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 utilizzare due viti passanti nella piastra ed avvitate nei fori filettati 7 della pinza.
I fori spina 8 sono solo su una faccia.

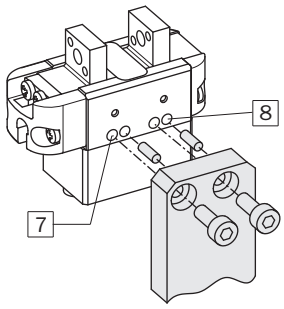
2- Per fissare la pinza sul fondo utilizzare due viti passanti nella piastra ed avvitate nei fori filettati 2.
Usare anche le due boccole (H) fornite nella confezione, per il centraggio nei fori calibrati 3.

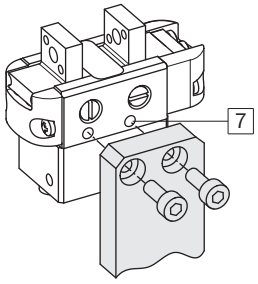
Fastening

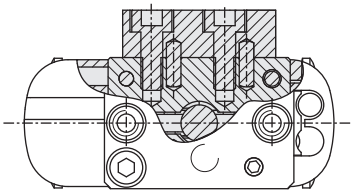
The gripper can be fastened to a static or moving part.
When on a moving part, you must pay attention to the forces created by inertia over the gripper and its load.

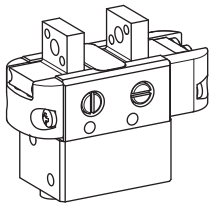
1- To fix the gripper on one side, use two screws passing through the plate and screwed into the threaded holes 7 of the gripper.
The dowel pin holes 8 are on one only side.

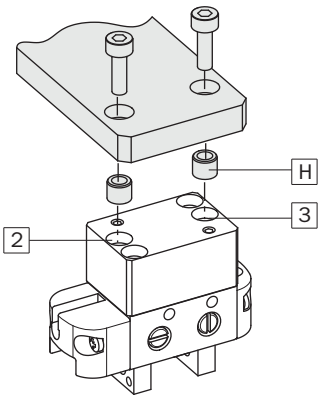
2- To fasten gripper to base use two screws passing through the holes in the plate and screwed in the threaded holes 2.
Use also the two centering sleeves (H) supplied in the packaging, in the calibrated holes 3.

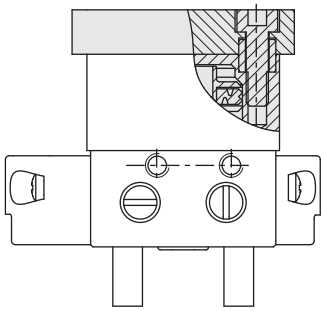












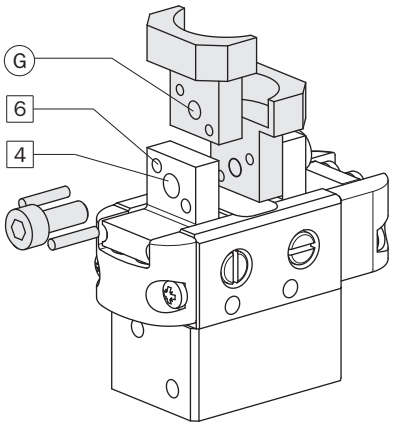
	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
H	Ø4h8 x Ø2 x 3 mm	Ø4h8 x Ø2.6 x 4 mm	Ø5h7 x Ø3.2 x 4.4 mm	Ø6h7 x Ø4.2 x 5.3 mm	Ø6h7 x Ø4.2 x 5.3 mm	Ø8h8 x Ø5.2 x 5.3 mm
2	M2 x 2.8 mm	M2.5 x 6 mm	M3 x 7 mm	M4 x 7.5 mm	M4 x 9.5 mm	M5 x8 mm
3	Ø3H8 x 1.2 mm	Ø4H8 x 2 mm	Ø5H8 x 2.4 mm	Ø6H8 x 2.9 mm	Ø6H8 x 2.9 mm	Ø8H8 x 2.5 mm
7	M1.6 x 2.4 mm	M2.5 x 4 mm	M3 x 5 mm	M3 x 5 mm	M3 x 5 mm	M5 x 8.4 mm
8	Ø3H8 x 1.5 mm	Ø1.5H8 x 3 mm	Ø2H8 x 4 mm	Ø2H8 x 5 mm	Ø2.5H8 x 6 mm	Ø8H8 x 2.5 mm

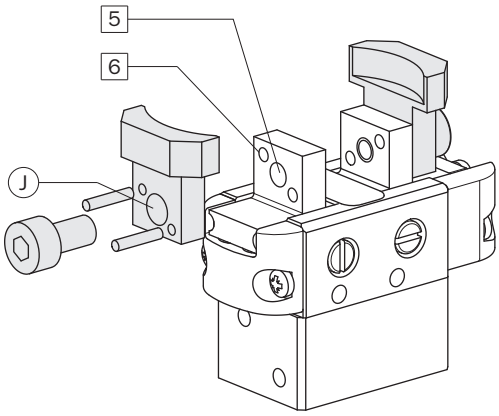
Fissaggio delle estremità di presa

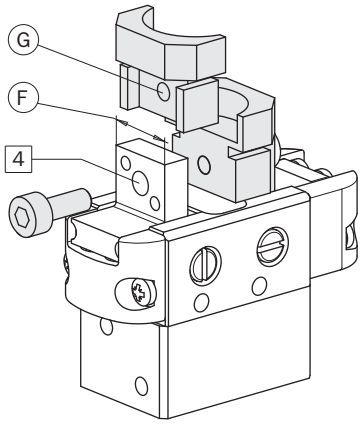
Costruire le dita di presa il più possibile corte e leggere.
Fissarle con una vite passante nel foro 4 ed avvitata nel foro filettato del dito di presa (G).
O viceversa, con una vite passante in (J) ed avvitata in 5.
Per il centraggio sulle griffe si può fare riferimento alla quota calibrata (F), oppure ai fori spina 6.

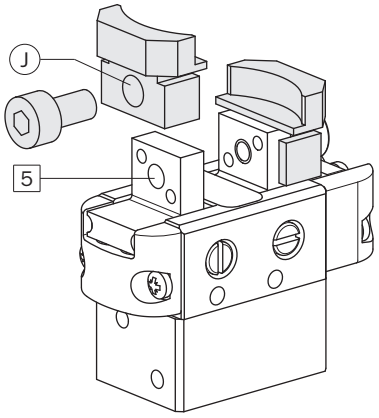
Gripping tool fastening

The gripping tools must be as short and light as possible.
They must be fastened by one screw in the through hole 4 to be screwed in the threaded hole (G) in the gripping tool.
Or on the contrary, by a screw passing through (J) and tightened in 5 .
For a precise positioning on the jaw use the calibrated dimension (F), or the dowel pin holes 6 .









	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
4 5	M3	M4	M4	M5	M5	M6
6	Ø1.5H8 x 3.5 mm	Ø1.5H8 x 3.5 mm	Ø1.5H8 x 4 mm	Ø2H8 x 5 mm	Ø2.5H8 x 6 mm	Ø3H8 x 8 mm
G	M2	M3	M3	M4	M4	M5
F	7.5 mm	$9^{-0.05}$ mm	$10^{-0.05}$ mm	$12^{-0.05}$ mm	$16^{-0.05}$ mm	$18^{-0.05}$ mm
J	Ø3.3 mm	Ø4.3 mm	Ø4.3 mm	Ø5.3 mm	Ø5.3 mm	Ø6.3 mm

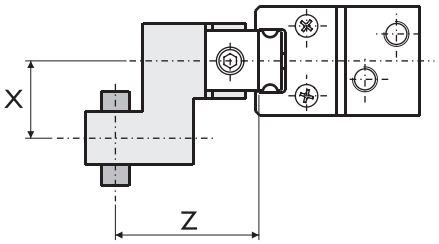
Forza di serraggio

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

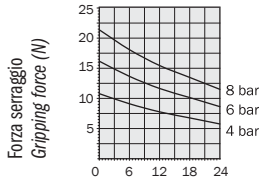
La forza indicata in questi grafici è riferita alla singola griffa.
La forza totale è il doppio.



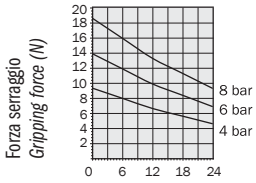
The force shown in these graphs refers to one jaw. The total force is double.

SGP-16S

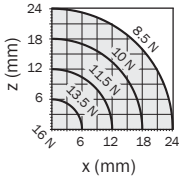
apertura / *opening*



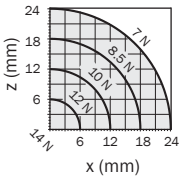
chiusura / *closing*



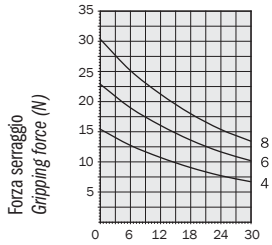
apertura / *opening* (6 bar)

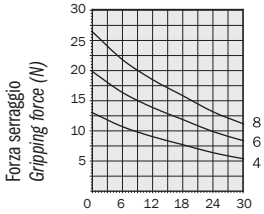


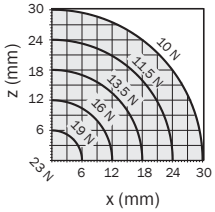
chiusura / *closing* (6 bar)

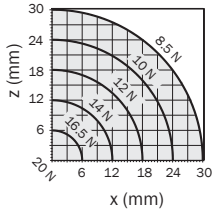


SGP-20S

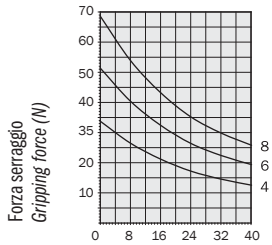


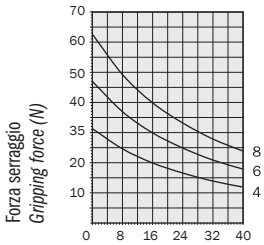


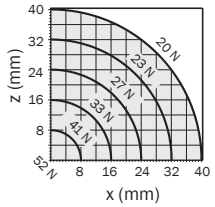


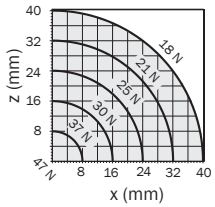


SGP-25S

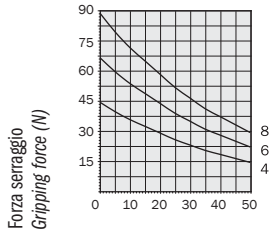


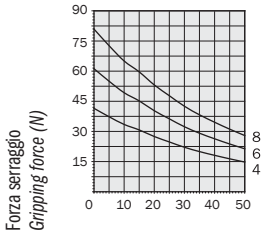


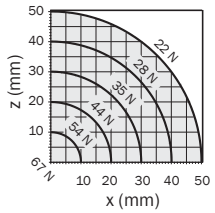


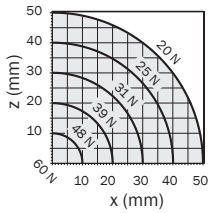


SGP-32S

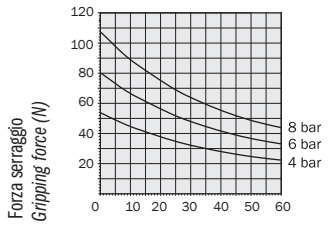


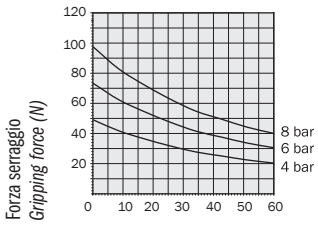


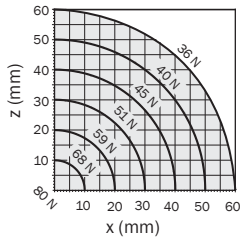


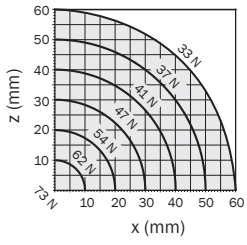


SGP-40S

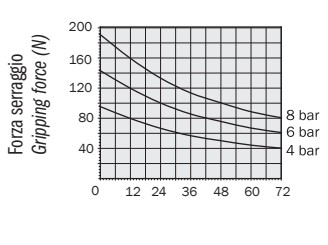


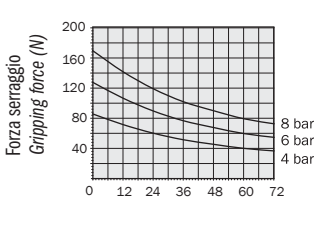


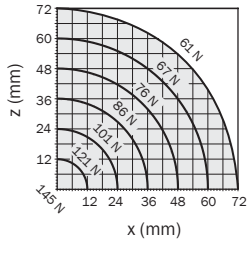


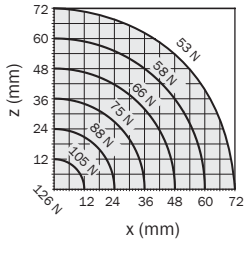


SGP-50S









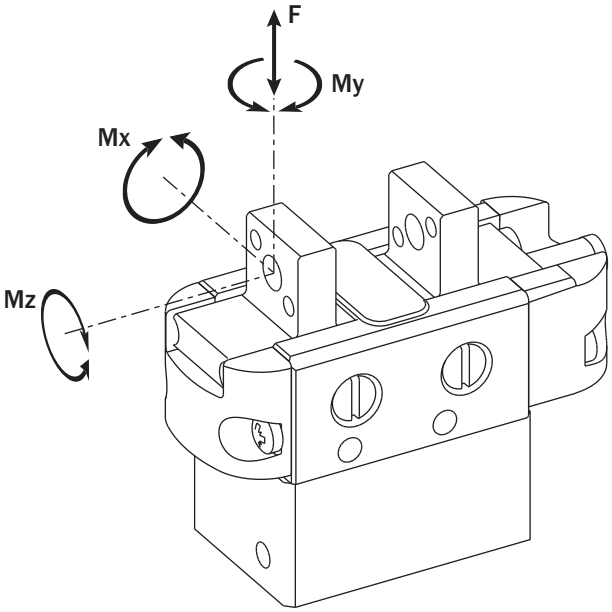
01/2022

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, Mx s, My s, Mz s, sono i carichi massimi ammissibili in condizioni statiche, cioè con le griffe ferme.
F d, Mx d, My d, Mz 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, Mx s, My s, Mz s, are maximum permitted static loads.
Static means with motionless jaws.
F d, Mx d, My d, Mz d, are maximum permitted dynamic loads.
Dynamic means with 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.



	SGP-16S	SGP-20S	SGP-25S	SGP-32S	SGP-40S	SGP-50S
F s	20 N	30 N	50 N	100 N	160 N	240 N
Mx s	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
My s	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
Mz s	0.5 Nm	1 Nm	2 Nm	4 Nm	6 Nm	10 Nm
F d	0.2 N	0.3 N	0.5 N	1 N	1.6 N	2.4 N
Mx d	0.5 Nm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
My d	0.5 Nm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
Mz d	0.5 Nm	1 Ncm	2 Ncm	4 Ncm	6 Ncm	10 Ncm
m 0.2s	20 g	30 g	50 g	100 g	160 g	240 g
m 0.05s	13 g	15 g	30 g	60 g	80 g	150 g
m 0.02s	10 g	10 g	20 g	40 g	-	-

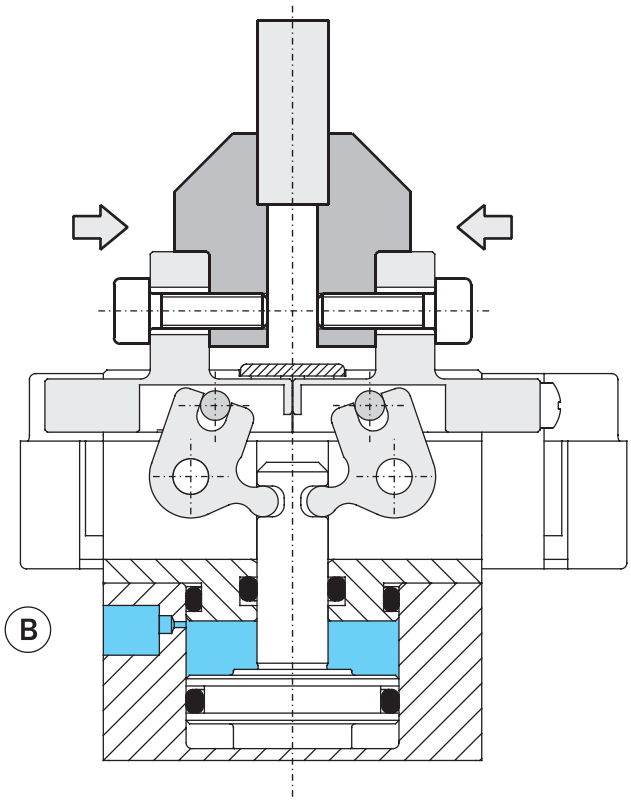
Serraggio

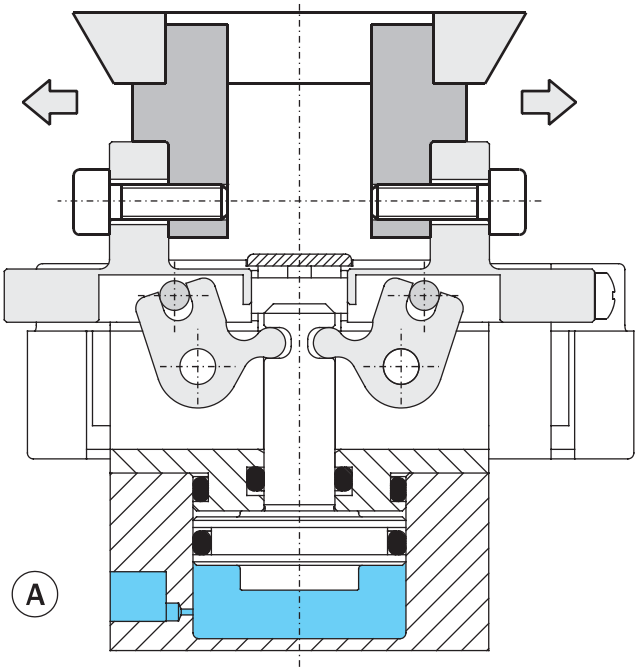
La pinza è a doppio effetto e può quindi essere usata per serrare il carico sia dall'esterno (B) che dall'interno (A).
La forza di serraggio è maggiore in apertura.

Gripping

The gripper is double-acting for either internal (A) or external (B) gripping applications.
The opening force is higher.

Camera in pressione
Pressurized chamber





Connessione pneumatica

La pinza si alimenta con aria compressa dai fori laterali (A e C) montandovi i raccordi dell'aria ed i relativi tubi (non forniti).
Oppure si alimenta direttamente dai fori inferiori (a e c) rimuovendo i tappi [1].

In questo caso bisogna rimuovere i tappi dai fori inferiori e bisogna tappare i fori laterali [2].

Utilizzare un adesivo sigillante THREAD LOCK sui tappi e fare attenzione alla profondità dei filetti.

Aria compressa in A o a: apertura della pinza.
Aria compressa in C o c: chiusura della pinza.

La pinza è azionata con aria compressa filtrata 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 (A and C) with fittings and hoses (not supplied).
Or it can be accomplished directly by the bottom air ports (a and c) removing the plugs [1].

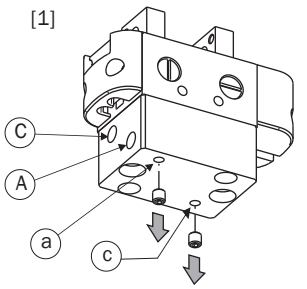
In this case, remove the plugs from the lower holes and insert the plugs into the side holes [2].

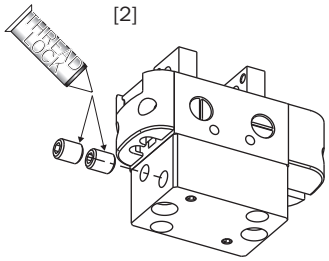
Use THREAD LOCK *adhesive sealant on the plugs and pay attention to the depth of the threads.*

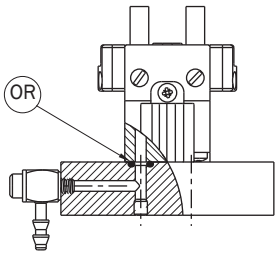
Compressed air in A or a: gripper opening.
Compressed air in C or c: gripper closing.

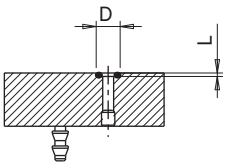
The gripper is driven by filtered compressed air not necessarily lubricated.
Maintain the medium selected at the start, lubricated or not, for the complete service life of the gripper.
The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.

Taglia *Size*	OR	Ingresso aria *Air connection thread* (a, c)	Sede O-Ring *O-Ring groove*	
			D	L
16, 20	OR Ø1x2.5 mm	M2.5	Ø4.5 H11	0.65
25, 32, 40, 50	OR Ø1x3 mm	M3	Ø5 H11	0.65









Circuito pneumatico

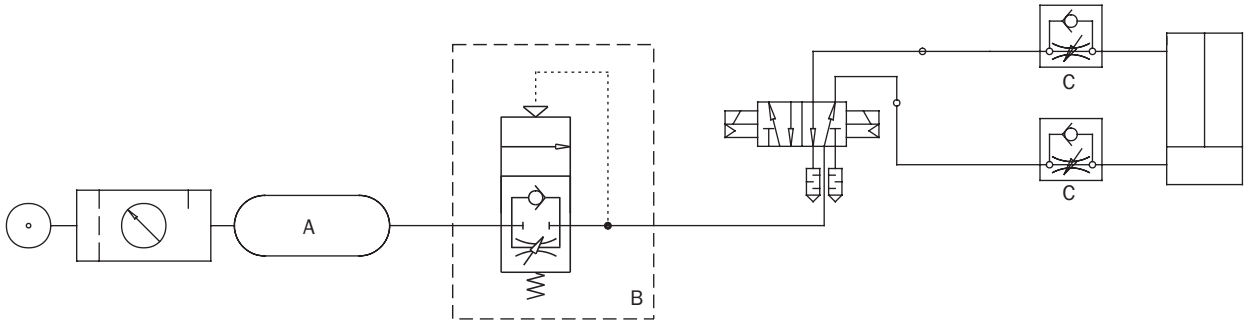
Possibili inconvenienti sul circuito di alimentazione dell'aria compressa:
1- Oscillazioni di pressione.
2- Riempimento pinza vuota all'avvio.
3- Improvvisa mancanza di pressione.
4- Velocità di azionamento eccessiva.

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).

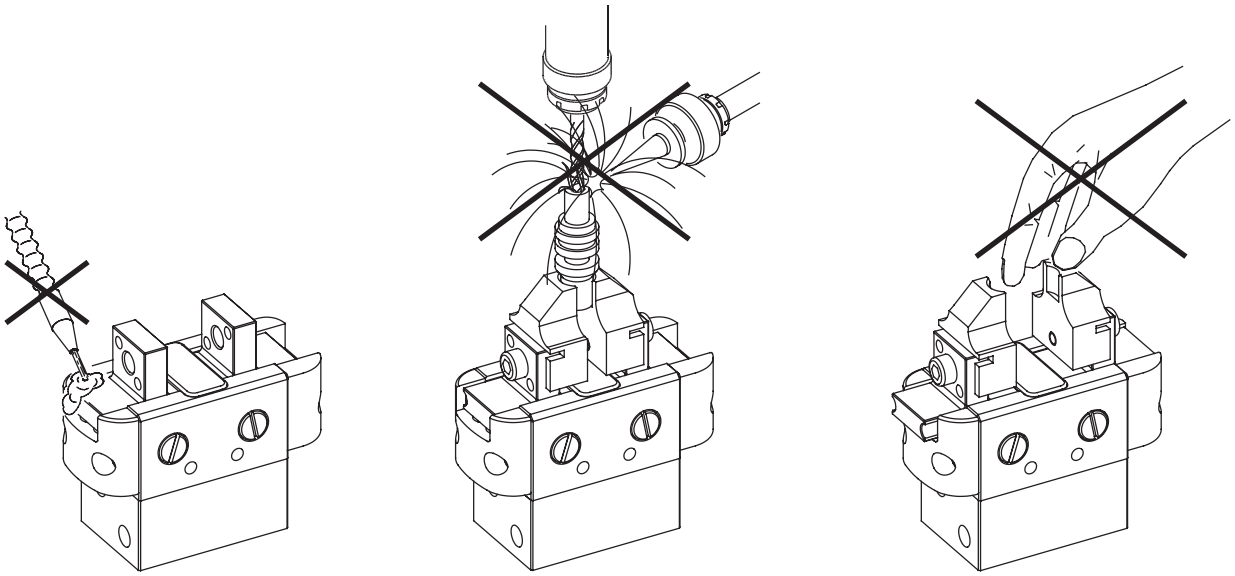


Avvertenze

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 20 milioni di cicli con:
- BERULUB FG-H 2 SL
  (Lubrificante NSF H1 Registrazione No. 135919).

Il gioco delle griffe, indicato qui sotto, viene regolato in fabbrica.
NON USARE MAI LE VITI DI REGOLAZIONE PER MODIFICARLO.

Maintenance

Grease the gripper after 20 million cycles with:
- *BERULUB FG-H 2 SL*
  (Lubricant NSF H1 Registration No. 135919).

The jaw backlash, showed in the picture below, is set in factory.
NEVER USE THE ADJUSTING SCREWS TO MODIFY IT.