mm DIN965A INOX A2)				Screw	17
18	Spina di riferimento	SPINA-028 (Ø5x10 mm DIN6325)				Dowel pin	18
19	Magnete	PAR-06-7				Magnet	19

Elenco delle parti / Part list



		PE-45200		
1	Corpo pinza	PE-45200-01	Gripper housing	1
2	Pistone	PE-45200-02	Piston	2
3	Griffa	PE-45200-03	Jaw	3
4	Guida centrale	PE-45200-04	Central guidance	4
5	Testata aperta	PE-4520-05A	Open end plate	5
6	Testata chiusa	PE-4520-05C	Closed end plate	6
7	Piastra supporto cuscinetto	PE-45200-06	Bearing cover	7
8	Pignone	PE-45200-09	Pinion	8
9	Profilo	PS-0045-P09	Seal profil	9
10	Inserto portamagnete	PE-4520-10	Magnet housing	10
11	Spina di riferimento	SPINA-058 (Ø8x60 mm DIN6325)	Dowel pin	11
12	O-Ring	GUAR-028 (Ø1.78x44.17)	O-Ring	12
13	Vite	VITE-027 (M5x10 mm DIN912 INOX A2)	Screw	13
14	O-Ring	GUAR-029 (Ø1.78x4.48)	O-Ring	14
15	Guarnizione dinamica	GUAR-026P (45x36x3)	Dynamic gasket	15
16	Vite	VITE-015 (M5x16 mm DIN912 INOX A2)	Screw	16
17	Vite	VITE-020 (M4x10 mm DIN912 INOX A2)	Screw	17
18	Cuscinetto radiale	CUSC-011 (Ø8xØ16x4 ISB 618/B)	Ball bearing	18
19	Magnete	PAR-06-7	Magnet	19

Connessione pneumatica

La pinza si alimenta con aria compressa dai fori laterali (P e R) montandovi i raccordi dell'aria ed i relativi tubi (non forniti).

La pinza è azionata con aria compressa filtrata (5÷40 µm) non necessariamente lubrificata.

La scelta iniziale, lubrificata o non lubrificata, deve essere mantenuta per tutta la vita della pinza.

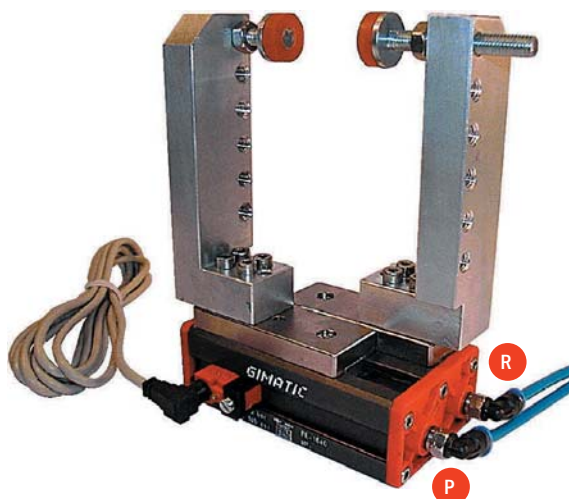
L'impianto pneumatico deve essere pressurizzato gradualmente, per evitare movimenti incontrollati.

Compressed air feeding

The compressed air feeding is accomplished on the lateral air ports (P and R) with fittings and hoses (not supplied).

The compressed air, must be filtered from 5 to 40 µm. Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



Circuito pneumatico

Possibili inconvenienti sul circuito di alimentazione dell'aria compressa:

- 1- Oscillazioni di pressione.
- 2- Riempimento pinza vuota all'avvio.
- 3- Improvvisa mancanza di pressione.
- 4- Velocità di azionamento eccessiva.

Accorgimenti per risolvere i problemi:

- 1- Serbatoio esterno (A).
- 2- Valvola di avviamento progressivo (B).
- 3- Valvole di sicurezza (C).
- 4- Regolatori di flusso (D).

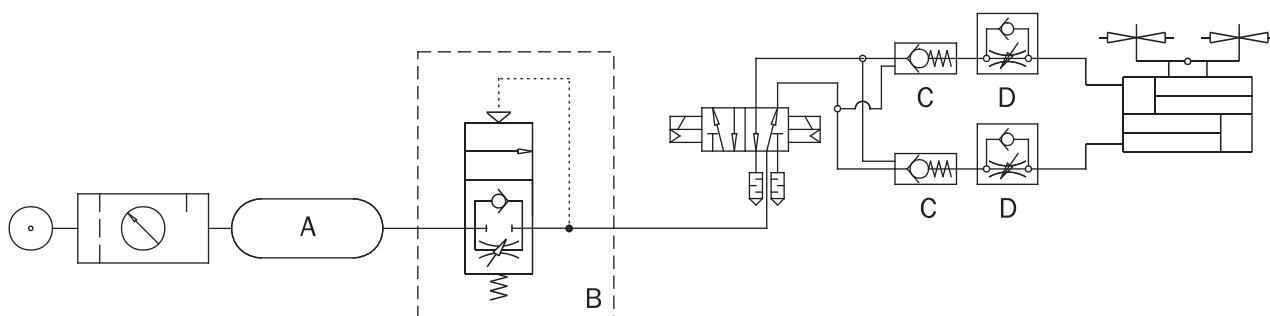
Pneumatic circuit

Possible problems on a compressed air circuit:

- 1- Pressure variation.
- 2- Pressurizing with empty cylinders.
- 3- Sudden pressure black-out.
- 4- Excessive speed of the jaws.

Possible solutions:

- 1- Compressed air storage (A).
- 2- Start-up valve (B).
- 3- Safety valve (C).
- 4- Flow controller (D).



Manutenzione

La pinza va ingrassata ogni 10 milioni di cicli con:

- Molykote DX (parti metalliche).
- Molykote PG75 (guarnizioni).

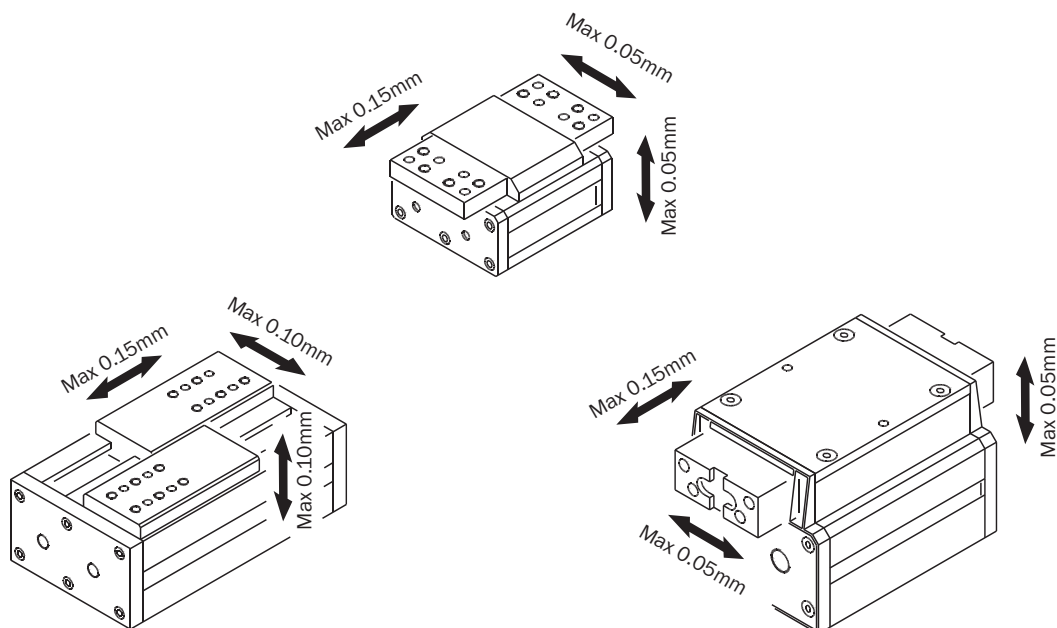
Il gioco delle griffe è indicato qui sotto.

Maintenance

Grease the gripper after 10 million cycles with:

- Molykote DX (metal on metal).
- Molykote PG75 (gaskets).

The figure below shows the jaw backlash.



Avvertenze

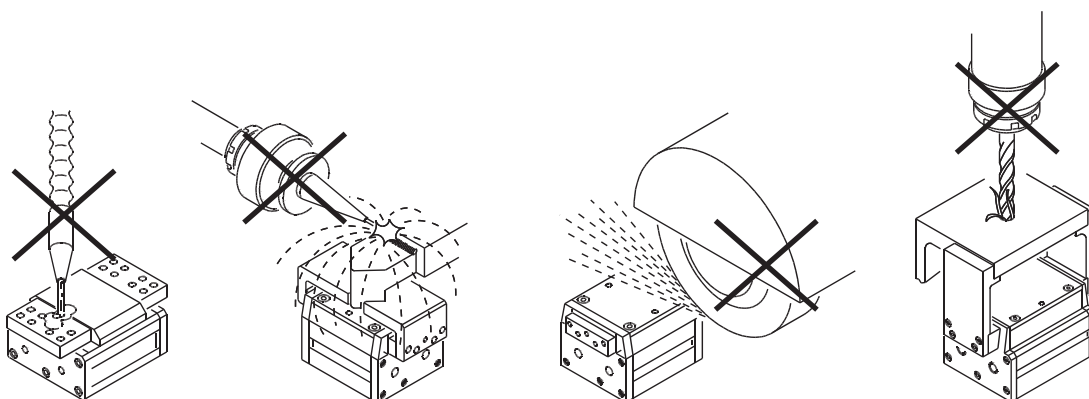
Evitare il contatto con sostanze corrosive, spruzzi di saldatura, polveri abrasive, che potrebbero danneggiare la funzionalità della pinza.

Per nessun motivo, persone od oggetti estranei devono entrare nel raggio d'azione della pinza.

La pinza non deve essere messa in servizio prima che la macchina di cui fa parte sia stata dichiarata conforme alle disposizioni di sicurezza vigenti.

Caution

Avoid the gripper coming into contact with the following media: coolants which cause corrosion, grinding dust or glowing sparks. Make sure that nobody can place his/her hand between the gripping tools and there are no objects in the path of the gripper. The gripper must not run before the whole machine, on which it is mounted, complies with the laws or safety norms of your country.



Pinza pneumatica a 2 griffe ad azione parallela autocentrante (serie DH)

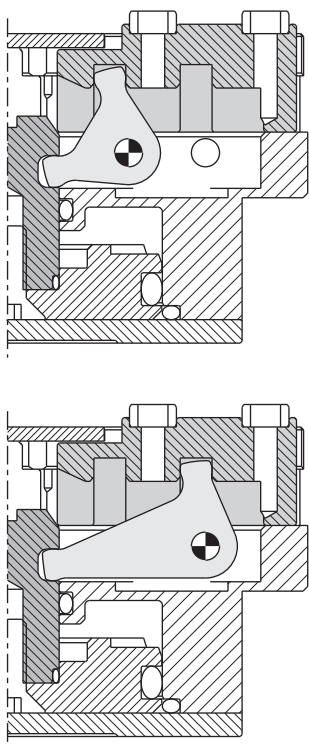
- Azionamento a doppio effetto, con molle opzionali (in chiusura o apertura).
- Corsa lunga o corsa corta (1).
- Possibilità di fissaggio frontale con viti passanti (2).
- Meccanismo di trasmissione ad alta efficienza (1).
- Sensori magnetici o induttivi opzionali (3).
- Grasso alimentare FDA-H1 e guarnizioni per alta temperatura (fino a 100°C.).

2-jaw self-centering pneumatic parallel gripper (series DH)

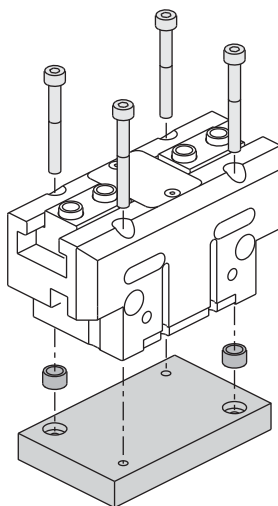
- Double acting with optional springs (normally closed or normally open).
- Long stroke or short stroke (1).
- Possibility of front fastening with through screws (2).
- High efficiency force transmission (1).
- Optional magnetic or inductive sensors (3).
- Food grade grease FDA-H1 and seals for high temperature (up to 100°C.).



[1]



[2]



[3]



[3]



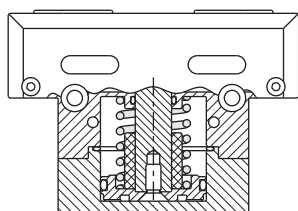
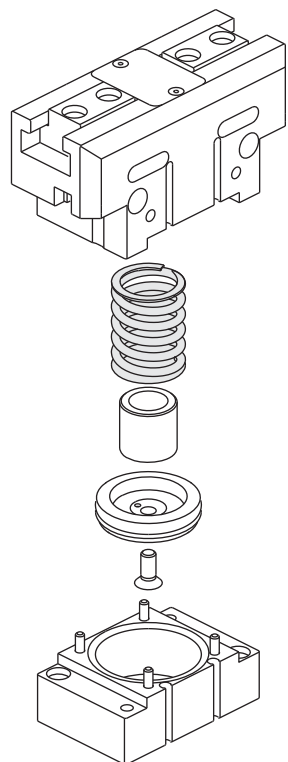
Molle opzionali

Tutte le pinze DH sono disponibili con o senza molla.
Le versioni a molla possono essere normalmente chiuse (NC) o normalmente aperte (NO).
In entrambi i casi è necessario un corpo addizionale e la pinza è più alta della versione senza molla.
Le molle sono calcolate per una vita superiore ai 10 milioni di cicli e forniscono, in assenza d'aria, una forza di ritenzione pari a circa un terzo della forza normale a 6bar.

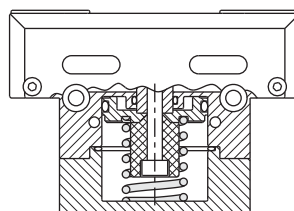
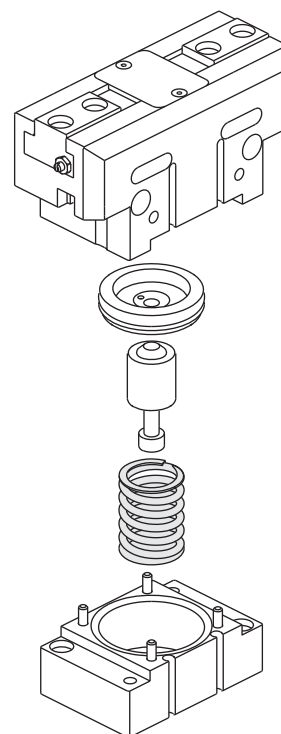
Optional springs

All DH grippers are available with or without spring.
The spring versions can be normally closed (NC) or normally open (NO).
In both cases an additional body is necessary and the gripper is taller than the version without spring.
The springs are designed for a life time higher than 10 million cycles and they provide a retention force, after a pressure black-out, about one third of the output force at 6bar.

DH...-NC

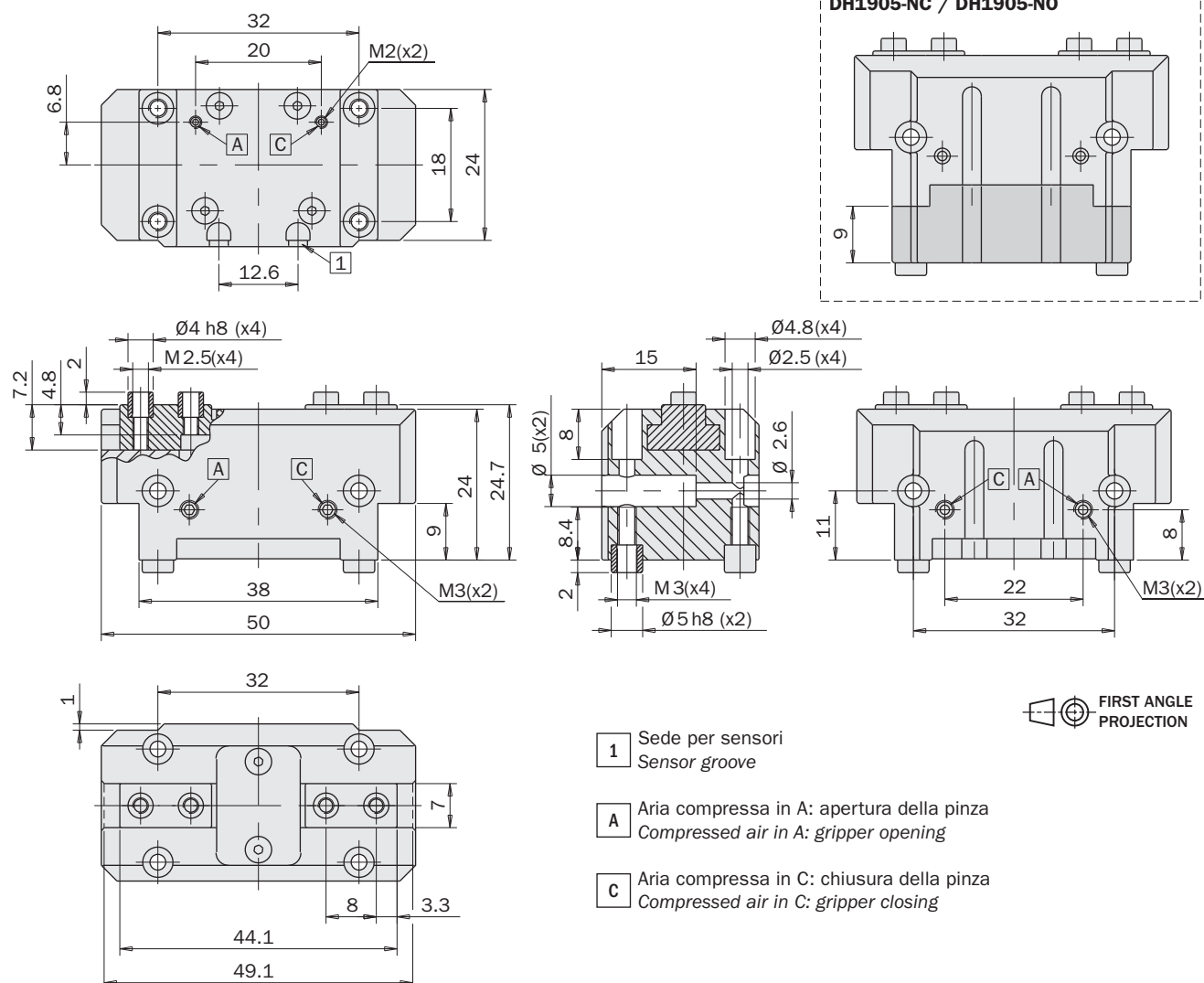


DH...-NO



	DH1905	DH1905-NC	DH1905-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air		
Pressione di esercizio Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.		
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	75N	43 ÷ 49N	101 ÷ 107N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	150N	86 ÷ 98N	202 ÷ 214N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	68N	94 ÷ 100N	36 ÷ 42N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	136N	188 ÷ 200N	72 ÷ 84N
Corsa totale Total stroke	±0.3mm	5mm	
Frequenza max funzionamento continuativo Maximum working frequency	3Hz		
Consumo d'aria per ciclo Cycle air consumption	2cm³	3cm³	3cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.01s / 0.01s	0.01s / 0.02s	0.02s / 0.01s
Ripetibilità Repetition accuracy	0.02mm		
Peso Weight	87g	100g	98g

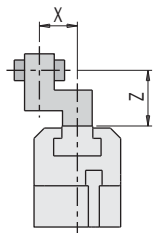
Dimensioni (mm) / Dimensions (mm)



Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

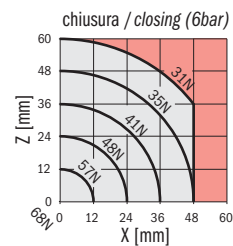
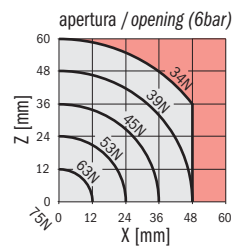
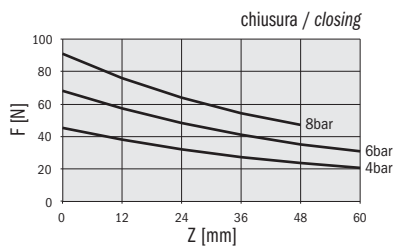
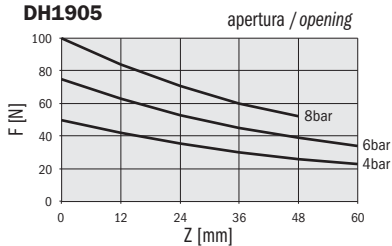
The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

Decrease the air pressure if the gripper is used in red area.

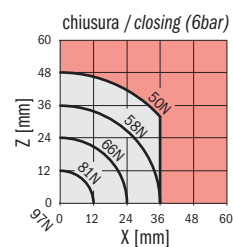
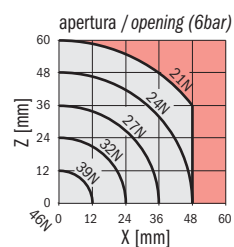
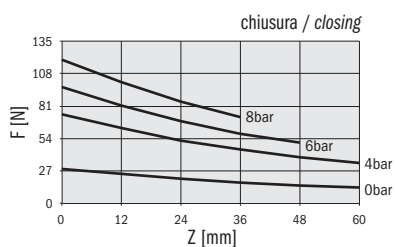
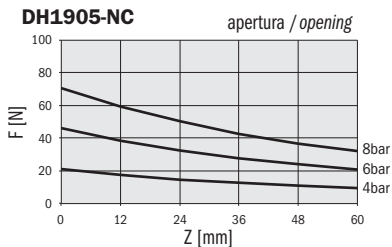
La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

The force shown in these graphs refers to one jaw.
The total force is double.

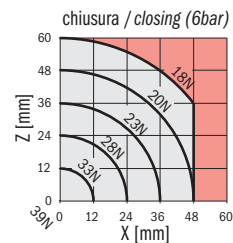
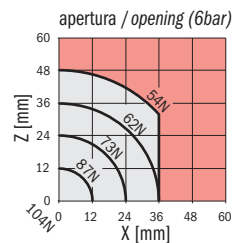
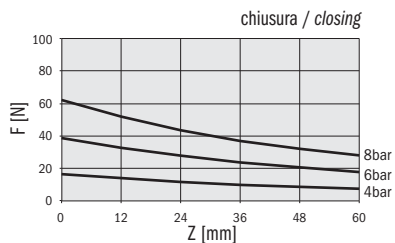
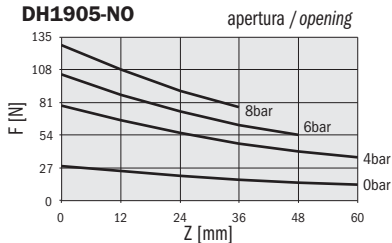
DH1905



DH1905-NC

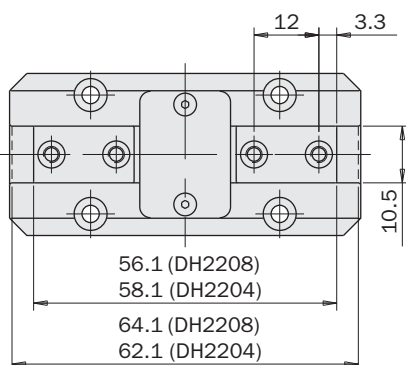
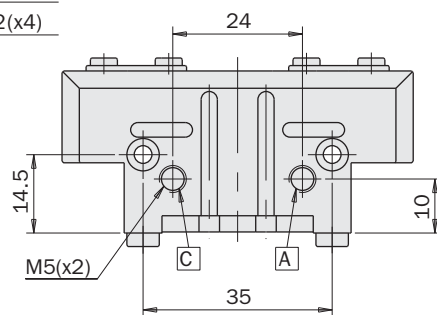
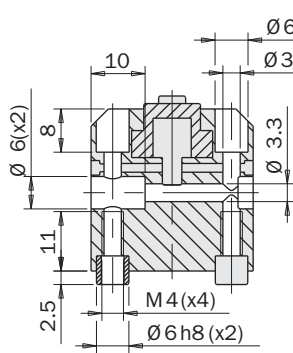
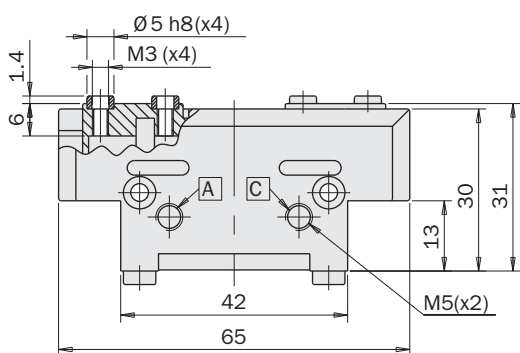
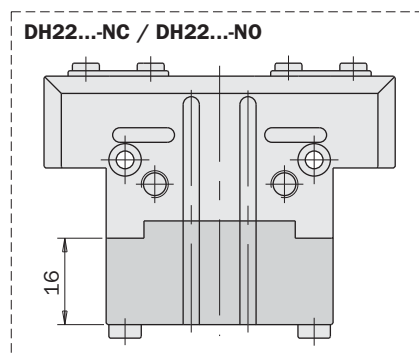
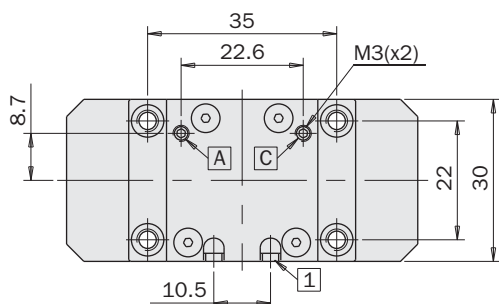


DH1905-NO



	DH2208	DH2208-NC	DH2208-NO	DH2204	DH2204-NC	DH2204-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	100N	58 ÷ 67N	134 ÷ 142N	200N	116 ÷ 133N	267 ÷ 284N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	200N	116 ÷ 134N	268 ÷ 284N	400N	232 ÷ 266N	534 ÷ 568N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	90N	123 ÷ 132N	48 ÷ 56N	180N	247 ÷ 264N	96 ÷ 113N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	180N	246 ÷ 264N	96 ÷ 112N	360N	494 ÷ 528N	192 ÷ 226N
Corsa totale Total stroke	±0.3mm	8mm		4mm		
Frequenza max funzionamento continuativo Maximum working frequency	3Hz					
Consumo d'aria per ciclo Cycle air consumption	4cm³	7cm³	7cm³	4cm³	7cm³	7cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.02s / 0.02s	0.02s / 0.03s	0.03s / 0.02s	0.02s / 0.02s	0.02s / 0.03s	0.03s / 0.02s
Ripetibilità Repetition accuracy	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm
Peso Weight	148g	188g	184g	150g	190g	186g

Dimensioni (mm) / Dimensions (mm)



1 Sede per sensori
Sensor groove

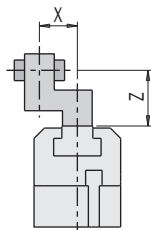
A Aria compressa in A: apertura della pinza
Compressed air in A: gripper opening

C Aria compressa in C: chiusura della pinza
Compressed air in C: gripper closing

Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

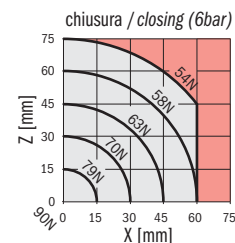
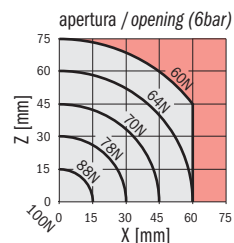
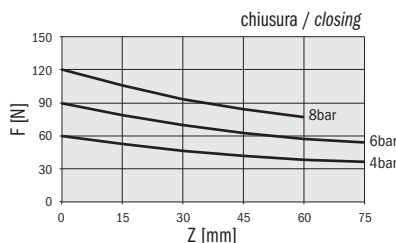
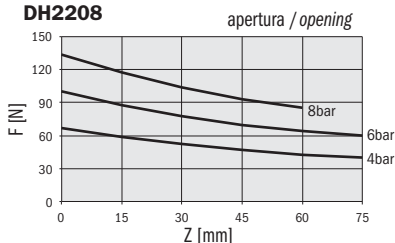
The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

Decrease the air pressure if the gripper is used in red area.

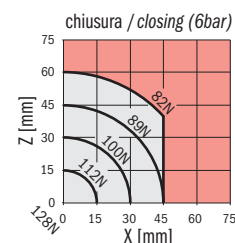
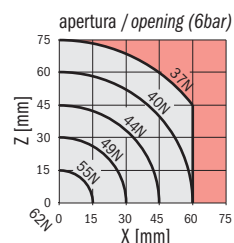
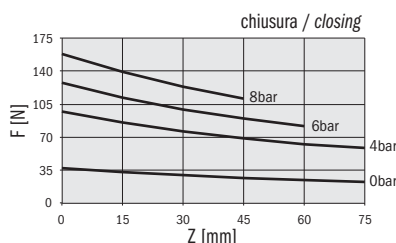
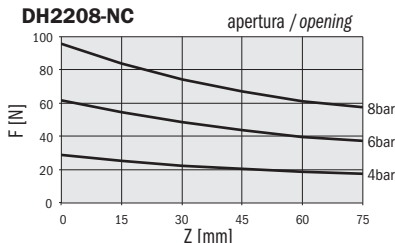
La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

The force shown in these graphs refers to one jaw.
The total force is double.

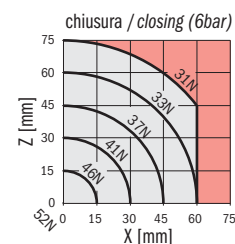
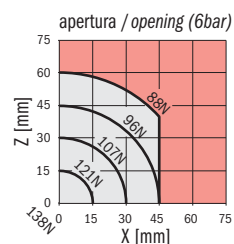
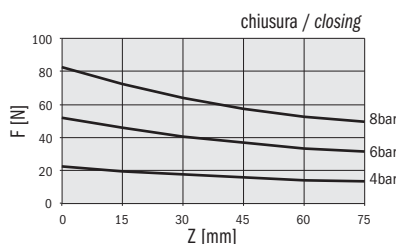
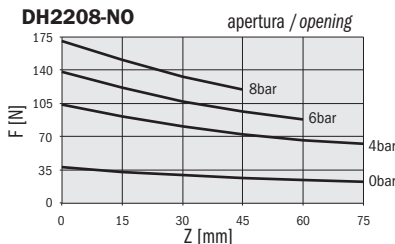
DH2208



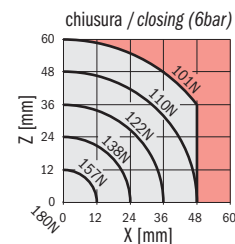
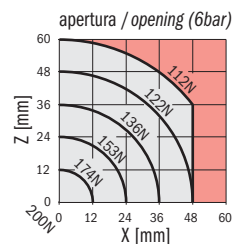
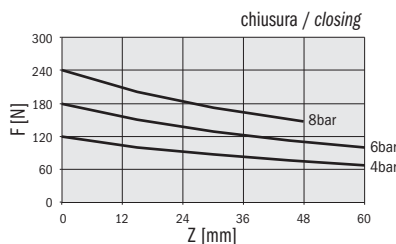
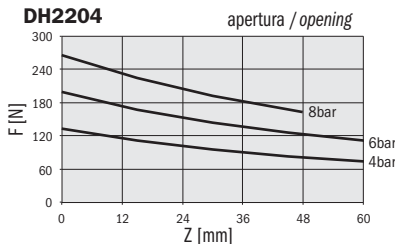
DH2208-NC



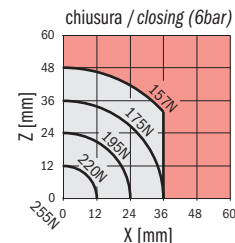
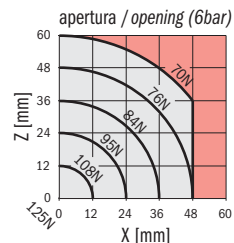
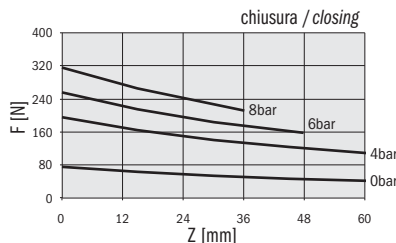
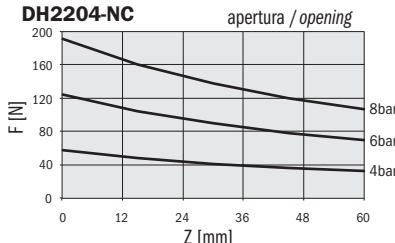
DH2208-NO



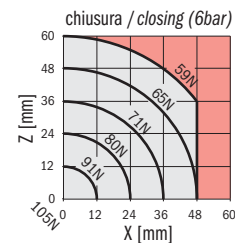
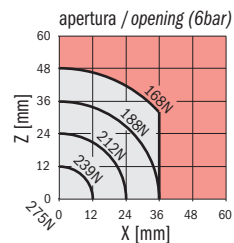
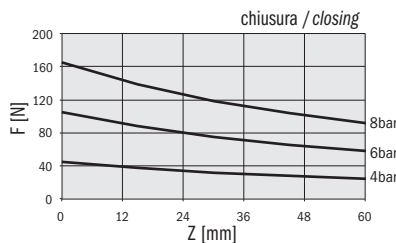
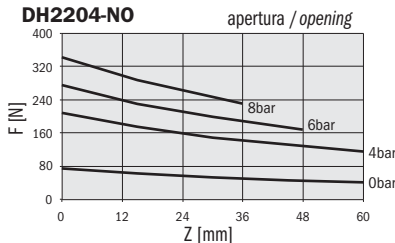
DH2204



DH2204-NC

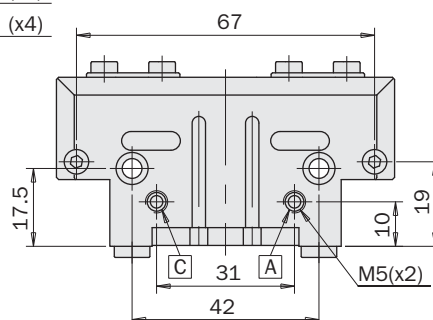
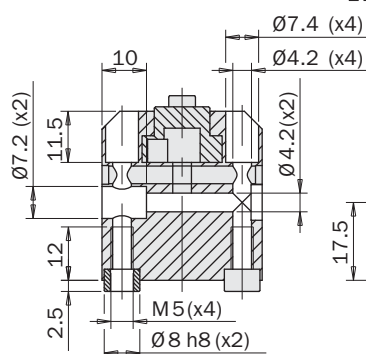
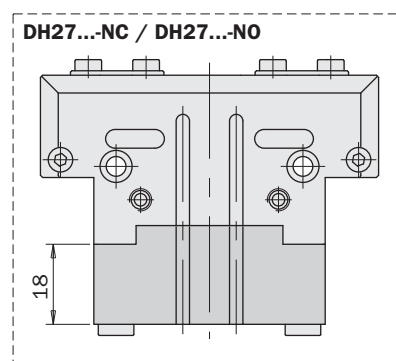
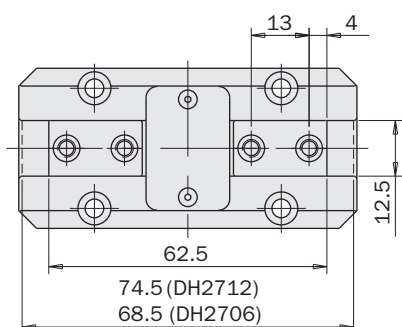
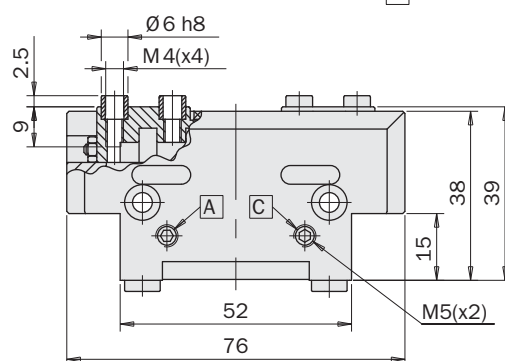
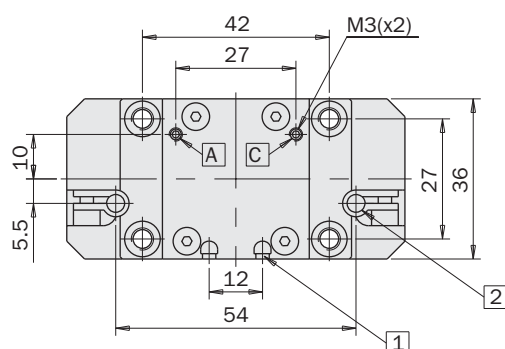


DH2204-NO



	DH2712	DH2712-NC	DH2712-NO	DH2706	DH2706-NC	DH2706-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	145N	85 ÷ 97N	194 ÷ 206N	290N	170 ÷ 194N	389 ÷ 413N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	290N	170 ÷ 194N	388 ÷ 412N	580N	340 ÷ 388N	778 ÷ 826N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	130N	178 ÷ 190N	69 ÷ 81N	260N	356 ÷ 380N	138 ÷ 162N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	260N	356 ÷ 380N	138 ÷ 162N	520N	712 ÷ 760N	276 ÷ 324N
Corsa totale Total stroke	±0.3mm	12mm		6mm		
Frequenza max funzionamento continuativo Maximum working frequency	3Hz					
Consumo d'aria per ciclo Cycle air consumption	9cm³	13cm³	13cm³	9cm³	13cm³	13cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s
Ripetibilità Repetition accuracy	0.02mm					
Peso Weight	255g	325g	315g	260g	330g	320g

Dimensioni (mm) / Dimensions (mm)

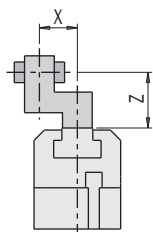


- 1** Sede per sensori
Sensor groove
- 2** Porta sensori induttivi Ø4
Ø4 inductive sensor holder
- A** Aria compressa in A: apertura della pinza
Compressed air in A: gripper opening
- C** Aria compressa in C: chiusura della pinza
Compressed air in C: gripper closing

Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

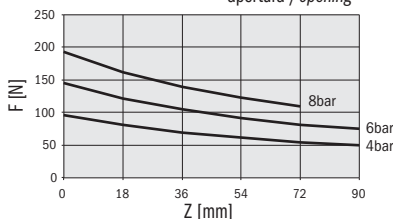
Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

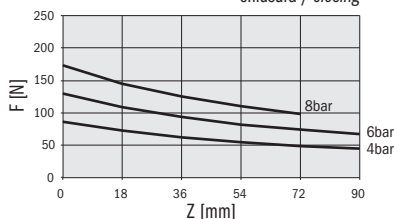
The force shown in these graphs refers to one jaw.
The total force is double.

DH2712

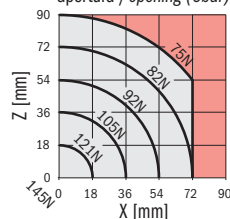
apertura / opening



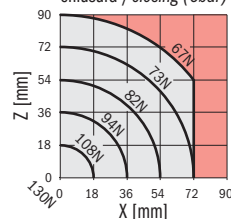
chiusura / closing



apertura / opening (6bar)

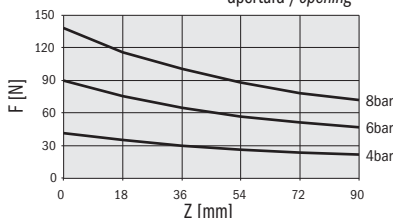


chiusura / closing (6bar)

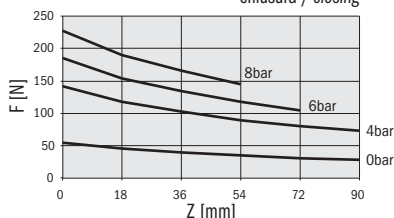


DH2712-NC

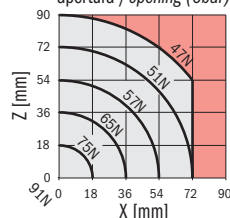
apertura / opening



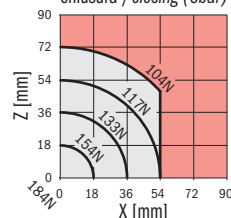
chiusura / closing



apertura / opening (6bar)

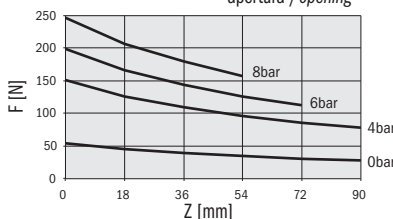


chiusura / closing (6bar)

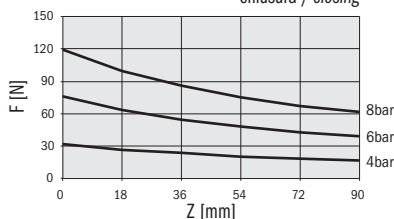


DH2712-NO

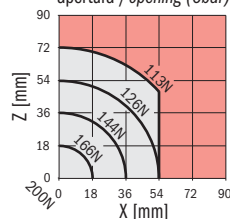
apertura / opening



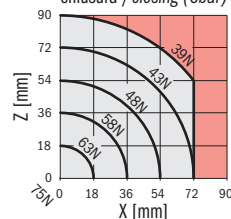
chiusura / closing



apertura / opening (6bar)

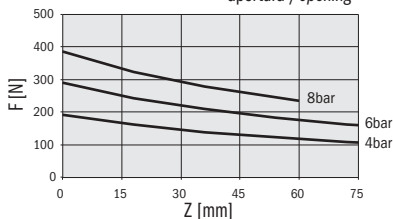


chiusura / closing (6bar)

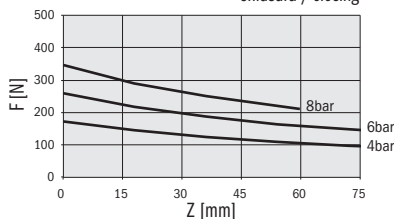


DH2706

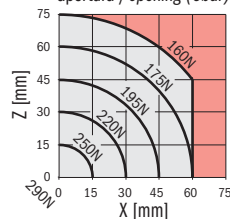
apertura / opening



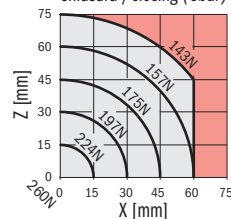
chiusura / closing



apertura / opening (6bar)

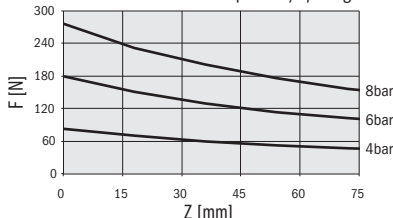


chiusura / closing (6bar)

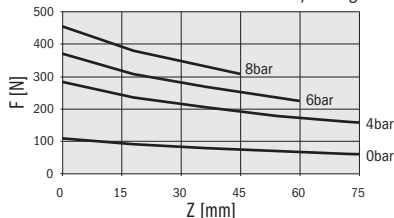


DH2706-NC

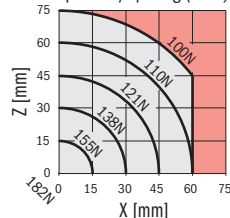
apertura / opening



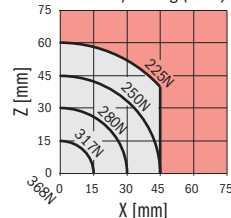
chiusura / closing



apertura / opening (6bar)

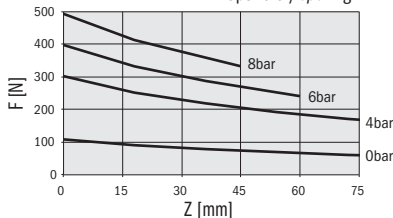


chiusura / closing (6bar)

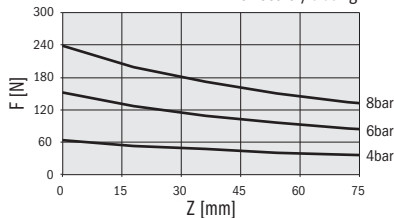


DH2706-NO

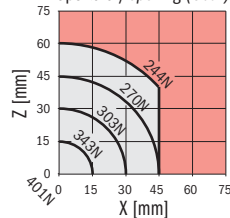
apertura / opening



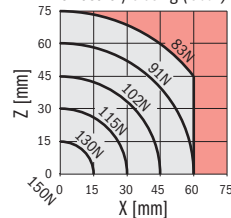
chiusura / closing



apertura / opening (6bar)

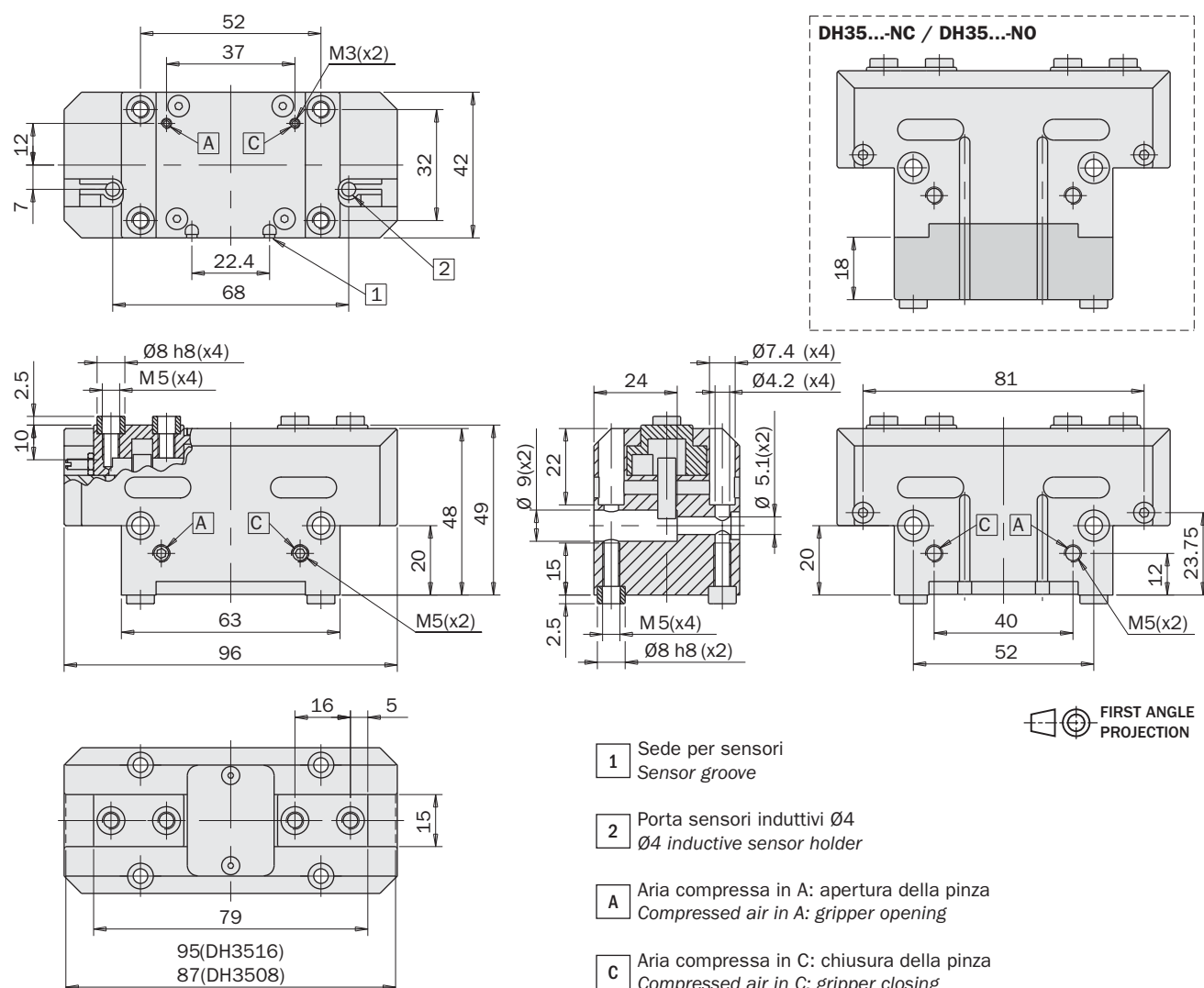


chiusura / closing (6bar)



	DH3516	DH3516-NC	DH3516-NO	DH3508	DH3508-NC	DH3508-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	250N	140 ÷ 177N	323 ÷ 360N	500N	280 ÷ 353N	647 ÷ 720N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	500N	280 ÷ 354N	646 ÷ 720N	1000N	560 ÷ 706N	1294 ÷ 1440N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	220N	298 ÷ 319N	122 ÷ 143N	440N	595 ÷ 639N	244 ÷ 287N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	440N	596 ÷ 638N	244 ÷ 286N	880N	1190 ÷ 1278N	488 ÷ 574N
Corsa totale Total stroke	±0.3mm	16mm		8mm		
Frequenza max funzionamento continuativo Maximum working frequency	3Hz					
Consumo d'aria per ciclo Cycle air consumption	18cm³	25cm³	25cm³	18cm³	25cm³	25cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s
Ripetibilità Repetition accuracy	0.02mm					
Peso Weight	460g	550g	540g	470g	560g	550g

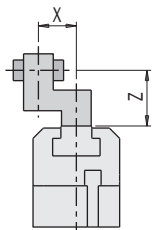
Dimensioni (mm) / Dimensions (mm)



Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

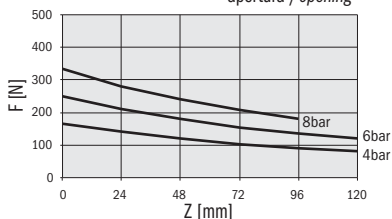
Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

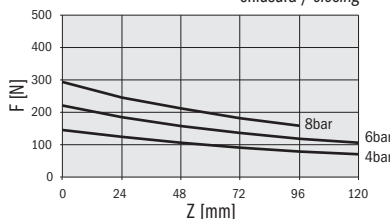
The force shown in these graphs refers to one jaw.
The total force is double.

DH3516

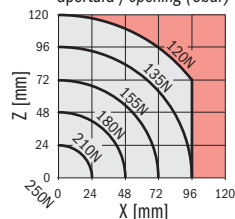
apertura / opening



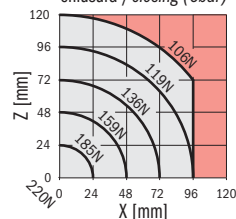
chiusura / closing



apertura / opening (6bar)

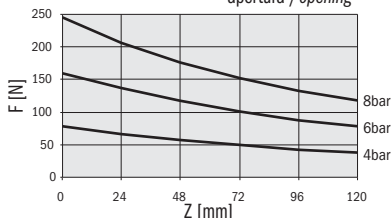


chiusura / closing (6bar)

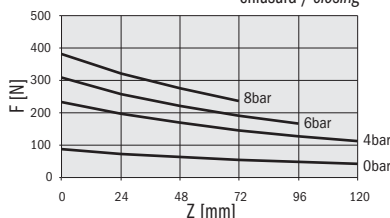


DH3516-NC

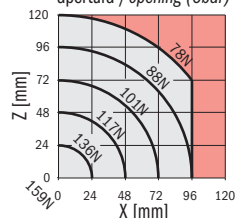
apertura / opening



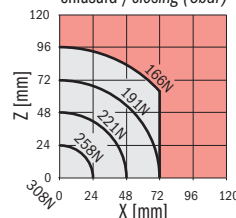
chiusura / closing



apertura / opening (6bar)

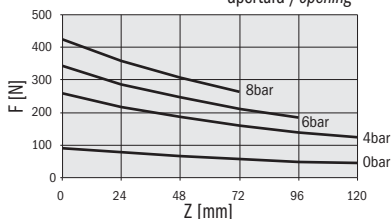


chiusura / closing (6bar)

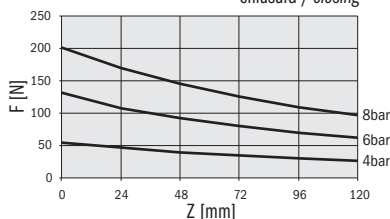


DH3516-NO

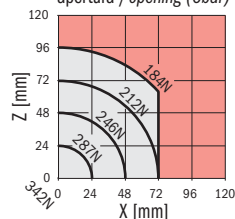
apertura / opening



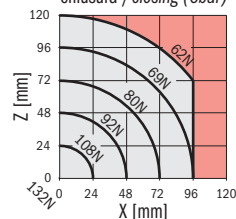
chiusura / closing



apertura / opening (6bar)

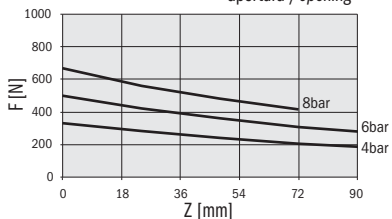


chiusura / closing (6bar)

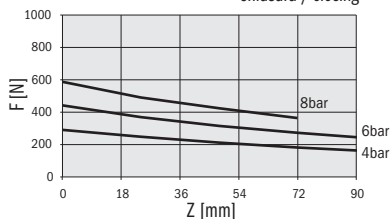


DH3508

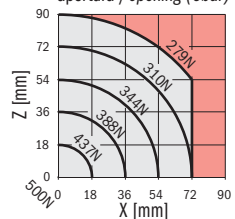
apertura / opening



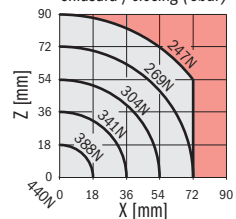
chiusura / closing



apertura / opening (6bar)

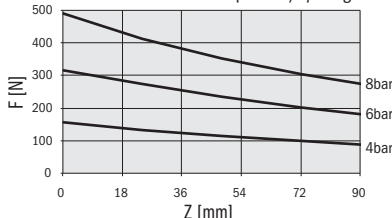


chiusura / closing (6bar)

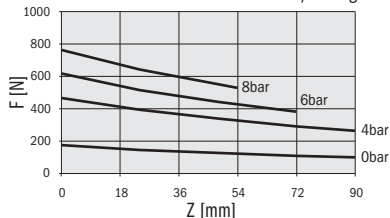


DH3508-NC

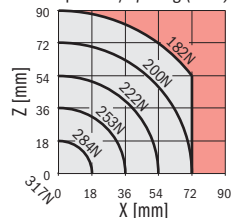
apertura / opening



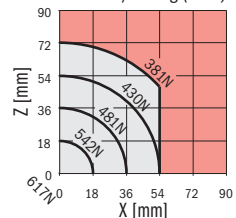
chiusura / closing



apertura / opening (6bar)

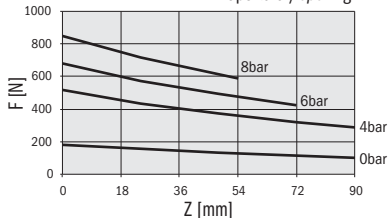


chiusura / closing (6bar)

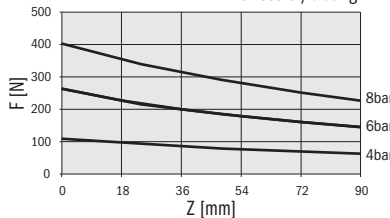


DH3508-NO

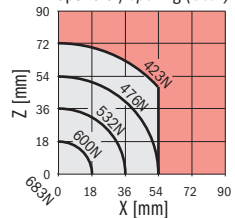
apertura / opening



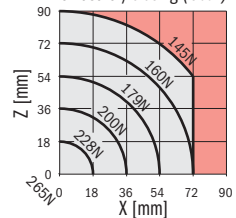
chiusura / closing



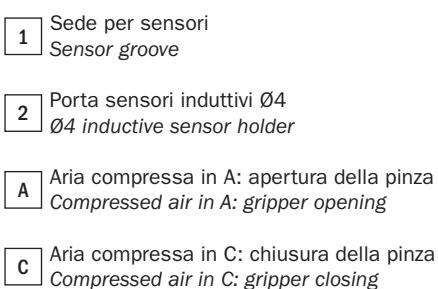
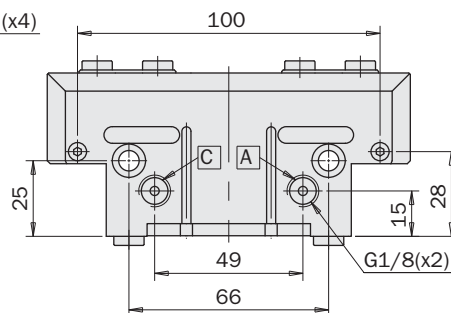
apertura / opening (6bar)



chiusura / closing (6bar)



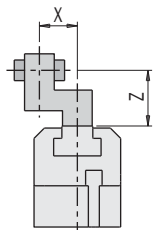
Dimensioni (mm) / Dimensions (mm)



Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

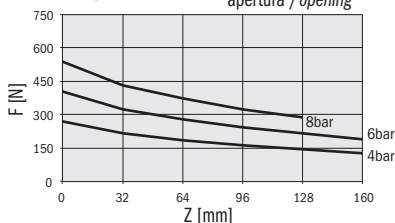
Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

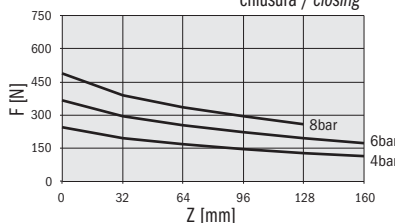
The force shown in these graphs refers to one jaw.
The total force is double.

DH4420

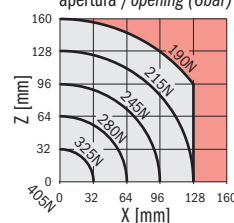
apertura / opening



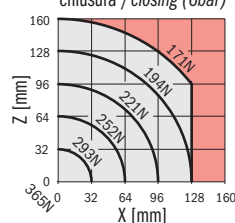
chiusura / closing



apertura / opening (6bar)

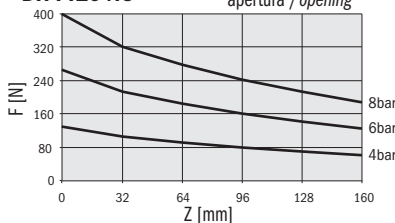


chiusura / closing (6bar)

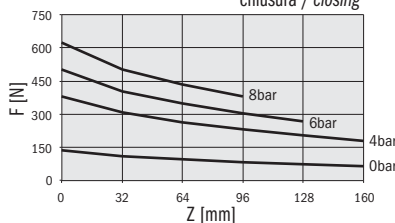


DH4420-NC

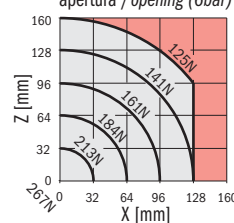
apertura / opening



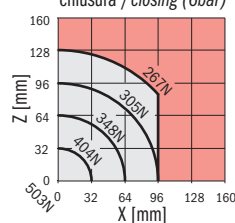
chiusura / closing



apertura / opening (6bar)

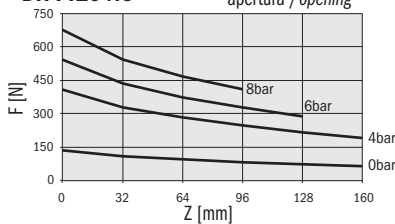


chiusura / closing (6bar)

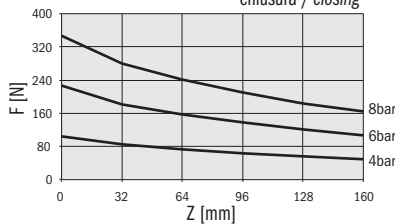


DH4420-NO

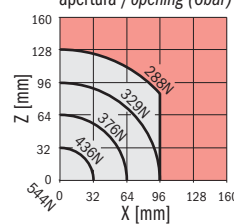
apertura / opening



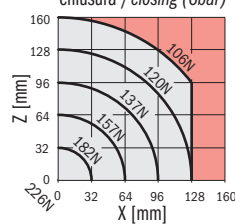
chiusura / closing



apertura / opening (6bar)

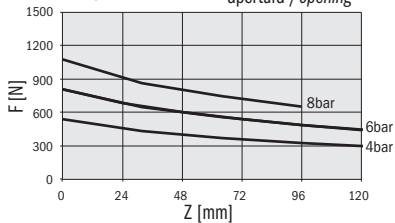


chiusura / closing (6bar)

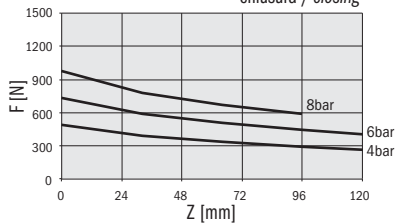


DH4410

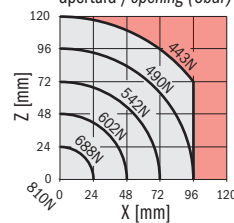
apertura / opening



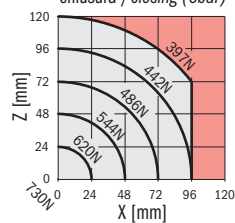
chiusura / closing



apertura / opening (6bar)

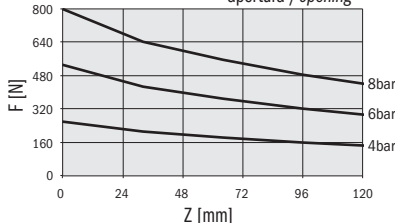


chiusura / closing (6bar)

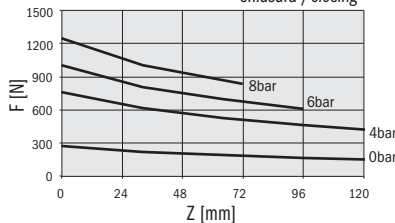


DH4410-NC

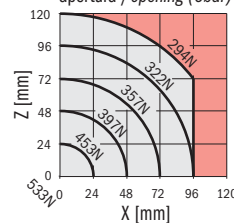
apertura / opening



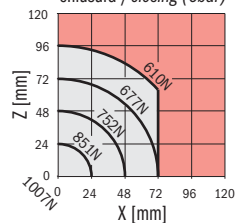
chiusura / closing



apertura / opening (6bar)

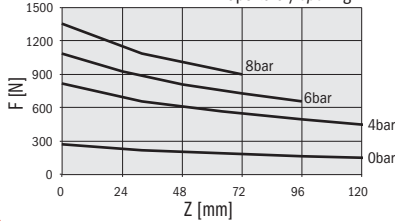


chiusura / closing (6bar)

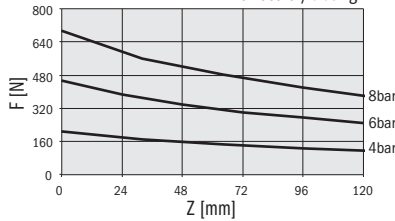


DH4410-NO

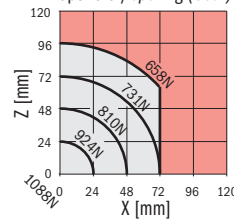
apertura / opening



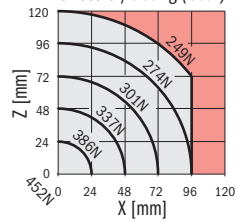
chiusura / closing



apertura / opening (6bar)

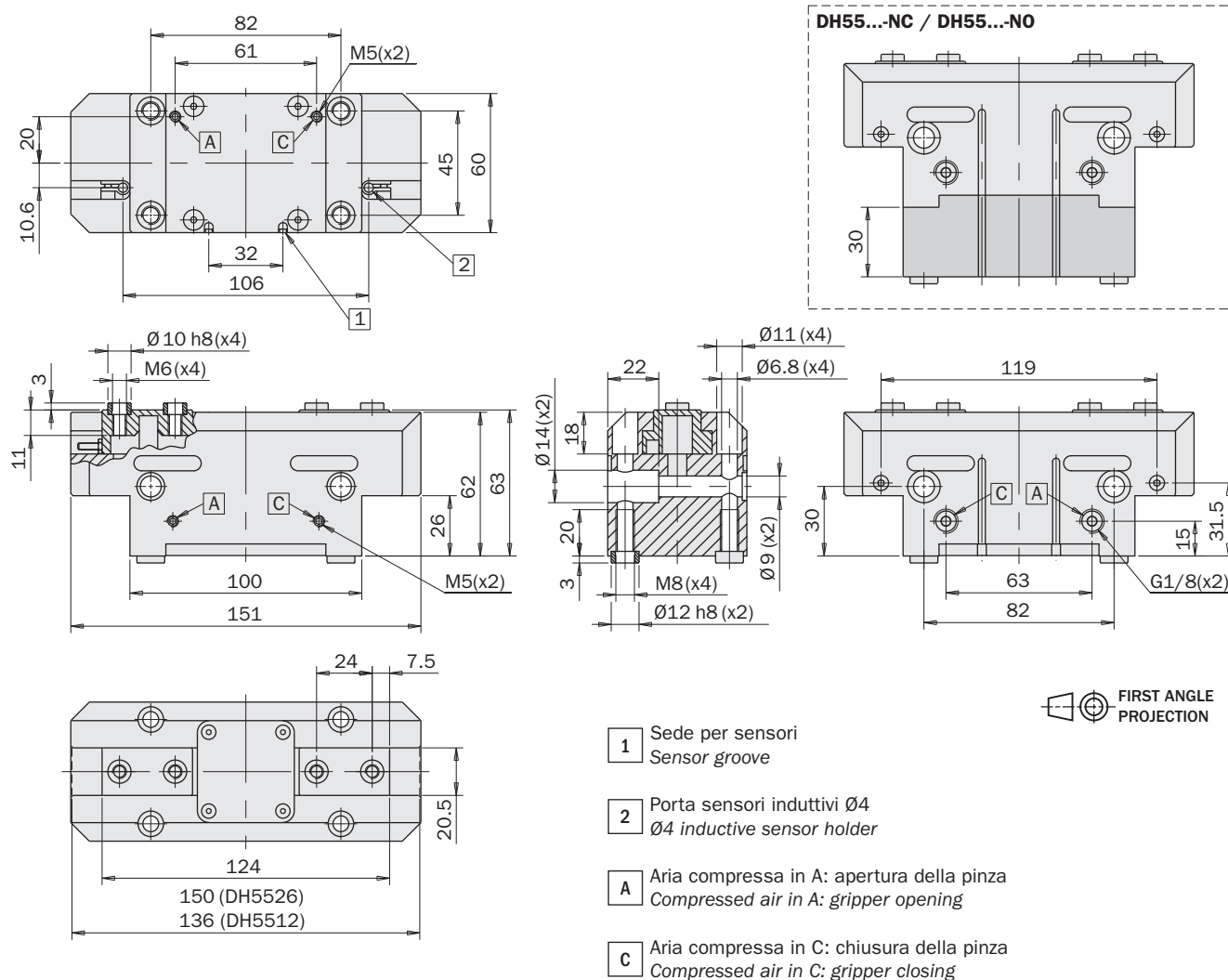


chiusura / closing (6bar)



	DH5526	DH5526-NC	DH5526-NO	DH5512	DH5512-NC	DH5512-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	625N	359 ÷ 443N	807 ÷ 891N	1350N	774 ÷ 957N	1742 ÷ 1924N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	1250N	718 ÷ 886N	1614 ÷ 1782N	2700N	1548 ÷ 1914N	3484 ÷ 3884N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	555N	739 ÷ 823N	290 ÷ 375N	1200N	1595 ÷ 1777N	627 ÷ 809N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	1110N	1478 ÷ 1646N	580 ÷ 750N	2400N	3190 ÷ 3554N	1254 ÷ 1618N
Corsa totale Total stroke	±0.3mm	26mm		12mm		
Frequenza max funzionamento continuativo Maximum working frequency	2Hz					
Consumo d'aria per ciclo Cycle air consumption	70cm³	97cm³	97cm³	70cm³	97cm³	97cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.11s / 0.11s	0.08s / 0.13s	0.13s / 0.08s	0.08s / 0.08s	0.06s / 0.13s	0.13s / 0.06s
Ripetibilità Repetition accuracy	0.02mm					
Peso Weight	1350g	1750g	1700g	1370g	1770g	1720g

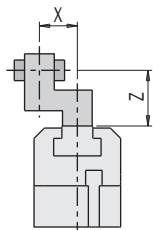
Dimensioni (mm) / Dimensions (mm)



Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

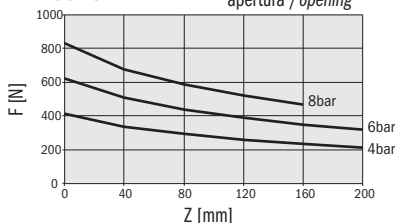
Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

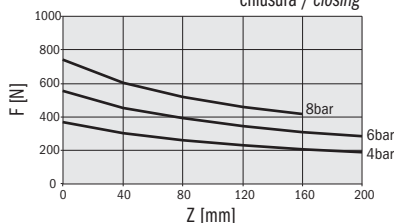
The force shown in these graphs refers to one jaw.
The total force is double.

DH5526

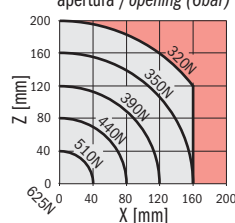
apertura / opening



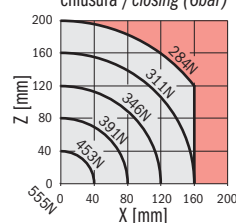
chiusura / closing



apertura / opening (6bar)

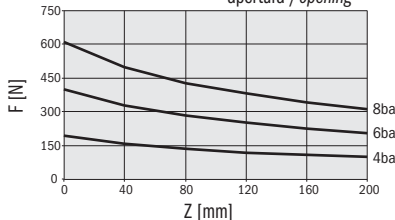


chiusura / closing (6bar)

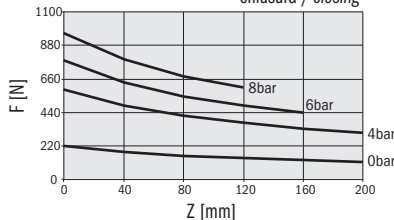


DH5526-NC

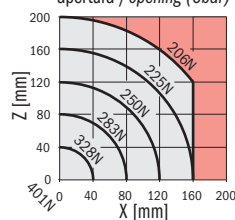
apertura / opening



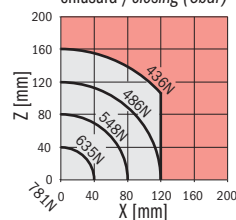
chiusura / closing



apertura / opening (6bar)

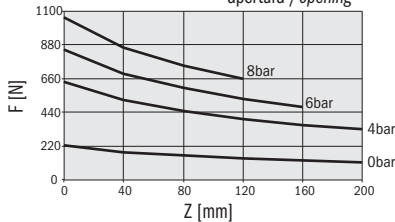


chiusura / closing (6bar)

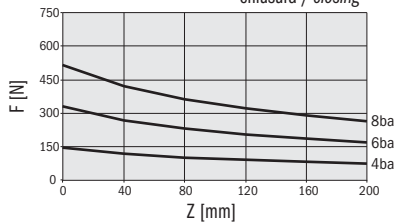


DH5526-NO

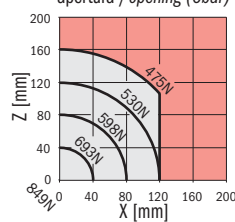
apertura / opening



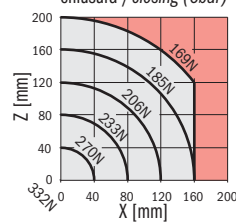
chiusura / closing



apertura / opening (6bar)

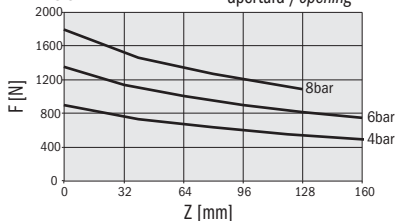


chiusura / closing (6bar)

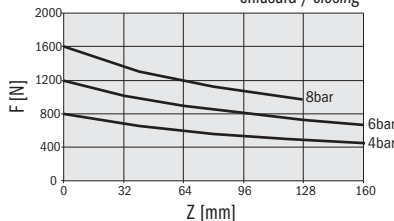


DH5512

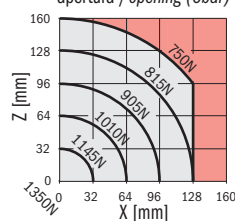
apertura / opening



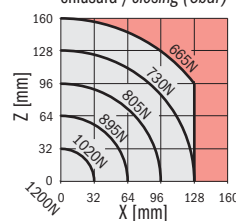
chiusura / closing



apertura / opening (6bar)

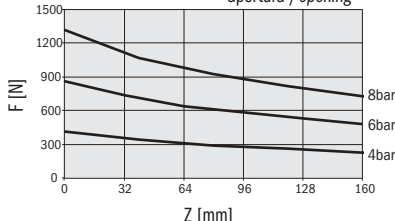


chiusura / closing (6bar)

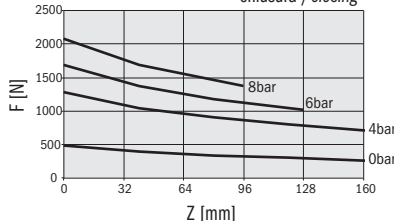


DH5512-NC

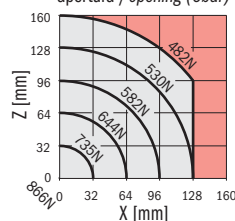
apertura / opening



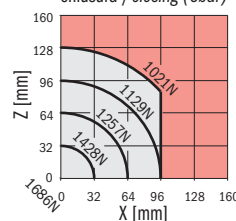
chiusura / closing



apertura / opening (6bar)

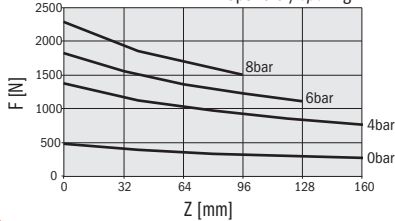


chiusura / closing (6bar)

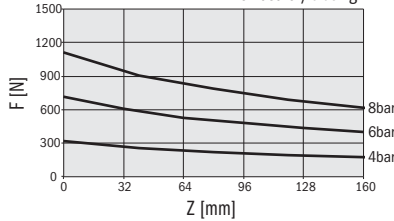


DH5512-NO

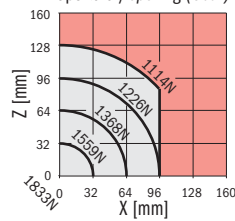
apertura / opening



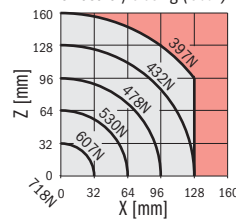
chiusura / closing



apertura / opening (6bar)

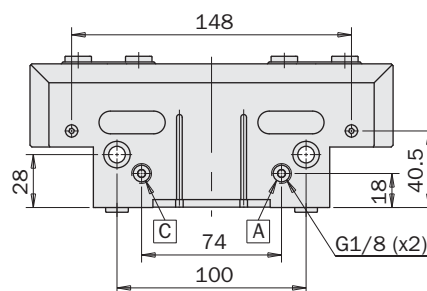
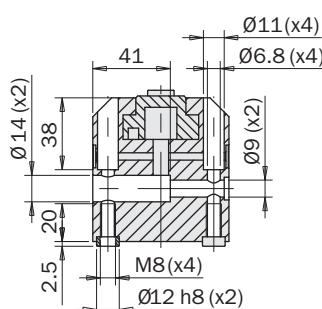
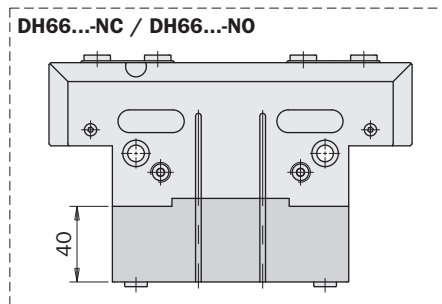
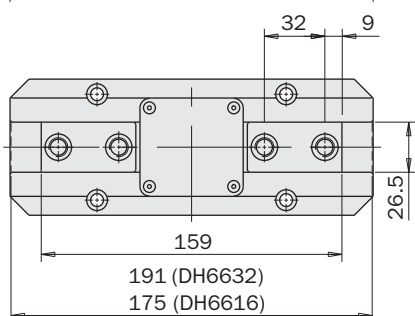
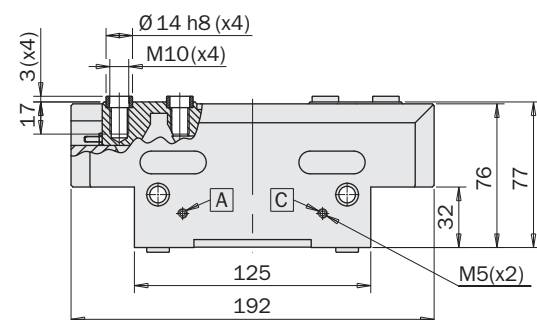
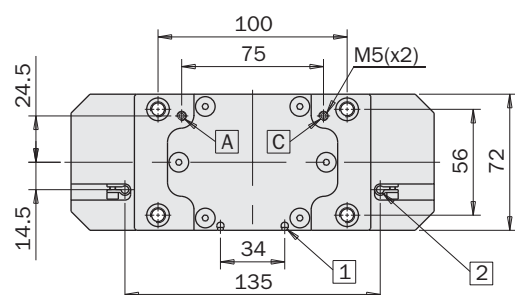


chiusura / closing (6bar)



	DH6632	DH6632-NC	DH6632-NO	DH6616	DH6616-NC	DH6616-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	920N	559 ÷ 663N	1180 ÷ 1284N	1840N	1119 ÷ 1326N	2361 ÷ 2568N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	1840N	1118 ÷ 1326N	2360 ÷ 2568N	3680N	2238 ÷ 2652N	4722 ÷ 5136N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	820N	1078 ÷ 1181N	457 ÷ 560N	1640N	2156 ÷ 2363N	914 ÷ 1121N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	1640N	2156 ÷ 2362N	914 ÷ 1120N	3280N	4312 ÷ 4726N	1828 ÷ 2242N
Corsa totale Total stroke	±0.3mm	32mm		16mm		
Frequenza max funzionamento continuativo Maximum working frequency	2Hz					
Consumo d'aria per ciclo Cycle air consumption	127cm³	178cm³	178cm³	127cm³	178cm³	178cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.15s / 0.15s	0.12s / 0.18s	0.18s / 0.12s	0.15s / 0.15s	0.12s / 0.18s	0.18s / 0.12s
Ripetibilità Repetition accuracy	0.02mm					
Peso Weight	2630g	3430g	3300g	2670g	3470g	3340g

Dimensioni (mm) / Dimensions (mm)



1 Sede per sensori
Sensor groove

2 Porta sensori induttivi Ø4
Ø4 inductive sensor holder

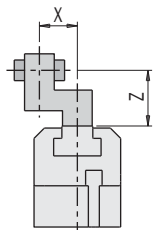
A Aria compressa in A: apertura della pinza
Compressed air in A: gripper opening

C Aria compressa in C: chiusura della pinza
Compressed air in C: gripper closing

Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.



Gripping force

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

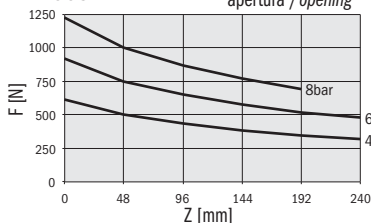
Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

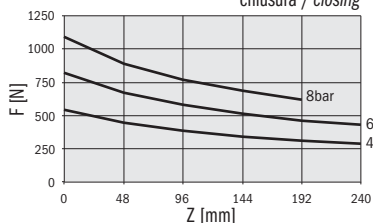
The force shown in these graphs refers to one jaw.
The total force is double.

DH6632

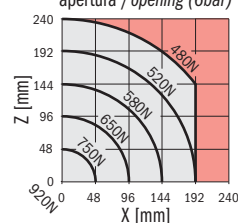
apertura / opening



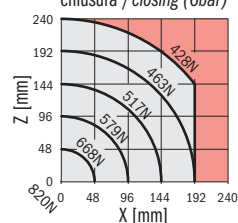
chiusura / closing



apertura / opening (6bar)

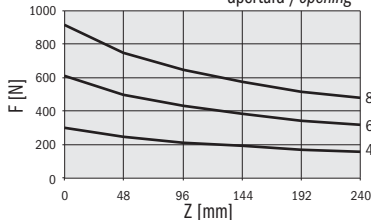


chiusura / closing (6bar)

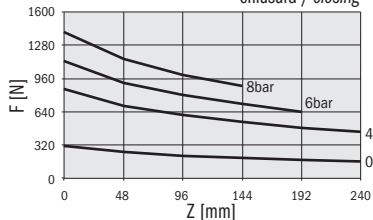


DH6632-NC

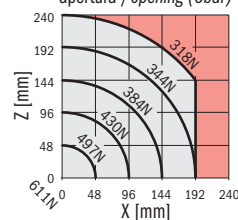
apertura / opening



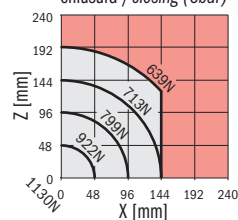
chiusura / closing



apertura / opening (6bar)

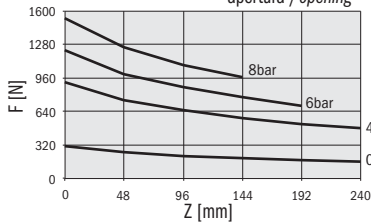


chiusura / closing (6bar)

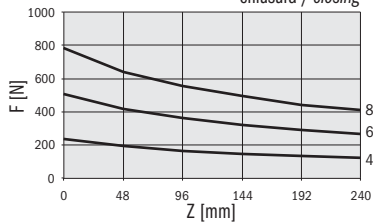


DH6632-NO

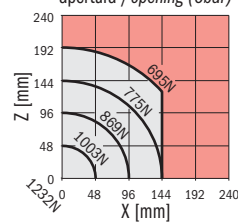
apertura / opening



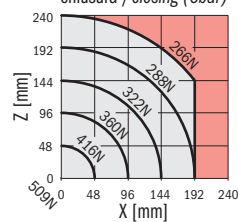
chiusura / closing



apertura / opening (6bar)

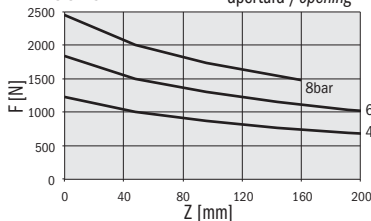


chiusura / closing (6bar)

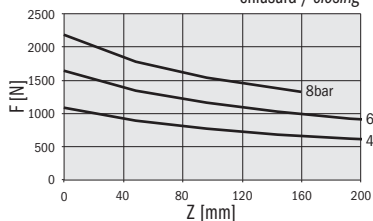


DH6616

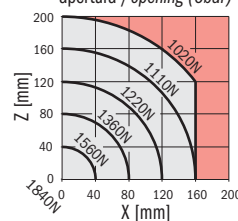
apertura / opening



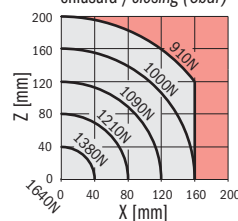
chiusura / closing



apertura / opening (6bar)

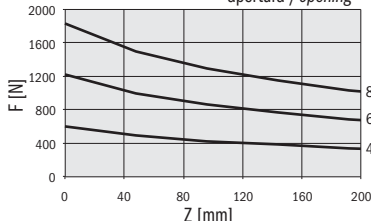


chiusura / closing (6bar)

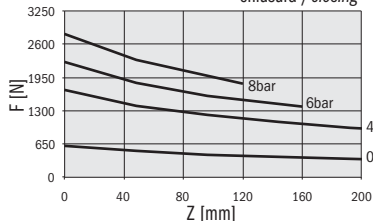


DH6616-NC

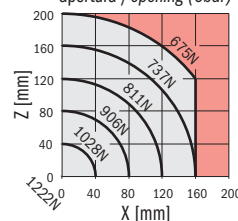
apertura / opening



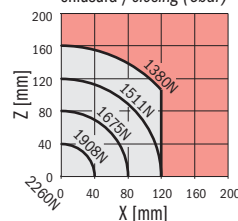
chiusura / closing



apertura / opening (6bar)

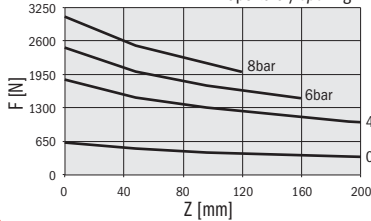


chiusura / closing (6bar)

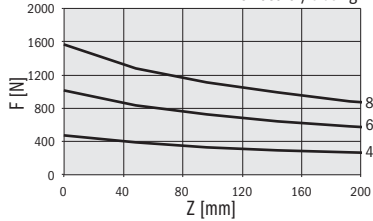


DH6616-NO

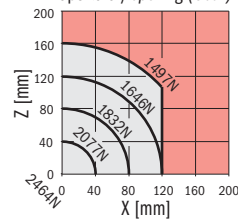
apertura / opening



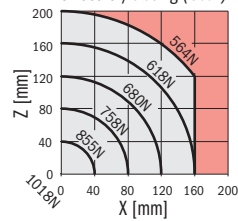
chiusura / closing



apertura / opening (6bar)

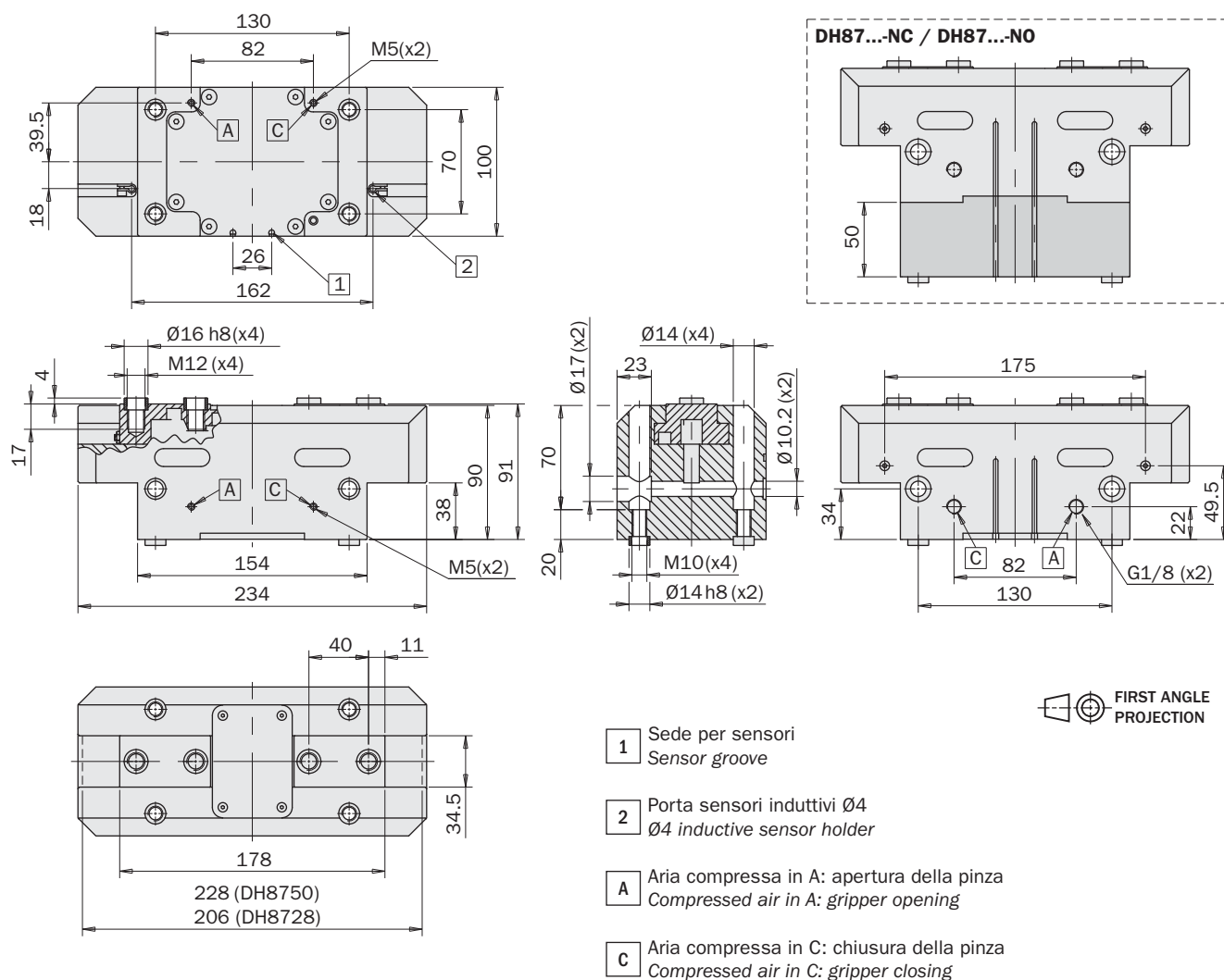


chiusura / closing (6bar)



	DH8750	DH8750-NC	DH8750-NO	DH8728	DH8728-NC	DH8728-NO
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air					
Pressione di esercizio Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperatura di esercizio Temperature range	5 ÷ 60°C.					
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar each jaw	1560N	977 ÷ 1129N	1992 ÷ 2144N	2750N	1720 ÷ 1988N	3509 ÷ 3776N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	3120N	1954 ÷ 2258N	3984 ÷ 4288N	5500N	3440 ÷ 3976N	7018 ÷ 7552N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar each jaw	1420N	1853 ÷ 2005N	837 ÷ 989N	2500N	3263 ÷ 3531N	1475 ÷ 1742N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	2840N	3706 ÷ 4010N	1674 ÷ 1978N	5000N	6526 ÷ 7026N	2950 ÷ 3484N
Corsa totale Total stroke	±0.3mm	50mm		28mm		
Frequenza max funzionamento continuativo Maximum working frequency	1Hz					
Consumo d'aria per ciclo Cycle air consumption	347cm³	472cm³	472cm³	347cm³	472cm³	472cm³
Tempo minimo di chiusura / apertura Closing / opening minimum time	0.21s / 0.21s	0.19s / 0.31s	0.31s / 0.19s	0.21s / 0.21s	0.19s / 0.31s	0.31s / 0.19s
Ripetibilità Repetition accuracy	0.02mm					
Peso Weight	4990g	6920g	6750g	5050g	6980g	6810g

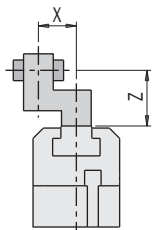
Dimensioni (mm) / Dimensions (mm)



Forza di serraggio

I grafici mostrano la forza (F) per griffa espressa dalla pinza in funzione della pressione, del braccio di leva (Z) e del disassamento del punto di presa (X).

Diminuire la pressione se la pinza è impiegata nella zona rossa.

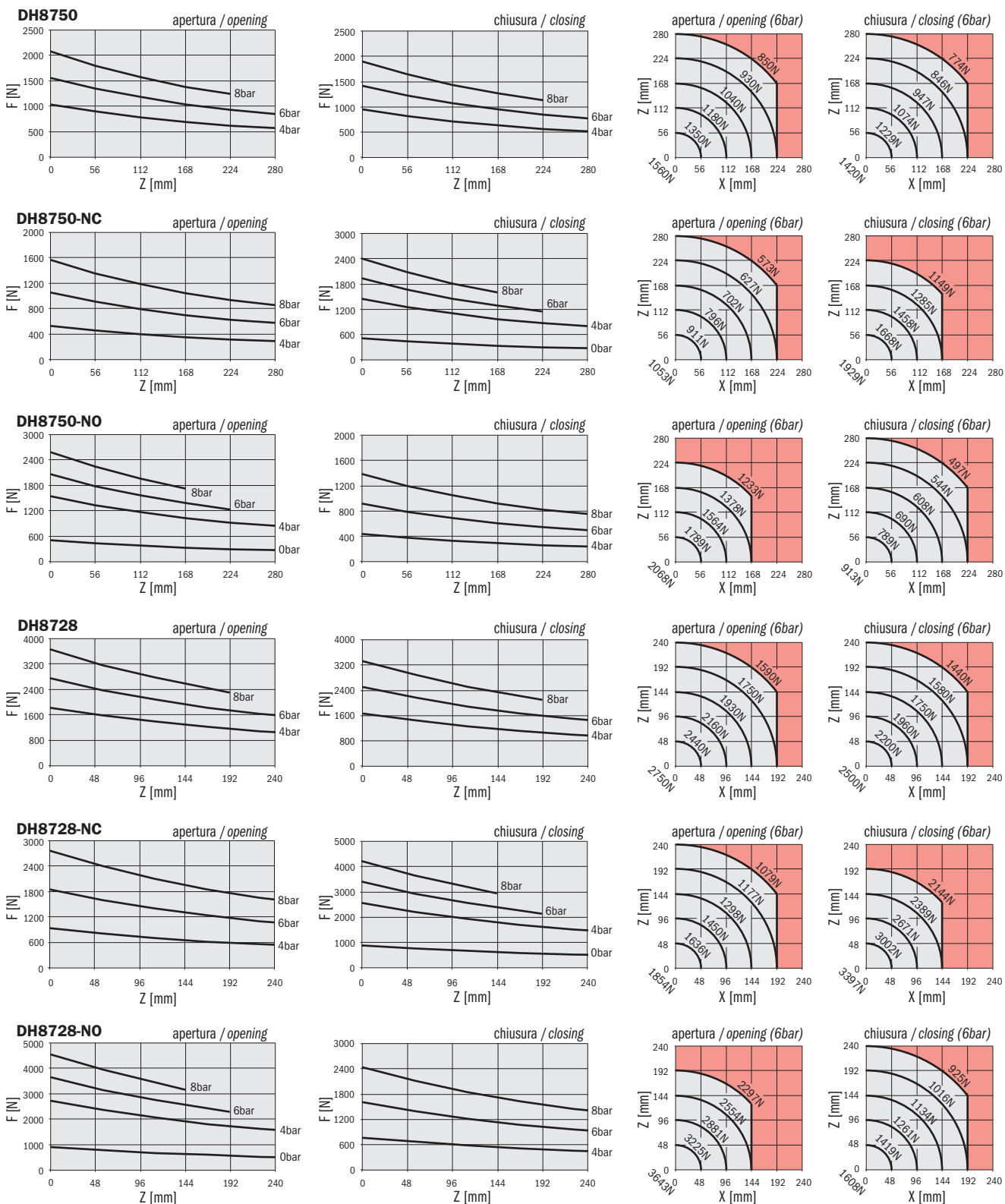
**Gripping force**

The graphs show the gripping force (F) on each jaw, as a function of the operating pressure, the gripping tool length (Z) and the overhanging (X).

Decrease the air pressure if the gripper is used in red area.

La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.

The force shown in these graphs refers to one jaw.
The total force is double.



Fissaggio della pinza

La pinza può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

- 1) Per fissare la pinza sul fondo, usare quattro viti (SC1) attraverso i fori passanti.
- 2) Il fissaggio sul fondo è possibile anche con quattro viti (SC2) passanti attraverso la piastra di fissaggio ed avvitata nella pinza.
- 3) Per fissare la pinza su un lato, usare due viti (SC3) attraverso i fori passanti dopo aver rimosso i tappi di protezione (T3).

In ogni caso utilizzare per il centraggio le due boccole (BC), fornite nella confezione. Rispettare le dimensioni nella tabella (D8 e H5) per le loro sedi nella piastra di fissaggio.

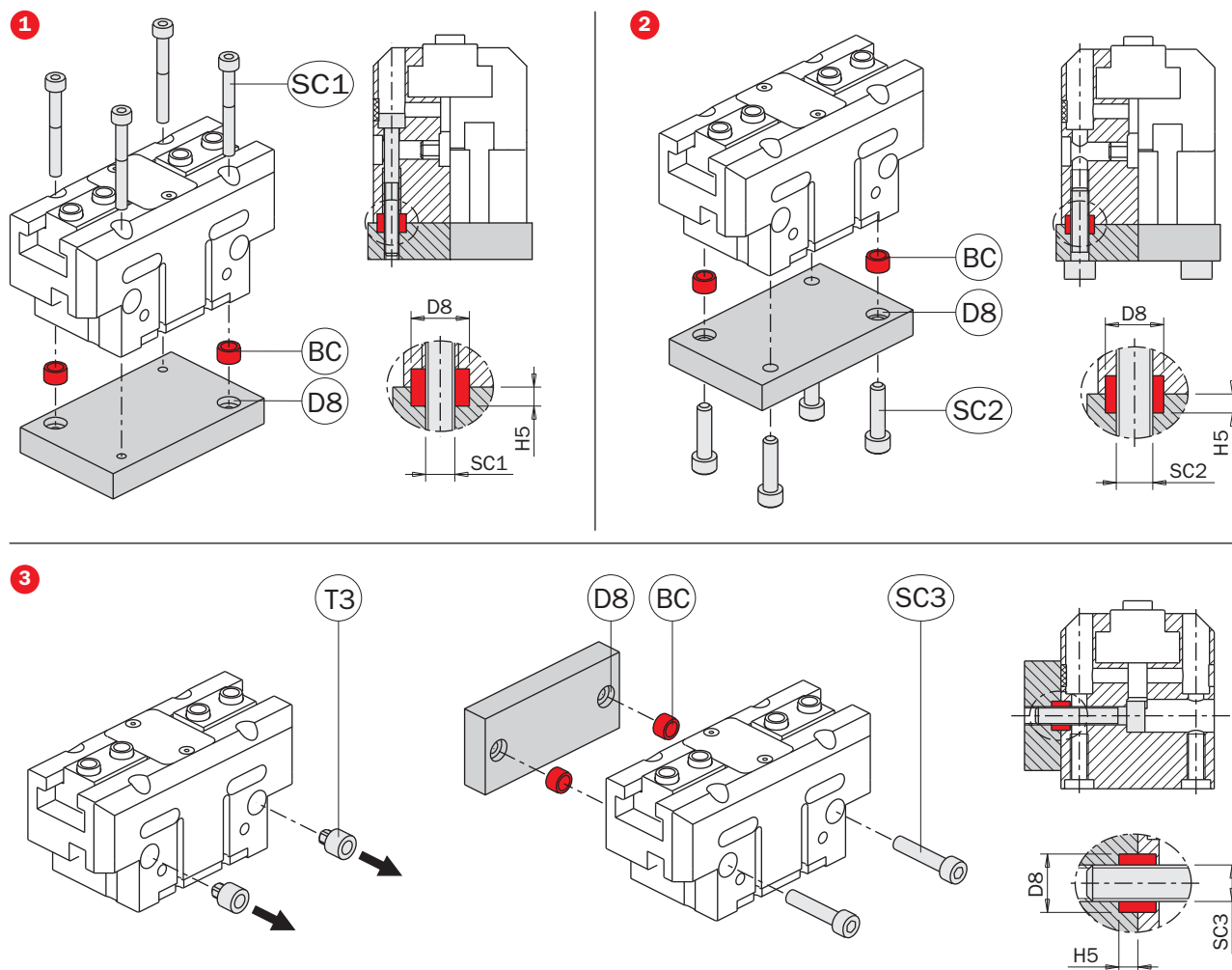
Gripper fastening

The gripper can be fastened to a static or moving part.

When on a moving part, you must pay attention to the inertial force to which the gripper and its load are subjected.

- 1) To fasten gripper to base, use four screws (SC1) in the through holes.
- 2) To fasten gripper to base, you can also use four screws (SC2) through the mounting plate, screwed in the gripper.
- 3) To fasten the gripper side, use two screws (SC3) in the through holes, after removing the protection plugs (T3).

In every case, put the two centering sleeves (BC), which are supplied in the package. Check the dimensions in the table (D8 and H5) for their housings in the mounting plate.



		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...
D8	H8	Ø5	Ø6	Ø8	Ø8	Ø10	Ø12	Ø12	Ø14
H5	+0.1 +0.2	2	2.5	2.5	2.5	3	3	2.5	4
SC1		M2.5	M3	M4	M4	M5	M6	M6	M8
SC2		M3	M4	M5	M5	M6	M8	M8	M10
SC3		M2.5	M3	M4	M5	M6	M8	M8	M10

Fissaggio delle estremità di presa

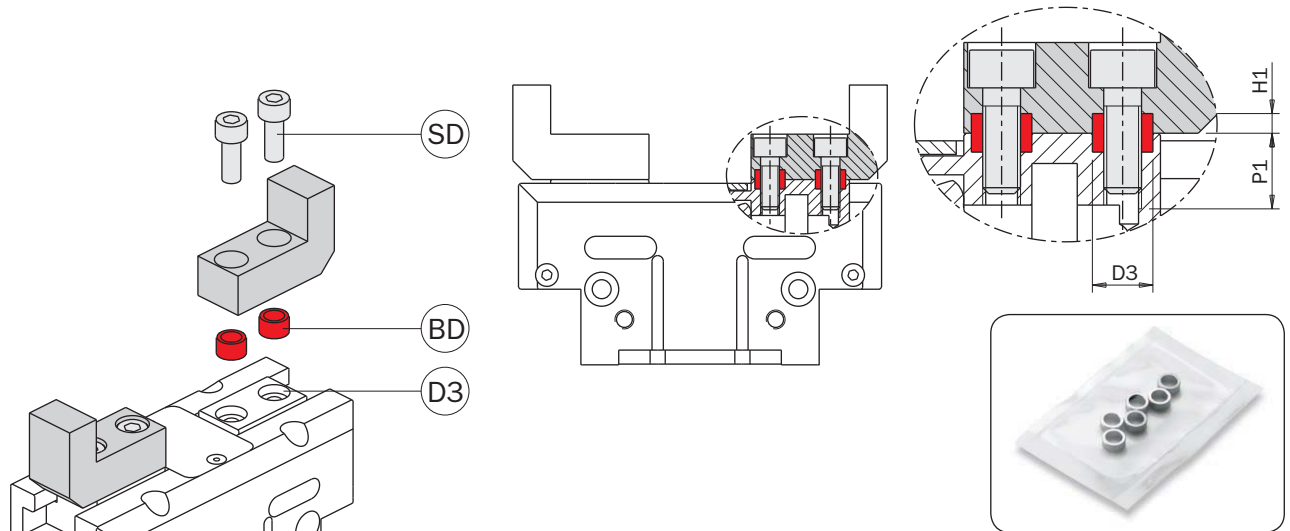
Costruire le dita di presa il più possibile corte e leggere.
Fissarle con due viti (SD) e due boccole di centraggio (BD) nei fori calibrati (D3) delle griffe.

Nella confezione della pinza sono fornite 4 boccole di centraggio (BD) per le dita di presa e 2 boccole (BC) per il corpo.

Gripping tool fastening

The gripping tools must be as short and light as possible.
They must be fastened by two screws (SD) and two centering sleeves (BD) in the calibrated holes (D3) of the jaws.

4 centering rings (BD) for the gripping tools and 2 centering sleeves (BC) for the housing are supplied in the packaging.



		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...
D3	H8	Ø4	Ø5	Ø6	Ø8	Ø10	Ø10	Ø14	Ø16
H1	+0.1 +0.2	2	1.4	2.5	2.5	3	3	3	4
P1		5	6	8	9.5	11	11	17	17
SD		M2.5	M3	M4	M5	M6	M6	M10	M12

Avvertenze

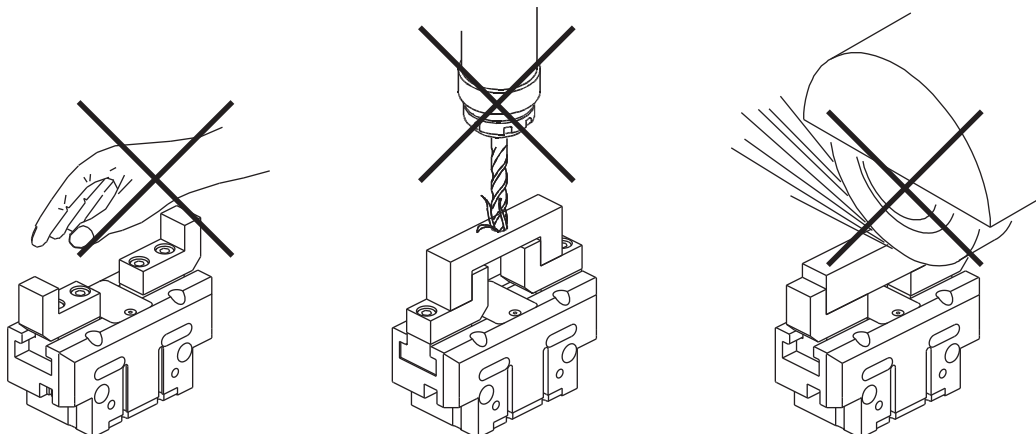
Evitare il contatto con sostanze corrosive, spruzzi di saldatura, polveri abrasive, che potrebbero danneggiare la funzionalità della pinza.

Per nessun motivo, persone od oggetti estranei devono entrare nel raggio d'azione della pinza.

La pinza non deve essere messa in servizio prima che la macchina di cui fa parte sia stata dichiarata conforme alle disposizioni di sicurezza vigenti.

Cautions

Avoid the gripper coming into contact with the following media: coolants which cause corrosion, grinding dust or glowing sparks. Make sure that nobody can place his/her hand between the gripping tools and there are no objects in the path of the gripper. The gripper must not run before the whole machine, on which it is mounted, complies with the laws or safety norms of your country.



Carichi di sicurezza

Consultare la tabella per i carichi massimi ammissibili. Forze e coppie eccessive possono danneggiare la pinza e causare difficoltà di funzionamento compromettendo la sicurezza dell'operatore.

F_s , $M_x s$, $M_y s$, $M_z s$, sono i carichi massimi ammissibili in condizioni statiche, cioè con le griffe ferme.

F_d , $M_x d$, $M_y d$, $M_z d$, sono i carichi massimi ammissibili in condizioni dinamiche, cioè con le griffe in movimento.

m , è il massimo peso ammissibile su ogni dito di presa quando la pinza è utilizzata senza regolazione di velocità; per dita più pesanti si deve diminuire la velocità delle griffe agendo sui regolatori di flusso (non forniti).

Safety loads

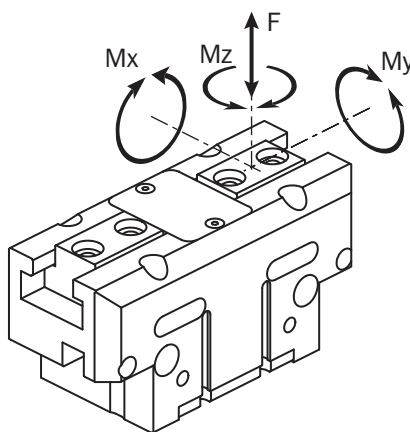
Check the table for maximum permitted loads.

Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.

F_s , $M_x s$, $M_y s$, $M_z s$, are maximum permitted static loads. Static means with motionless jaws.

F_d , $M_x d$, $M_y d$, $M_z d$, are maximum permitted dynamic loads. Dynamic means with running jaws.

m , is the maximum permitted weight of each gripping tool, when the gripper works without speed adjustment. If the weight is over the permitted value, it is necessary to decrease the speed of the jaw by using flow controllers (not supplied).



	DH1905 DH1905-NC DH1905-NO	DH2208 DH2208-NC DH2208-NO	DH2204 DH2204-NC DH2204-NO	DH2712 DH2712-NC DH2712-NO	DH2706 DH2706-NC DH2706-NO	DH3516 DH3516-NC DH3516-NO	DH3508 DH3508-NC DH3508-NO
F_s	200N	350N	350N	600N	600N	900N	900N
$M_x s$	2.5Nm	5Nm	7.5Nm	8Nm	13Nm	18Nm	30Nm
$M_y s$	2.5Nm	7.5Nm	7.5Nm	13Nm	13Nm	30Nm	30Nm
$M_z s$	2Nm	4Nm	6Nm	6.5Nm	10Nm	15Nm	23Nm
F_d	2N	4N	4N	6N	6N	9N	9N
$M_x d$	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
$M_y d$	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
$M_z d$	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
m	100g	180g	180g	350g	350g	600g	600g

	DH4420 DH4420-NC DH4420-NO	DH4410 DH4410-NC DH4410-NO	DH5526 DH5526-NC DH5526-NO	DH5512 DH5512-NC DH5512-NO	DH6632 DH6632-NC DH6632-NO	DH6616 DH6616-NC DH6616-NO	DH8750 DH8750-NC DH8750-NO	DH8728 DH8728-NC DH8728-NO
F_s	1500N	1500N	2500N	2500N	4000N	4000N	7000N	7000N
$M_x s$	40Nm	60Nm	80Nm	125Nm	145Nm	215Nm	350Nm	400Nm
$M_y s$	60Nm	60Nm	80Nm	80Nm	145Nm	145Nm	200Nm	200Nm
$M_z s$	30Nm	45Nm	65Nm	95Nm	115Nm	165Nm	280Nm	300Nm
F_d	15N	15N	25N	25N	40N	40N	70N	70N
$M_x d$	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
$M_y d$	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
$M_z d$	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
m	1100g	1100g	2100g	2100g	3500g	3500g	6500g	6500g

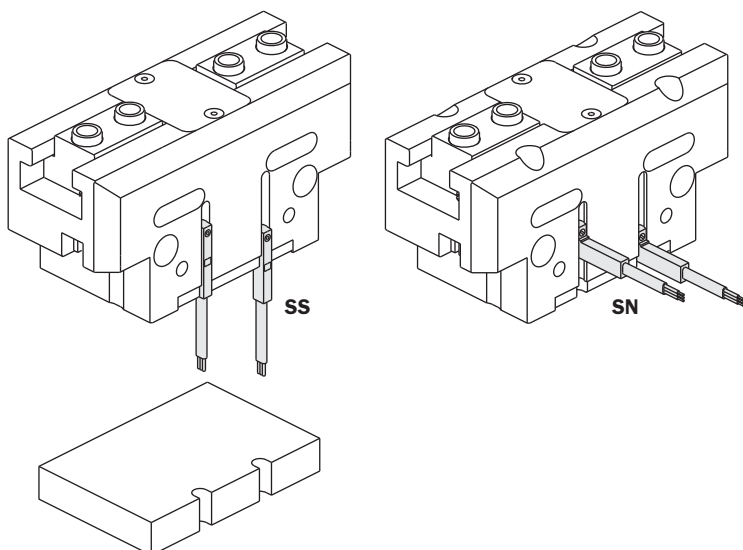
Sensori (opzionali)

Il rilevamento della posizione di lavoro può essere effettuato con sensori magnetici che rilevano il magnete sul pistone, oppure con sensori induttivi (diametro 4mm), che rilevano una parte metallica (M) la cui posizione nella griffa è regolabile.

I sensori magnetici utilizzabili sono i codici Gimatic:

			DH
SN4N225-G	PNP	Cavo 2.5m / 2.5m cable	✓
SN4M225-G	NPN	Cavo 2.5m / 2.5m cable	✓
SN3N203-G	PNP	Connettore M8 / M8 snap plug connector	✓
SN3M203-G	NPN	Connettore M8 / M8 snap plug connector	✓
SS4N225-G	PNP	Cavo 2.5m / 2.5m cable	✓
SS4M225-G	NPN	Cavo 2.5m / 2.5m cable	✓
SS3N203-G	PNP	Connettore M8 / M8 snap plug connector	✓
SS3M203-G	NPN	Connettore M8 / M8 snap plug connector	✓

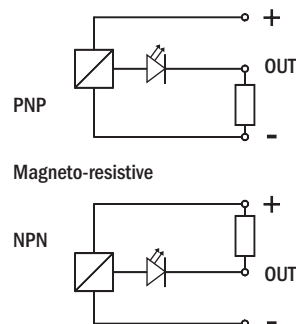
Sono tutti dotati di un cavo piatto a tre fili e di un led.



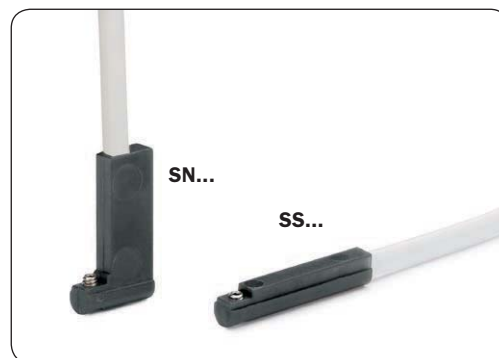
Sensors (optional)

The operating position can be checked by magnetic sensors which detect a magnet on the piston, or by inductive sensors (4mm diameter), which detect a metal part (M) in an adjustable position into the jaw.

The magnetic sensors from Gimatic are the codes:

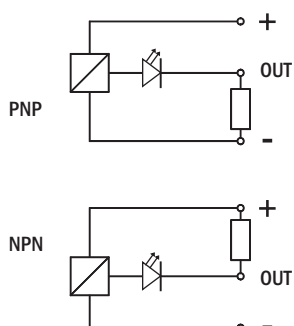


They are all provided with a 3-wire flat cable and a LED.

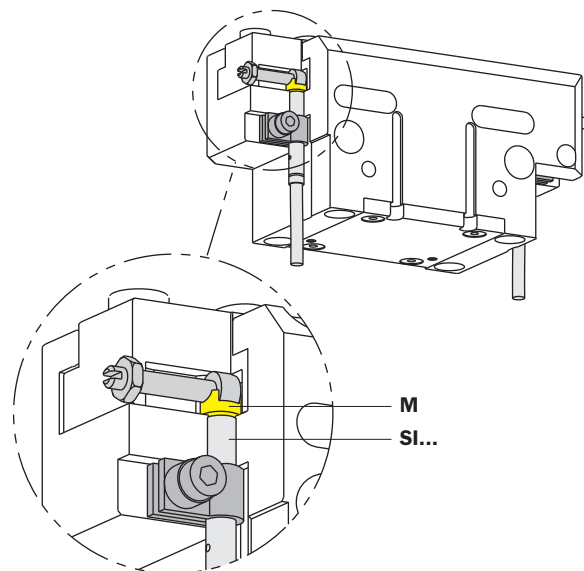


Sensori induttivi regolabili (non per DH19 e DH22):

			DH27 DH35 DH44 DH55 DH66 DH87
SI4M225-G	NPN	Cavo 2.5m / 2.5m cable	✓
SI4N225-G	PNP	Cavo 2.5m / 2.5m cable	✓



Adjustable inductive sensors (not for DH19 and DH22):



Connessione pneumatica

La pinza può essere alimentata con aria compressa dai fori principali sul fianco, montando i raccordi dell'aria ed i relativi tubi (non forniti).

Oppure si può alimentare direttamente dalla piastra di fissaggio rimuovendo i tappi e interponendo degli O-Ring (non forniti).

Questo è possibile, dopo aver tappato i fori principali, sia con la pinza fissata sul fondo, sia con la pinza fissata sul fianco.

Rispettare le dimensioni indicate nella tabella per le sedi degli O-Ring nella piastra di fissaggio.

Aria compressa in A: apertura della pinza.

Aria compressa in C: chiusura della pinza.

La pinza è azionata con aria compressa filtrata (5÷40 µm) non necessariamente lubrificata.

La scelta iniziale, lubrificata o non lubrificata, deve essere mantenuta per tutta la vita della pinza.

L'impianto pneumatico deve essere pressurizzato gradualmente, per evitare movimenti incontrollati.

Compressed air feeding

The compressed air feeding can be accomplished by the main lateral air ports on the gripper side, after mounting fittings and hoses (not supplied).

Or the compressed air can be supplied directly by the mounting plate, through O-Rings (not supplied), after removing the plugs.

This is possible with the gripper fastened on the bottom, or on one side, after plugging the main air ports.

Check the dimensions in the table for the housings of the O-Rings in the mounting plate.

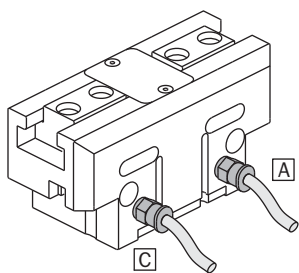
Compressed air in A: gripper opening.

Compressed air in C: gripper closing.

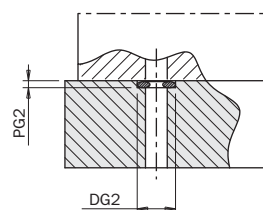
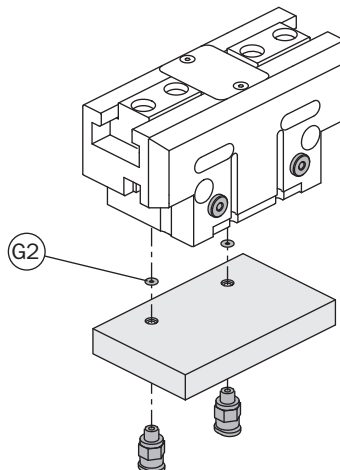
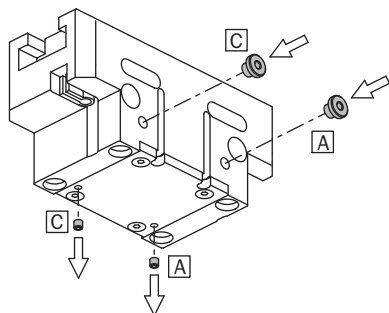
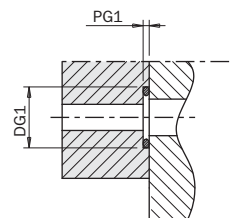
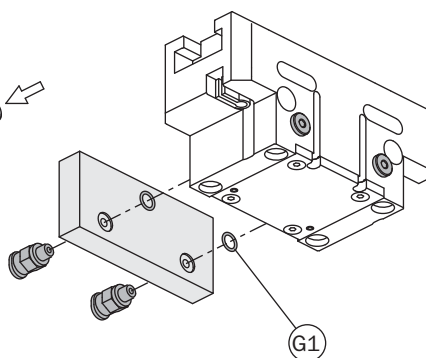
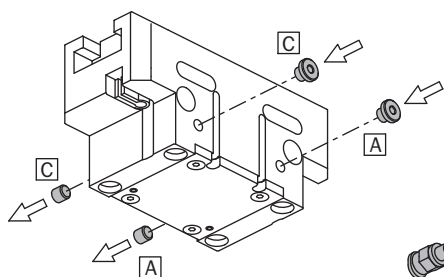
Compressed air must be supplied filtered (5÷40µm), not necessarily lubricated.

The initial choice on air lubrication (lubricated or not) must be kept for the complete service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...
G1		O-Ring 1x3 (GUAR-082)	O-Ring 1x5 (GUAR-021)						
DG1	H11	Ø5 mm	Ø7 mm						
PG1	+0.1	0.7 mm							
G2		O-Ring 1x3 (GUAR-082)					O-Ring 1x5 (GUAR-021)		
DG2	H11	Ø5 mm					Ø7 mm		
PG2	+0.1	0.4 mm	0.4 mm	0.4 mm	0.4 mm	0.5 mm	0.5 mm	0.5 mm	0.7 mm



Circuito pneumatico

Possibili inconvenienti sul circuito di alimentazione dell'aria compressa:

- 1- Oscillazioni di pressione.
- 2- Riempimento pinza vuota all'avvio.
- 3- Improvvisa mancanza di pressione.
- 4- Velocità di azionamento eccessiva.

Accorgimenti per risolvere i problemi:

- 1- Serbatoio esterno (A).
- 2- Valvola di avviamento progressivo (B).
- 3- Valvole di sicurezza (C).
- 4- Regolatori di flusso (D).

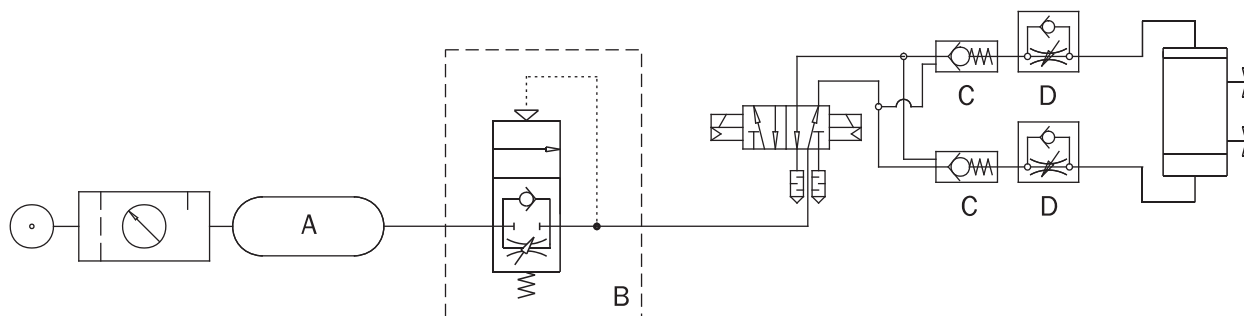
Pneumatic circuit

Possible problems on a compressed air circuit:

- 1- Pressure variation.
- 2- Pressurizing with empty gripper.
- 3- Sudden pressure black-out.
- 4- Excessive speed of the jaws.

Possible solutions:

- 1- Compressed air storage (A).
- 2- Start-up valve (B).
- 3- Safety valve (C).
- 4- Flow controller (D).



Manutenzione

La pinza va ingrassata ogni 10 milioni di cicli con:

- BERULUB FG-H 2 EP
(Lubrificante NSF H1 Registrazione No. 140486).

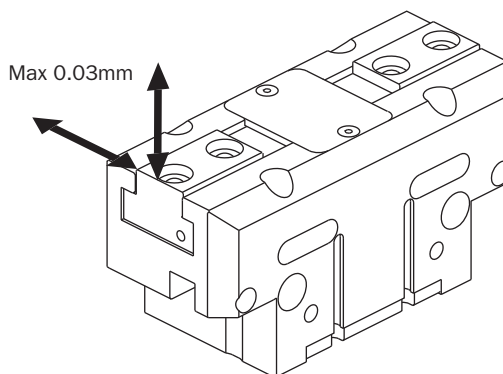
La figura sotto mostra il gioco massimo delle griffe.

Maintenance

Grease the gripper after 10 million cycles with:

- BERULUB FG-H 2 EP
(Lubricant NSF H1 Registration No. 140486).

The picture below shows the jaw maximum backlash.

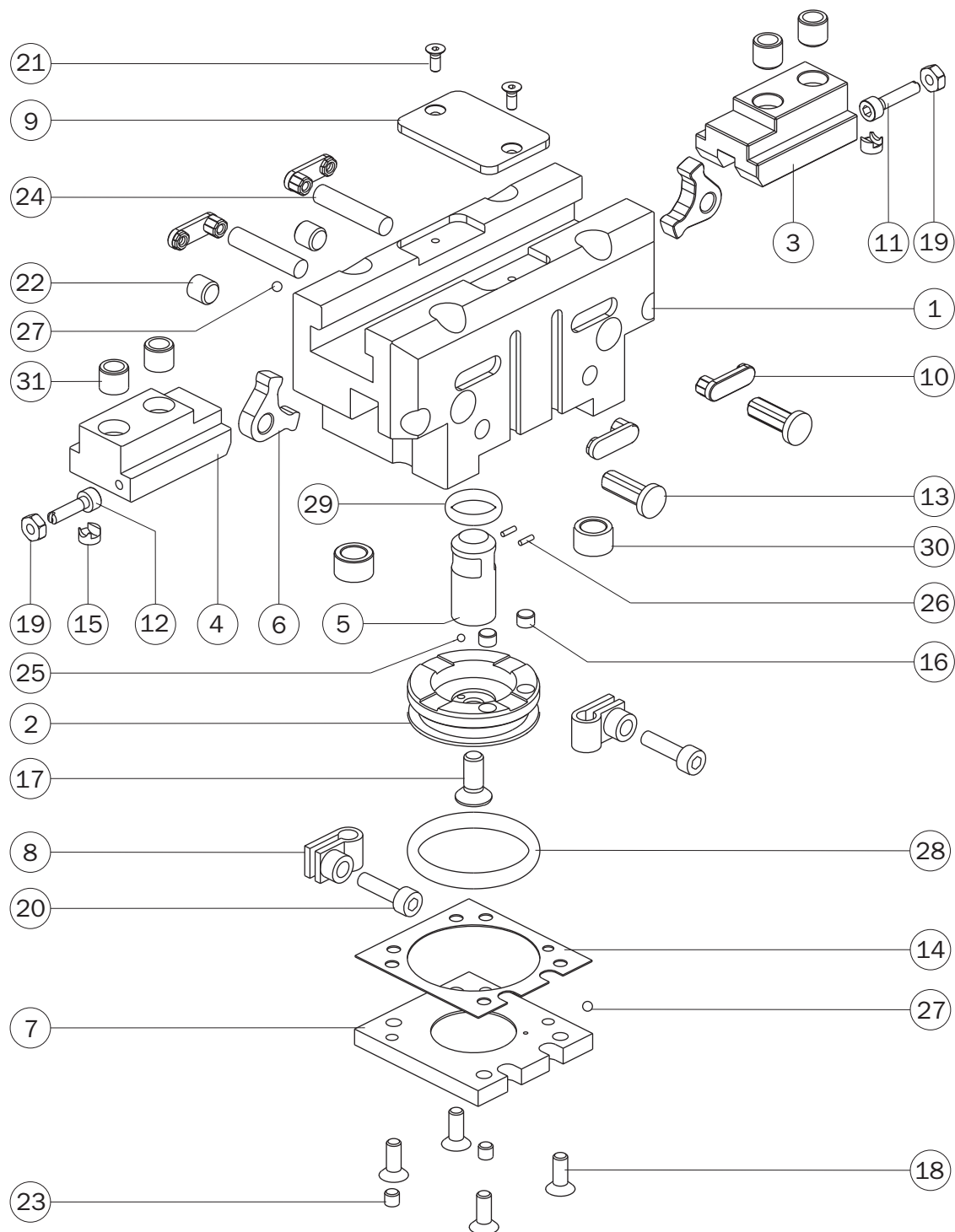


Vista esplosa / Exploded view

DH19

DH22

DH27



Elenco delle parti / Part list

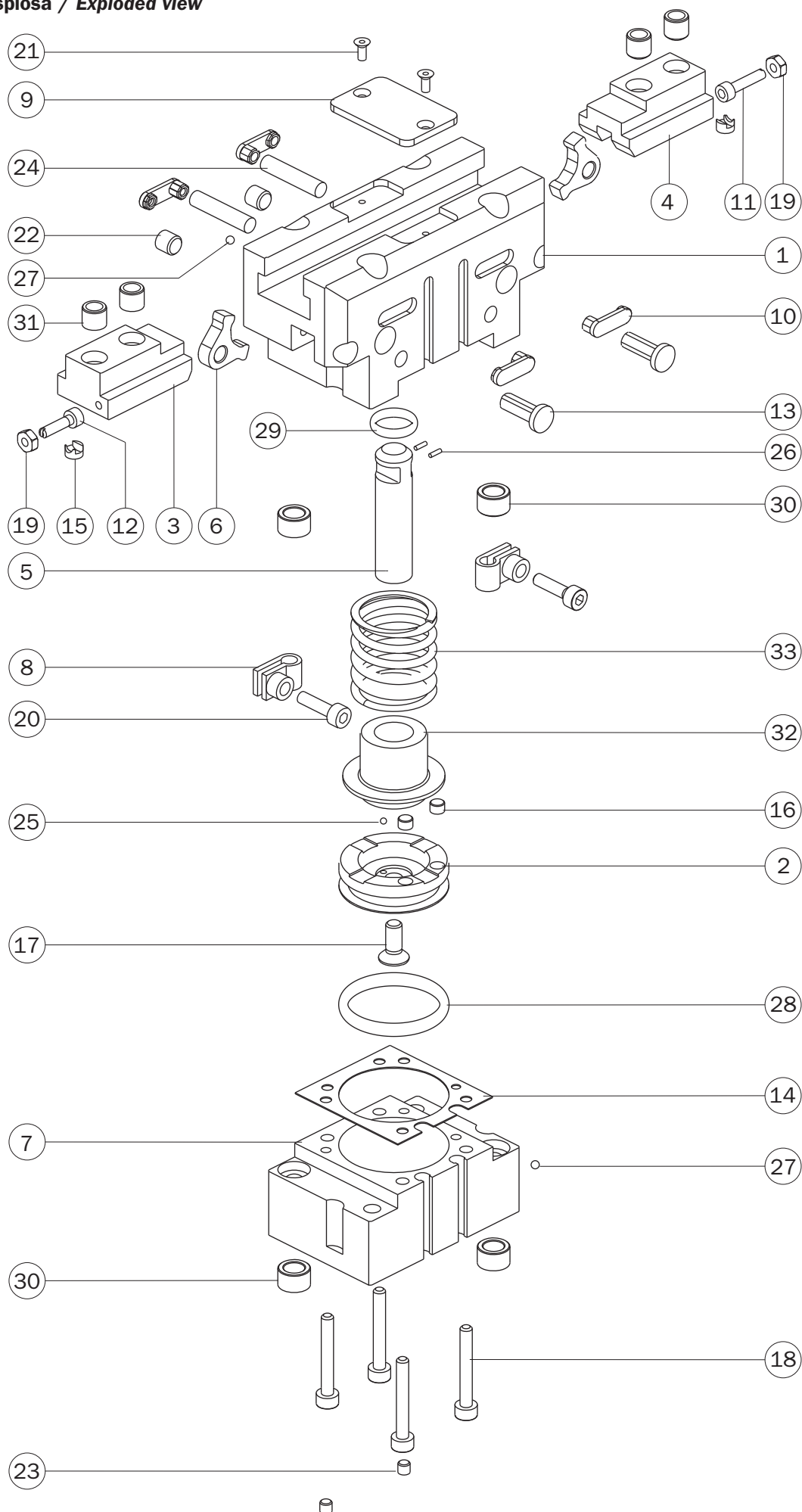
		DH1905	DH2208	DH2204	DH2712	DH2706		
1	Corpo pinza	DH1905-01	DH2208-01		DH2712-01		Gripper housing	1
2	Pistone	DH1905-04	DH2208-02		DH2712-02		Piston	2
3	Griffa destra	DH1905-03	DH2208-03		DH2712-03D		Right jaw	3
4	Griffa sinistra	DH1905-03	DH2208-03		DH2712-03S		Left jaw	4
5	Stelo	-	DH2208-04		DH2712-04		Piston rod	5
6	Leva	DH1905-05	DH2208-05	DH2204-05	DH2712-05	DH2706-05	Lever	6
7	Fondello	DH1905-06	DH2208-06		DH2712-06		Bottom end plate	7
8	Supporto per sensori induttivi	-	-		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH1905-08	DH2208-08		DH2712-08		Top cover	9
10	Tappo	-	DH2208-13		DH2712-13		Plug	10
11	Vite di regolazione	-	-		DH2712-14		Adjustment screw	11
12	Vite di regolazione	-	-		DH2712-15	DH2712-16	Adjustment screw	12
13	Tappo di protezione	-	DH2208-17		DH2712-17		Protection plug	13
14	Guarnizione fondello	DH1905-18	DH2208-18		DH2712-18		Seal	14
15	Trascinatore per sensore	-	-		DH2712-19		Sensor activator	15
16	Magnete	EPP12-13					Magnet	16
17	Vite	-	VITE-035 M3x8 DIN965A		VITE-028 M4x10 DIN965A		Screw	17
18	Vite	VITE-238 M2x5 DIN7991	VITE-234 M2.5x6 DIN7991		VITE-306 M3x8 UNI5933		Screw	18
19	Dado	-	-		VITE-210 M2.5 DIN934		Nut	19
20	Vite	-	-		VITE-014 M3x12 DIN912		Screw	20
21	Vite	VITE-238 M2x5 DIN7991					Screw	21
22	Vite senza testa	VITE-229 M3x3 DIN913	VITE-197 M5x4 DIN913		VITE-069 M5x5 DIN913		Grub screw	22
23	Vite senza testa	VITE-432 M2x2.5 DIN913	VITE-229 M3x3 DIN913				Grub screw	23
24	Spina di riferimento	SPINA-077 2.5x20 DIN6325	SPINA-069 2.5x17.8 DIN5402		SPINA-012 4x20 DIN6325		Dowel pin	24
25	Sfera	-	SPINA-180 Ø1.5 DIN5401A				Ball	25
26	Spina di riferimento	-	SPINA-111 4x3.8 DIN5402				Dowel pin	26
27	Sfera	SPINA-084 Ø2 DIN5401A					Ball	27
28	O-Ring	GUAR-023H 1.78x15.6	GUAR-206H 2.62x17.13		GUAR-032H 2.62x21.89		O-Ring	28
29	O-Ring	GUAR-039H 1.78x6.07	GUAR-012H 1.78x6.75		GUAR-013H 1.78x8.73		O-Ring	29
30	Boccola	SGP-25-09	SGP-32-09		LP23-62		Bush	30
31	Boccola	SGP-20-09	ZBH-5		SGP-32-09		Bush	31

Vista esplosa / Exploded view

DH19...-NC

DH22...-NC

DH27...-NC



Elenco delle parti / Part list

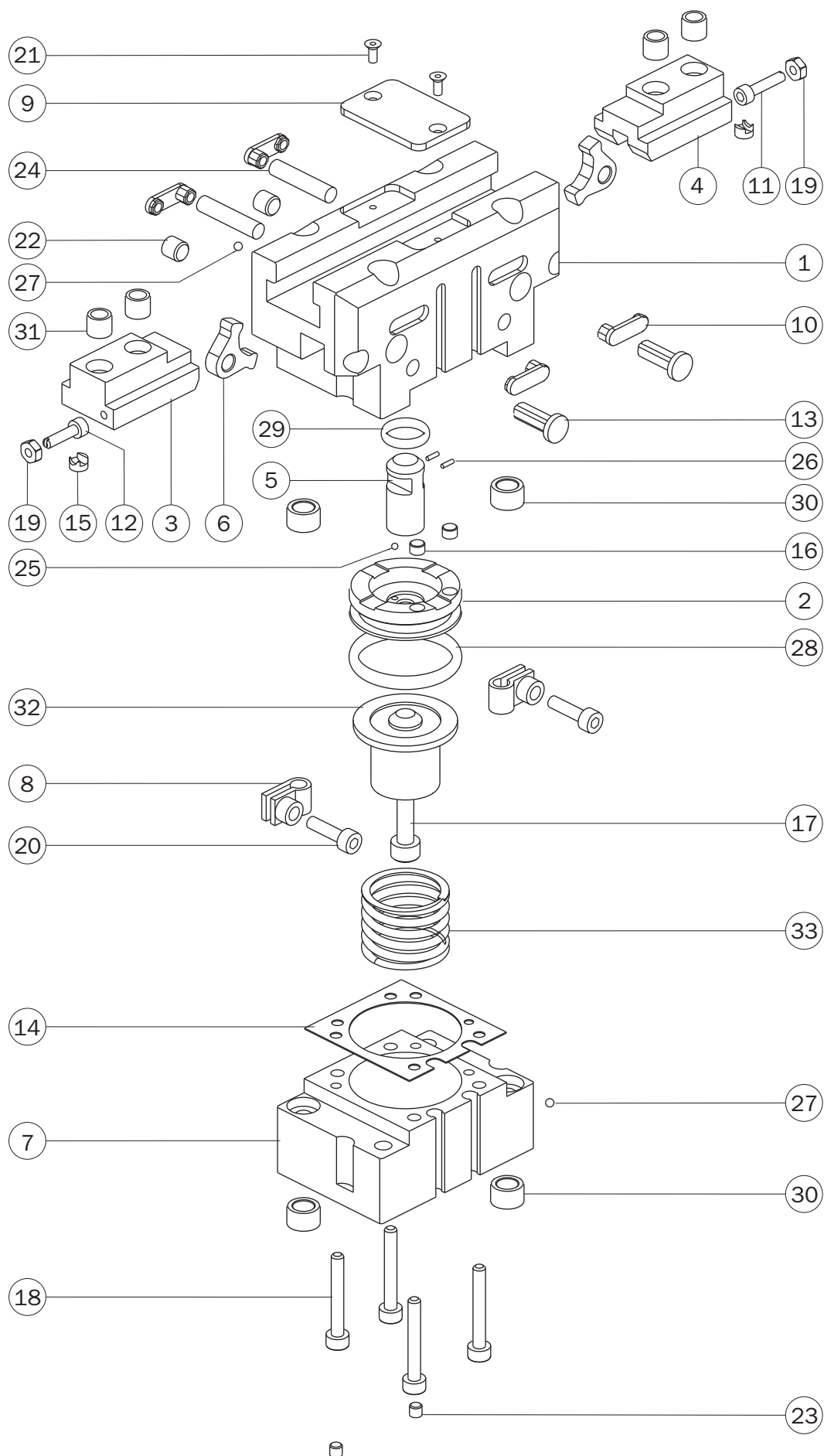
		DH1905-NC	DH2208-NC	DH2204-NC	DH2712-NC	DH2706-NC			
1	Corpo pinza	DH1905-01	DH2208-01		DH2712-01		Gripper housing	1	
2	Pistone	DH1905-10	DH2208-02		DH2712-02		Piston	2	
3	Griffa destra	DH1905-03	DH2208-03		DH2712-03D		Right jaw	3	
4	Griffa sinistra	DH1905-03	DH2208-03		DH2712-03S		Left jaw	4	
5	Stelo	-	DH2208-10		DH2712-10		Piston rod	5	
6	Leva	DH1905-05	DH2208-05	DH2204-05	DH2712-05	DH2706-05	Lever	6	
7	Corpo addizionale	DH1905-09	DH2208-09		DH2712-09		Additional body	7	
8	Supporto per sensori induttivi	-	-		DH3516-07		Inductive sensor holder	8	
9	Protezione superiore	DH1905-08	DH2208-08		DH2712-08		Top cover	9	
10	Tappo	-	DH2208-13		DH2712-13		Plug	10	
11	Vite di regolazione	-	-		DH2712-14		Adjustment screw	11	
12	Vite di regolazione	-	-		DH2712-15	DH2712-16	Adjustment screw	12	
13	Tappo di protezione	-	DH2208-17		DH2712-17		Protection plug	13	
14	Guarnizione fondello	DH1905-18	DH2208-18		DH2712-18		Seal	14	
15	Trascinatore per sensore	-	-		DH2712-19		Sensor activator	15	
16	Magnete	EPP12-13					Magnet	16	
17	Vite	-	VITE-035 M3x8 DIN965A		VITE-028 M4x10 DIN965A		Screw	17	
18	Vite	VITE-433 M2x16 DIN7991	VITE-445 M2.5x20 DIN912		VITE-164 M3x22 DIN912		Screw	18	
19	Dado	-	-		VITE-210 M2.5 DIN934		Nut	19	
20	Vite	-	-		VITE-014 M3x12 DIN912		Screw	20	
21	Vite	VITE-238 M2x5 DIN7991					Screw	21	
22	Vite senza testa	VITE-229 M3x3 DIN913	VITE-197 M5x4 DIN913		VITE-069 M5x5 DIN913		Grub screw	22	
23	Vite senza testa	VITE-432 M2x2.5 DIN913	VITE-229 M3x3 DIN913					Grub screw	23
24	Spina di riferimento	SPINA-077 2.5x20 DIN6325	SPINA-069 2.5x17.8 DIN5402		SPINA-012 4x20 DIN6325		Dowel pin	24	
25	Sfera	-	SPINA-180 Ø1.5 DIN5401A					Ball	25
26	Spina di riferimento	-	SPINA-111 4x3.8 DIN5402					Dowel pin	26
27	Sfera	SPINA-084 Ø2 DIN5401A					Ball	27	
28	O-Ring	GUAR-023H 1.78x15.6	GUAR-206H 2.62x17.13		GUAR-032H 2.62x21.89		O-Ring	28	
29	O-Ring	GUAR-039H 1.78x6.07	GUAR-012H 1.78x6.75		GUAR-013H 1.78x8.73		O-Ring	29	
30	Boccola	SGP-25-09	SGP-32-09		LP23-62		Bush	30	
31	Boccola	SGP-20-09	ZBH-5		SGP-32-09		Bush	31	
32	Distanziale -NC	DH1905-11	DH2208-11		DH2712-11		Spacer -NC	32	
33	Molla	DH1905-20	FES-32-20C		DH2712-20		Spring	33	

Vista esplosa / Exploded view

DH19...-NO

DH22...-NO

DH27...-NO



Elenco delle parti / Part list

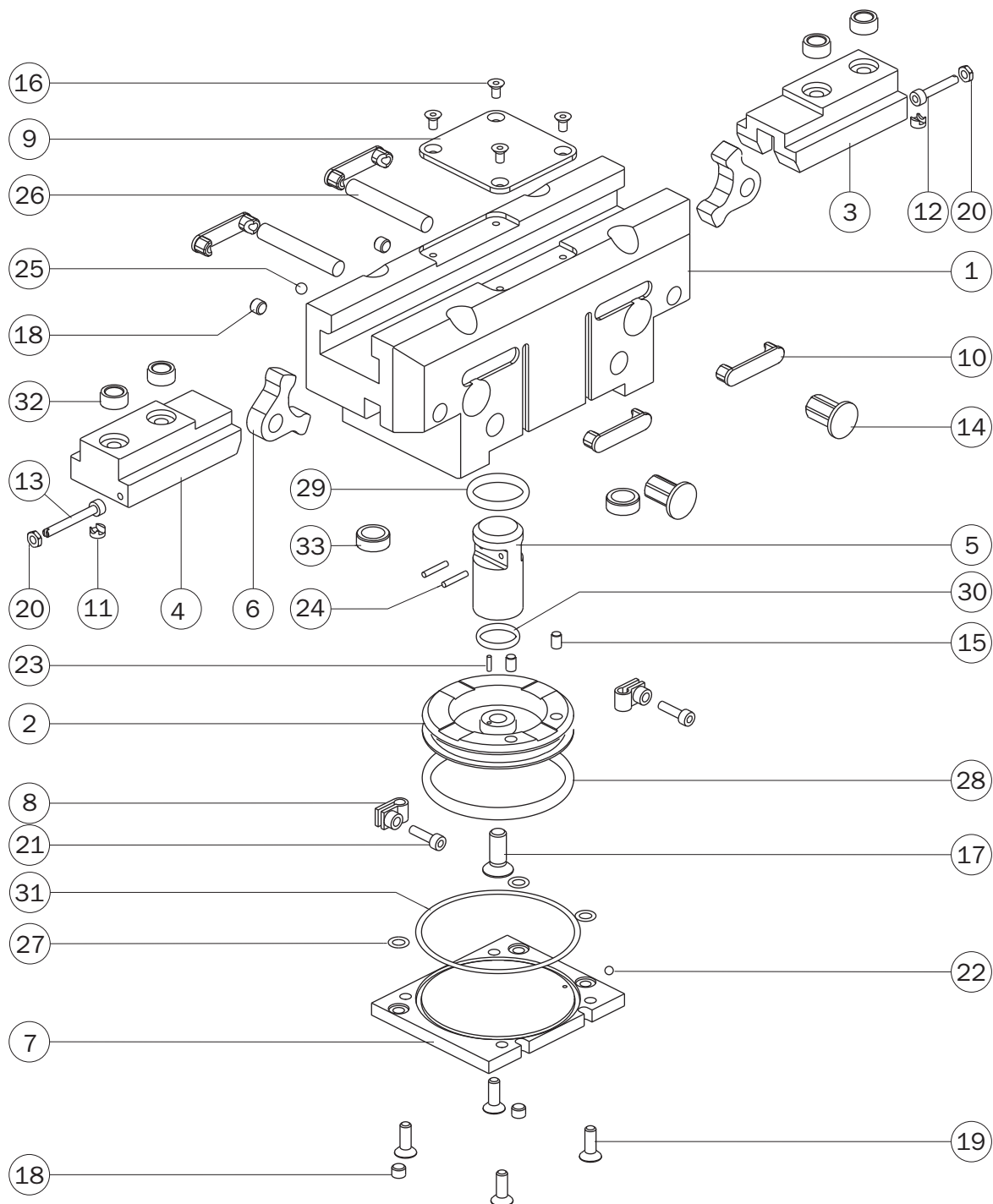
		DH1905-NO	DH2208-NO	DH2204-NO	DH2712-NO	DH2706-NO			
1	Corpo pinza	DH1905-01	DH2208-01		DH2712-01		Gripper housing	1	
2	Pistone	DH1905-10	DH2208-02		DH2712-02		Piston	2	
3	Griffa destra	DH1905-03	DH2208-03		DH2712-03D		Right jaw	3	
4	Griffa sinistra	DH1905-03	DH2208-03		DH2712-03S		Left jaw	4	
5	Stelo	-	DH2208-04		DH2712-04		Piston rod	5	
6	Leva	DH1905-05	DH2208-05	DH2204-05	DH2712-05	DH2706-05	Lever	6	
7	Corpo addizionale	DH1905-09	DH2208-09		DH2712-09		Additional body	7	
8	Supporto per sensori induttivi	-	-		DH3516-07		Inductive sensor holder	8	
9	Protezione superiore	DH1905-08	DH2208-08		DH2712-08		Top cover	9	
10	Tappo	-	DH2208-13		DH2712-13		Plug	10	
11	Vite di regolazione	-	-		DH2712-14		Adjustment screw	11	
12	Vite di regolazione	-	-		DH2712-15	DH2712-16	Adjustment screw	12	
13	Tappo di protezione	-	DH2208-17		DH2712-17		Protection plug	13	
14	Guarnizione fondello	DH1905-18	DH2208-18		DH2712-18		Seal	14	
15	Trascinatore per sensore	-	-		DH2712-19		Sensor activator	15	
16	Magnete	EPP12-13					Magnet	16	
17	Vite	-	VITE-050 M3x16 DIN912		VITE-258 M4x20 DIN912		Screw	17	
18	Vite	VITE-433 M2x16 DIN7991	VITE-445 M2.5x20 DIN912		VITE-164 M3x22 DIN912		Screw	18	
19	Dado	-	-		VITE-210 M2.5 DIN934		Nut	19	
20	Vite	-	-		VITE-014 M3x12 DIN912		Screw	20	
21	Vite	VITE-238 M2x5 DIN7991					Screw	21	
22	Vite senza testa	VITE-229 M3x3 DIN913	VITE-197 M5x4 DIN913		VITE-069 M5x5 DIN913		Grub screw	22	
23	Vite senza testa	VITE-432 M2x2.5 DIN913	VITE-229 M3x3 DIN913					Grub screw	23
24	Spina di riferimento	SPINA-077 2.5x20 DIN6325	SPINA-069 2.5x17.8 DIN5402		SPINA-012 4x20 DIN6325		Dowel pin	24	
25	Sfera	-	SPINA-180 Ø1.5 DIN5401A					Ball	25
26	Spina di riferimento	-	SPINA-111 4x3.8 DIN5402					Dowel pin	26
27	Sfera	SPINA-084 Ø2 DIN5401A					Ball	27	
28	O-Ring	GUAR-023H 1.78x15.6	GUAR-206H 2.62x17.13		GUAR-032H 2.62x21.89		O-Ring	28	
29	O-Ring	GUAR-039H 1.78x6.07	GUAR-012H 1.78x6.75		GUAR-013H 1.78x8.73		O-Ring	29	
30	Boccola	SGP-25-09	SGP-32-09		LP23-62		Bush	30	
31	Boccola	SGP-20-09	ZBH-5		SGP-32-09		Bush	31	
32	Distanziale -NO	DH1905-12	DH2208-12		DH2712-12		Spacer -NO	32	
33	Molla	DH1905-20	FES-32-20C		DH2712-20		Spring	33	

Vista esplosa / Exploded view

DH35

DH44

DH55



Elenco delle parti / Part list

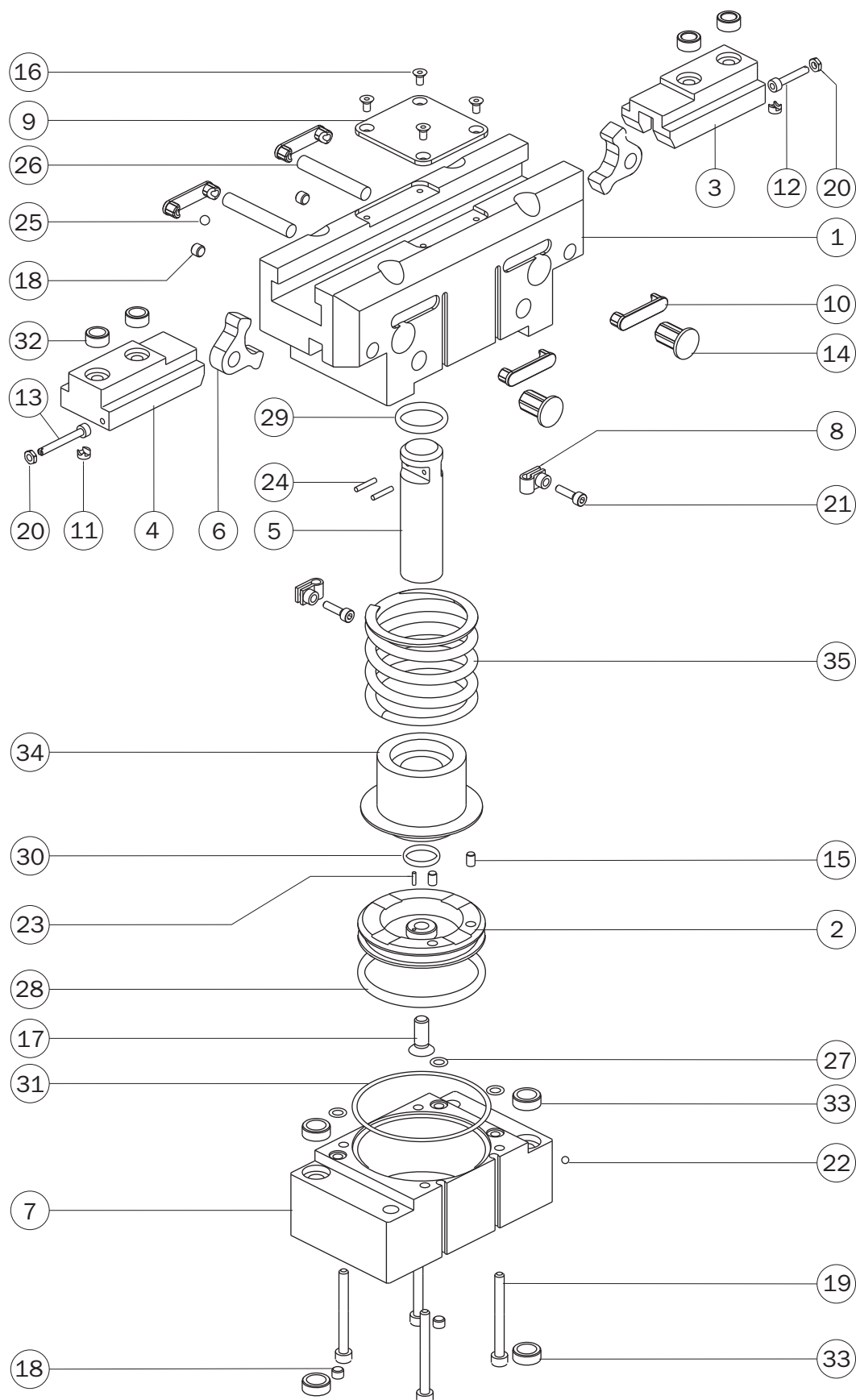
		DH3516	DH3508	DH4420	DH4410	DH5526	DH5512		
1	Corpo pinza	DH3516-01		DH4420-01		DH5526-01		Gripper housing	1
2	Pistone	DH3516-02		DH4420-02		DH5526-02		Piston	2
3	Griffa destra	DH3516-03D		DH4420-03D		DH5526-03D		Right jaw	3
4	Griffa sinistra	DH3516-03S		DH4420-03S		DH5526-03S		Left jaw	4
5	Stelo	DH3516-04		DH4420-04		DH5526-04		Piston rod	5
6	Leva	DH3516-05	DH3508-05	DH4420-05	DH4410-05	DH5526-05	DH5512-05	Lever	
7	Fondello	DH3516-06		DH4420-06		DH5526-06		Bottom end plate	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH3516-08		DH4420-08		DH5526-08		Top cover	9
10	Tappo	DH3516-13		DH4420-13		DH5516-13		Plug	10
11	Trascinatore per sensore	DH3516-14		DH3516-14		DH3516-14		Sensor activator	11
12	Vite di regolazione	TH5408-09		TH5408-09	TH5408-09	DH5526-14		Adjustment screw	12
13	Vite di regolazione	TH5408-10		TH7610-09	TH5408-10	TH9613-09		Adjustment screw	13
14	Tappo di protezione	DH3516-17		DH4420-17		DH5526-17		Protection plug	14
15	Magnete	EPP12-13		PAR-06-7		FES-16-3-9		Magnet	15
16	Vite	VITE-234 M2.5x6 DIN7991		VITE-233 M3x6 UNI5933				Screw	16
17	Vite	VITE-030 M5x12 DIN965A		VITE-054 M6x16 DIN965A				Screw	17
18	Vite senza testa	VITE-229 M3x3 DIN913		VITE-069 M5x5 DIN913		VITE-197 M5x4 DIN913		Grub screw	18
19	Vite	VITE-188 M3x10 UNI5933		VITE-305 M4x8 DIN7991		VITE-426 M4x12 UNI5933		Screw	19
20	Dado	VITE-148 M3 DIN439B						Nut	20
21	Vite	VITE-014 M3x12 DIN912						Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A				SPINA-092 Ø3 DIN5401A		Ball	22
23	Spina di riferimento	SPINA-084 Ø2 DIN5401A				SPINA-187 Ø1.5x5.8 DIN5402		Dowel pin	23
24	Spina di riferimento	SPINA-054 Ø3x14 DIN6325		SPINA-005 Ø2x10 DIN6325		SPINA-024 Ø2x12 DIN6325		Dowel pin	24
25	Sfera	SPINA-084 Ø2 DIN5401A		SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-072 Ø5x24 DIN6325		SPINA-115 Ø5x36 DIN6325		SPINA-032 Ø6x40 DIN6325		Dowel pin	26
27	O-Ring	GUAR-172 1x2.5		GUAR-091 1x4		GUAR-087 1x5.5		O-Ring	27
28	O-Ring	GUAR-150H 2.62x29.82 HNBR		GUAR-201H 2.62x39.34		GUAR-160H 3.53x47.22		O-Ring	28
29	O-Ring	GUAR-037H 1.78x11.11		GUAR-007H 1.78x14		GUAR-034H 2.62x17.86		O-Ring	29
30	O-Ring	-		-		GUAR-047 1.78x12.42		O-Ring	30
31	O-Ring	GUAR-205 2x35		GUAR-028 1.78x44.17		GUAR-219 1.5x55		O-Ring	31
32	Boccola	LP23-62		PQ5047-07				Bush	32
33	Boccola	LP23-62		PQ5047-07		ZBH-12		Bush	33

Vista esplosa / Exploded view

DH35...-NC

DH44...-NC

DH55...-NC



Elenco delle parti / Part list

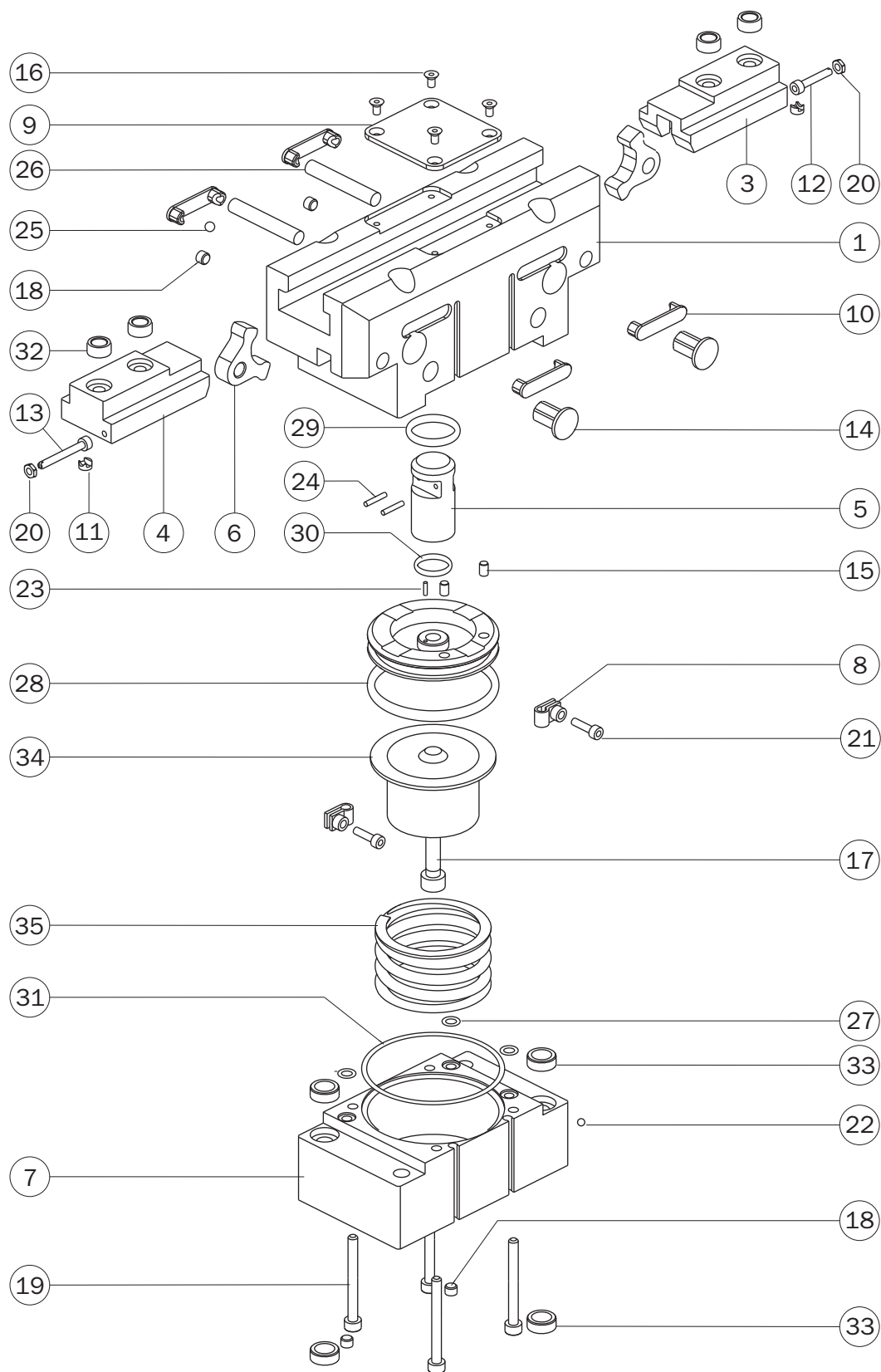
		DH3516-NC	DH3508-NC	DH4420-NC	DH4410-NC	DH5526-NC	DH5512-NC		
1	Corpo pinza	DH3516-01		DH4420-01		DH5526-01		Gripper housing	1
2	Pistone	DH3516-02		DH4420-02		DH5526-02		Piston	2
3	Griffa destra	DH3516-03D		DH4420-03D		DH5526-03D		Right jaw	3
4	Griffa sinistra	DH3516-03S		DH4420-03S		DH5526-03S		Left jaw	4
5	Stelo	DH3516-10		DH4420-10		DH5526-10		Piston rod	5
6	Leva	DH3516-05	DH3508-05	DH4420-05	DH4410-05	DH5526-05	DH5512-05	Lever	6
7	Corpo addizionale	DH3516-09		DH4420-09		DH5526-09		Additional body	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH3516-08		DH4420-08		DH5526-08		Top cover	9
10	Tappo	DH3516-13		DH4420-13		DH5516-13		Plug	10
11	Trascinatore per sensore	DH3516-14						Sensor activator	11
12	Vite di regolazione	TH5408-09		TH5408-09	TH5408-09	DH5526-14	DH5526-15	Adjustment screw	12
13	Vite di regolazione	TH5408-10		TH7610-09	TH5408-10	TH9613-09		Adjustment screw	13
14	Tappo di protezione	DH3516-17		DH4420-17		DH5526-17		Protection plug	14
15	Magnete	EPP12-13		PAR-06-7		FES-16-3-9		Magnet	15
16	Vite	VITE-234 M2.5x6 DIN7991		VITE-233 M3x6 UNI5933				Screw	16
17	Vite	VITE-030 M5x12 DIN965A		VITE-054 M6x16 DIN965A				Screw	17
18	Vite senza testa	VITE-229 M3x3 DIN913		VITE-069 M5x5 DIN913		VITE-197 M5x4 DIN913		Grub screw	18
19	Vite	VITE-251 M3x25 DIN912		VITE-121 M4x30 DIN912		VITE-190 M4x40 DIN912		Screw	19
20	Dado	VITE-148 M3 DIN439B						Nut	20
21	Vite	VITE-014 M3x12 DIN912						Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A				SPINA-092 Ø3 DIN5401A		Ball	22
23	Spina di riferimento	SPINA-084 Ø2 DIN5401A				SPINA-187 Ø1.5x5.8 DIN5402		Dowel pin	23
24	Spina di riferimento	SPINA-054 Ø3x14 DIN6325		SPINA-005 Ø2x10 DIN6325		SPINA-024 Ø2x12 DIN6325		Dowel pin	24
25	Sfera	SPINA-084 Ø2 DIN5401A		SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-072 Ø5x24 DIN6325		SPINA-115 Ø5x36 DIN6325		SPINA-032 Ø6x40 DIN6325		Dowel pin	26
27	O-Ring	GUAR-172 1x2.5		GUAR-091 1x4		GUAR-087 1x5.5		O-Ring	27
28	O-Ring	GUAR-150H 2.62x29.82 HNBR		GUAR-201H 2.62x39.34		GUAR-160H 3.53x47.22		O-Ring	28
29	O-Ring	GUAR-037H 1.78x11.11		GUAR-007H 1.78x14		GUAR-034H 2.62x17.86		O-Ring	29
30	O-Ring	-		-		GUAR-047 1.78x12.42		O-Ring	30
31	O-Ring	GUAR-205 2x35		GUAR-028 1.78x44.17		GUAR-219 1.5x55		O-Ring	31
32	Boccola	LP23-62		PQ5047-07				Bush	32
33	Boccola	LP23-62		PQ5047-07		ZBH-12		Bush	33
34	Distanziale -NC	DH3516-11		DH4420-11		DH5526-11		Spacer -NC	34
35	Molla	DH3516-20		DH4420-20		DH5526-20		Spring	35

Vista esplosa / Exploded view

DH35...-NO

DH44...-NO

DH55...-NO



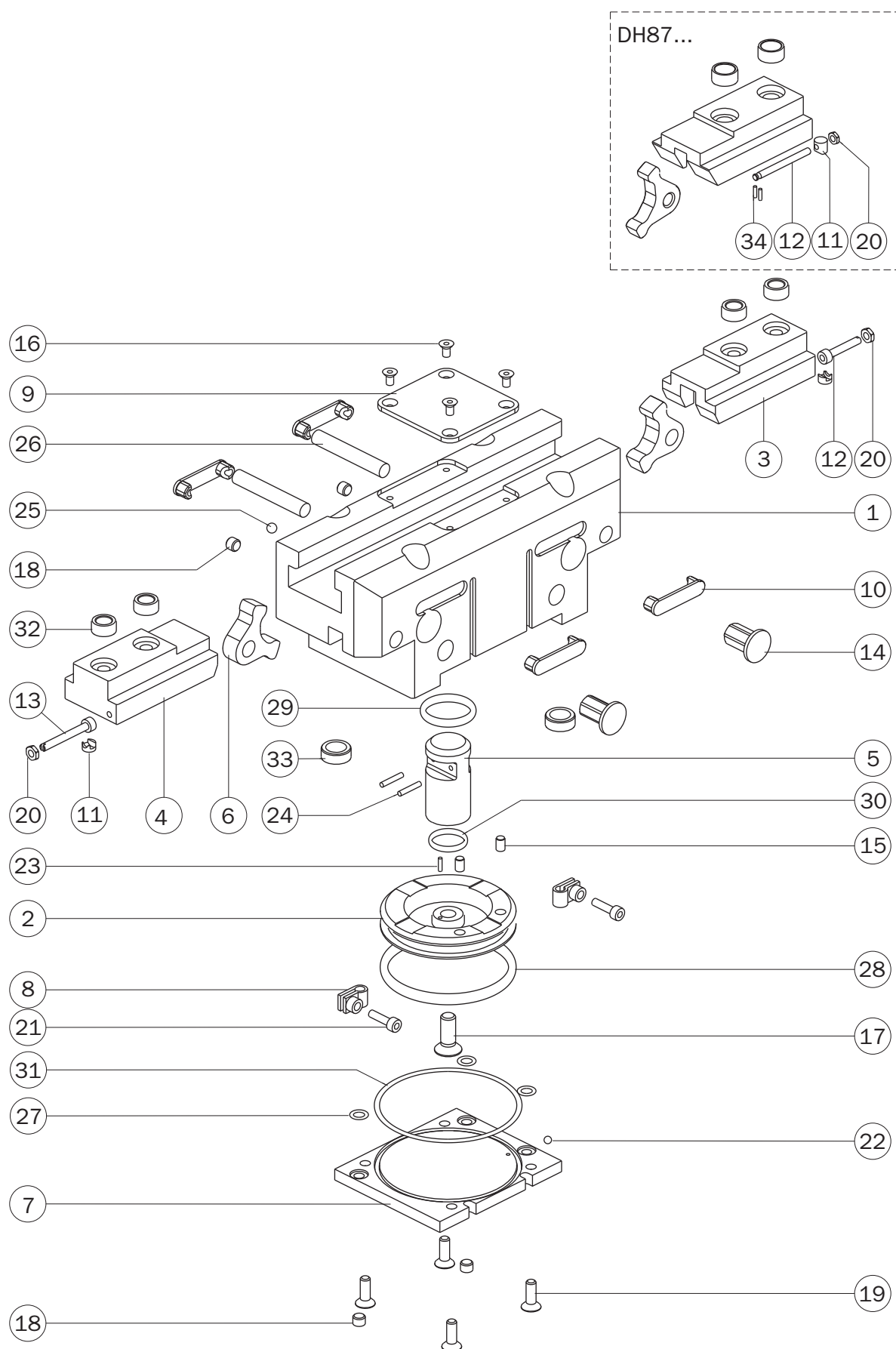
Elenco delle parti / Part list

		DH3516-NO	DH3508-NO	DH4420-NO	DH4410-NO	DH5526-NO	DH5512-NO		
1	Corpo pinza	DH3516-01		DH4420-01		DH5526-01		Gripper housing	1
2	Pistone	DH3516-02		DH4420-02		DH5526-02		Piston	2
3	Griffa destra	DH3516-03D		DH4420-03D		DH5526-03D		Right jaw	3
4	Griffa sinistra	DH3516-03S		DH4420-03S		DH5526-03S		Left jaw	4
5	Stelo	DH3516-04		DH4420-04		DH5526-04		Piston rod	5
6	Leva	DH3516-05	DH3508-05	DH4420-05	DH4410-05	DH5526-05	DH5512-05	Lever	6
7	Corpo addizionale	DH3516-09		DH4420-09		DH5526-09		Additional body	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH3516-08		DH4420-08		DH5526-08		Top cover	9
10	Tappo	DH3516-13		DH4420-13		DH5516-13		Plug	10
11	Trascinatore per sensore	DH3516-14						Sensor activator	11
12	Vite di regolazione	TH5408-09		TH5408-09	TH5408-09	DH5526-14	DH5526-15	Adjustment screw	12
13	Vite di regolazione	TH5408-10		TH7610-09	TH5408-10	TH9613-09		Adjustment screw	13
14	Tappo di protezione	DH3516-17		DH4420-17		DH5526-17		Protection plug	14
15	Magnete	EPP12-13		PAR-06-7		FES-16-3-9		Magnet	15
16	Vite	VITE-234 M2.5x6 DIN7991		VITE-233 M3x6 UNI5933				Screw	16
17	Vite	VITE-065 M5x25 DIN912		VITE-192 M6x30 DIN912		VITE-355 M6x35 DIN912		Screw	17
18	Vite senza testa	VITE-229 M3x3 DIN913		VITE-069 M5x5 DIN913		VITE-197 M5x4 DIN913		Grub screw	18
19	Vite	VITE-251 M3x25 DIN912		VITE-121 M4x30 DIN912		VITE-190 M4x40 DIN912		Screw	19
20	Dado	VITE-148 M3 DIN439B						Nut	20
21	Vite	VITE-014 M3x12 DIN912						Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A				SPINA-092 Ø3 DIN5401A		Ball	22
23	Spina di riferimento	SPINA-084 Ø2 DIN5401A				SPINA-187 Ø1.5x5.8 DIN5402		Dowel pin	23
24	Spina di riferimento	SPINA-054 Ø3x14 DIN6325		SPINA-005 Ø2x10 DIN6325		SPINA-024 Ø2x12 DIN6325		Dowel pin	24
25	Sfera	SPINA-084 Ø2 DIN5401A		SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-072 Ø5x24 DIN6325		SPINA-115 Ø5x36 DIN6325		SPINA-032 Ø6x40 DIN6325		Dowel pin	26
27	O-Ring	GUAR-172 1x2.5		GUAR-091 1x4		GUAR-087 1x5.5		O-Ring	27
28	O-Ring	GUAR-150H 2.62x29.82 HNBR		GUAR-201H 2.62x39.34		GUAR-160H 3.53x47.22		O-Ring	28
29	O-Ring	GUAR-037H 1.78x11.11		GUAR-007H 1.78x14		GUAR-034H 2.62x17.86		O-Ring	29
30	O-Ring	-		-		GUAR-047 1.78x12.42		O-Ring	30
31	O-Ring	GUAR-205 2x35		GUAR-028 1.78x44.17		GUAR-219 1.5x55		O-Ring	31
32	Boccola	LP23-62		PQ5047-07				Bush	32
33	Boccola	LP23-62		PQ5047-07		ZBH-12		Bush	33
34	Distanziale -NO	DH3516-12		DH4420-12		DH5526-12		Spacer -NO	34
35	Molla	DH3516-21		DH4420-20		DH5526-20		Spring	35

Vista esplosa / Exploded view

DH66

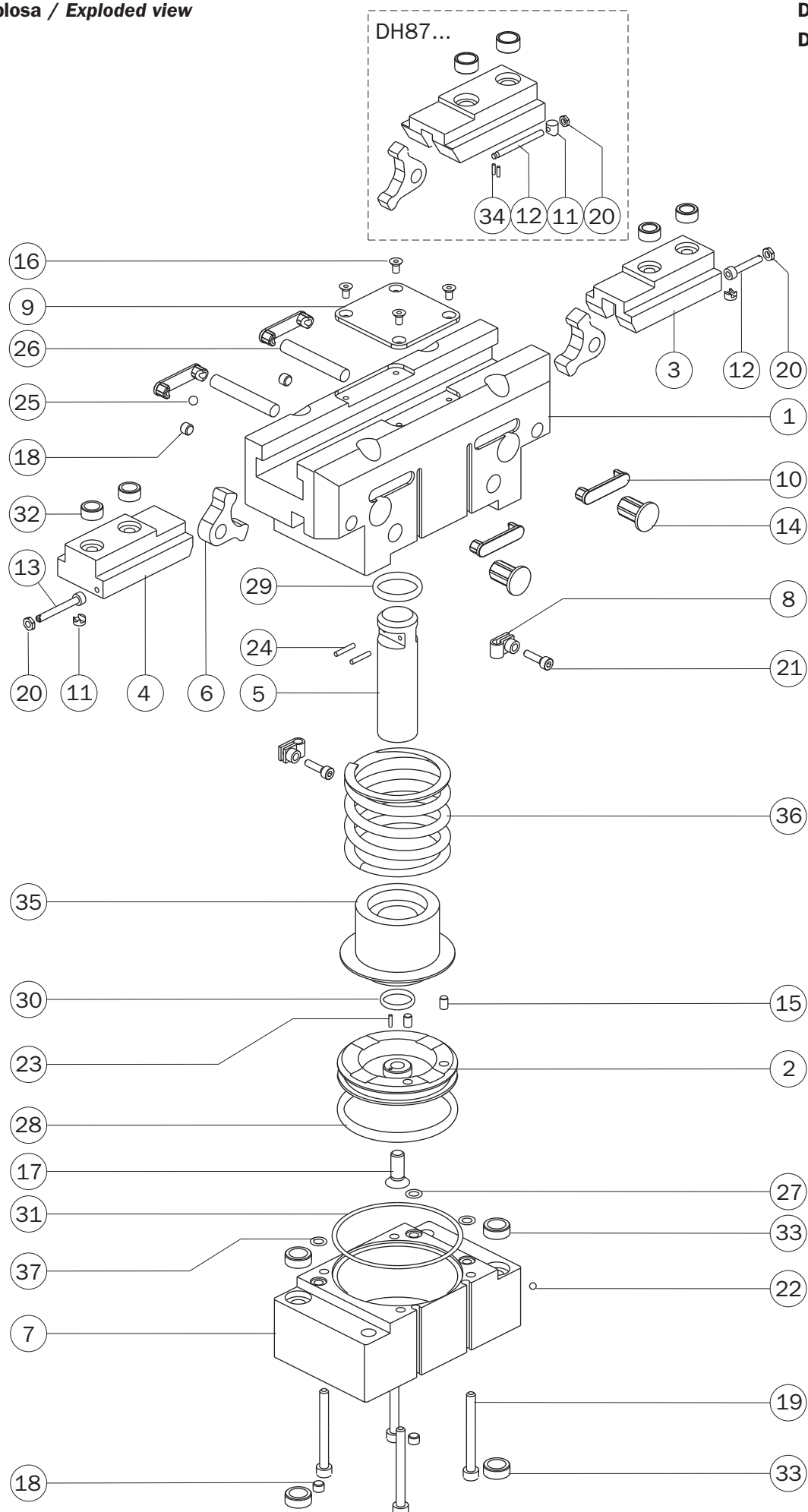
DH87



Elenco delle parti / Part list

		DH6632	DH6616	DH8750	DH8728		
1	Corpo pinza	DH6632-01		DH8750-01		Gripper housing	1
2	Pistone	DH6632-02		DH8750-02		Piston	2
3	Griffa destra	DH6632-03D		DH8750-03D		Right jaw	3
4	Griffa sinistra	DH6632-03S		DH8750-03S		Left jaw	4
5	Stelo	DH6632-04		DH8750-04		Piston rod	5
6	Leva	DH6632-05	DH6616-05	DH8750-05	DH8728-05	Lever	6
7	Fondello	DH6632-06		DH8750-06		Bottom end plate	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH6632-08		DH8750-08		Top cover	9
10	Tappo	DH6632-13		DH8750-13		Plug	10
11	Trascinatore per sensore	DH3516-14		DH8750-18		Sensor activator	11
12	Vite di regolazione	TH7610-09		DH8750-15		Adjustment screw	12
13	Vite di regolazione	TH12516-10	TH9613-09	DH8750-15		Adjustment screw	13
14	Tappo di protezione	DH6632-17		DH8750-17		Protection plug	14
15	Magnete	R63-180-20		FES-16-3-9		Magnet	15
16	Vite	VITE-233 M3x6 UNI5933		VITE-306 M3x8 UNI5933		Screw	16
17	Vite	VITE-328 M8x20 DIN7991		VITE-440 M8x25 DIN7991		Screw	17
18	Vite senza testa	VITE-069 M5x5 DIN913				Grub screw	18
19	Vite	VITE-290 M5x12 DIN7991		VITE-430 M5x12 DIN5933		Screw	19
20	Dado	VITE-148 M3 DIN439B		VITE-134 M4 DIN439B		Nut	20
21	Vite	VITE-014 M3x12 DIN912				Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A		-		Ball	22
23	Spina di riferimento	SPINA-005 Ø2x10 DIN6325				Dowel pin	23
24	Spina di riferimento	SPINA-009 Ø2x16 DIN6325		SPINA-002 Ø3x20 DIN6325		Dowel pin	24
25	Sfera	SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-029 Ø8x40 DIN6325		SPINA-211 Ø8x55 DIN6325		Dowel pin	26
27	O-Ring	GUAR-021 1x5		-		O-Ring	27
28	O-Ring	GUAR-197H 3.53x59.92		GUAR-198H 3.53x78.97		O-Ring	28
29	O-Ring	GUAR-032H 2.62x21.89		GUAR-199H 2.5x26		O-Ring	29
30	O-Ring	GUAR-023 1.78x15.6		GUAR-052 1.78x20.35		O-Ring	30
31	O-Ring	GUAR-075 1.78x15.6		GUAR-200 1.78x94.97		O-Ring	31
32	Boccola	TH12516-09		DH8750-14		Bush	32
33	Boccola	ZBH-12		TH12516-09		Bush	33
34	Spina di riferimento	-		SPINA-020 Ø2x8 DIN6325		Dowel pin	34

Vista esplosa / Exploded view

DH66...-NC
DH87...-NC

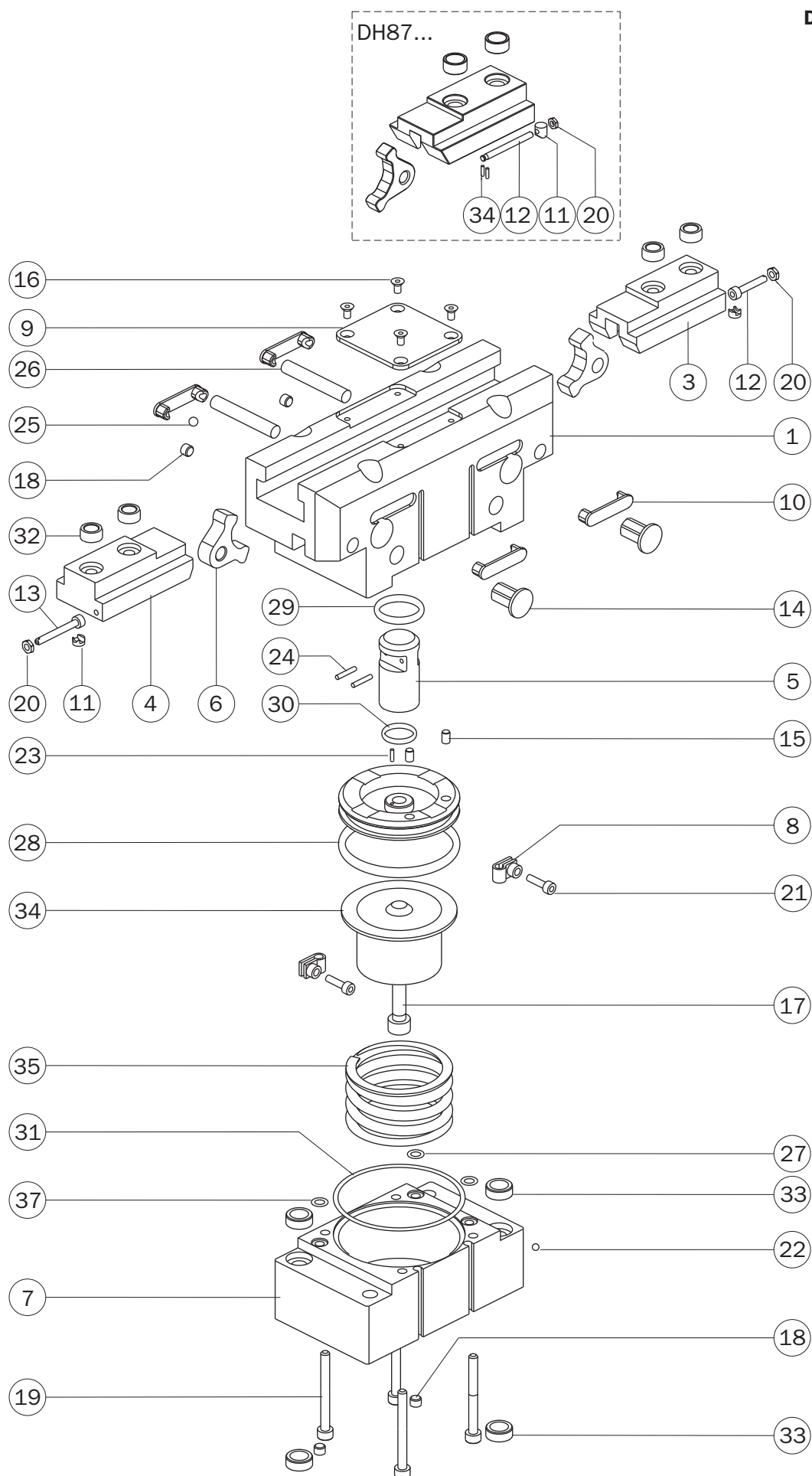
Elenco delle parti / Part list

		DH6632-NC	DH6616-NC	DH8750-NC	DH8728-NC		
1	Corpo pinza	DH6632-01		DH8750-01		Gripper housing	1
2	Pistone	DH6632-02		DH8750-02		Piston	2
3	Griffa destra	DH6632-03D		DH8750-03D		Right jaw	3
4	Griffa sinistra	DH6632-03S		DH8750-03S		Left jaw	4
5	Stelo	DH6632-10		DH8750-10		Piston rod	5
6	Leva	DH6632-05		DH8750-05	DH8728-05	Lever	6
7	Corpo addizionale	DH6632-09		DH8750-09		Additional body	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH6632-08		DH8750-08		Top cover	9
10	Tappo	DH6632-13		DH8750-13		Plug	10
11	Trascinatore per sensore	DH3516-14		DH8750-18		Sensor activator	11
12	Vite di regolazione	TH7610-09		DH8750-15		Adjustment screw	12
13	Vite di regolazione	TH12516-10	TH9613-09	DH8750-15		Adjustment screw	13
14	Tappo di protezione	DH6632-17		DH8750-17		Protection plug	14
15	Magnete	R63-180-20		FES-16-3-9		Magnet	15
16	Vite	VITE-233 M3x6 UNI5933		VITE-306 M3x8 UNI5933		Screw	16
17	Vite	VITE-328 M8x20 DIN7991		VITE-440 M8x25 DIN7991		Screw	17
18	Vite senza testa	VITE-069 M5x5 DIN913				Grub screw	18
19	Vite	VITE-439 M5x50 DIN7991		VITE-381 M5x60 DIN912		Screw	19
20	Dado	VITE-148 M3 DIN439B		VITE-134 M4 DIN439B		Nut	20
21	Vite	VITE-014 M3x12 DIN912				Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A		-		Ball	22
23	Spina di riferimento	SPINA-005 Ø2x10 DIN6325				Dowel pin	23
24	Spina di riferimento	SPINA-009 Ø2x16 DIN6325		SPINA-002 Ø3x20 DIN6325		Dowel pin	24
25	Sfera	SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-029 Ø8x40 DIN6325		SPINA-211 Ø8x55 DIN6325		Dowel pin	26
27	O-Ring	GUAR-021 1x5		GUAR-091 1x4		O-Ring	27
28	O-Ring	GUAR-197H 3.53x59.92		GUAR-198H 3.53x78.97		O-Ring	28
29	O-Ring	GUAR-032H 2.62x21.89		GUAR-199H 2.5x26		O-Ring	29
30	O-Ring	GUAR-023 1.78x15.6		GUAR-052 1.78x20.35		O-Ring	30
31	O-Ring	GUAR-075 1.78x15.6		GUAR-200 1.78x94.97		O-Ring	31
32	Boccola	TH12516-09		DH8750-14		Bush	32
33	Boccola	ZBH-12		TH12516-09		Bush	33
34	Spina di riferimento	-		SPINA-020 Ø2x8 DIN6325		Dowel pin	34
35	Distanziale -NC	DH6632-11		DH8750-11		Spacer -NC	35
36	Molla	DH6632-20		DH8750-20 DH8750-21		Spring	36
37	O-Ring	-		GUAR-098 1x6		O-Ring	37

Vista esplosa / Exploded view

DH66...-NO

DH87...-NO



Elenco delle parti / Part list

		DH6632-NO	DH6616-NO	DH8750-NO	DH8728-NO		
1	Corpo pinza	DH6632-01		DH8750-01		Gripper housing	1
2	Pistone	DH6632-02		DH8750-02		Piston	2
3	Griffa destra	DH6632-03D		DH8750-03D		Right jaw	3
4	Griffa sinistra	DH6632-03S		DH8750-03S		Left jaw	4
5	Stelo	DH6632-04		DH8750-04		Piston rod	5
6	Leva	DH6632-05		DH8750-05	DH8728-05	Lever	6
7	Corpo addizionale	DH6632-09		DH8750-09		Additional body	7
8	Supporto per sensori induttivi	DH3516-07		DH3516-07		Inductive sensor holder	8
9	Protezione superiore	DH6632-08		DH8750-08		Top cover	9
10	Tappo	DH6632-13		DH8750-13		Plug	10
11	Trascinatore per sensore	DH3516-14		DH8750-18		Sensor activator	11
12	Vite di regolazione	TH7610-09		DH8750-15		Adjustment screw	12
13	Vite di regolazione	TH12516-10	TH9613-09	DH8750-15		Adjustment screw	13
14	Tappo di protezione	DH6632-17		DH8750-17		Protection plug	14
15	Magnete	R63-180-20		FES-16-3-9		Magnet	15
16	Vite	VITE-233 M3x6 UNI5933		VITE-306 M3x8 UNI5933		Screw	16
17	Vite	VITE-384 M8x30 DIN912		VITE-208 M8x40 DIN912		Screw	17
18	Vite senza testa	VITE-069 M5x5 DIN913				Grub screw	18
19	Vite	VITE-439 M5x50 DIN7991		VITE-381 M5x60 DIN912		Screw	19
20	Dado	VITE-148 M3 DIN439B		VITE-134 M4 DIN439B		Nut	20
21	Vite	VITE-014 M3x12 DIN912				Screw	21
22	Sfera	SPINA-084 Ø2 DIN5401A		-		Ball	22
23	Spina di riferimento	SPINA-005 Ø2x10 DIN6325				Dowel pin	23
24	Spina di riferimento	SPINA-009 Ø2x16 DIN6325		SPINA-002 Ø3x20 DIN6325		Dowel pin	24
25	Sfera	SPINA-203 Ø4 DIN5401A				Ball	25
26	Spina di riferimento	SPINA-029 Ø8x40 DIN6325		SPINA-211 Ø8x55 DIN6325		Dowel pin	26
27	O-Ring	GUAR-021 1x5		GUAR-091 1x4		O-Ring	27
28	O-Ring	GUAR-197H 3.53x59.92		GUAR-198H 3.53x78.97		O-Ring	28
29	O-Ring	GUAR-032H 2.62x21.89		GUAR-199H 2.5x26		O-Ring	29
30	O-Ring	GUAR-023 1.78x15.6		GUAR-052 1.78x20.35		O-Ring	30
31	O-Ring	GUAR-075 1.78x15.6		GUAR-200 1.78x94.97		O-Ring	31
32	Boccola	TH12516-09		DH8750-14		Bush	32
33	Boccola	ZBH-12		TH12516-09		Bush	33
34	Spina di riferimento	-		SPINA-020 Ø2x8 DIN6325		Dowel pin	34
35	Distanziale -NO	DH6632-12		DH8750-12		Spacer -NO	35
36	Molla	DH6632-20		DH8750-20 DH8750-21		Spring	36
37	O-Ring	-		GUAR-098 1x6		O-Ring	37

Pinza pneumatica a 2 griffe ad azione parallela autocentrante (serie SP)

- Azionamento a doppio effetto.
- Meccanismo di regolazione del gioco esclusivo.
- Grande durata e affidabilità senza manutenzione.
- Diverse possibilità di fissaggio e alimentazione.
- Sensori magnetici opzionali.

2-jaw self-centering parallel pneumatic gripper (series SP)

- Double-acting drive.
- Exclusive backlash adjusting system.
- Maintenance-free long life and reliability.
- Various mounting and feeding options.
- Optional magnetic sensors.



SP-20

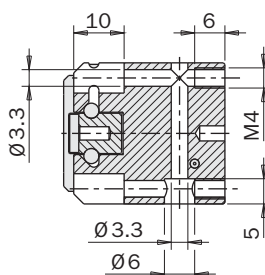
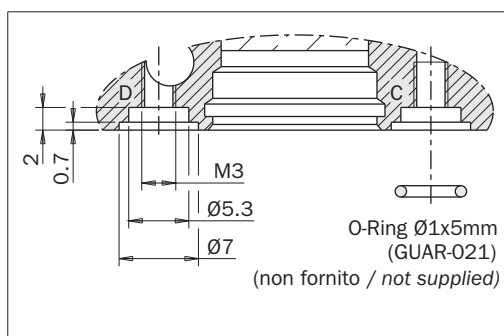
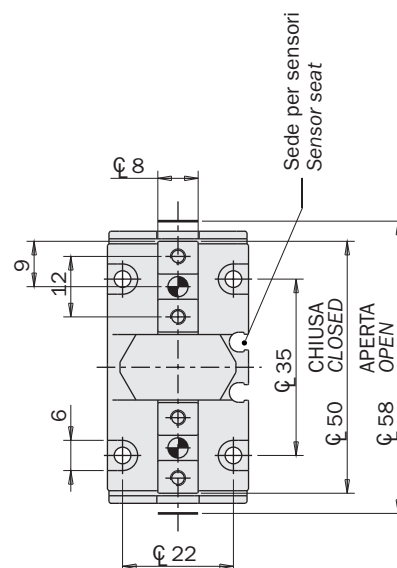
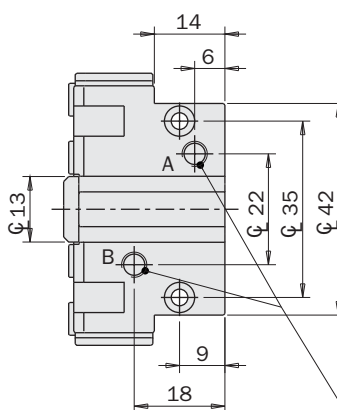
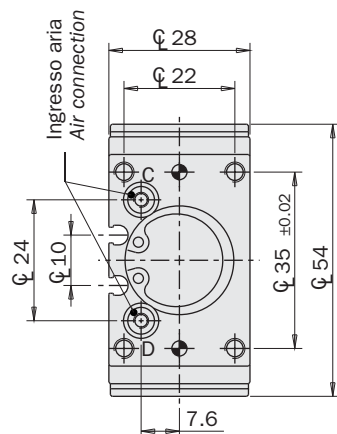
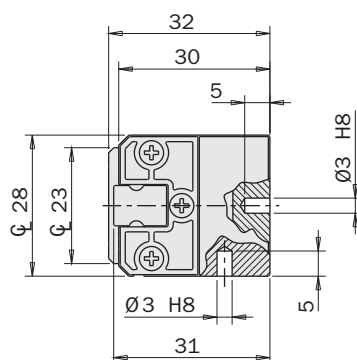
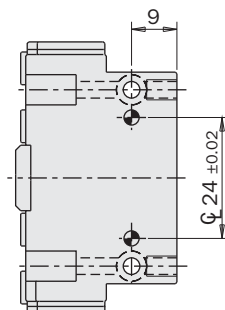
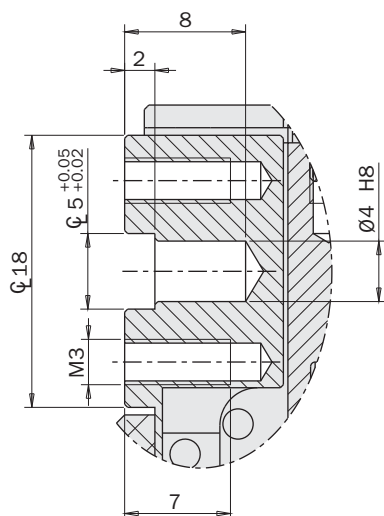
SP-25

SP-32

SP-40

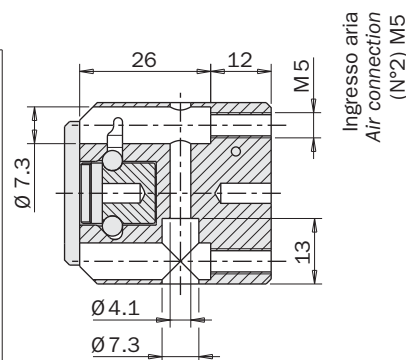
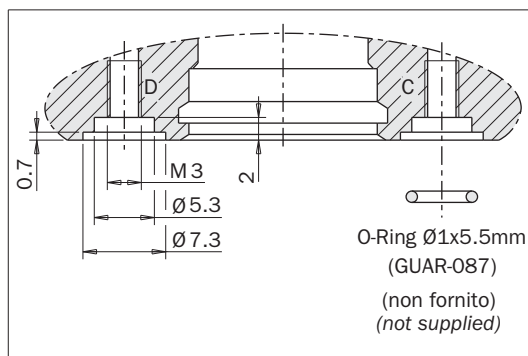
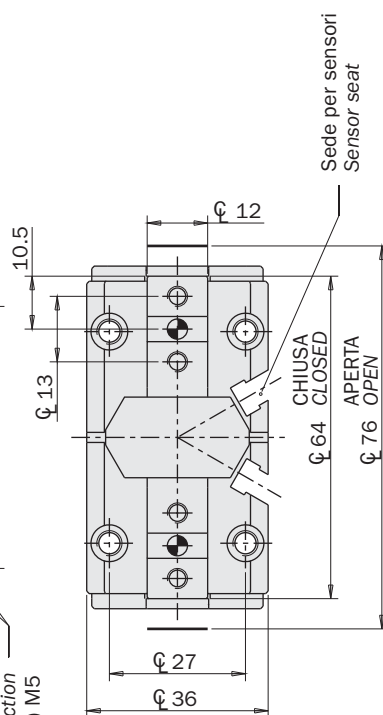
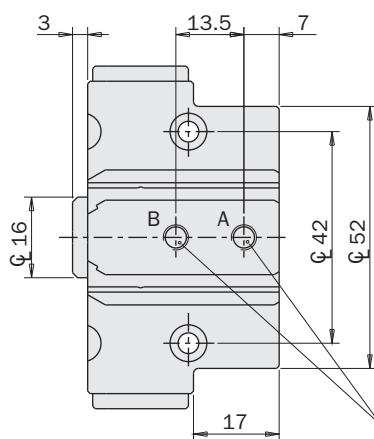
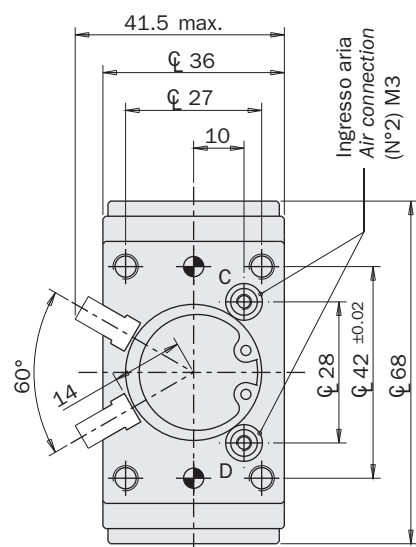
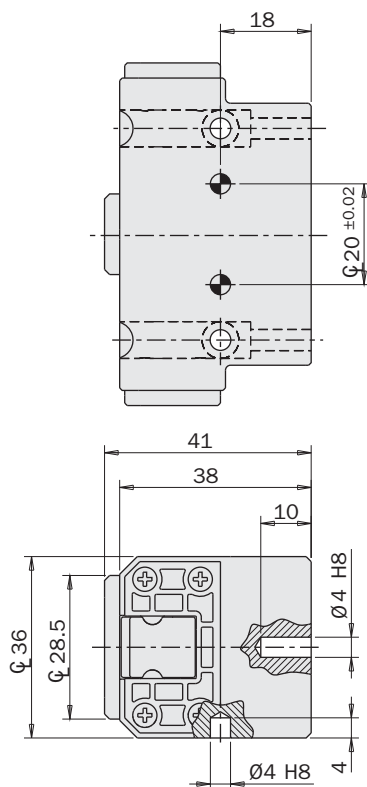
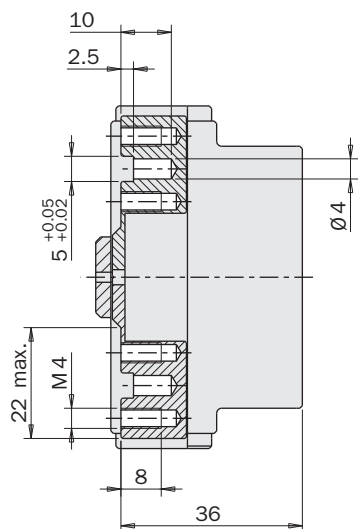
	NEW SP-20	NEW SP-25	NEW SP-32	NEW SP-40
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air			
Pressione di esercizio Operating pressure range	2.5 ÷ 8 bar			
Temperatura di esercizio Operating temperature range	5° ÷ 60°C.			
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar on each jaw	70 N	120 N	220 N	350 N
Forza di serraggio totale in apertura a 6 bar Total opening gripping force at 6 bar	140 N	240 N	440 N	700 N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar on each jaw	65 N	110 N	200 N	320 N
Forza di serraggio totale in chiusura a 6 bar Total closing gripping force at 6 bar	130 N	220 N	400 N	640 N
Corsa totale (±0.2 mm) Total stroke	8 mm	12 mm	16 mm	20 mm
Frequenza max funzionamento continuativo Maximum continuous operating frequency	3 Hz	2 Hz	2 Hz	2 Hz
Consumo d'aria per ciclo Air consumption per cycle	3 cm³	6 cm³	13 cm³	31 cm³
Tempo di chiusura senza carico Closing time without load	0.03 s	0.05 s	0.05 s	0.05 s
Tolleranza max ripetibilità Maximum repeatability tolerance	±0.02 mm	±0.02 mm	±0.02 mm	±0.02 mm
Peso Weight	105 g	210 g	380 g	600 g

Dettaglio griffa sezionata
Jaw cross section

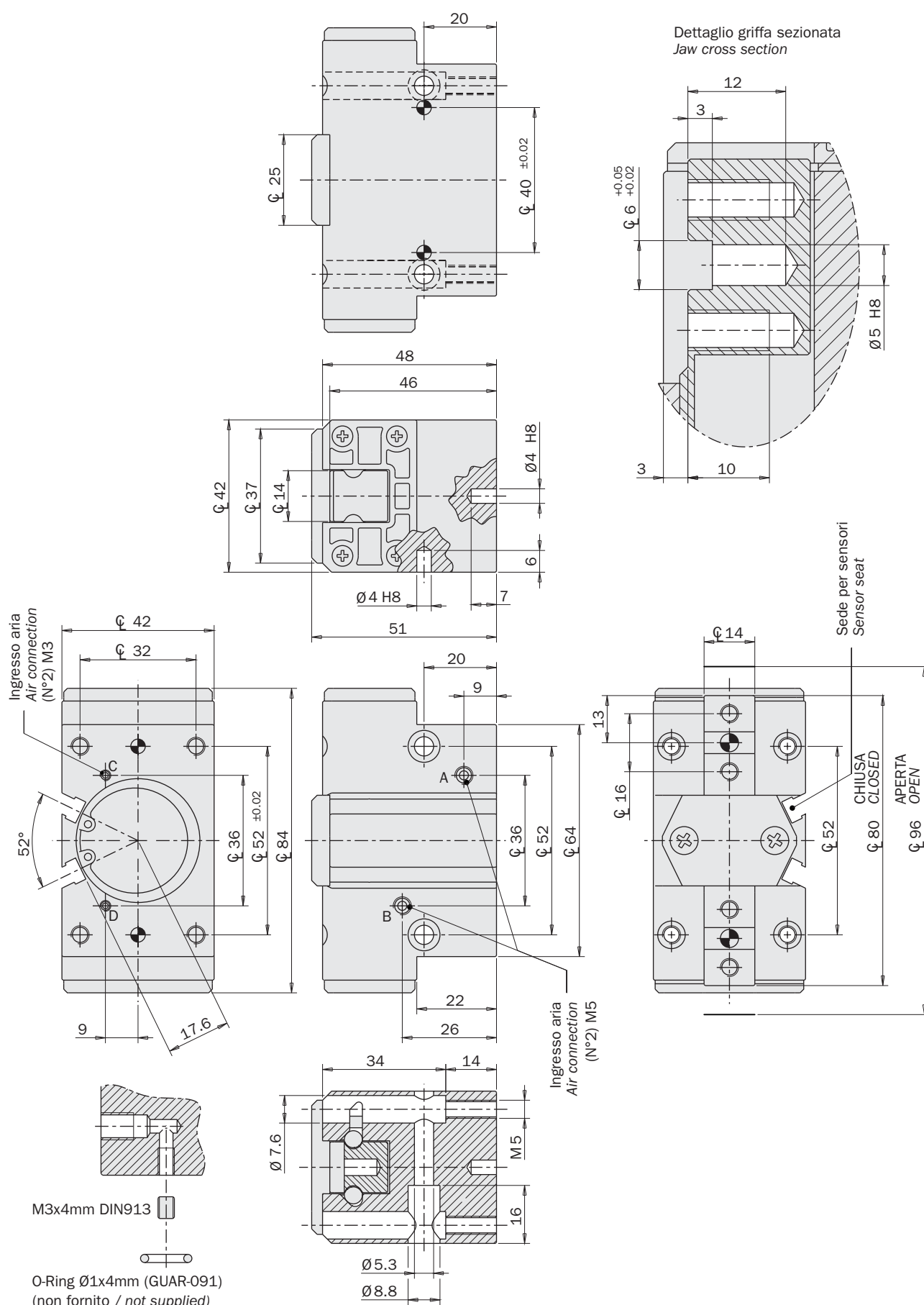


Dimensioni (mm) / Dimensions (mm)

SP-25

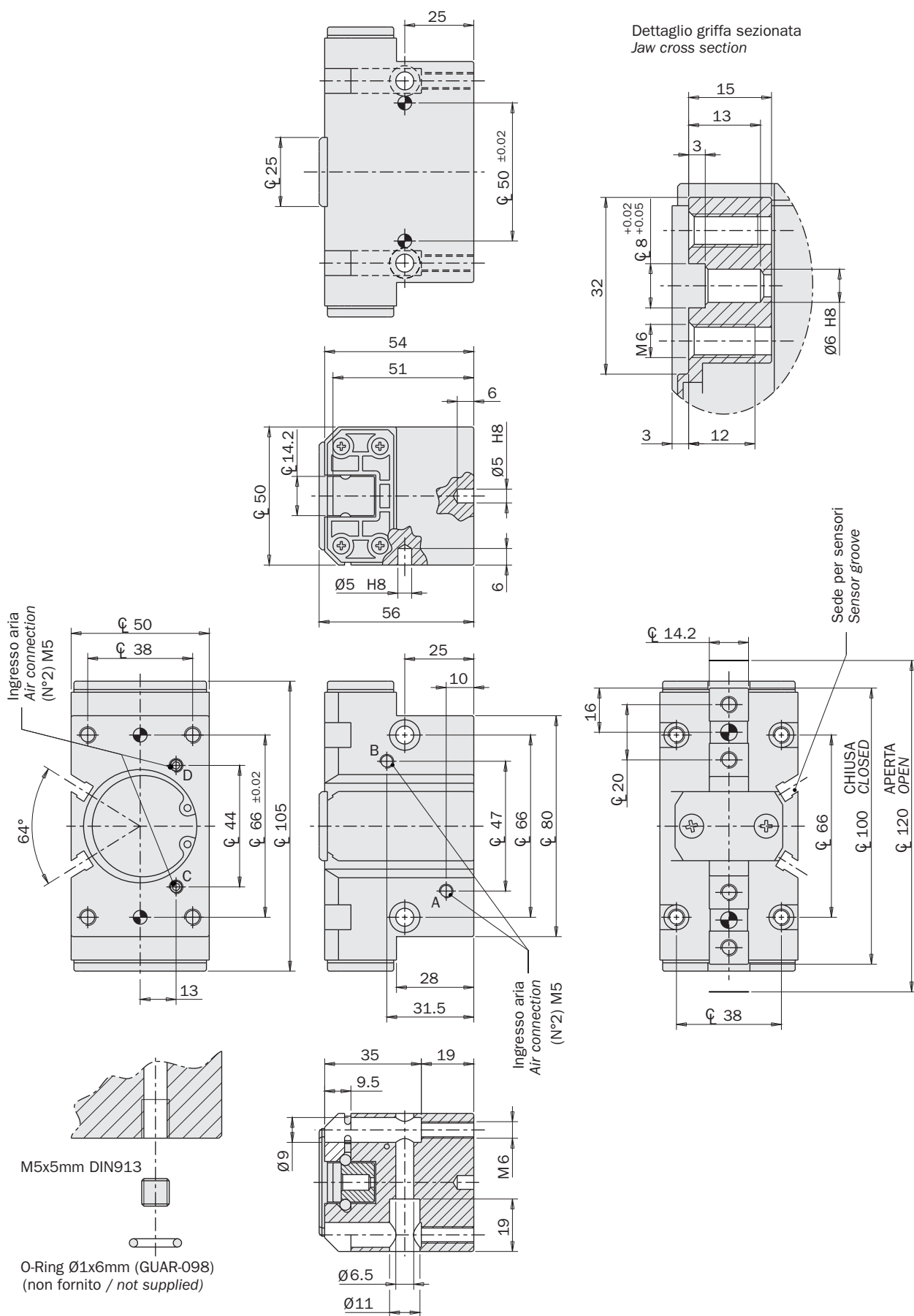
Dettaglio griffa sezionata
Jaw cross sectionFIRST ANGLE
PROJECTION

03/2015



Dimensioni (mm) / Dimensions (mm)

SP-40

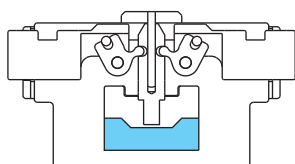
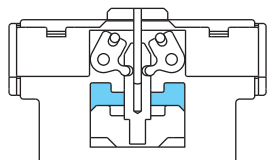
FIRST ANGLE
PROJECTION

03/2015

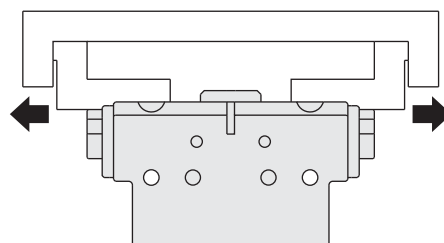
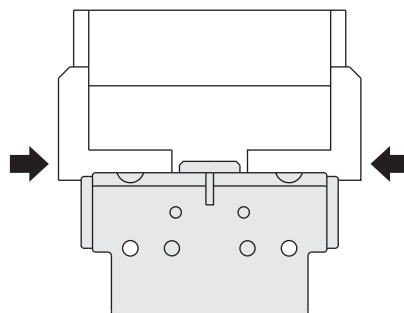
Serraggio

La pinza è a doppio effetto e può quindi essere usata per serrare il carico sia dall'esterno che dall'interno. La forza di serraggio è maggiore in apertura.

 Camera in pressione
Pressurized chamber

**Gripping**

The gripper is double-acting for either internal or external gripping applications. The gripping force on opening is higher.

**Esempio di applicazione****Application example**

Fissaggio

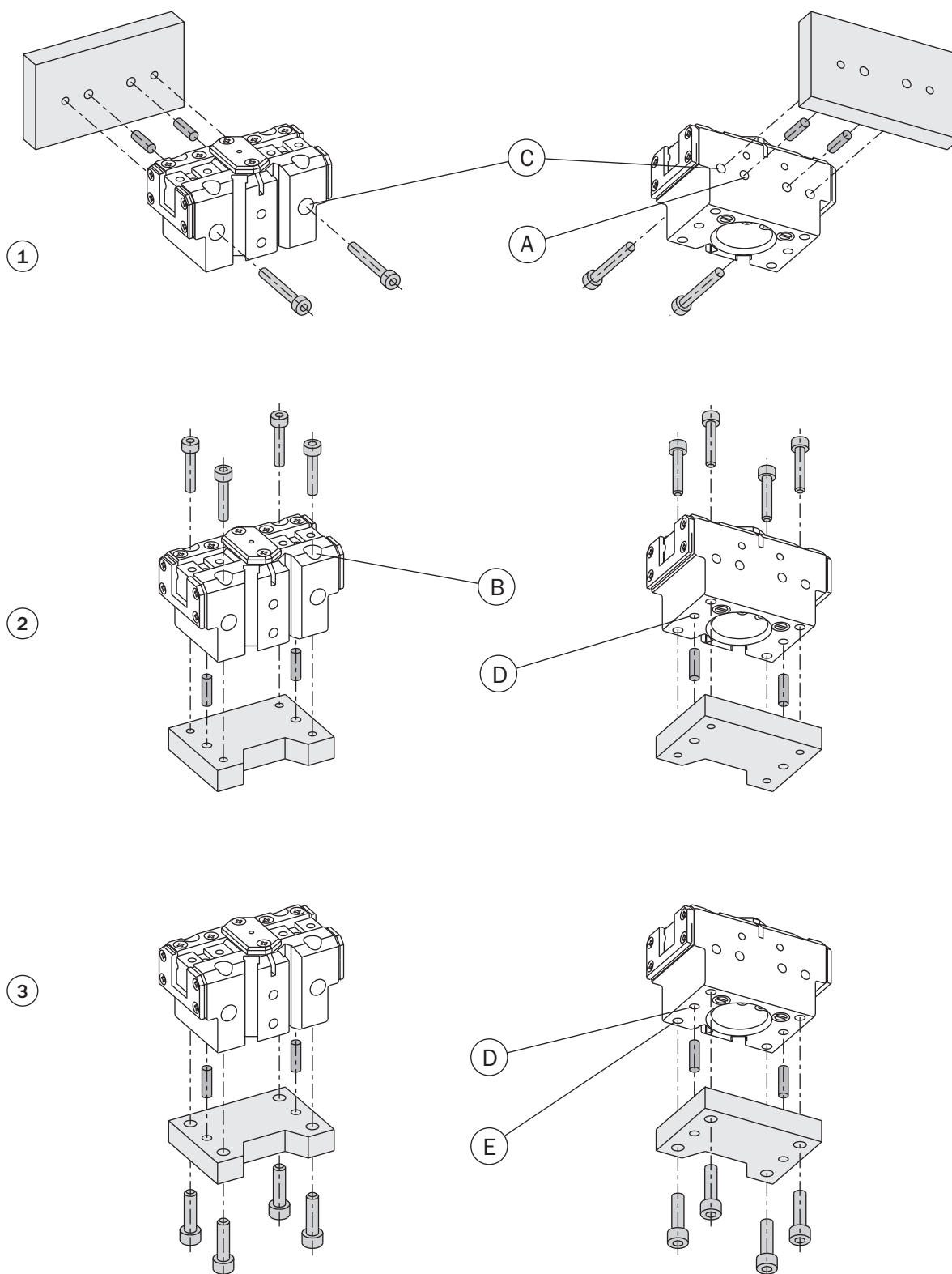
La pinza può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

- 1- Per fissare la pinza su un lato montare due viti nei fori passanti (C) e due spine nei fori calibrati (A).
- 2- Per fissare la pinza sul fondo usare quattro viti passanti attraverso i fori (B) e due spine nei fori calibrati (D).
- 3- Il fissaggio sul fondo è possibile anche usando le due spine nei fori calibrati (D) e quattro viti passanti nella piastra e avvitate in (E).

Fastening

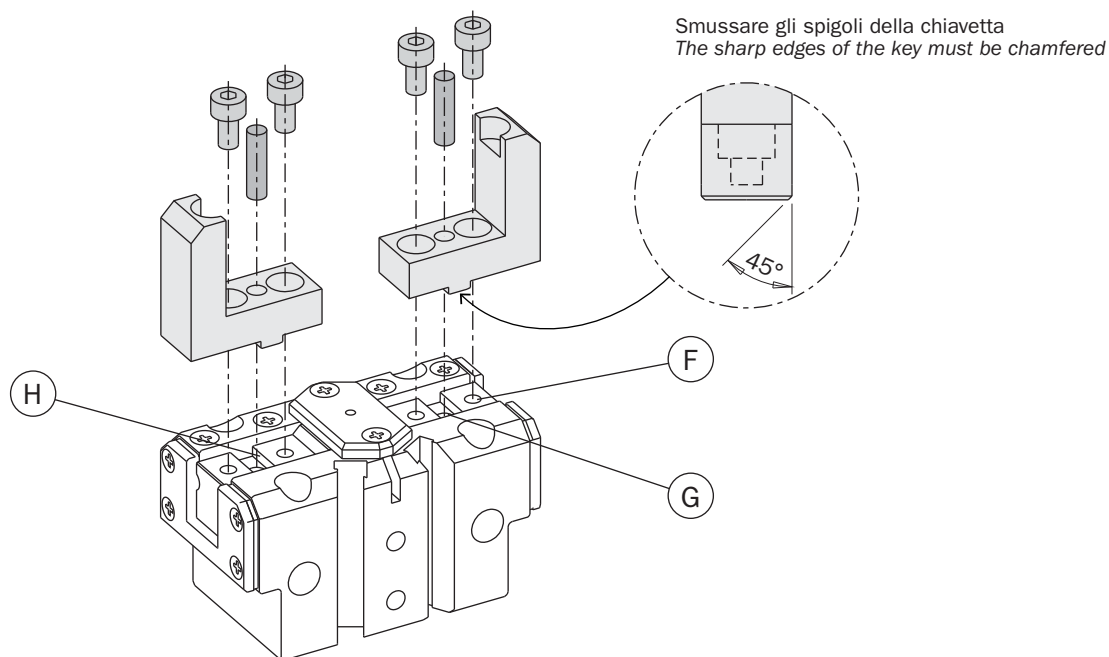
The gripper can be fastened to a static or moving part. When on a moving part, attention must be paid to the inertial force to which the gripper and its load are subjected.

- 1- To fasten the gripper on its side, insert two screws in the through holes (C) and two dowel pins in the dowel pin holes (A).
- 2- To fasten the gripper on its bottom, insert four screws in the through holes (B) and two dowel pins in the dowel pin holes (D).
- 3- The gripper can be fastened on its bottom also with the two dowel pins in the dowel pin holes (D) and four screws through the plate and screwed in (E).



Costruire le dita di presa il più possibile corte e leggere.
Fissarle con due viti nei fori filettati (F).
Per il centraggio sulle griffe utilizzare le scanalature calibrate (H) ed i fori spina calibrati (G).

*The gripping fingers must be as short and light as possible.
Fasten them with two screws in the threaded holes (F).
For a precise positioning on the jaws use the key slots (H) and the dowel pin holes (G).*



	SP-20	SP-25	SP-32	SP-40
A	Ø3H8 x 5 mm	Ø4H8 x 4 mm	Ø4H8 x 6 mm	Ø5H8 x 6 mm
B	Ø3.3 mm	Ø4.2 mm	Ø4.2 mm	Ø5 mm
C	Ø3.3 mm	Ø4.2 mm	Ø5.3 mm	Ø6.5 mm
D	Ø3H8 x 5 mm	Ø4H8 x 10 mm	Ø4H8 x 7 mm	Ø5H8 x 6 mm
E	M4x6 mm	M5x12 mm	M5x14 mm	M6x19 mm
F	M3x7 mm	M4x8 mm	M5x10 mm	M6x12 mm
G	Ø4H8 x 6 mm	Ø4H8 x 6.5 mm	Ø5H8 x 9 mm	Ø6H8 x 10 mm
H	5 ^{+0.02} _{+0.05} x 2 mm	5 ^{+0.02} _{+0.05} x 2.5 mm	6 ^{+0.02} _{+0.05} x 3 mm	8 ^{+0.02} _{+0.05} x 3 mm

Forza di serraggio

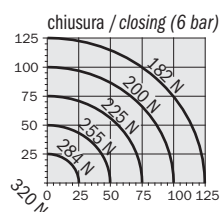
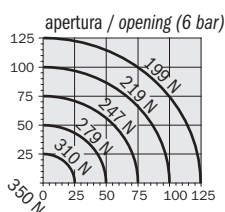
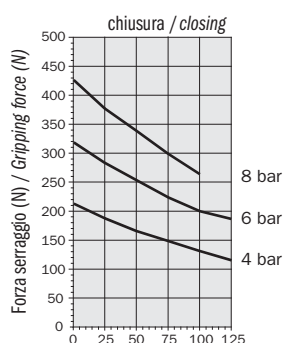
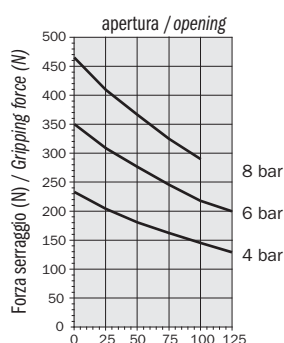
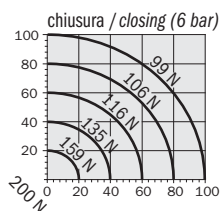
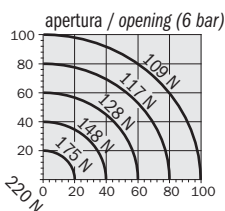
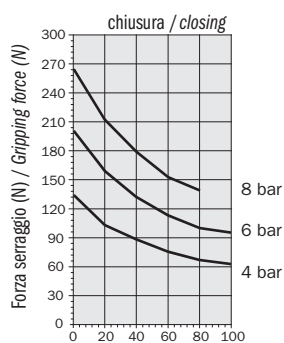
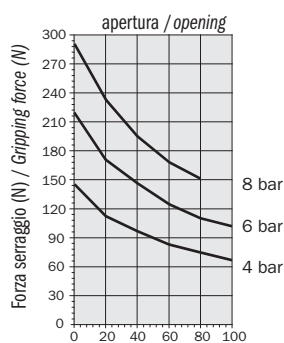
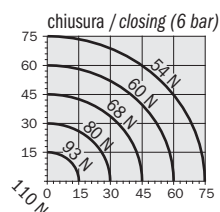
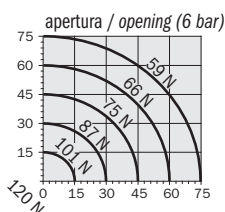
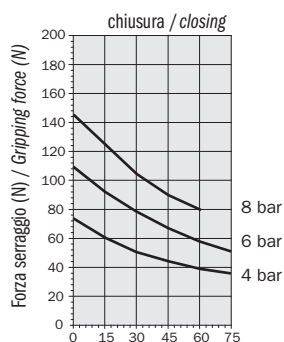
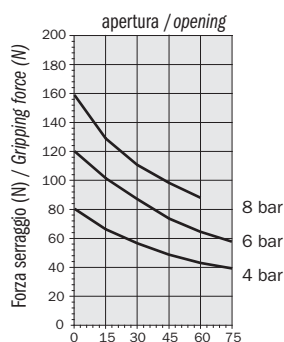
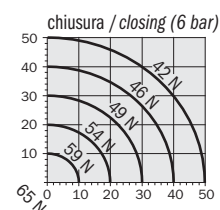
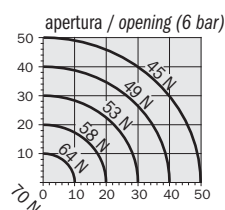
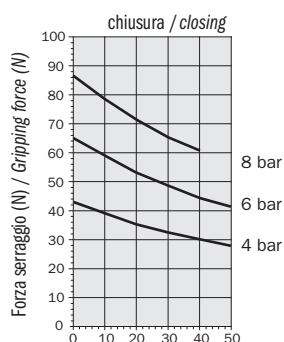
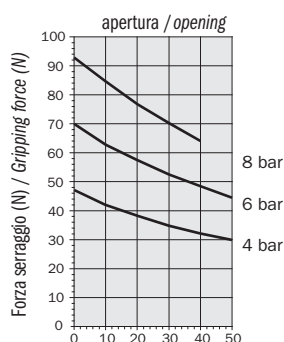
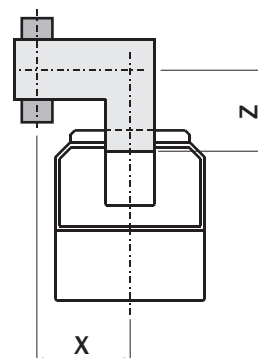
I grafici mostrano la forza media per griffa espressa dalla pinza in funzione della pressione, del braccio di leva Z e del disassamento del punto di presa X.

Gripping force

The graphs show the average gripping force on each jaw, as function of the operating pressure, of the gripping tool length Z and of the off-set position of the gripping point X.

La forza indicata in questi grafici è riferita alla singola griffa. La forza totale è il doppio.

The force shown in these graphs refers to one jaw. The total force is double.



Carichi di sicurezza

Consultare la tabella per i carichi massimi ammissibili. Forze e coppie eccessive possono danneggiare la pinza e causare difficoltà di funzionamento compromettendo la sicurezza dell'operatore.

F_s , $M_x s$, $M_y s$, $M_z s$, sono i carichi massimi ammissibili in condizioni statiche, cioè con le griffe ferme.

F_d , $M_x d$, $M_y d$, $M_z d$, sono i carichi massimi ammissibili in condizioni dinamiche, cioè con le griffe in movimento.

m , è il massimo peso ammissibile su ogni dito di presa quando la pinza è utilizzata senza regolazione di velocità; per dita più pesanti si deve diminuire la velocità delle griffe agendo sui regolatori di flusso (non forniti).

Safety loads

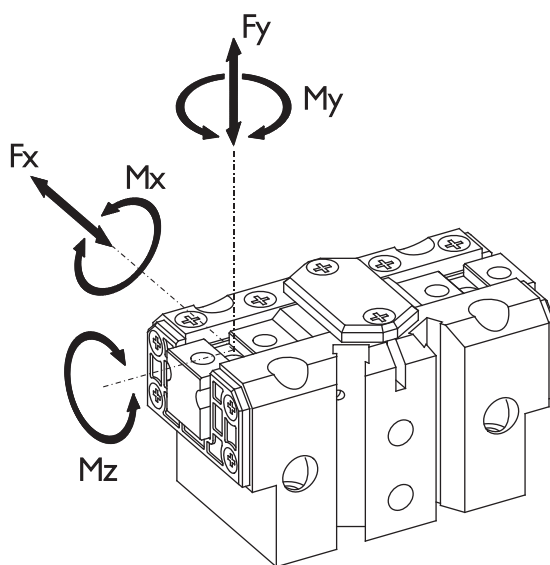
Check the table for the maximum permitted loads.

Excessive forces or torques can damage the gripper, cause operation problems and endanger the safety of the operator.

F_s , $M_x s$, $M_y s$, $M_z s$, are the maximum permitted loads under static conditions, that is with motionless jaws.

F_d , $M_x d$, $M_y d$, $M_z d$, are the maximum permitted loads under dynamic conditions, that is with running jaws.

m , is the maximum permitted weight of each gripping finger, when the gripper works without speed adjustment. If the weight of the gripping fingers is over the permitted value, it is necessary to decrease the jaw speed by acting on the flow controllers (not supplied).



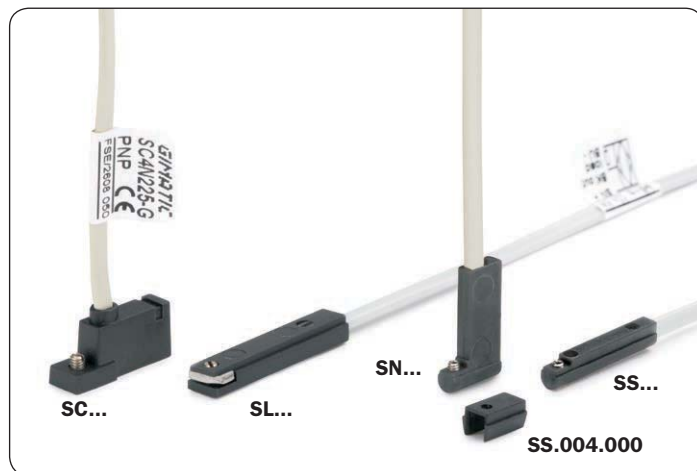
	SP-20	SP-25	SP-32	SP-40
$F_x s$	100 N	200 N	300 N	400 N
$F_y s$	100 N	200 N	300 N	400 N
$M_x s$	3 Nm	6 Nm	13 Nm	30 Nm
$M_y s$	3 Nm	6 Nm	13 Nm	30 Nm
$M_z s$	3 Nm	6 Nm	13 Nm	30 Nm
$F_x d$	1 N	2 N	3 N	4 N
$F_y d$	1 N	2 N	3 N	4 N
$M_x d$	5 Ncm	12 Ncm	24 Ncm	40 Ncm
$M_y d$	5 Ncm	12 Ncm	24 Ncm	40 Ncm
$M_z d$	5 Ncm	12 Ncm	24 Ncm	40 Ncm
m	100 g	200 g	300 g	400 g

Sensori

Il rilevamento della posizione di lavoro è affidato a uno o più sensori magnetici di prossimità (opzionali), che rilevano la posizione attraverso il magnete sul pistone.

Quindi, per un corretto funzionamento, è da evitare l'impiego in presenza di forti campi magnetici od in prossimità di grosse masse di materiale ferromagnetico.

I sensori utilizzabili sono:

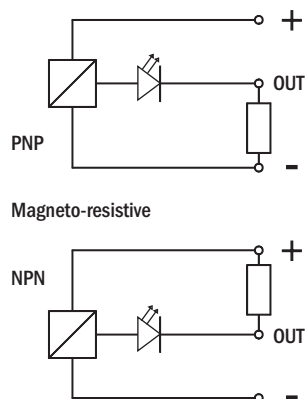


Sensors

The operating position is detected by magnetic proximity sensors (optional) through a magnet placed on the piston.

The use of magnetic proximity sensors is to be avoided in the vicinity of large masses of ferromagnetic material or intense magnetic fields as this may cause detection problems.

The sensors that can be used are:



			SP-20 U	SP-25 / SP-32 / SP-40 U
SC4N225Y	PNP	Cavo 2.5m / 2.5m cable	☐	☒
SC3N203Y	PNP	Connettore M8 / M8 connector	☐	☒
SL4N225-G	PNP	Cavo 2.5m / 2.5m cable	☐	☒
SL4M225-G	NPN	Cavo 2.5m / 2.5m cable	☐	☒
SL3N203-G	PNP	Connettore M8 / M8 connector	☐	☒
SL3M203-G	NPN	Connettore M8 / M8 connector	☐	☒
SN4N225-G	PNP	Cavo 2.5m / 2.5m cable	☒	☒ (*)
SN4M225-G	NPN	Cavo 2.5m / 2.5m cable	☒	☒ (*)
SN3N203-G	PNP	Connettore M8 / M8 connector	☒	☒ (*)
SN3M203-G	NPN	Connettore M8 / M8 connector	☒	☒ (*)
SS4N225-G	PNP	Cavo 2.5m / 2.5m cable	☒	☒ (*)
SS4M225-G	NPN	Cavo 2.5m / 2.5m cable	☒	☒ (*)
SS3N203-G	PNP	Connettore M8 / M8 connector	☒	☒ (*)
SS3M203-G	NPN	Connettore M8 / M8 connector	☒	☒ (*)

(*)
Utilizzando l'adattatore SS.004.000 fornito con il sensore.

(*)
Using the adapter SS.004.000 supplied with the sensor.



Connessione pneumatica

La pinza si alimenta con aria compressa dai fori laterali (A e B) montandovi i raccordi dell'aria ed i relativi tubi (non forniti).

Oppure si alimenta direttamente dai fori inferiori (C e D) rimuovendo i tappi.

Aria compressa in A o C: apertura della pinza.

Aria compressa in B o D: chiusura della pinza.

Pneumatic connection

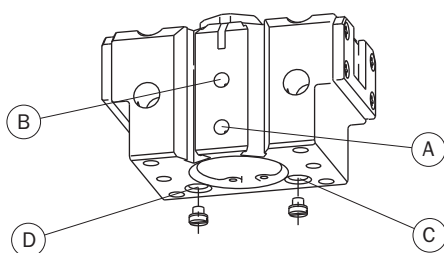
The gripper is driven by compressed air through the side ports (A and B) using air fittings and relevant hoses (not supplied).

Alternatively, the gripper is fed through the lower holes (C and D), after removing the caps.

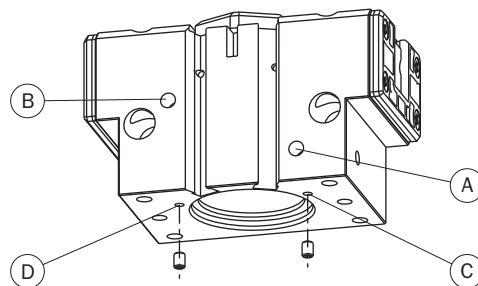
Compressed air in A or C: gripper opening.

Compressed air in B or D: gripper closing.

SP-20/SP-25



SP-32/SP-40



Circuito pneumatico

Possibili inconvenienti sul circuito di alimentazione dell'aria compressa:

- 1- Oscillazioni di pressione.
- 2- Riempimento pinza vuota all'avvio.
- 3- Improvvisa mancanza di pressione.
- 4- Velocità di azionamento eccessiva.

Accorgimenti per risolvere i problemi:

- 1- Serbatoio esterno (A).
- 2- Valvola di avviamento progressivo (B).
- 3- Valvole di sicurezza (C).
- 4- Regolatori di flusso (D).

La pinza è azionata con aria compressa filtrata

(5÷40 µm) non necessariamente lubrificata.

La scelta iniziale, lubrificata o non lubrificata, deve essere mantenuta per tutta la vita della pinza.

L'impianto pneumatico deve essere pressurizzato gradualmente, per evitare movimenti incontrollati.

Pneumatic circuit

Possible problems on a compressed air circuit:

- 1- Pressure variations.
- 2- Pressurising the empty gripper at start-up.
- 3- Sudden lack of pressure.
- 4- Excessive drive speed.

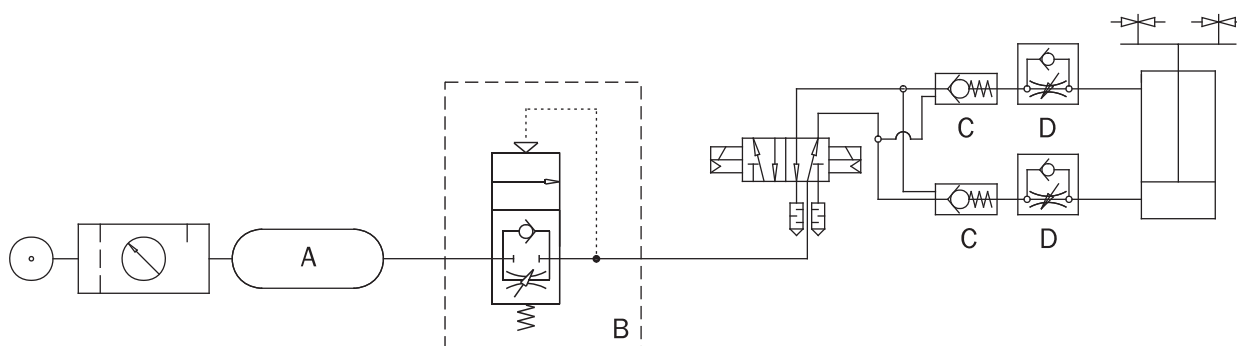
Possible solutions to the above issues:

- 1- External compressed air storage (A).
- 2- Start-up valve (B).
- 3- Safety valves (C).
- 4- Flow controllers (D).

The gripper is driven by filtered compressed air (5÷40 µm) not necessarily lubricated.

The initial choice on air lubrication (lubricated or not) must be kept for the entire service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



Avvertenze

Evitare il contatto con sostanze corrosive, spruzzi di saldatura, polveri abrasive, che potrebbero danneggiare la funzionalità della pinza.

Per nessun motivo, persone od oggetti estranei devono entrare nel raggio d'azione della pinza.

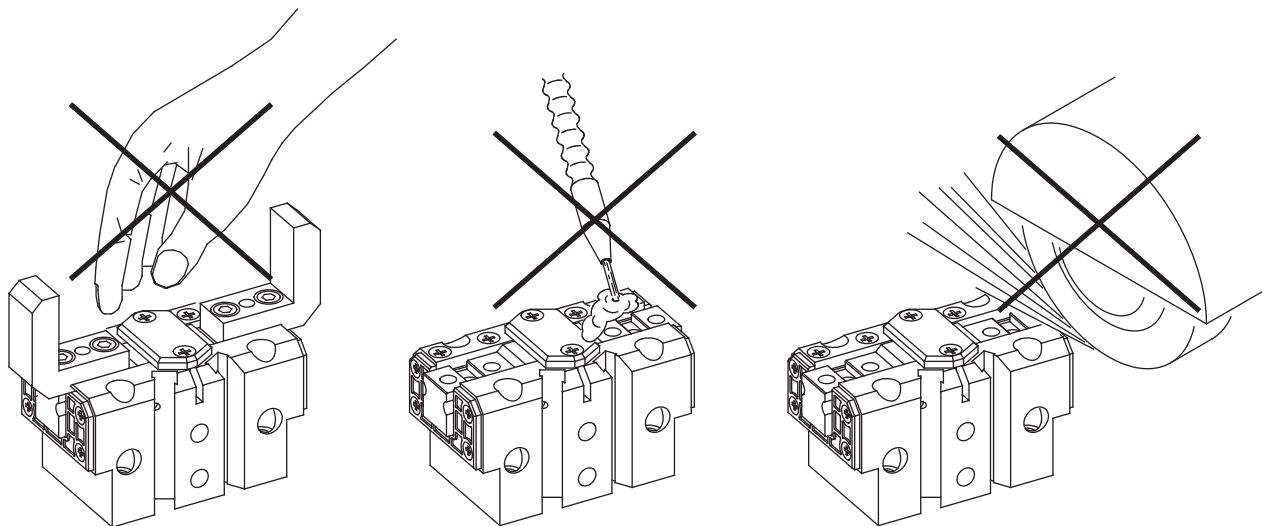
La pinza non deve essere messa in servizio prima che la macchina di cui fa parte sia stata dichiarata conforme alle disposizioni di sicurezza vigenti.

Caution

Never let the unit come into contact with corrosive substances, soldering splashes or abrasive powders as they will damage the gripper.

Never let non-authorised persons or objects be within the operating range of the gripper.

Never operate the gripper on a machine that does not comply with the safety standards and laws of your country.

**Manutenzione**

La pinza è esente da manutenzione per 10 milioni di cicli. Il gioco delle griffe, indicato qui sotto, viene regolato in fabbrica.

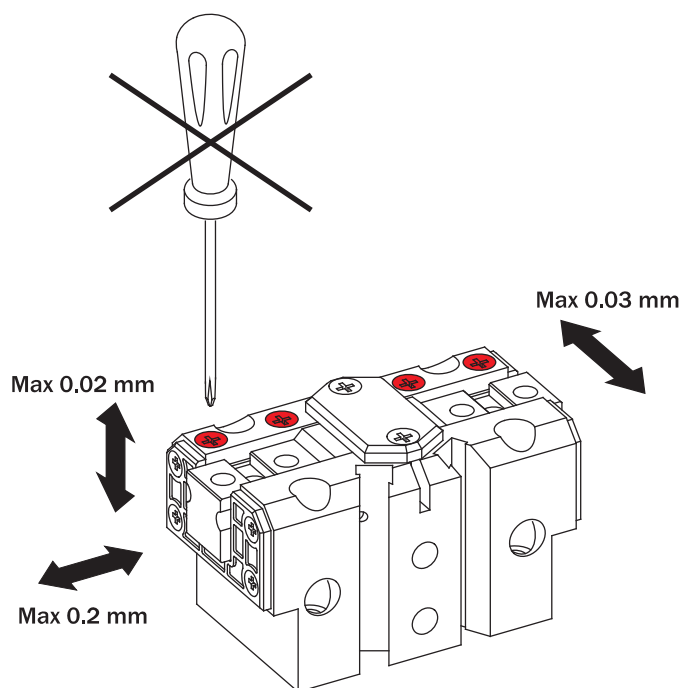
NON USARE MAI LE VITI DI REGOLAZIONE PER MODIFICARLO.

Maintenance

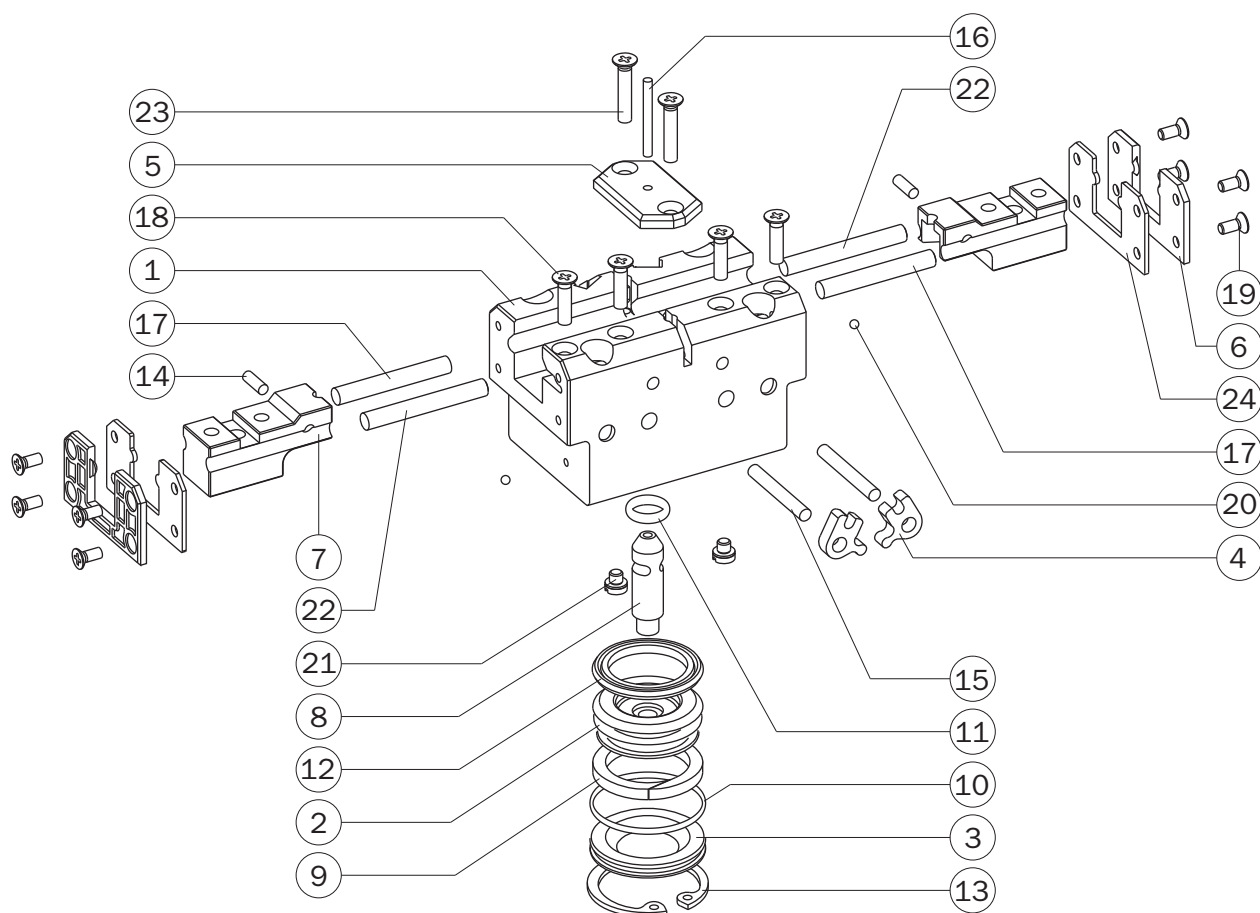
The gripper is maintenance-free for 10 million cycles.

The play of the jaws, indicated below, is factory-set.

NEVER USE THE ADJUSTING SCREWS TO MODIFY IT.



Elenco delle parti / Part list



		SP-20	SP-25	SP-32	SP-40		
1	Corpo pinza	SP-20-1	SP-25-1	SP-32-1	SP-40-1	Gripper body	1
2	Pistone	SP-20-2	SP-25-2	SP-32-2	SP-40-2	Piston	2
3	Fondello	SP-20-3	SP-25-3	SP-32-3	SP-40-3	Back end plate	3
4	Leva	SP-20-4	SP-25-4	SP-32-4	SP-40-4	Lever	4
5	Copertura	SP-20-5	SP-25-5	SP-32-5	SP-40-5	Closing plate	5
6	Protezione	SP-20-6	SP-25-6	SP-32-6	SP-40-6	Cover plate	6
7	Griffa	SP-20-7	SP-25-7	SP-32-7	SP-40-7	Jaw	7
8	Stelo	SP-20-8	SP-25-8	SP-32-8	SP-40-8	Rod	8
9	Magnete	SP-20-9	PAR-25-10B	T30-10	T40-10	Magnet	9
10	O-Ring	Ø1x19 (GUAR-078)	Ø1x24 (GUAR-090)	Ø1.78x29.87 (GUAR-054)	Ø1.78x31.47 (GUAR-009)	O-Ring	10
11	O-Ring	Ø1.78x4.48 (GUAR-029)	Ø1.78x6.75 (GUAR-012)	Ø1.78x9.25 (GUAR-065)	Ø1.78x11.89 (GUAR-095)	O-Ring	11
12	Guarnizione dinamica	20x13x2.5 (GUAR-040P)	25x18x2.4 (GUAR-003M)	32x23x3 (GUAR-004P)	40x13x3 (GUAR-006)	Dynamic gasket	12
13	Anello elastico per interni	Ø21 mm DIN 472	Ø26 mm DIN 472	Ø33 mm DIN 472	Ø41 mm DIN 472	Retaining ring	13
14	Rullino	Ø2x5.8 mm DIN 5402	Ø2.5x7.8 mm DIN 5402	Ø3x10 mm DIN 6325	Ø4x11.8 mm DIN 5402	Pin	14
15	Spina di riferimento	Ø2x20 mm DIN 6325	Ø3x24 mm DIN 6325	Ø3x33.5 mm DIN 6325	Ø4x39.8 mm DIN 5402	Dowel pin	15
16	Spina di riferimento	Ø1.5x13.8 mm DIN 5402	Ø2x20 mm DIN 6325	Ø2.5x24 mm DIN 6325	Ø2.5x20 mm DIN 6325	Dowel pin	16
17	Spina di riferimento	Ø3x24 mm DIN 6325	Ø4x30 mm DIN 6325	Ø5x36 mm DIN 6325	Ø4x50 mm DIN 6325	Dowel pin	17
18	Vite	M2.5x10 mm DIN 965A	M3x12 mm DIN 965A	M4x20 mm DIN 965A	M4x16 mm DIN 965A	Screw	18
19	Vite	M2.5x5 mm DIN 965A	M2.5x6 mm DIN 965A	M3x8 mm DIN 965A	M3x8 mm DIN 965A	Screw	19
20	Sfera	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ø2 mm AA DIN 5401A	Ball	20
21	Tappo	DT-205 (M3)	DT-205 (M3)	M3x4 mm DIN 913	M5x5 mm DIN 913	Cap	21
22	Spina	Ø3x24 mm DIN 6325	Ø4x32 mm DIN 6325	Ø5x40 mm DIN 6325	Ø4x45 mm DIN 6325	Dowel pin	22
23	Vite	M2.5x10 mm DIN 965A	M3x16 mm DIN 965A	M4x20 mm DIN 965A	M4x16 mm DIN 965A	Screw	23
24	Protezione metallica	SP-20-10	SP-25-10	SP-32-10	SP-40-10	Protection metal plate	24

Pinza pneumatica a 2 griffe ad azione parallela autocentrante (serie HS)

- Progettata per macchine ad alta velocità.
- Tempo di chiusura / apertura ridottissimo.
- Basso peso.
- Grande durata e affidabilità senza manutenzione.
- Corsa lunga.
- Possibilità di ridurre la corsa (su richiesta).
- Sensori magnetici opzionali.

2-jaw parallel self-centering pneumatic gripper (series HS)

- Specially suited for high speed machines.
- Very short closing/opening time.
- Low weight.
- Trouble free long life without maintenance.
- Long stroke.
- Reduced stroke (upon request).
- Optional magnetic sensors.

**HS-2012****HS-2518**

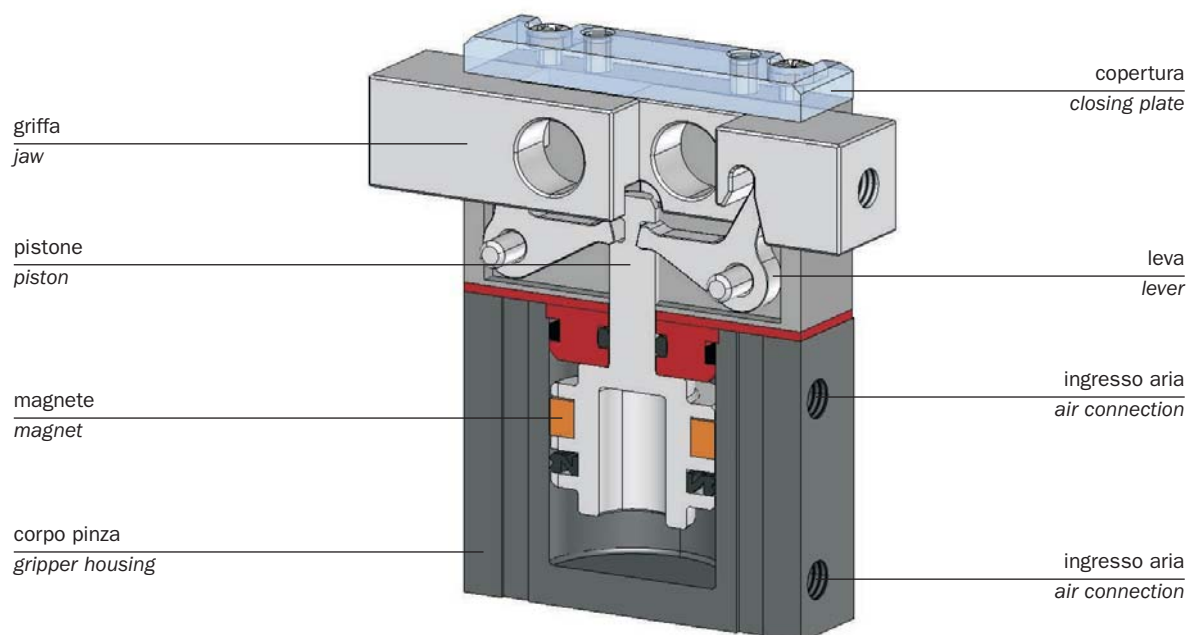
	HS-2012	HS-2518
Fluido Medium	Aria compressa filtrata, lubrificata / non lubrificata Filtered, lubricated / non lubricated compressed air	
Pressione di esercizio Operating pressure range	2.5 ÷ 8 bar	
Temperatura di esercizio Operating temperature range	5° ÷ 60°C.	
Forza di serraggio per griffa in apertura a 6 bar Opening gripping force at 6 bar on each jaw	60 N	90 N
Forza di serraggio totale in apertura a 6 bar Opening total gripping force at 6 bar	120 N	180 N
Forza di serraggio per griffa in chiusura a 6 bar Closing gripping force at 6 bar on each jaw	55 N	83 N
Forza di serraggio totale in chiusura a 6 bar Closing total gripping force at 6 bar	110 N	166 N
Corsa totale Total stroke (±0.3 mm)	11.6 mm	17.6 mm
Frequenza max funzionamento continuativo Maximum working frequency	6 Hz	5 Hz
Consumo d'aria per ciclo Cycle air consumption	5 cm³	12 cm³
Tempo minimo di chiusura / apertura Closing / opening time minimum	0.007 s	0.018 s
Ripetibilità Repetition accuracy	0.02 mm	0.02 mm
Peso Weight	144 g	270 g

Schema di funzionamento

Le griffe sono azionate tramite leve dallo stelo del pistone.

Lay-out

The gripper is driven by the piston rod, that operates the jaws by levers.



Riduzione della corsa

È possibile ridurre la corsa con distanziali che limitano l'apertura delle griffe.

In questo modo diminuisce ulteriormente il tempo di apertura e chiusura della pinza.

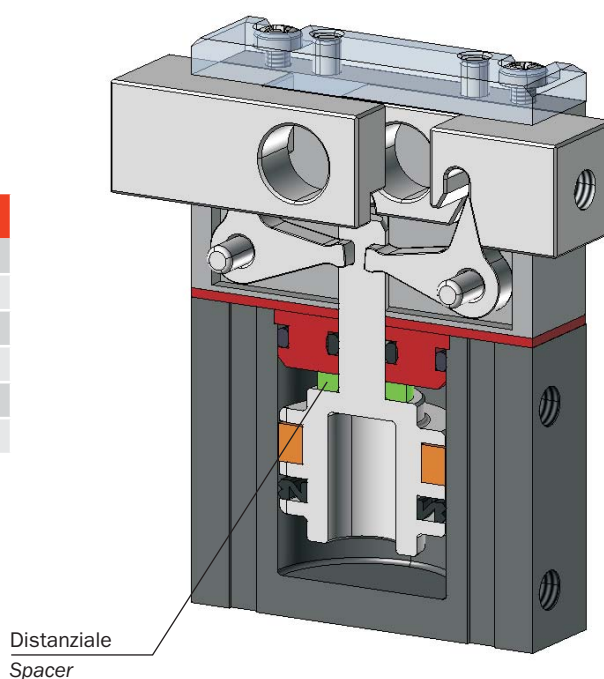
Stroke reduction

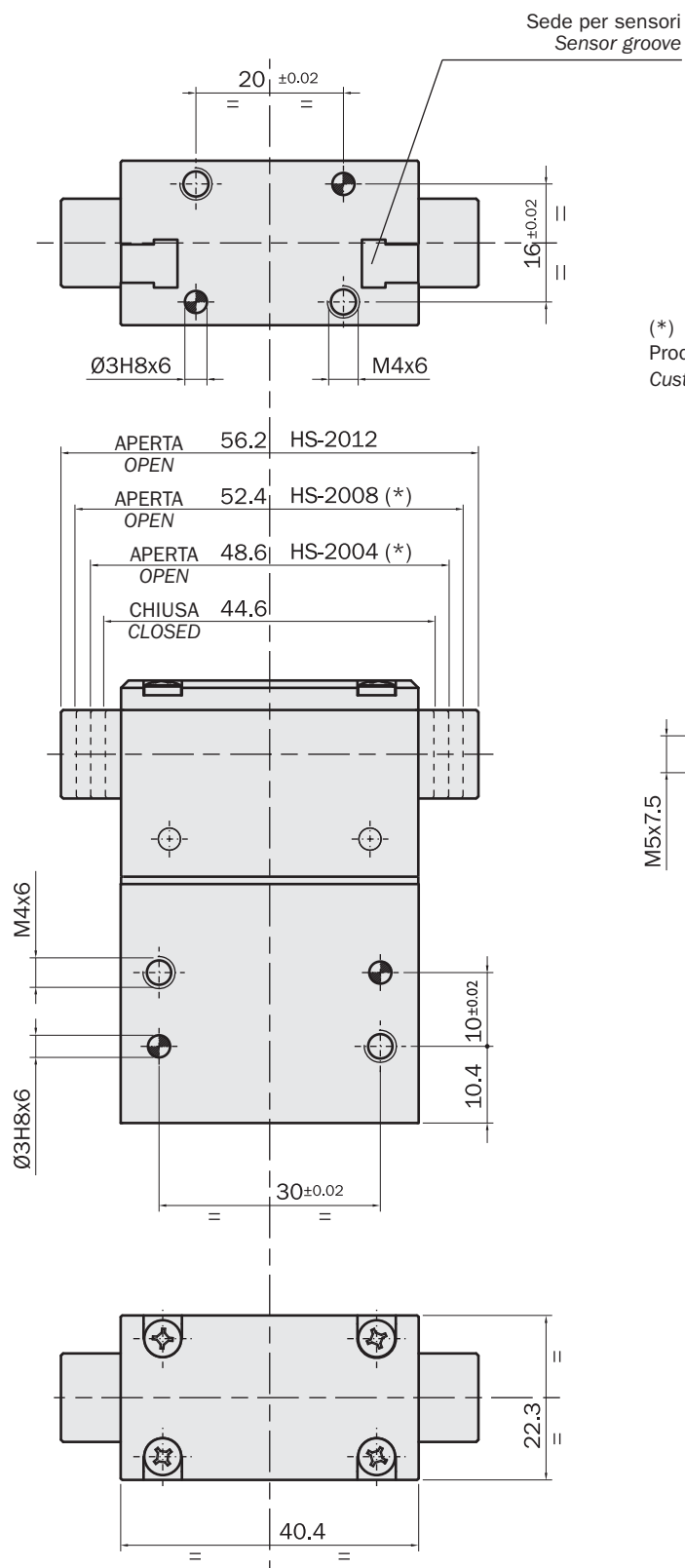
The stroke can be reduced by spacers which limit the jaw opening. In this way the opening and closing time can be further decreased.

	Distanziale / Spacer	Corsa / Stroke
HS-2012	/	2 x 5.8 mm
HS-2008 (*)	1 x XP-16-3	2 x 3.9 mm
HS-2004 (*)	2 x XP-16-3	2 x 2 mm
HS-2518	/	2 x 8.9 mm
HS-2512 (*)	1 x XA-26-3	2 x 6.1 mm
HS-2506 (*)	2 x XA-26-3	2 x 3.25 mm

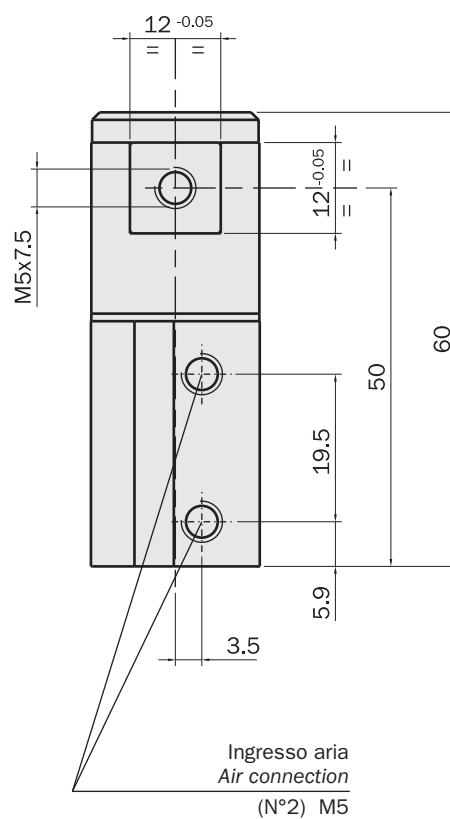
(*)

Prodotto speciale (chiedere in Fabbrica)
Custom product (consult Factory)



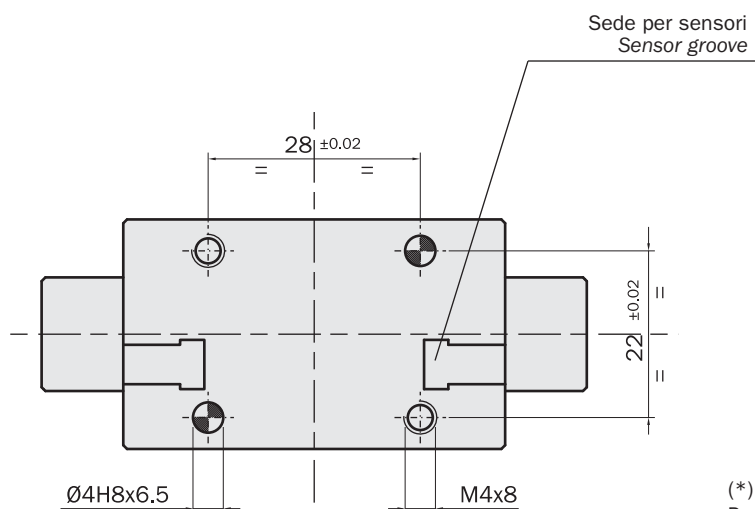


(*)
Prodotto speciale (chiedere in Fabbrica)
Custom product (consult Factory)

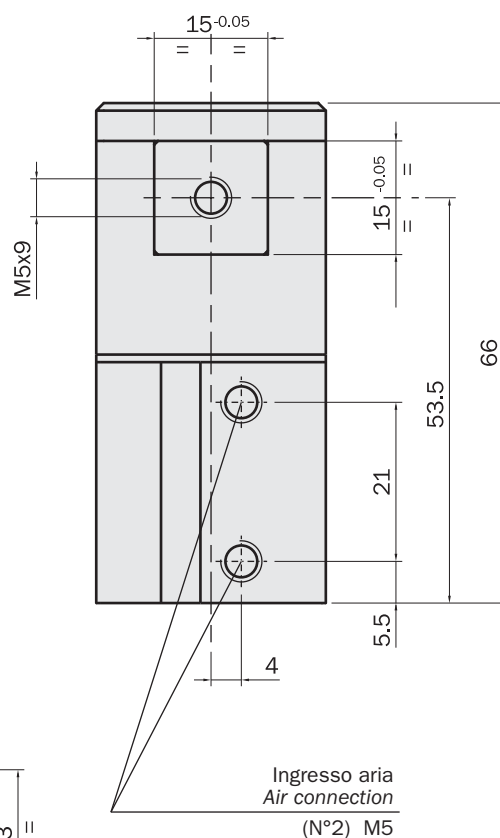
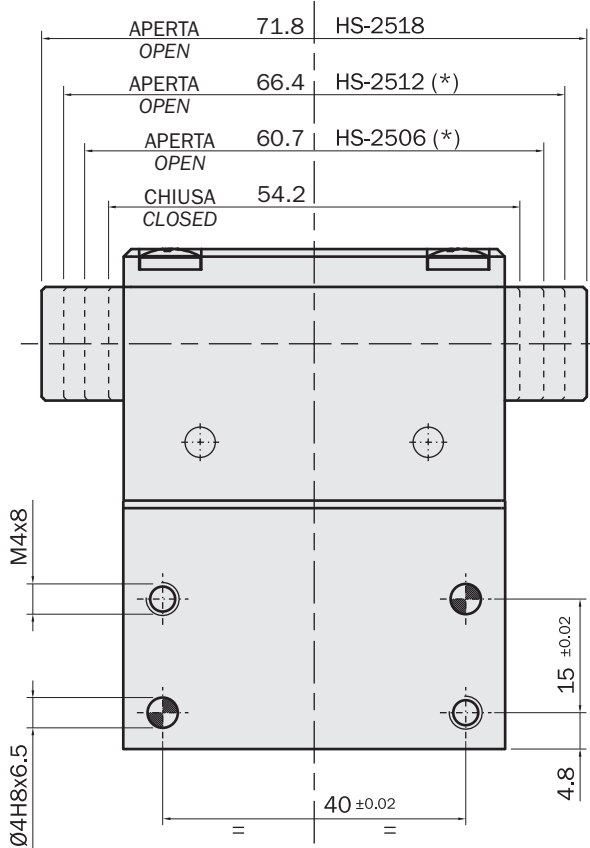


Dimensioni (mm) / Dimensions (mm)

HS-2518



(*)
Prodotto speciale (chiedere in Fabbrica)
Custom product (consult Factory)



FIRST ANGLE
PROJECTION

Forza di serraggio

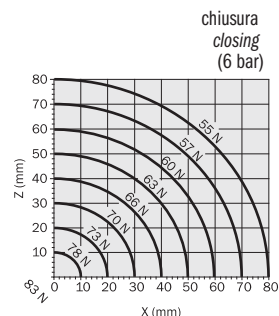
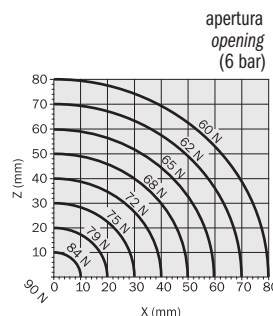
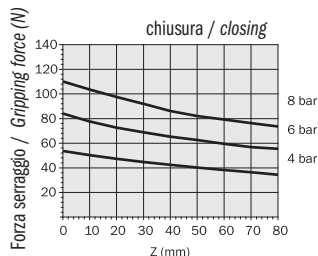
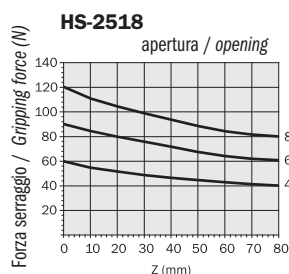
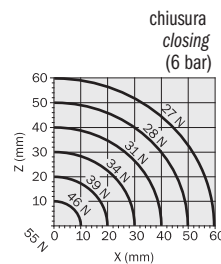
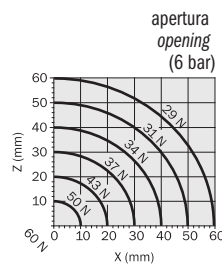
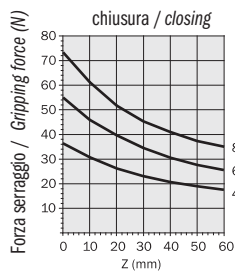
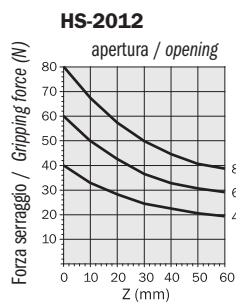
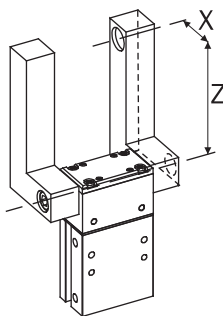
I grafici mostrano la forza per griffa espressa dalla pinza in funzione della pressione, del braccio di leva Z e del disassamento del punto di presa X.

**La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.**

Gripping force

The graphs show the gripping force on each jaw, as a function of the operating pressure, the gripping tool length Z and the overhanging X.

**The force shown in these graphs refers to one jaw.
The total force is double.**



Carichi di sicurezza

Consultare la tabella per i carichi massimi ammissibili.

Forze e coppie eccessive possono danneggiare la pinza e causare difficoltà di funzionamento compromettendo la sicurezza dell'operatore.

F_x s, F_y s, M_x s, M_y s, M_z s, sono i carichi massimi ammissibili in condizioni statiche, cioè con le griffe ferme.

F_x d, F_y d, M_x d, M_y d, M_z d, sono i carichi massimi ammissibili in condizioni dinamiche, cioè con le griffe in movimento.

m, è il massimo peso ammissibile su ogni dito di presa quando la pinza è utilizzata senza regolazione di velocità; per dita più pesanti si deve diminuire la velocità delle griffe agendo sui regolatori di flusso (non forniti).

Safety loads

Check the table for maximum permitted loads.

Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.

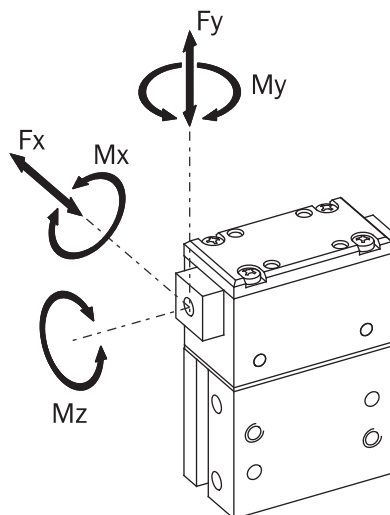
F_x s, F_y s, M_x s, M_y s, M_z s, are maximum permitted static loads. Static means with motionless jaws.

F_x d, F_y d, M_x d, M_y d, M_z d, are maximum permitted dynamic loads. Dynamic means with running jaws.

m, is the maximum permitted weight of each gripping tool, when the gripper works without speed adjustment.

If the weight is over the permitted value, it is necessary to decrease the speed of the jaw by using flow controllers (not supplied).

	HS-2012	HS-2518
F_x s	80 N	150 N
F_y s	60 N	100 N
M_x s	4 Nm	8 Nm
M_y s	4 Nm	8 Nm
M_z s	4 Nm	8 Nm
F_x d	1 N	2 N
F_y d	1 N	2 N
M_x d	4 Ncm	8 Ncm
M_y d	4 Ncm	8 Ncm
M_z d	4 Ncm	8 Ncm
m	50 g	100 g



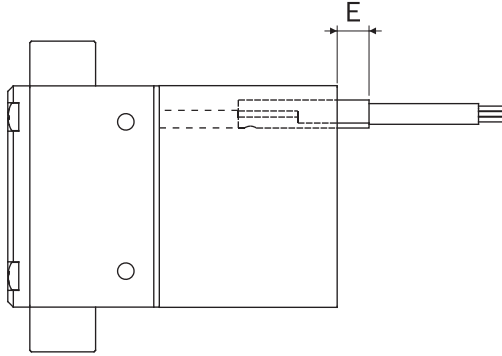
Fissaggio della pinza

La pinza può essere montata in posizione fissa oppure su parti in movimento: in questo caso va considerata la forza d'inerzia cui la pinza ed il suo carico sono sottoposti.

Per fissare la pinza si possono utilizzare:

- i due fori filettati (A) ed i due fori calibrati (B) presenti sul fianco del corpo;
- oppure i due fori filettati (A) ed i due fori calibrati (B) presenti sul fondo del corpo.

Nel secondo caso si deve prevedere lo spazio (E) per i sensori.



	HS-2012	HS-2518
A	M4 x 6 mm	M4 x 8 mm
B	Ø3H8 x 6 mm	Ø4H8 x 6.5 mm
E	4 mm	5 mm

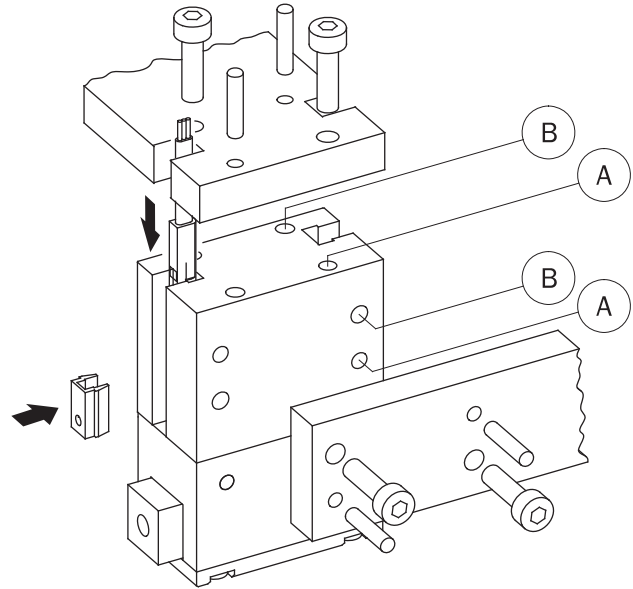
Gripper fastening

The gripper can be fastened to a static or moving part. When on a moving part, you must pay attention to the forces created by inertia over the gripper and its load.

To fasten the gripper use:

- the threaded holes (A) and the dowel pin holes (B) on the side of the gripper;
- or the threaded holes (A) and the dowel pin holes (B) on the base of the gripper.

Space for the sensors (E) must be allowed, in the second case.

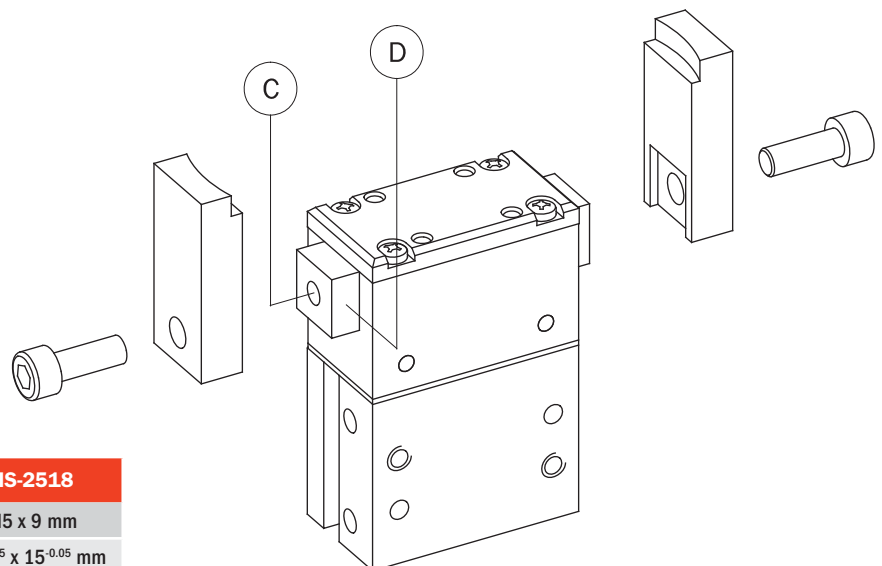


Fissaggio delle estremità di presa

Costruire le dita di presa il più possibile corte e leggere. Fissarle sulle griffe calzandole sulla sagoma calibrata (D) e bloccandole con una vite nel foro filettato (C) centrale.

Gripping tool fastening

The gripping tools must be as short and light as possible. Fit them to the jaws by centering the square calibrated profile (D) and locking with a screw through the threaded middle hole (C).



	HS-2012	HS-2518
C	M5 x 7.5 mm	M5 x 9 mm
D	12 ^{+0.05} x 12 ^{+0.05} mm	15 ^{+0.05} x 15 ^{+0.05} mm

Sensori

Il rilevamento della posizione di lavoro è affidato a uno o più sensori magnetici di prossimità (opzionali), che rilevano la posizione attraverso il magnete sul pistone.

Quindi, per un corretto funzionamento, è da evitare l'impiego in presenza di forti campi magnetici od in prossimità di grosse masse di materiale ferromagnetico.

I sensori utilizzabili sono:

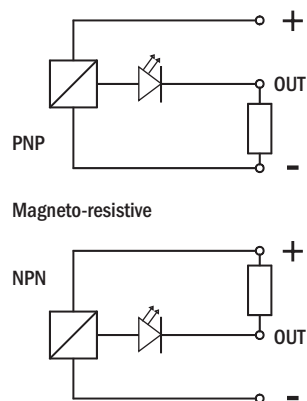


Sensors

The operating position can be checked by magnetic sensors (optional), that detect the magnet on the piston inside.

Therefore a near big mass of ferromagnetic material or intense magnetic fields may cause sensing troubles.

The optional sensors are:



			HS-2012	HS-2518
SS4N225-G	PNP	Cavo 2.5m / 2.5m cable	☒	☒
SS4M225-G	NPN	Cavo 2.5m / 2.5m cable	☒	☒
SS3N203-G	PNP	Connettore M8 / M8 snap plug connector	☒	☒
SS3M203-G	NPN	Connettore M8 / M8 snap plug connector	☒	☒

Sono tutti dotati di un cavo piatto a tre fili e di un led.

They are all provided with a flat three wire cable and a lamp.



SS... + SS.004.000

Connessione pneumatica

La pinza si alimenta con aria compressa dai fori laterali (P e R) montandovi i raccordi dell'aria ed i relativi tubi (non forniti).

Aria compressa in P: apertura della pinza.
Aria compressa in R: chiusura della pinza.

La pinza è azionata con aria compressa filtrata ($5\div 40\text{ }\mu\text{m}$) non necessariamente lubrificata. La scelta iniziale, lubrificata o non lubrificata, deve essere mantenuta per tutta la vita della pinza.

L'impianto pneumatico deve essere pressurizzato gradualmente, per evitare movimenti incontrollati.

Compressed air feeding

The compressed air feeding can be accomplished on the lateral air ports (P and R) with fittings and hoses (not supplied).

Compressed air in P: gripper opening.
Compressed air in R: gripper closing.

The compressed air, must be filtered from 5 to $40\text{ }\mu\text{m}$. Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



Circuito pneumatico

Possibili inconvenienti sul circuito di alimentazione dell'aria compressa:

- 1- Oscillazioni di pressione.
- 2- Riempimento pinza vuota all'avvio.
- 3- Improvvisa mancanza di pressione.
- 4- Velocità di azionamento eccessiva.

Accorgimenti per risolvere i problemi:

- 1- Serbatoio esterno (A).
- 2- Valvola di avviamento progressivo (B).
- 3- Valvole di sicurezza (C).
- 4- Regolatori di flusso (D).

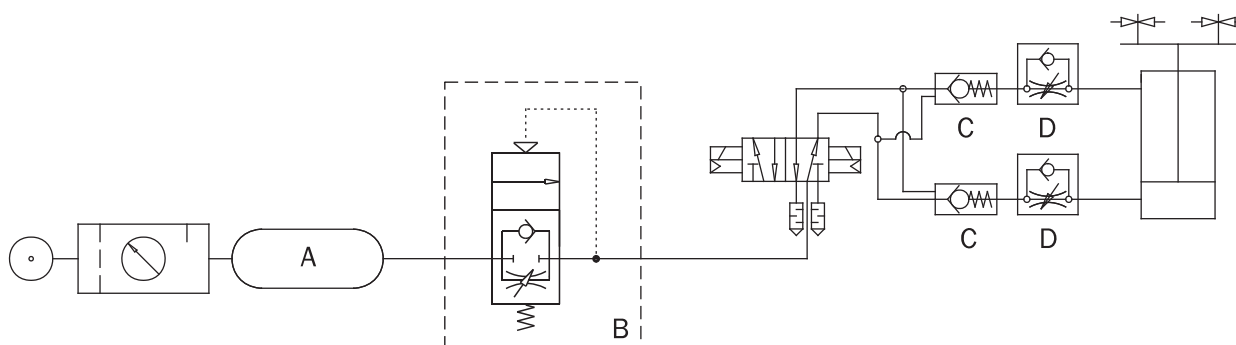
Pneumatic circuit

Possible problems on a compressed air circuit:

- 1- Pressure variation.
- 2- Pressurizing with empty cylinder.
- 3- Sudden pressure black-out.
- 4- Excessive speed of the jaws.

Possible solutions:

- 1- Compressed air storage (A).
- 2- Start-up valve (B).
- 3- Safety valve (C).
- 4- Flow controller (D).



Avvertenze

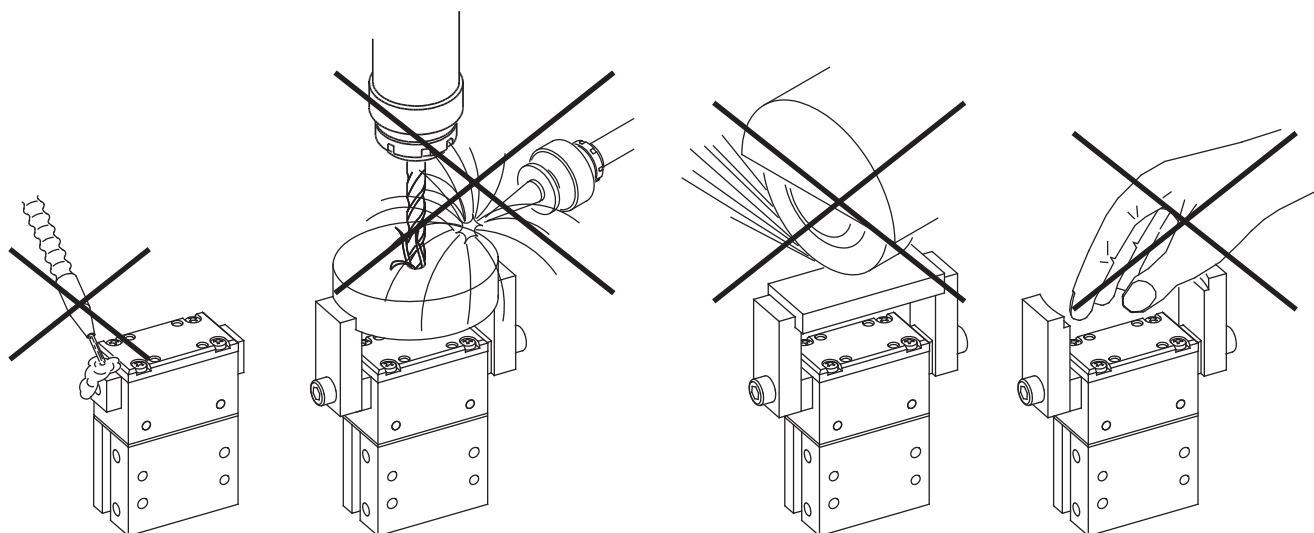
Evitare il contatto con sostanze corrosive, spruzzi di saldatura, polveri abrasive, che potrebbero danneggiare la funzionalità della pinza.

Per nessun motivo, persone od oggetti estranei devono entrare nel raggio d'azione della pinza.

La pinza non deve essere messa in servizio prima che la macchina di cui fa parte sia stata dichiarata conforme alle disposizioni di sicurezza vigenti.

Caution

Avoid the gripper coming into contact with the following media: coolants which cause corrosion, grinding dust or glowing sparks. Make sure that nobody can place his/her hand between the gripping tools and there are no objects in the path of the gripper. The gripper must not run before the whole machine, on which it is mounted, complies with the laws or safety norms of your country.

**Manutenzione**

La pinza va ingrassata ogni 30 milioni di cicli con:

- Molykote DX (parti metalliche).
- Molykote PG75 (guarnizioni).

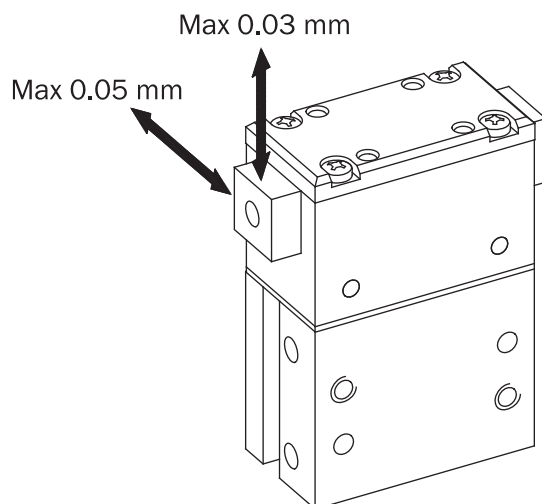
Il gioco delle griffe è indicato qui sotto.

Maintenance

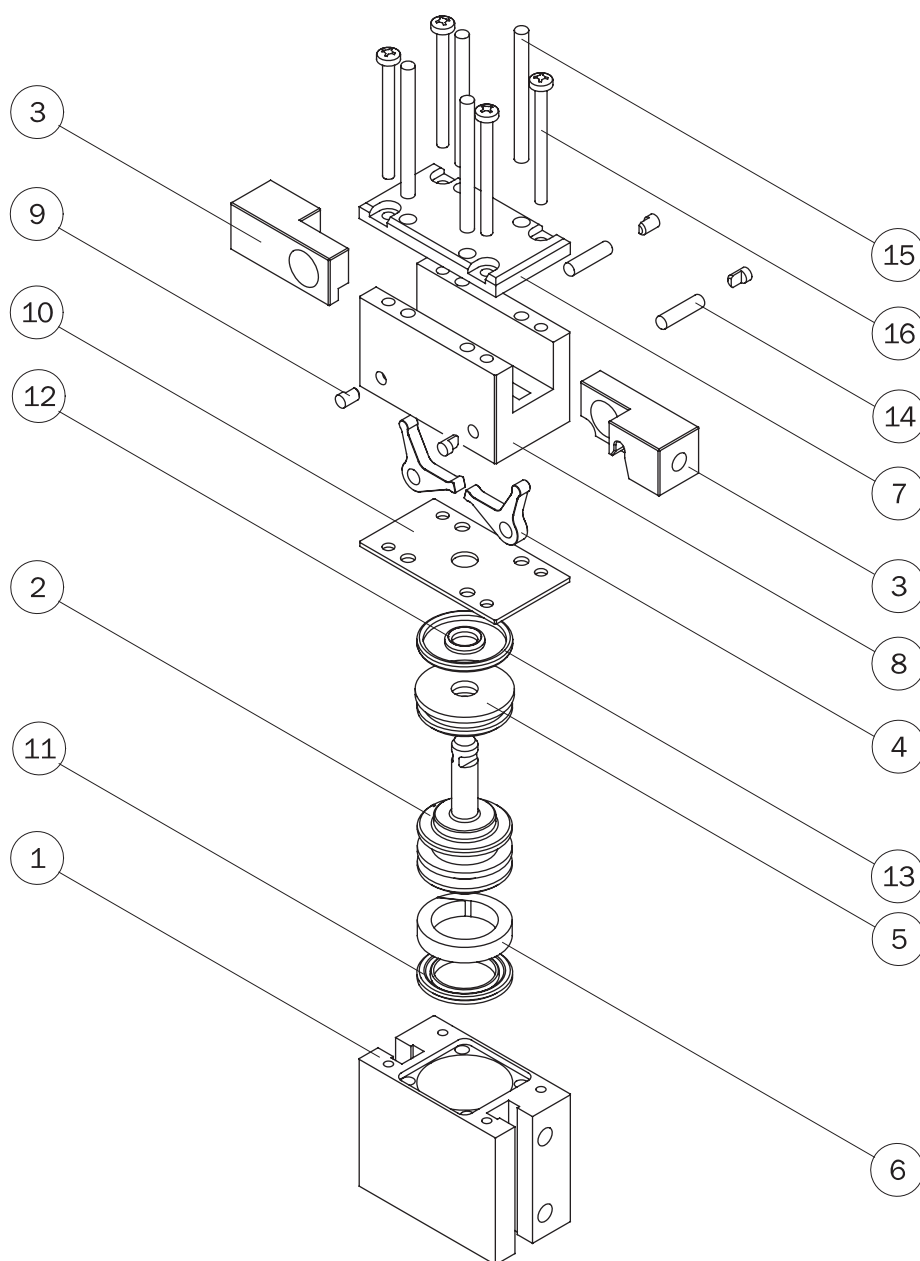
Grease the gripper after 30 million cycles with:

- Molykote DX (metal on metal).
- Molykote PG75 (gaskets).

The figure below shows the jaw backlash.



Elenco delle parti / Part list



		HS-2012	HS-2518		
1	Corpo pinza	HS-2012-1	HS-2518-1	Gripper housing	1
2	Pistone	HS-2012-2	HS-2518-2	Piston	2
3	Griffa	HS-2012-3	XPM-26-3	Jaw	3
4	Leva	HS-2012-4	XPM-26-6	Lever	4
5	Flangia	XP-20-3	XP-25-12	Flange	5
6	Magnete	XP-20-5	PS-0025-P07	Magnet	6
7	Copertura	XP-16-5	XP-25-5	Closing plate	7
8	Porta griffe	XP-16-8	XP-25-8	Jaw holder	8
9	Tappo	XP-16-11	XP-25-11	Plug	9
10	Paratia colorata	XP-16-10	XP-25-10	Spacer	10
11	Guarnizione dinamica	GUAR-040P (20x13x2.5)	GUAR-003M (25x18x2.4)	Dynamic gasket	11
12	Anello di tenuta O-RING	GUAR-011 (Ø1.78x5.28)	GUAR-012 (Ø1.78x6.75)	O-RING gasket	12
13	Anello di tenuta O-RING	GUAR-076 (Ø1.78x17.17)	GUAR-008 (Ø1.78x23.52)	O-RING gasket	13
14	Spina di riferimento	SPINA-022 (Ø3x12 mm DIN6325)	SPINA-014 (Ø4x16 mm DIN6325)	Dowel pin	14
15	Spina di riferimento	SPINA-003 (Ø3x33.5 mm DIN5402)	SPINA-004N (Ø4x39.8 mm DIN5402)	Dowel pin	15
16	Vite	VITE-099 (M2.5x30 mm DIN7985A)	VITE-072 (M4x40 mm DIN7985A)	Screw	16