CILINDRI COMPATTI A CORSA BREVE
Conformi al progetto U.N.I.T.O.P. - RUP/7

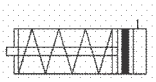
SHORT STROKE CYLINDERS
According to project U.N.I.T.O.P. - RUP/7

serie **CU**

series **CU**

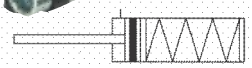
SEMPLICE EFFETTO
Molla anteriore
SINGLE ACTING
Front spring

CUS...-FA



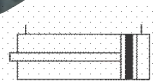
SEMPLICE EFFETTO
Molla posteriore
SINGLE ACTING
Rear spring

CUS...-FP



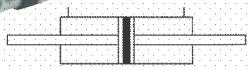
DOPPIO EFFETTO
DOUBLE ACTING

CUD...-F



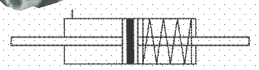
DOPPIO EFFETTO
Stelo passante
DOUBLE ACTING
Double ended piston rod

CUDP...-F



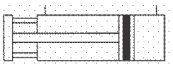
SEMPLICE EFFETTO
Stelo passante
SINGLE ACTING
Double ended piston rod

CUSP...-F



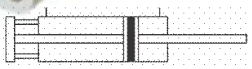
DOPPIO EFFETTO
Stelo antirotante - 2 aste guida
DOUBLE ACTING
Antirotation with double slide bar

CUD...-A



DOPPIO EFFETTO
Stelo antirotante-asta passante
DOUBLE ACTING
Antirotation - double ended piston rod

CUDP...-A



DOTAZIONI STANDARD
Ammortizzamento elastico a fine corsa
Stelo con filetto femmina
Magnete permanente sul pistone del cilindro
Scanalature per il montaggio dei finecorsa magnetici per il rilevamento senza contatto delle posizioni intermedie o di fine corsa del pistone.

STANDARD EQUIPMENT
End stroke elastic bumper
Piston rod with female thread
Permanent magnet on piston rod of cylinder
Slots for assembling of proximity switches for detection of piston in intermediate or end stroke position, without contact.

I COMPONENTI E GLI ACCESSORI

COMPONENTS AND ACCESSORIES

Testate pressofuse in lega leggera anodizzata di colore nero, boccola guida stelo in bronzo sinterizzato autolubrificante.		Squeeze casted end caps in black anodized light alloy, slide bush for piston rod in self-lubricating sintered bronze.
La camicia, un elemento estetico e funzionale, è realizzata in lega leggera calibrata e anodizzata internamente ed esternamente (classe 20 micron).		The body, aesthetic and functional component, manufactured in light alloy, honed and anodized inside and outside (class 20 micron).
Lo stelo è in acciaio inossidabile rullato. Il pistone in lega leggera sul quale è applicato un magnete permanente.		Piston rod in rolled stainless steel. Piston in light alloy with a permanent magnet fixed on it.
Le guarnizioni sono in poliuretano con elevata resistenza all'usura. Dopo la lubrificazione iniziale, è previsto l'utilizzo solo con aria filtrata.		Seals in polyurethane for high resistance to wear. After first lubrication, they can be used with only filtered air.
Elementi di fissaggio per il posizionamento fisso od oscillante dei cilindri.		Fasteners for fixed or oscillating installation of cylinders.

DATI TECNICI TECHNICAL DATA

FLUIDO: aria filtrata con o senza lubrificazione.
VELOCITÀ: ≤ 1 m/sec. in assenza di carico.
PRESSIONE DI ESERCIZIO: da 1 a10 bar.
INTERVALLO DI TEMPERATURA: da -20°C a +80°C (max +60°C con l'impiego dei finecorsa magnetici).

POWER FLUID: filtered air with or without lubrication.
SPEED: ≤ 1 m/sec. without load.
OPERATING PRESSURE: from 1 to 10 bar.
TEMPERATURE RANGE: from -20° to +80°C (max +60°C when using magnetic switches).

LE CORSE DISPONIBILI
AVAILABLE STROKES

	SEMPLICE EFFETTO SINGLE ACTING			DOPPIO EFFETTO DOUBLE ACTING					
Alesaggio Bore size Ø mm	Corse standard Standard strokes mm	Corse possibili Possible strokes mm	Forza di ritorno della molla* Return force of spring*	Corse standard Standard strokes mm	Corse possibili Possible strokes mm	Forza in spinta a 6 bar* Thrust force at 6 bar* N	Forza in trazione a 6 bar* N Traction force at 6 bar* N	Peso Weight g	Incr. peso per 5 mm Weight rise for 5 mm g
16	5,10,15,20,25	1 ÷ 25	vedere diagramma see diagram	5,10,15,20,25,30,40	1 ÷ 200	121	90	90	8
20				5,10,15,20,25,		188	140	140	12
25				30,40,50		295	247	180	14
32				5,10,15,20,25,30,	1 ÷ 300	483	415	280	16
40				40,50,60,80		754	685	400	30
50	10,15,20,25			10,15,20,25,30		1177	1057	540	37
63						1869	1750	970	55
80				40,50,60,80	1 ÷ 400	3015	2825	1560	90
100						4710	4415	2450	100

*Valori teorici *Theoretic values

CODICE PER L'ORDINAZIONE DEI CILINDRI ORDER CODE FOR CYLINDERS

CU S P 032 25 F A 4

CILINDRO UNITOP
UNITOP CYLINDER

D= doppio effetto double acting
S= semplice effetto single acting

P= stelo passante double ended piston rod

Alesaggio cilindro Cylinder bore size 016-020-025-032-040 050-063-080-100

Corsa del cilindro Cylinder stroke

F= stelo con filetto femmina piston rod with female thread
M= stelo con filetto maschio piston rod with male thread

A= molla anteriore front spring
P= molla posteriore rear spring

X= staffa antirotazione (solo in esecuzione a doppio effetto)
anti-rotation bracket (only with double acting execution)
4= stelo passante cavo (solo con filetto maschio)
double acting hollow piston rod (only with male thread)

CODICE PER L'ORDINAZIONE DEGLI ACCESSORI DI FISSAGGIO ORDER CODE FOR FIXING ACCESSORIES

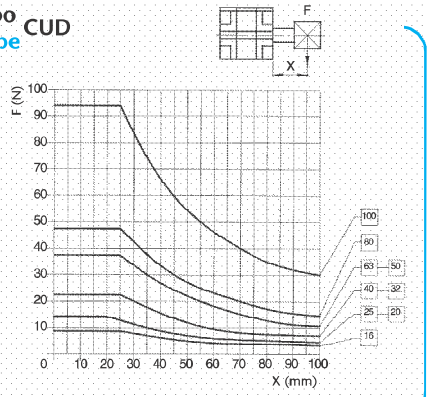
3007 - 032

Fissaggio a flangia
Fixing flange

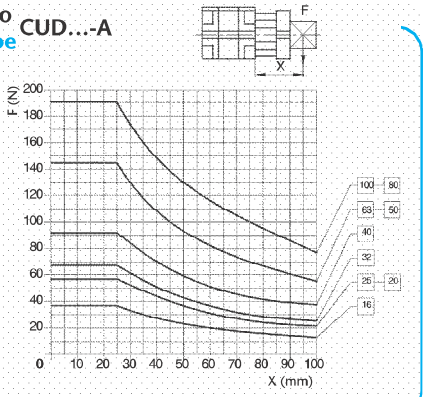
Alesaggio cilindro
Bore size cylinder

DIAGRAMMI DI CARICO E DI COPPIA in funzione della sporgenza della forza radiale F
GRAPHS OF LOAD AND TORQUE as a function of protrusion of radial force F

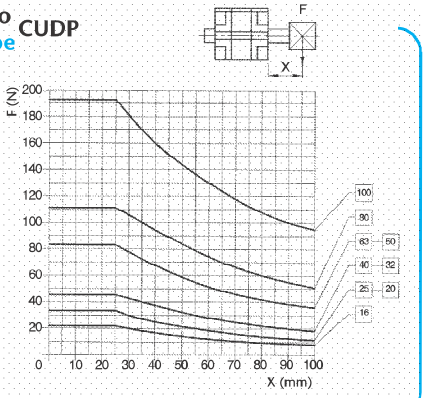
tipo type CUD



tipo type CUD...-A



tipo type CUDP



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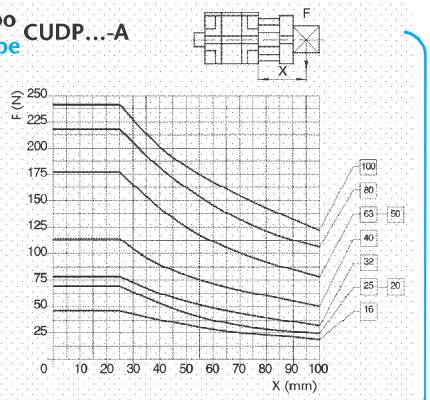

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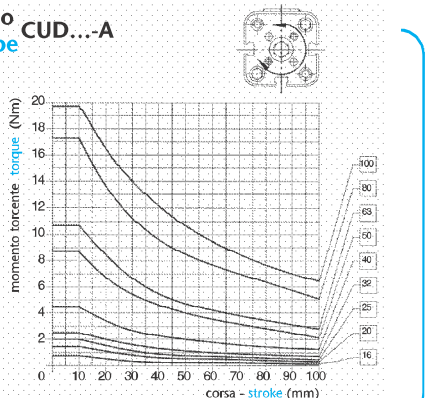
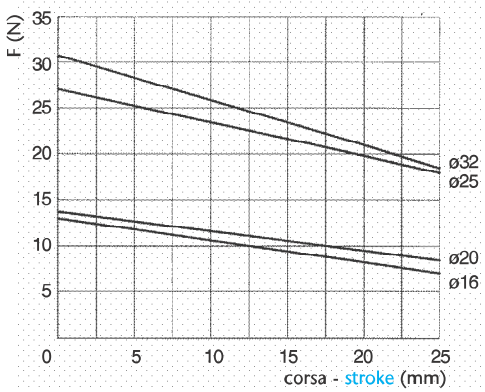
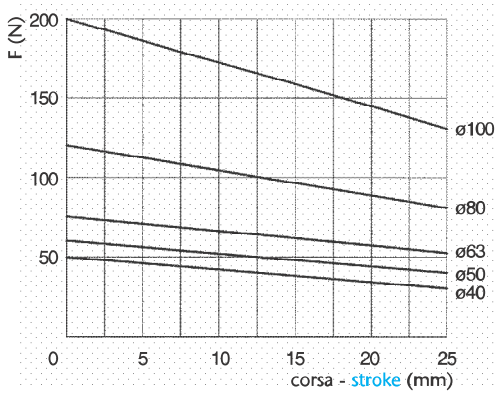


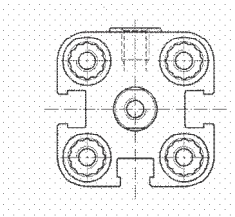
LA FORZA DI RITORNO DELLE MOLLE
RETURN FORCE OF SPRINGS

valori teorici theoretic values

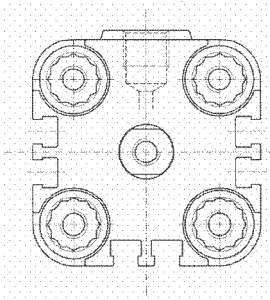




LA POSIZIONE DELLE GUIDE PER I SENSORI MAGNETICI
POSITION OF SLOTS FOR MAGNETIC SWITCHES



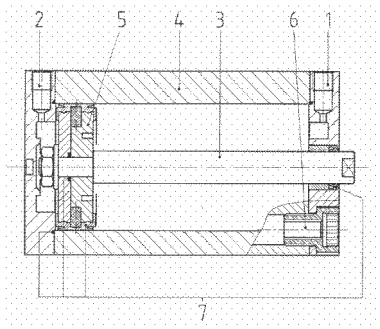
per alesaggi 16,20,25 mm
for bore size 16,20,25 mm



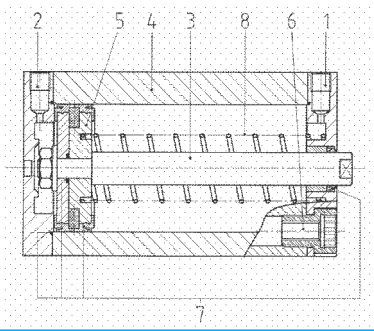
per alesaggi da 32 a 100 mm
for bore size from 32 to 100 mm

PARTI DI RICAMBIO SPARE PARTS

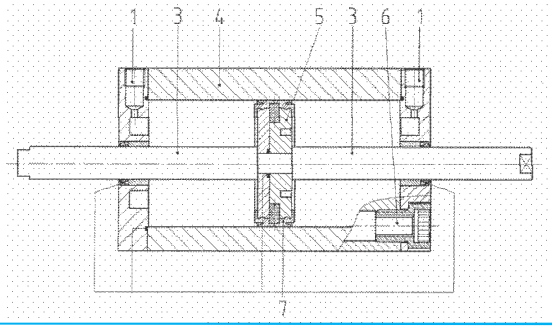
tipo CUD...-F; CUD...-M
type



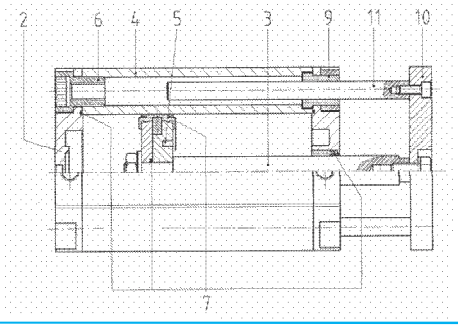
tipo CUS...-FA; CUS...-FP;
type CUS...-MA; CUS...-MP



tipo CUSP...-F; CUSP...-M; CUDP...-F;
type CUDP...-M; CUSP...-M4; CUDP...-M4



tipo CUD...-A; CUDP...-A
type



Posizione Position	Quantità Quantity	Sigla Code	Descrizione Description
1	1	GTA	Gruppo testata anteriore Front end cap group
2	1	GTP	Gruppo testata posteriore Rear end cap group
3	1	ST	Stelo Piston rod
4	1	CM	Camicia Body
5	1	GPT	Gruppo pistone Piston group

Posizione Position	Quantità Quantity	Sigla Code	Descrizione Description
6	8	VT	Vite di collegamento Screw
7	1	SGM	Kit guarnizioni Seals kit
8	1	ML	Molla Spring
9	1	GTR	Gruppo testata antirotazione Antirotation front end cap
10	1	GSA	Gruppo staffa antirotazione Antirotation bracket group
11	2	SA	Aste di guida Slide bars

CODICE PER L'ORDINAZIONE DELLE PARTI DI RICAMBIO
ORDER CODE FOR SPARE PARTS

CILINDRO UNITOP
UNITOP CYLINDER

CU – □ – □ – □ – □ – □ – □

solo per la posizione 3
only for position 3

solo per la posizione 3-4 e 11
only for position 3-4 and 11

P= stelo passante rear spring

Sigla parte di ricambio Spare part code

Alesaggio del cilindro Cylinder bore size

F= stelo con filetto femmina piston rod female thread
M= stelo con filetto maschio piston rod male thread

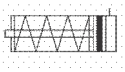
4= stelo passante cavo solo con filetto maschio double acting hollow piston rod (only with male thread)

Corsa del clindro Stroke of cylinder

CARATTERISTICHE DIMENSIONALI DIMENSIONAL FEATURES

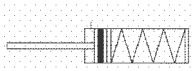
SEMPLICE EFFETTO
Molla anteriore
SINGLE ACTING
Front spring

CUS...-FA



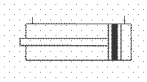
SEMPLICE EFFETTO Molla posteriore
SINGLE ACTING
Rear spring

CUS...-FP



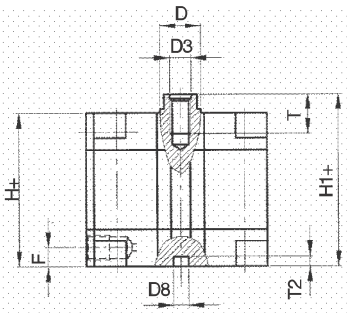
DOPPIO EFFETTO
DOUBLE ACTING

CUD...-F

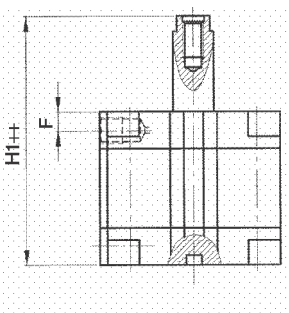


ESECUZIONE STANDARD — STANDARD

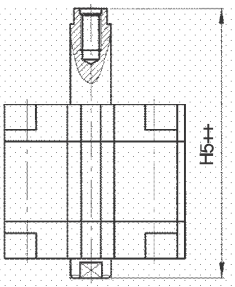
CUS...-FA
CUD...-F

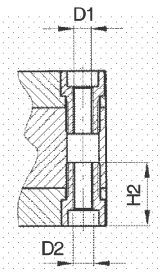


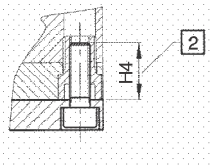
CUS...-FP

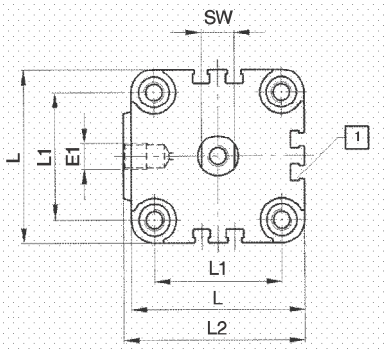


CUSP...-F
CUDP...-F









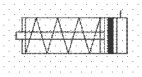
1 Guida per fine corsa magnetico Slot for magnetic switch
2 Quota minima di avvitatura Minimum height of screwing
\+ Aggiungere la corsa Add the stroke
++ Aggiungere 2 volte la corsa Add the stroke twice

Alesaggio Bore size mm	D Ø mm	D1 Ø mm	D2	D3	D6 Ø mm	D7	D8 Ø H9 mm	E1	F mm	H mm	H1 mm
16	8	3,3	M4	M4	3,2	–	6	M5	8	38	42,5
20	10	4,2	M5	M5	3,8	–	6	M5	8	38	42,5
25	10	4,2	M5	M5	3,8	–	6	M5	8	39,5	45
32	12	5,2	M6	M6	4,5	–	6	G1/8"	8	44,5	50,5
40	12	5,2	M6	M6	4,5	–	6	G1/8"	8	45,5	52
50	16	6,8	M8	M8	6	–	6	G1/8"	8	45,5	53
63	16	8,5	M10	M8	6	–	8	G1/8"	8	50	57,5
80	20	8,5	M10	M10	8	G1/8"	8	G1/8"	8,5	56	64
100	25	8,5	M10	M12	11,7	G1/4"	8	G1/4"	10,5	66,5	76,5

CARATTERISTICHE DIMENSIONALI DIMENSIONAL FEATURES

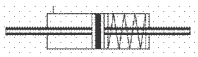
SEMPLICE EFFETTO
Molla anteriore
SINGLE ACTING
Front spring

CUS...-MA



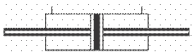
SEMPLICE EFFETTO
Stelo passante
SINGLE ACTING
Double ended piston rod

CUSP...-M



DOPPIO EFFETTO
Stelo passante
DOUBLE ACTING
Double ended piston rod

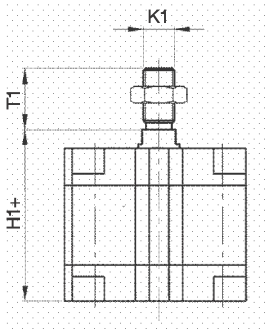
CUDP...-M



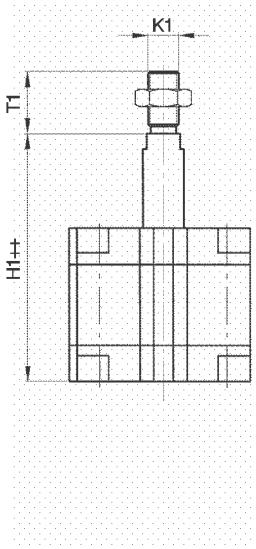
ESECUZIONI SPECIALI

SPECIAL FEATURES

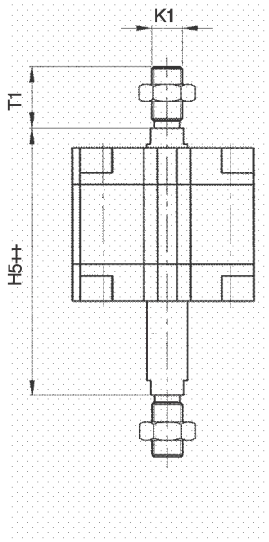
CUS...-MA
CUD...-M



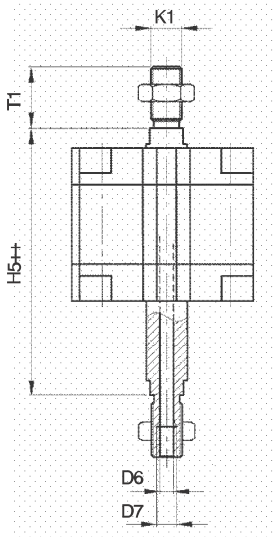
CUS...-MP



CUSP...-M
CUDP...-M



CUDP...-M4

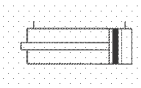


H2 mm	H4 mm	H5 mm	K1	L mm	L1 mm	L2 mm	SW mm	T* mm	T1 mm	T2 mm
18,5	16	47	M8	29	18	30	7	10	20	4
18,5	18	47	M10x1,25	36	22	37,5	8	10	22	4
18,5	18	50,5	M10x1,25	40	26	41,5	8	10	22	4
23	20	56,5	M10x1,25	50	32	52	10	12	22	4
23	20	58,5	M10x1,25	60	42	62,5	10	12	22	4
24,5	20	60,5	M12x1,25	68	50	71	13	16	24	4
27	25	65	M12x1,25	87	62	91	13	16	24	4
27	25	72	M16x1,5	107	82	111	17	20	32	4
32,5	25	86,5	M20x1,5	128	103	133	22	24	40	4

*Per le esecuzioni a stelo passante con corsa < 5 mm diminuisce di 6 mm. *For versions with double ended piston rod and stroke < 5 mm, this dimension decreases of 6 mm.

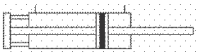
DOPPIO EFFETTO
Stelo antirotante - 2 aste guida
DOUBLE ACTING
Antirotation with double slide bar

CUD...-A



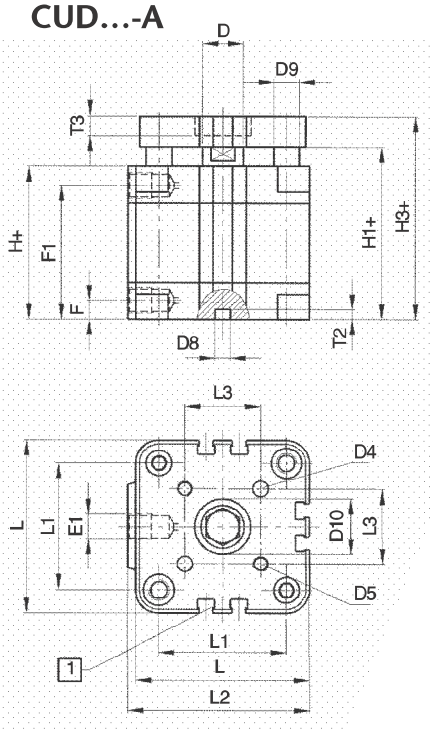
DOPPIO EFFETTO
Stelo antirotante - passante
DOUBLE ACTING
Antirotation - double ended piston rod

CUDP...-A

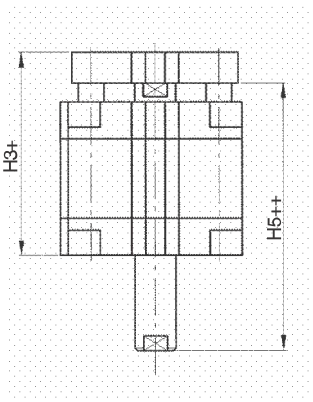


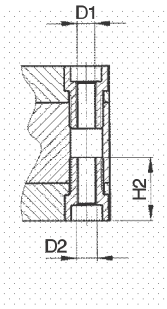
ESECUZIONE STANDARD — STANDARD

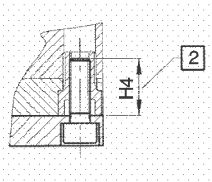
CUD...-A



CUDP...-A



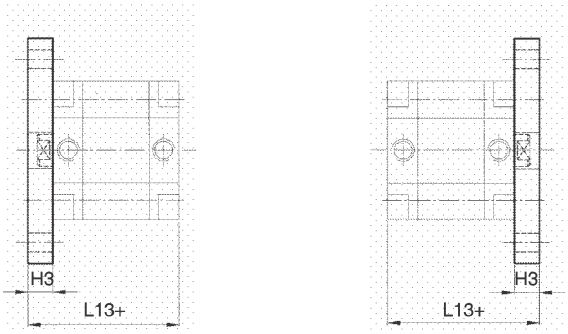




1 Guida per fine corsa magnetico Slot for magnetic switch
2 Quota minima di avvitatura Minimum height of screwing
\+ Aggiungere la corsa Add the stroke
++ Aggiungere 2 volte la corsa Add the stroke twice

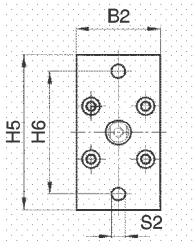
Alesaggio Bore size mm	D Ø mm	D1 Ø mm	D2	D4 H8 mm	D5	D8 Ø H9 mm	D9 Ø mm	D10 Ø H9 mm	E1	F mm	F1 mm	H mm	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	L mm	L1 mm	L2 mm	L3 mm	T2 mm	T3 mm
16	8	3,3	M4	3	M3	6	5	8	M5	8	30	38	42,5	18,5	48,5	16	47	29	18	30	10	4	4,2
20	10	4,2	M5	4	M4	6	6	10	M5	8	30	38	42,5	18,5	50,5	18	47	36	22	37,5	12	4	5,7
25	10	4,2	M5	5	M5	6	6	14	M5	8	31,5	39,5	45	18,5	53	18	50,5	40	26	41,5	15,6	4	4,8
32	12	5,2	M6	5	M5	6	8	17	G1/8"	8	36,5	44,5	50,5	21,5	60,5	20	56,5	50	32	52	19,8	4	6,1
40	12	5,2	M6	5	M5	6	8	17	G1/8"	8	37,5	45,5	52	21,5	62	20	58,5	60	42	62,5	23,3	4	6,1
50	16	6,8	M8	6	M6	6	10	22	G1/8"	8	37,5	45,5	53	22	65	20	60,5	68	50	71	29,7	4	7,6
63	16	8,5	M10	6	M6	8	10	22	G1/8"	8	42	50	57,5	24,5	69,5	25	65	87	62	91	35,4	4	7,6
80	20	8,5	M10	8	M8	8	12	28	G1/8"	8,5	47,5	56	64	27,5	78	25	72	107	82	111	46	4	8,7
100	25	8,5	M10	10	M10	8	12	30	G1/4"	10,5	56	66,5	76,5	32,5	90,5	25	86,5	128	103	133	56,6	4	10,3

FLANGIA tipo 3007-...
acciaio zincato + 4 viti fissaggio

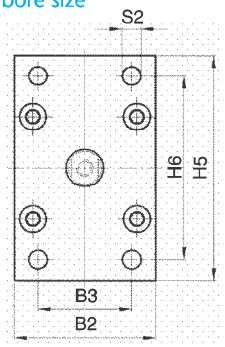


FLANGE type 3007-...
zinc-plated steel + 4 fixing screws

alesaggio 16,20,25
bore size



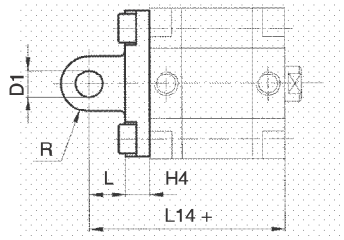
alesaggio 32÷100
bore size

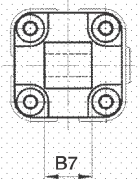


CERNIERA tipo 3002-... tipo 3001-...
lega leggera + 4 viti fissaggio

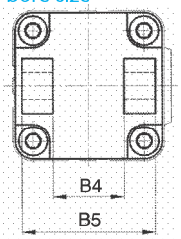
PIVOT type 3002-... type 3001-...
light alloy + 4 fixing screws

tipo type 3002 femmina female
alesaggio 16,20,25
bore size





tipo type 3001 maschio male
alesaggio 32÷100
bore size

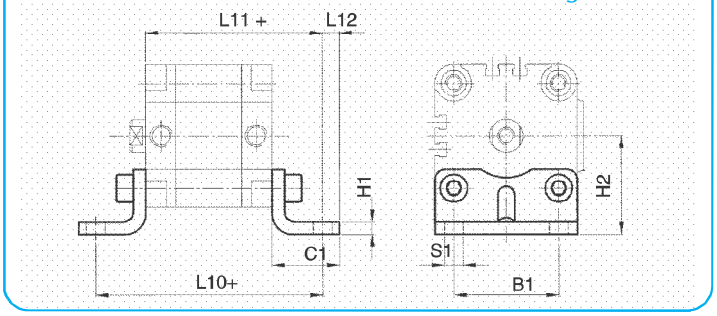


Alesaggio Bore size mm	Corsa Stroke* max. mm
16	50
20	50
25	50
32	100
40	100
50	100
63	100
80	150
100	150

*Con il fissaggio a cerniera tipo 3001, 3002, la corsa del cilindro non deve superare i valori in tabella
*When using the pivot fixing type 3001, 3002 the stroke of the cylinder should not be longer than the values indicated in the table.

PIEDINI tipo 3008-...
acciaio zincato
+ 4 viti

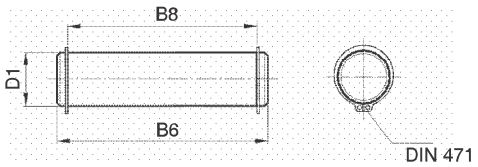
FOOT type 3008-...
zinc-plated steel
+ 4 fixing screws



+ Aggiungere la corsa + Add the stroke

PERNO PER CERNIERA tipo ISEC-...
acciaio rettificato
+ 2 seeger

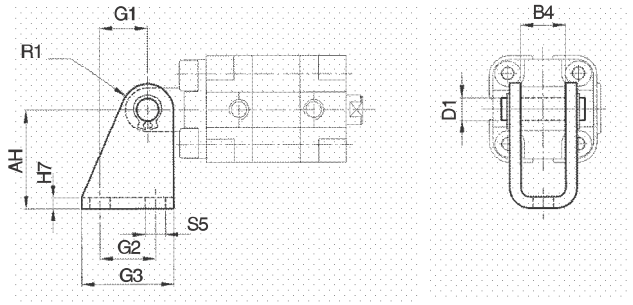
PIN FOR PIVOT type ISEC-...
ground steel
+ 2 seeger



Alesaggio Bore size mm	B1 mm	B2 mm	B3 mm	B4 mm	B5 h14 mm	B6 mm	B7 h14 mm	B8 mm	C1 mm	D1 Ø H9-e8 mm	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	H6 mm	L mm	L10 mm	L11 mm	L12 mm	L13 mm	L14 mm	R Ø mm	S1 mm	S2 mm
16	18	29	–	12,1	–	–	12	–	17,5	6	3	22	10	6	55	43	10	64	51	4,5	48	54	6	5,5	5,5
20	22	36	–	16,1	–	–	16	–	22	8	4	27	10	6	70	55	14	70	54	6	48	58	8	6,6	6,6
25	26	40	–	16,1	–	–	16	–	22	8	4	30	10	6	76	60	14	71,5	55,5	6	49,5	59,5	8	6,6	6,6
32	32	50	32	26	45	52	–	46	26	10	5	32	10	9	80	65	13	80,5	62,5	8	54,5	66,5	10	6,6	7
40	42	60	36	28	52	59	–	53	28	12	5	42,5	10	9	102	82	16	85,5	65,5	8	55,5	70,5	12,5	9	9
50	50	68	45	32	60	67	–	61	32	12	6	47	12	11	110	90	16	93,5	69,5	8	57,5	72,5	12,5	9	9
63	62	87	50	40	70	77	–	71	39	16	6	50,5	15	11	130	110	21	104	77	12	65	82	15	11	9
80	82	107	63	50	90	97	–	91	42	16	8	65,5	15	13	160	135	23	116	86	12	71	92	15	11	12
100	103	128	75	60	110	118	–	111	45	20	8	78	15	15	190	163	26	132,5	99,5	12	81,5	107,5	20	13,5	14

CONTROSUPPORTO A 90° tipo 3003
per alesaggi 16-20-25 mm

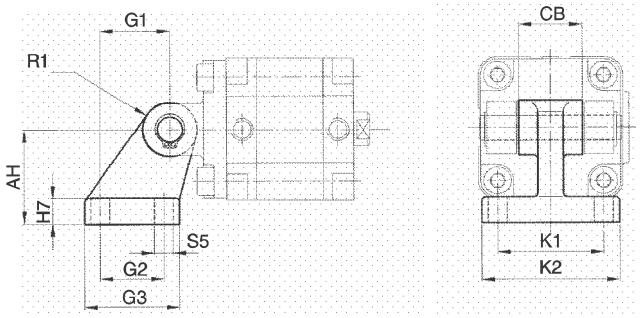
RIGHT ANGLES JOINT type 3003
for bore size 16-20-25 mm



In acciaio zincato
In zinc-plated steel

CONTROSUPPORTO A 90° tipo 2803
per alesaggi da 32 a 100 mm

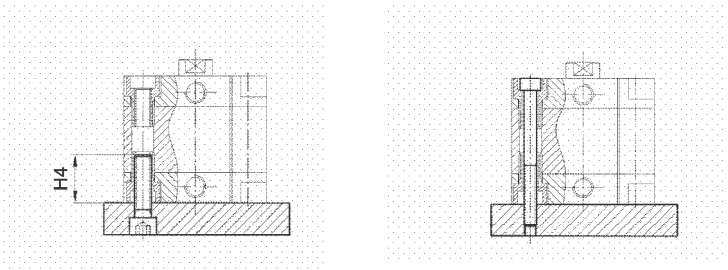
RIGHT ANGLES JOINT type 2803
for bore size from 32 to100 mm



In lega leggera
In light alloy

POSIZIONAMENTO DEL CILINDRO SENZA FISSAGGI

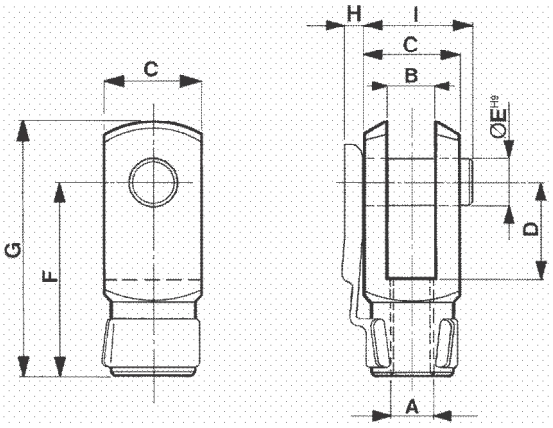
POSITIONING OF THE CYLINDER WITHOUT FIXINGS



Per cilindri con alesaggio 16 mm usare solo 2 viti in diagonale, oppure 4 viti antimagnetiche
For cylinders with bore size 16 mm use just two screws in diagonal or 4 anti-magnetic screws

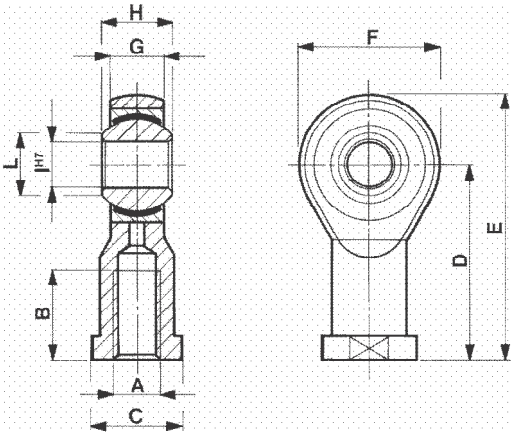
Alesaggio Bore size mm	B4 mm	D1 Ø H9-e8 mm	AH mm	CB mm	G1 mm	G2 mm	G3 mm	H4 mm	H7 mm	K1 mm	K2 mm	R1 mm	S5 Ø mm
16	12,1	6	27	–	13	15	25	6	3	–	–	7	5,5
20	16,1	8	30	–	16	20	32	6	4	–	–	10	6,6
25	16,1	8	30	–	16	20	32	6	4	–	–	10	6,6
32	26	10	32	26	21	18	31	9	8	38	51	11	6,6
40	28	12	36	28	24	22	35	9	10	41	54	13	6,6
50	32	12	45	32	33	30	45	11	12	50	65	13	9
63	40	16	50	40	37	35	50	11	12	52	67	16	9
80	50	16	63	50	47	40	60	13	14	66	86	16	11
100	60	20	71	60	55	50	70	15	15	76	96	21	11

FORCELLA ISO 8140 - tipo IFF-...
ROD CLEVIS ISO 8140 - type IFF-...



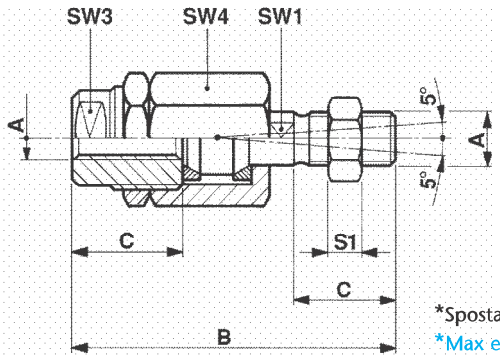
Alesaggio Bore size mm	A	B	C	D	E	F	G	H	I
16	M8	6	12	12	6	24	31	2	14
20	M10x1,25	8	16	16	8	32	42	3	19
25	M10x1,25	10	20	20	10	40	52	3	23
32	M10x1,25	10	20	20	10	40	52	3	23
40	M10x1,25	12	24	24	12	48	62	4	28
50	M12x1,25	16	32	32	16	64	83	4	36
63	M12x1,25	16	32	32	16	64	83	4	36
80	M16x1,5	20	40	40	20	80	105	4	44
100	M20x1,5	20	40	40	20	80	105	4	44

SNODO ISO 8139 - tipo IKJ-...
OSCILLATING EYE ISO 8139 - type IKJ-...



Alesaggio Bore size mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	L mm
16	M8	12	11	30	40	20	6,75	9	6	8,9
20	M10x1,25	16	14	36	48	24	9	12	8	10,4
25	M10x1,25	20	17	43	57	28	10,5	14	10	12,9
32	M10x1,25	20	17	43	57	28	10,5	14	10	12,9
40	M10x1,25	22	19	50	66	32	12	16	12	15,4
50	M12x1,25	28	22	64	85	42	15	21	16	19,3
63	M12x1,25	28	22	64	85	42	15	21	16	19,3
80	M16x1,5	33	30	77	102	50	18	25	20	24,3
100	M20x1,5	33	30	77	102	50	18	25	20	24,3

SNODO PER LA COMPENSAZIONE RADIALE E ASSIALE - tipo IKK-...
AXIAL AND RADIAL COMPENSATION JOINT - type IKK-...



*Spostamento radiale max
*Max end float

Alesaggio Bore size mm	A	B mm	C mm	S1 mm	SW1 mm	* mm	SW3 mm	SW4 mm
16	M8	35	10	4	5	1	7	13
20	M10x1,25	57	20	5	7	2	11	17
25	M10x1,25	71	20	5	12	2	19	30
32	M10x1,25	71	20	5	12	2	19	30
40	M10x1,25	75	24	6	12	2	19	30
50	M12x1,25	103	32	8	20	2	30	42
63	M12x1,25	103	32	8	20	2	30	42
80	M16x1,5	119	40	10	20	2	30	42
100	M20x1,5	119	40	10	20	2	30	42