



ATTUATORI ACTUATORS

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● SLITTE / <i>SLIDES</i>	A1.17
● CILINDRI COMPATTI / <i>COMPACT CYLINDERS</i>	A1.35
● PINZE / <i>GRIPPER</i>	A1.50
● ATTUATORI ROTANTI / <i>ROTARY ACTUATORS</i>	A1.73

UNITÀ DI GUIDA - ACCESSORI / LINEAR CONTROL UNIT ACCESSORY

	● UNITÀ DI GUIDA SERIE AMCL BA/BB LINEAR CONTROL UNITS TYPE AMCL BA/BB	A1.4
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	● UNITÀ DI GUIDA SERIE AMLL BA/BB LINEAR CONTROL UNITS TYPE AMLL BA/BB	A1.13
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SLITTE / SLIDES

	● DOPPIO CILINDRO SERIE S10 TWIN CYLINDER SERIES S10	A1.17
	● SLITTA A DOPPIO CILINDRO A CORPO FISSO SERIE S11 TWIN CYLINDER SLIDE WITH FIXED BODY SERIES S11	A1.20
	● SLITTA A DOPPIO CILINDRO A PIASTRE FISSE SERIE S12 TWIN CYLINDER SLIDE WITH FIXED PLATES SERIES S12	A1.25
	● SLITTA DI PRECISIONE SERIE S13 PRECISION SLIDE SERIES S13	A1.31

CILINDRO COMPATTO GUIDATO / COMPACT GUIDE CYLINDERS

	● CILINDRO COMPATTO GUIDATO TIPO AMCCG BA/BB COMPACT GUIDE CYLINDERS TYPE AMCCG BA/BB	A1.35
	● CILINDRO COMPATTO GUIDATO SERIE MULTIFIX COMPACT GUIDED CYLINDER SERIES MULTIFIX	A1.41

PINZE / GRIPPERS

	● PINZA FULCRATA PNEUMATICA SERIE PFP PNEUMATIC PIVOTED GRIPPER TYPE PFP	A1.50
	● PINZE A DUE GRIFFE FULCRATE 180° SERIE P9 GRIPPER 180° WITH 2 HINGED JAWS SERIES P9	A1.52
	● PINZA PNEUMATICA PARALLELA SERIE PP PNEUMATIC PARALLEL GRIPPER TYPE PP	A1.54
	● PINZA A DUE GRIFFE PARALLELE SERIE P1 GRIPPER WITH TWO PARALLEL JAWS SERIES P1	A1.55
	● PINZA A DUE GRIFFE PARALLELE SERIE P2 GRIPPER WITH TWO PARALLEL JAWS SERIES P2	A1.57



- **PINZA A DUE GRIFFE PARALLELE SERIE P3**
GRIPPER WITH TWO PARALLEL JAWS SERIES P3

A1.59



- **PINZA A DUE GRIFFE PARALLELE A CORSA LUNGA SERIE P4**
GRIPPER WITH TWO PARALLEL LONG-STROKE JAWS, SERIES P4

A1.65



- **PINZA A TRE GRIFFE PARALLELE SERIE P12**
GRIPPER WITH THREE PARALLEL JAWS, SERIES P12

A1.68

ATTUATORI ROTANTI / ROTARY ACTUATORS



- **ATTUATORE ROTANTE SERIE R2**
ROTARY ACTUATOR SERIES R2

A1.73



- **ATTUATORE ROTANTE SERIE R3**
ROTARY ACTUATOR SERIES R3

A1.76



- **ATTUATORE ROTANTE SERIE R3 CON DECELERATORI ESTERNI**
ROTARY ACTUATOR SERIES R3 WITH EXTERNAL SHOCK ABSORBERS

A1.81

- **DIMENSIONAMENTO ATTUATORI ROTANTI**
ROTARY ACTUATORS SIZING

A1.87+

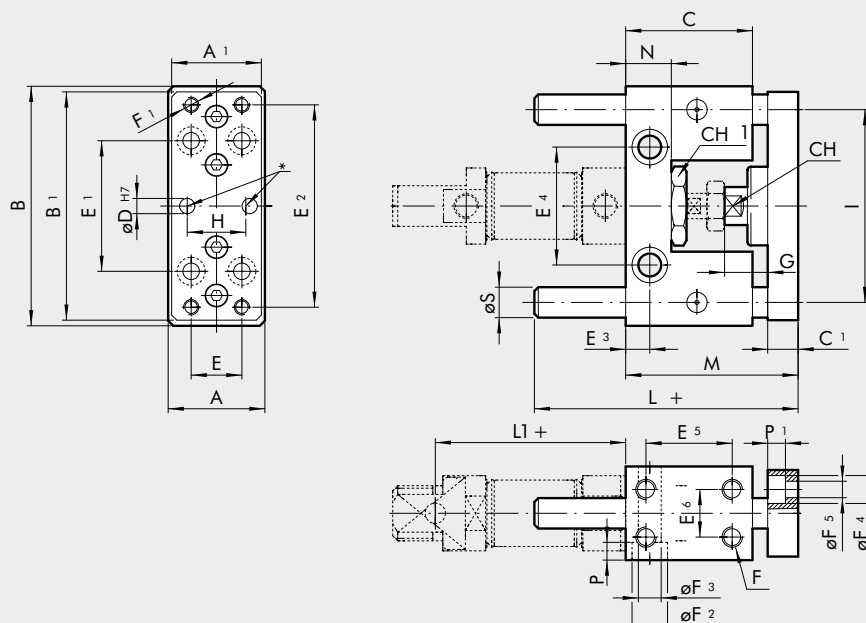
UNITÀ DI GUIDA SERIE AMCL BA/BB LINEAR CONTROL UNITS TYPE AMCL BA/BB

PER CILINDRI DIN/ISO 6432 Ø 12÷16
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 12-16



DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
* = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



Ø	A	A ₁	B	B ₁	C	C ₁	Ch	Ch ₁	D	E	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	F	F ₁	F ₂	F ₃	F ₄	F ₅	G	H	I	L	L ₁	M	N	P	P ₁	S
12	30	27	65	63	38	10	8	19	4	15	32	54	6.5	24	25	22	M4	M4	8.5	5.1	7.5	4.5	15	15	46	70	53	54	13	5.5	4.5	10
16	30	27	65	63	38	10	8	19	4	15	32	54	6.5	24	25	22	M4	M4	8.5	5.1	7.5	4.5	15	15	46	70	60	54	13	5.5	4.5	10

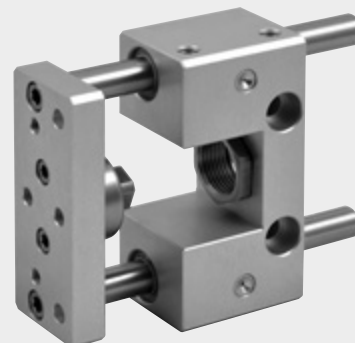
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMCL TIPOLOGIA TYPE	012 DIAMETRO BORE	100 CORSO STROKE	BA VERSIONE VERSION
		012 Ø 12	Corsa in mm	BA Bronzine
		016 Ø 16	Stroke in mm	BB Sfere
				BB Ball bushing

UNITÀ DI GUIDA SERIE AMC BA/BB LINEAR CONTROL UNITS TYPE AMC BA/BB

SOCIETÀ DEL GRUPPO
METALWORK
PNEUMATIC

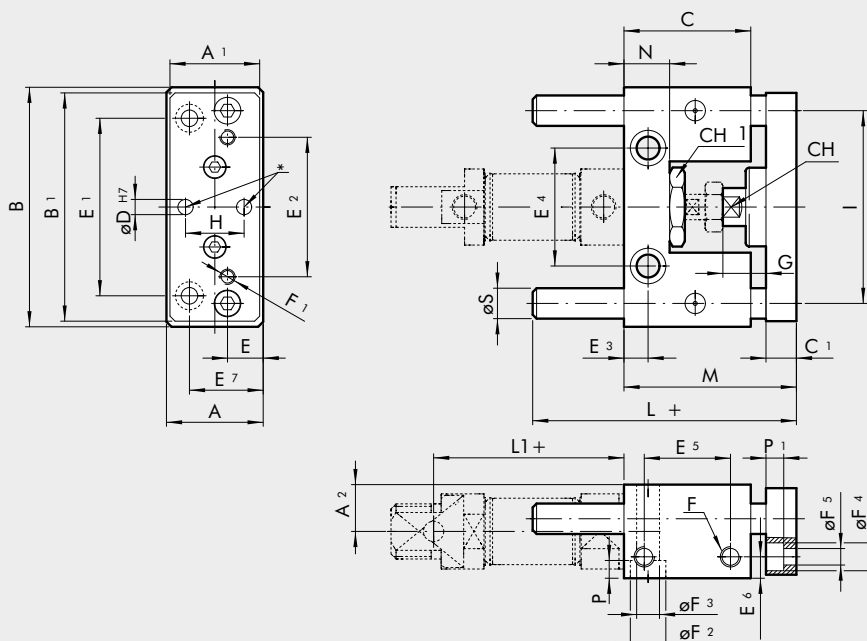
PER CILINDRI DIN/ISO 6432 Ø 20÷25
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 20-25



ATTUATORI / ACTUATORS

DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
* = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



Ø	A	A ₁	A ₂	B	B ₁	C	C ₁	Ch	Ch ₁	D	E	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	F	F ₁	F ₂	F ₃	F ₄	F ₅	G	H	I	L	L ₁	M	N	P	P ₁	S
20	40	38	24	100	90	48	12	13	27	6	15	70	55	8.5	46.5	32	10	30	M8	M6	14	9	11	6.5	22	20	76	77	71	65	17	9	6.5	12
25	40	38	24	100	90	48	12	13	27	6	15	70	55	8.5	46.5	32	10	30	M8	M6	14	9	11	6.5	22	20	76	77	76	71	17	9	6.5	12

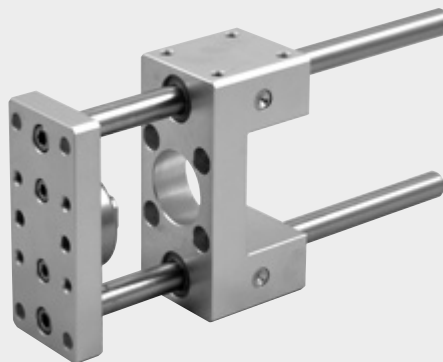
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMC TIPOLOGIA TYPE	012 DIAMETRO BORE	100 CORSA STROKE	BA VERSIONE VERSION
		020 Ø 20	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		025 Ø 25		BB Sfere Ball bushing

UNITÀ DI GUIDA SERIE AMC BA/BB
LINEAR CONTROL UNITS TYPE AMC BA/BB

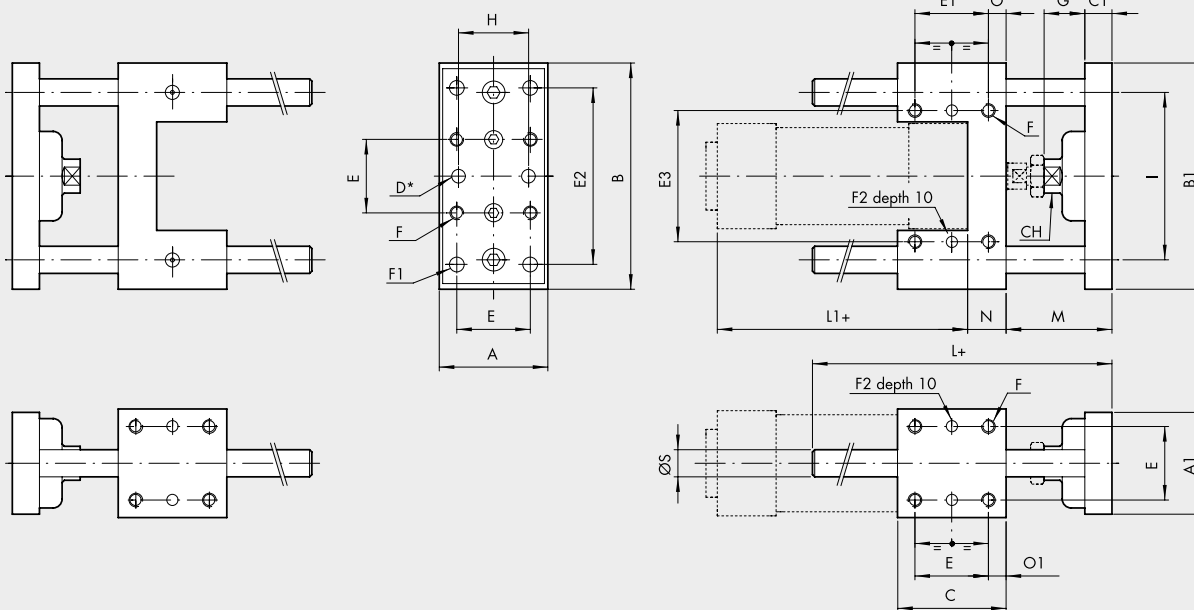
UNITÀ DI GUIDA SERIE AMC BA/BB LINEAR CONTROL UNITS TYPE AMC BA/BB

PER CILINDRI DIN/ISO 15552 Ø 32÷100
FOR CYLINDERS SERIES DIN/ISO 15552 Ø 32-100



DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
* = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



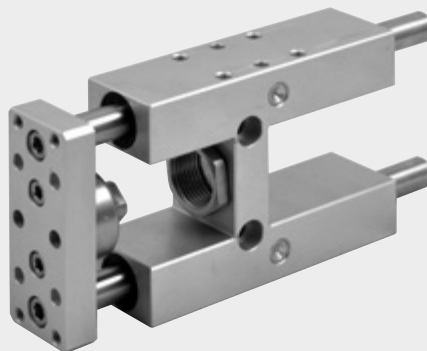
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32	48	45	100	95	48	12	6	32.5	32.5	78	58	M6	6.5	6	18	31	74	108	94	46	17	7.8	7.8	12	15
40	56	53	106	101	58	15	6	38	38	84	64	M6	6.5	6	21	36	80	120	105	52	21	10	10	12	15
50	66	63	125	120	59	15	6	46.5	46.5	100	80	M8	8.5	6	24	45	96	130	106	65	25	6.3	6.3	16	22
63	76	73	132	127	76	15	6	56.5	56.5	105	95	M8	8.5	6	24	45	104	145	121	65	25	9.8	9.8	16	22
80	98	95	165	160	90	16	6	72	50	130	130	M10	11	6	31	56	130	170	128	71	34	20	9	20	27
100	118	115	185	180	110	16	6	89	70	150	150	M10	11	6	31	56	152	190	138	71	39	20	10.5	20	27

CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMC TIPOLOGIA TYPE	032 DIAMETRO BORE	100 CORSO STROKE	BA VERSIONE VERSION
		032 Ø 32	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		040 Ø 40		BB Sfere Ball bushing
		050 Ø 50		
		063 Ø 63		
		080 Ø 80		
		100 Ø 100		

UNITÀ DI GUIDA SERIE AMHL BA/BB LINEAR CONTROL UNITS TYPE AMHL BA/BB

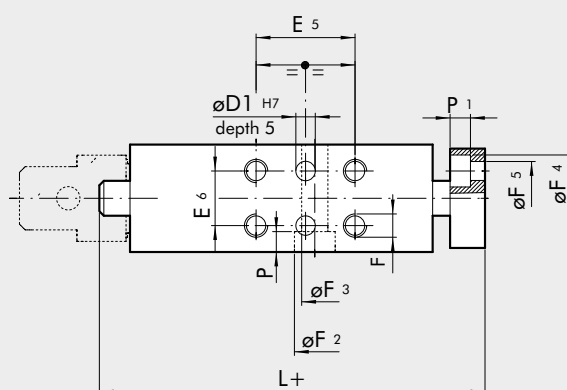
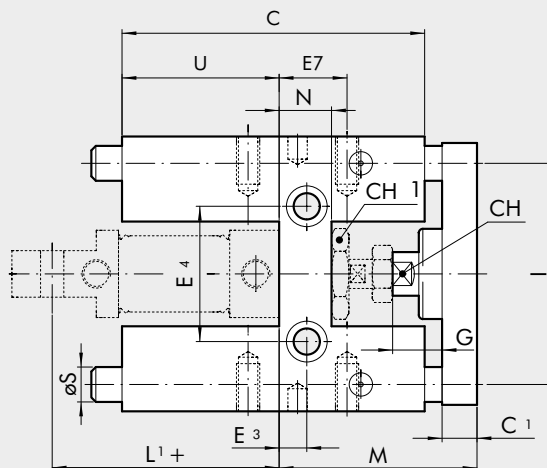
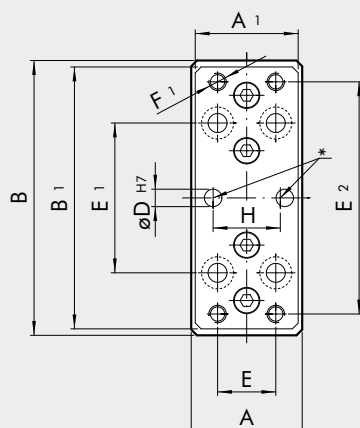
PER CILINDRI DIN/ISO 6432 Ø 12÷16
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 12-16



ATTUATORI / ACTUATORS

DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
* = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



Ø	A	A ₁	B	B ₁	C	C ₁	Ch	Ch ₁	D	D ₁	E	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	F	F ₁	F ₂	F ₃	F ₄	F ₅	G	H	I	L	L ₁	M	N	P	S	U
12	30	27	65	63	75	10	8	19	4	5	15	32	54	6.5	24	32.5	22	11	M4	M4	8.5	5.1	7.5	4.5	15	15	46	130	53	54	15	5.5	10	37
16	30	27	65	63	75	10	8	19	4	5	15	32	54	6.5	24	32.5	22	11	M4	M4	8.5	5.1	7.5	4.5	15	15	46	130	60	54	15	5.5	10	37

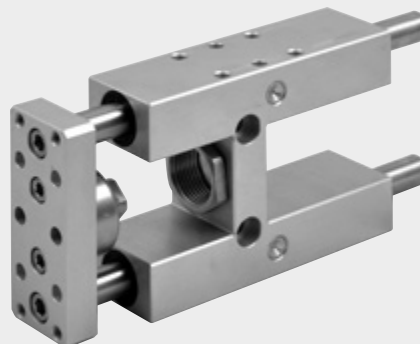
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMHL TIPOLOGIA TYPE	012 DIAMETRO BORE	100 CORSO STROKE	BA VERSIONE VERSION
		012 Ø 12	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		016 Ø 16		BB Sfere Ball bushing

UNITÀ DI GUIDA SERIE AMHL BA/BB
LINEAR CONTROL UNITS TYPE AMHL BA/BB

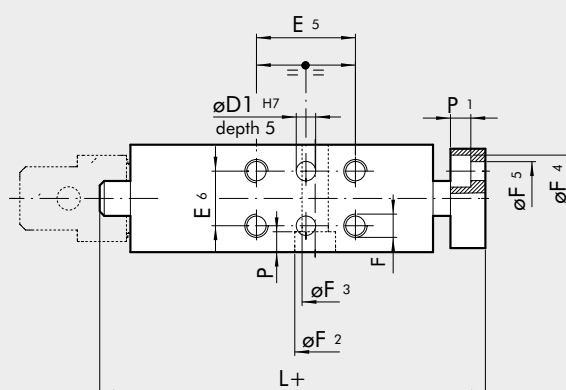
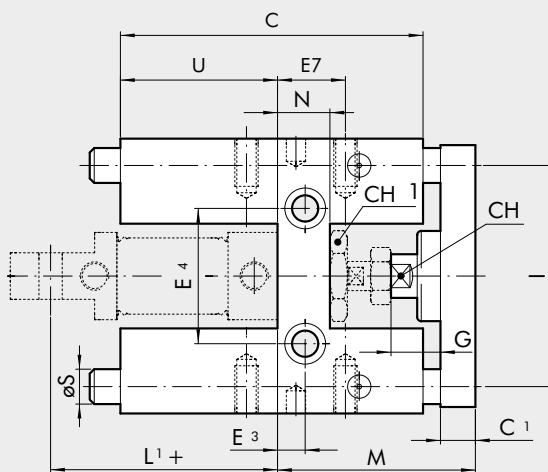
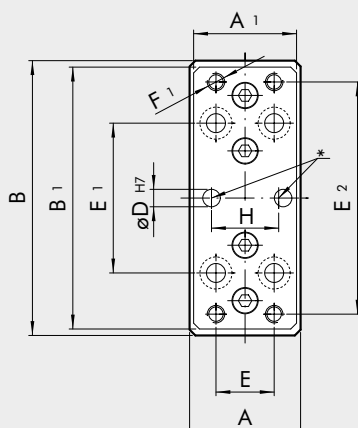
UNITÀ DI GUIDA SERIE AMH BA/BB LINEAR CONTROL UNITS TYPE AMH BA/BB

PER CILINDRI DIN/ISO 6432 Ø 20÷25
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 20-25



DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
* = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



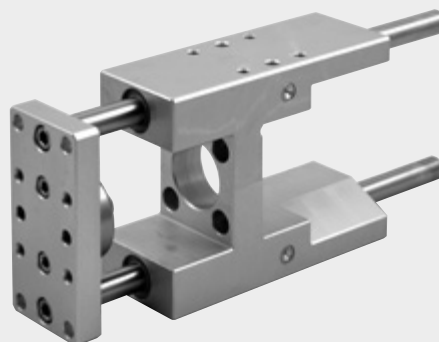
Ø	A	A ₁	B	B ₁	C	C ₁	Ch	Ch ₁	D	D ₁	E	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	F	F ₁	F ₂	F ₃	F ₄	F ₅	G	H	I	L	L ₁	M	N	P	S	U
20	34	32	79	76	108	12	13	27	6	5	20	40	68	8.5	38	32.5	23	15	M6	M5	10.5	6.5	9	5.5	22	20	58	160	71	65	15	7	12	58
25	34	32	79	76	108	12	13	27	6	5	20	40	68	8.5	38	32.5	23	15	M6	M5	10.5	6.5	9	5.5	22	20	58	160	76	65	15	7	12	58

CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMH TIPOLOGIA TYPE	020 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		020 Ø 20	Corsa in mm	BA Bronzine
		025 Ø 25	Stroke in mm	BB Sfere
				BB Ball bushing

* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

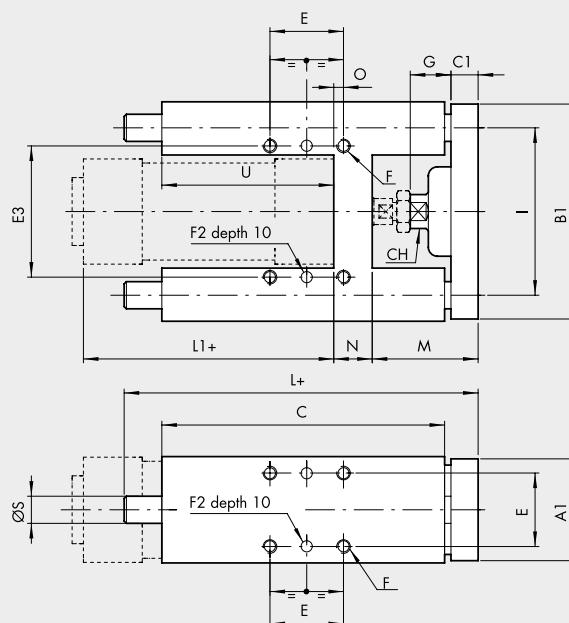
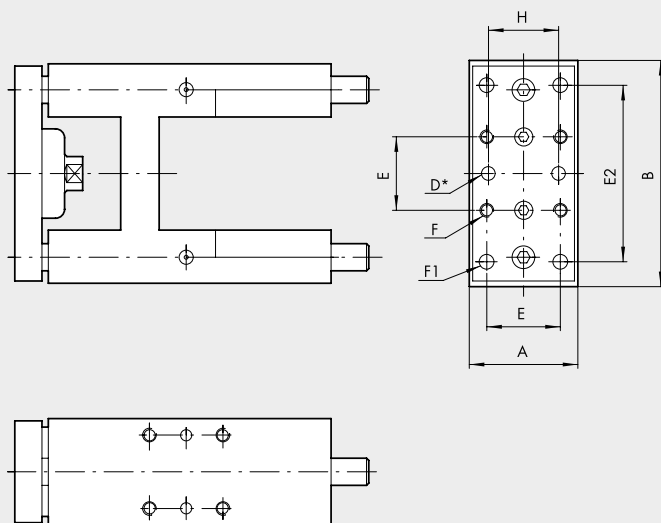
PER CILINDRI DIN/ISO 15552 Ø 32÷100
 FOR CYLINDERS SERIES DIN/ISO 15552 Ø 32-100



ATTUATORI / ACTUATORS

DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 * = FORI PER SPINE DI CENTRATURA / CENTERING PINHOLES



Ø	A	A ₁	B	B ₁	C	C ₁	Ch	D ^{H7}	E	E ₂	E ₃	F	F ₁	F ₂ ^{H7}	G	H	I	L	L ₁	M	N	O	ØS	U
32	49	45	97	90	125	12	13	6	32.5	78	61	M6	6.5	6	18	31	74	177	97	47	17	4.3	12	76
40	58	54	115	110	139	15	15	6	38	84	69	M6	6.5	6	21	36	87	192	105	53	21	11	16	81
50	69	63	137	130	148	15	22	6	46.5	100	85	M8	8.5	6	24	45	104	205	106	63	26	18.5	20	78
63	85	79	152	145	182	15	22	6	56.5	105	100	M8	8.5	6	24	45	119	237	121	62	26	15.3	20	111
80	105	99	189	180	215	20	27	6	72	130	130	M10	11	6	31	56	148	280	128	76	34	21	25	128
100	129	120	213	200	220	20	27	6	89	150	150	M10	11	6	31	56	172	280	138	76	39	24.5	25	128

CHIAVI DI CODIFICA / KEY TO CODE

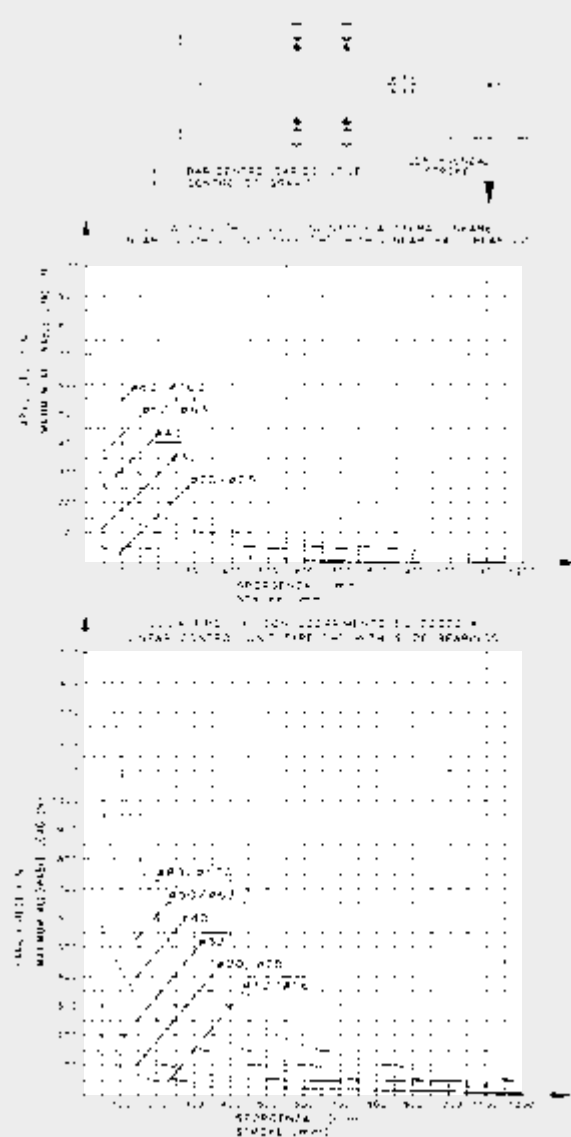
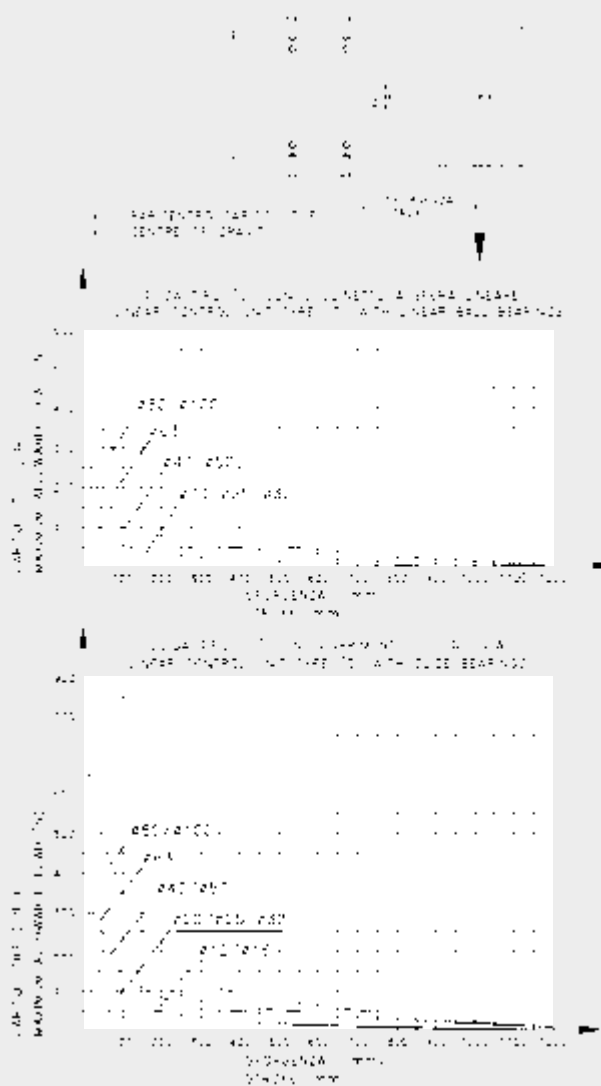
Cod.	AMH TIPOLOGIA TYPE	032 DIAMETRO BORE	100 * CORSO STROKE	BA VERSIONE VERSION
		032 Ø 32	Corsa in mm	BA Bronzine
		040 Ø 40	Stroke in mm	BB Sfere
		050 Ø 50		BB Ball bushing
		063 Ø 63		
		080 Ø 80		
		100 Ø 100		

* Inserire la corsa a 3 cifre (esempio 50 = 050)
 Enter the stroke in 3 digits (e.g. 50 = 050)

UNITÀ DI GUIDA SERIE AMH BA/BB
 LINEAR CONTROL UNITS TYPE AMH BA/BB

DIAGRAMMA MAX. CARICO UTILE IN FUNZIONE DELLA SPORGENZA / GRAPH MAXIMUM ALLOWABLE LOAD RELATED TO THE STROKE

CON ASSE LONGITUDINALE DELL'UNITÀ DI GUIDA ORIZZONTALE
WITH THE LONGITUDINAL AXES OF THE UNIT HORIZONTAL PLACED



PIASTRA POSTERIORE DI COLLEGAMENTO STELI GUIDA REAR FLANGE COUPLING GUIDE

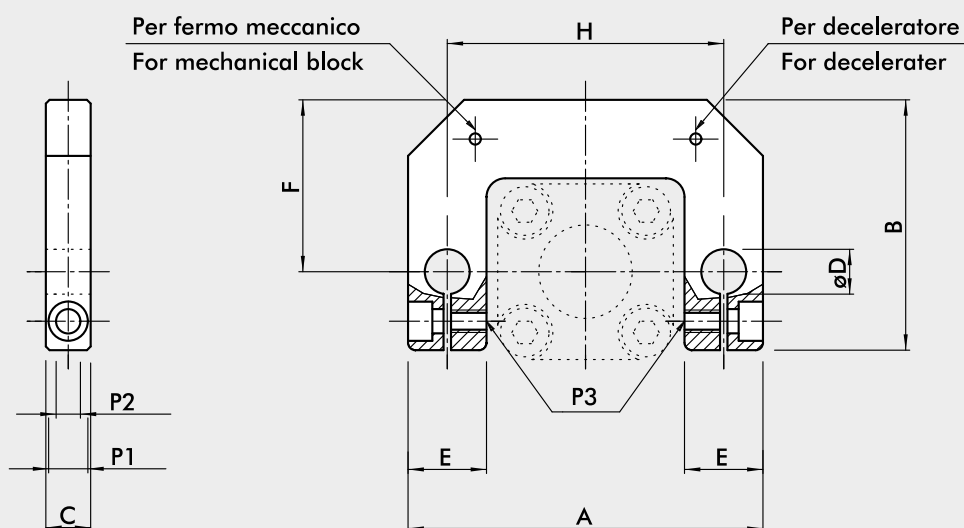
SERIE PPH Ø32÷100 PER AMH Ø32÷100
PPH Ø32-100 FOR AMH Ø 32-100



DIMENSIONI / DIMENSIONS

MATERIALE: Alluminio anodizzato / BUILDING MATERIAL: Anodized aluminium
Nr. 2 viti di bloccaggio comprese / No. 2 fixing screws included

A RICHIESTA FORATURE SPECIALI PER FERMO
MECCANICO E DECELERATORE IDRAULICO
SPECIAL HOLES FOR MECHANICAL STOP AND
SHOCK ABSORBER ON REQUEST



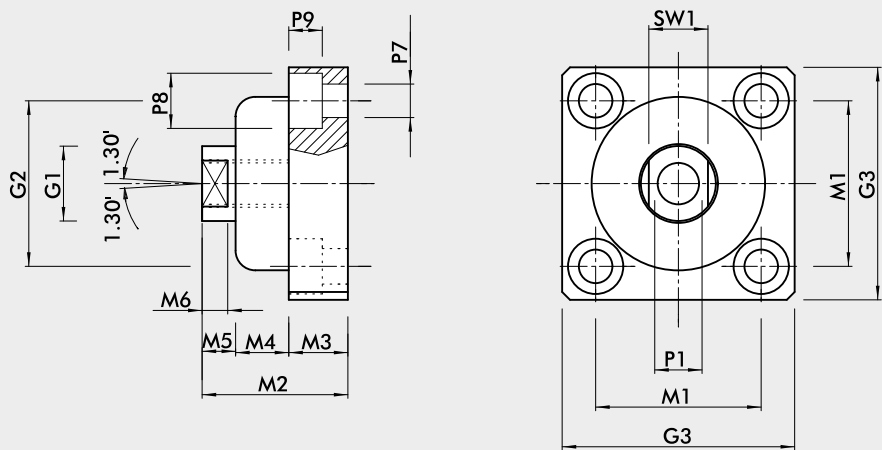
Ø	A	B	C	D	E	F	H	P ₁	P ₂	P ₃
32	95	68	12	12	21	46	74	10.5	6.5	M6
40	113	78	15	16	26	56	87	10.5	6.5	M6
50	135	98	17	20	30	66	104	10.5	6.5	M6
63	149	118	17	20	31	78	119	13.5	8.5	M8
80	187	142	20	25	39	99	148	13.5	8.5	M8
100	211	163	20	25	39	114	172	13.5	8.5	M8

CHIAVI DI CODIFICA / KEY TO CODE

Cod.	PPH TIPOLOGIA TYPE	032 DIAMETRO BORE
		032 Ø 32
		040 Ø 40
		050 Ø 50
		063 Ø 63
		080 Ø 80
		100 Ø 100



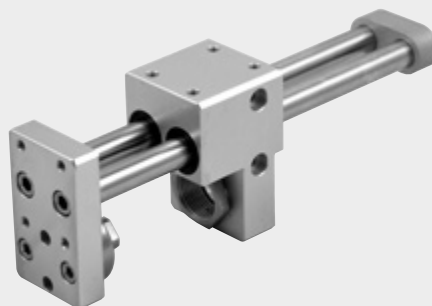
DIMENSIONI / DIMENSIONS



Cod.	Ø	G ₁	G ₂	G ₃	M ₁	M ₂	M ₃	M ₄	M ₅	M ₆	P ₁	P ₇	P ₈	P ₉	SW ₁
AMG025	25	15	31.5	39	29	31	12	10	9	6.5	M10x1.25	5.5	9	6	13
AMG032	32	17	39.5	49	36	30	12	10	8	6.5	M10x1.25	6.5	11	6.5	15
AMG040	40	19	44	59	42	36	15	13.5	7	6.5	M12x1.25	8.5	14	8.5	15
AMG050	50-63	26	59	79	58	44	20	15	9	7	M16x1.5	10.5	17	10.5	22
AMG080	80-100	31	69	89	65	51	20	20	11	8	M20x1.5	12.5	19	12.5	27

UNITÀ DI GUIDA SERIE AMLL BA/BB LINEAR CONTROL UNITS TYPE AMLL BA/BB

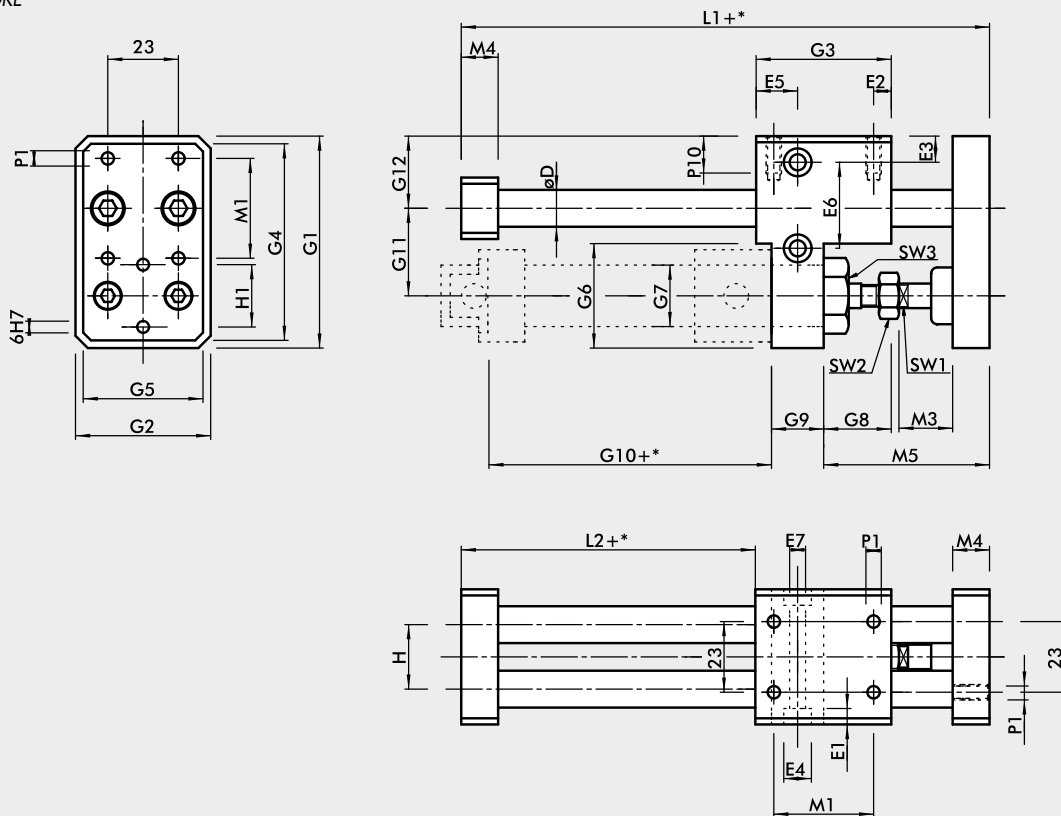
PER CILINDRI DIN/ISO 6432 Ø 16÷25
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 16-25



ATTUATORI / ACTUATORS

DIMENSIONI / DIMENSIONS

+ = CORSA / STROKE



Ø	D	Ø E ₁	E ₂	E ₃	Ø E ₄	E ₅	E ₆	Ø E ₇	G ₁	G ₂	G ₃	G ₄	G ₅	G ₆	Ø G ₇	G ₈	G ₉	G ₁₀	G ₁₁	G ₁₂	H	H ₁	L ₁	L ₂	M ₁	M ₃	M ₄	M ₅	Ø P ₁	P ₁₀	SW ₁	SW ₂	SW ₃
12	10	5.2	5.75	8.5	9	13.5	28	5.2	69	39	44	64	34	34	16	22	17	60	27	25	19	15	97	25	32.5	19	12	48	M5	12	13	10	27
20	12	5.2	5.75	8.5	9	13.5	28	5.2	69	44	44	64	39	34	20	22	17	71	28.5	23.5	21	15	97	25	32.5	19	12	49	M5	12	13	13	27
25	12	5.2	5.75	8.5	9	13.5	28	5.2	69	44	44	64	39	34	25	22	17	76	28.5	23.5	21	20	97	25	32.5	19	12	54	M5	12	13	13	27

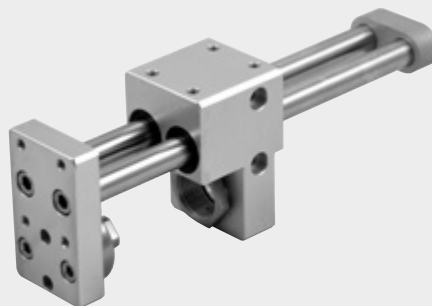
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMLL TIPOLOGIA TYPE	012 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		012 Ø 12	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		016 Ø 16		BB Sfere Ball bushing
		025 Ø 25		

* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

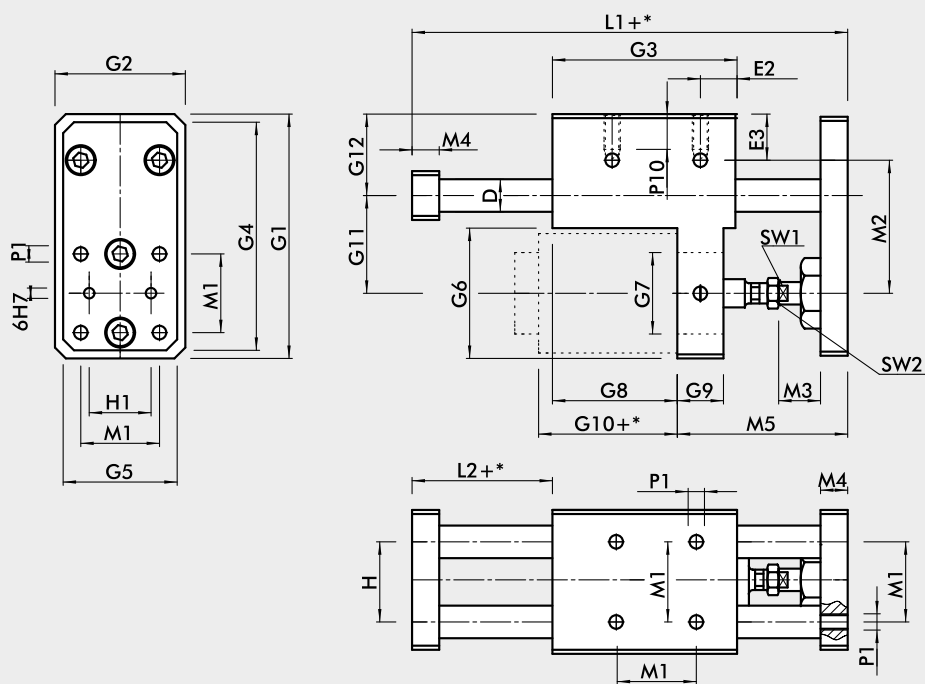
UNITÀ DI GUIDA SERIE AMLL BA/BB
LINEAR CONTROL UNITS TYPE AMLL BA/BB

PER CILINDRI DIN/ISO 15552 Ø 32÷63
FOR CYLINDERS SERIES DIN/ISO 15552 Ø 32-63



DIMENSIONI / DIMENSIONS

+ = CORSA / STROKE



Ø	D	G ₁	G ₂	G ₃	G ₄	G ₅	G ₆	Ø G ₇	G ₈	G ₉	G ₁₀	G ₁₁	G ₁₂	H	H ₁	L ₁	L ₂	E ₂	E ₃	M ₁	M ₂	M ₃	M ₄	M ₅	Ø P ₁	P ₁₀	SW ₁	SW ₂
32	12	95	48	68	90	44	48	30	46	17	94	37	34	25	31	143	30	13.5	21	32.5	50	18	12	67	M6	15	13	17
40	16	109	58	74	104	54	58	35	48	21	105	43	37	30	36	157	30	15.5	21	38	69	21	15	79	M6	18	15	19
50	20	125	68	74	120	64	68	40	43	26	106	50	41	36	45	172	35	18	22	46.5	69	24	15	94	M8	18	22	24
63	20	136	79	74	131	75	79	45	43	26	121	56	41	47	45	188	40	18	22	56.5	85	24	15	94	M8	18	22	24

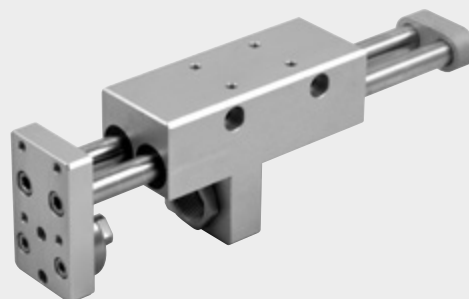
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMLL TIPOLOGIA TYPE	032 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		032 Ø 32	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		040 Ø 40		BB Sfere Ball bushing
		050 Ø 50		
		063 Ø 63		

* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

UNITÀ DI GUIDA SERIE AMLX BA/BB LINEAR CONTROL UNITS TYPE AMLX BA/BB

PER CILINDRI DIN/ISO 6432 Ø 16÷25
FOR CYLINDERS SERIES DIN/ISO 6432 Ø 16-25

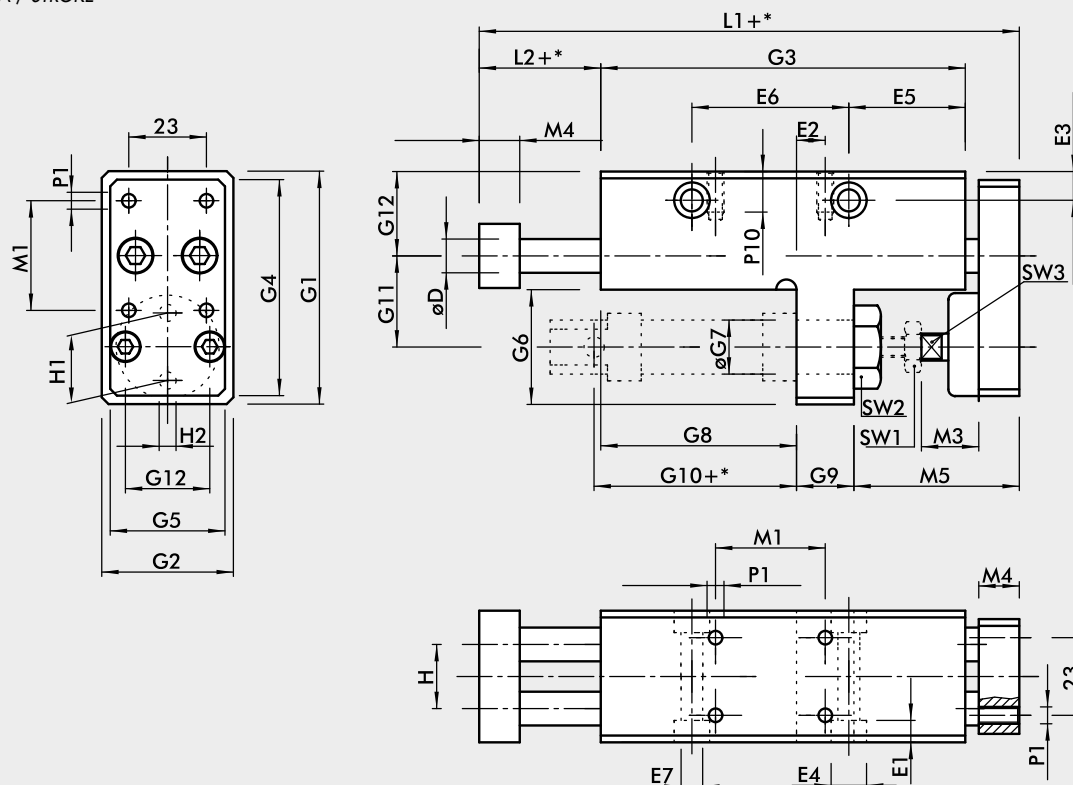


ATTUATORI / ACTUATORS

UNITÀ DI GUIDA SERIE AMLX BA/BB
LINEAR CONTROL UNITS TYPE AMLX BA/BB

DIMENSIONI / DIMENSIONS

+ = CORSA / STROKE



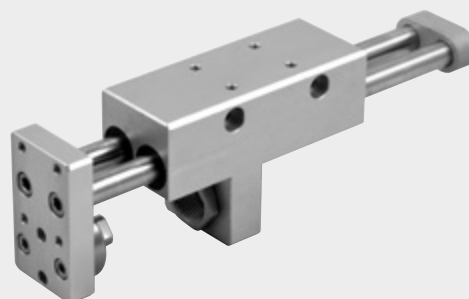
Ø	D	G ₁	G ₂	G ₃	G ₄	G ₅	G ₆	Ø G ₇	G ₈	G ₉	G ₁₀	G ₁₁	G ₁₂	H	H ₁	H ₂	L ₁	E ₁	E ₂	E ₃	E ₄	E ₅	E ₆	E ₇	M ₁	M ₃	M ₄	M ₅	Ø P ₁	P ₁₀	SW ₁	SW ₂	SW ₃	L ₂
16	10	69	39	108	64	34	34	16	58	17	60	27	25	19	20	Ø6H7	160	6.5	8.5	8.5	10.5	34.5	46.5	6.5	32.5	19	12	49	M5	12	13	10	27	36
20	12	69	44	108	64	39	34	20	58	17	71	28.5	23.5	21	20	Ø6H7	160	6.5	8.5	8.5	10.5	34.5	46.5	6.5	32.5	19	12	49	M5	12	13	13	27	36
25	12	69	44	108	64	39	34	25	58	17	76	28.5	23.5	21	20	Ø6H7	160	6.5	8.5	8.5	10.5	34.5	46.5	6.5	32.5	19	12	49	M5	12	13	13	27	36

CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMLX TIPOLOGIA TYPE	016 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		016 Ø 16	Corsa in mm	BA Bronzine
		020 Ø 20	Stroke in mm	BB Bronze bushing
		025 Ø 25		BB Sfere
				BB Ball bushing

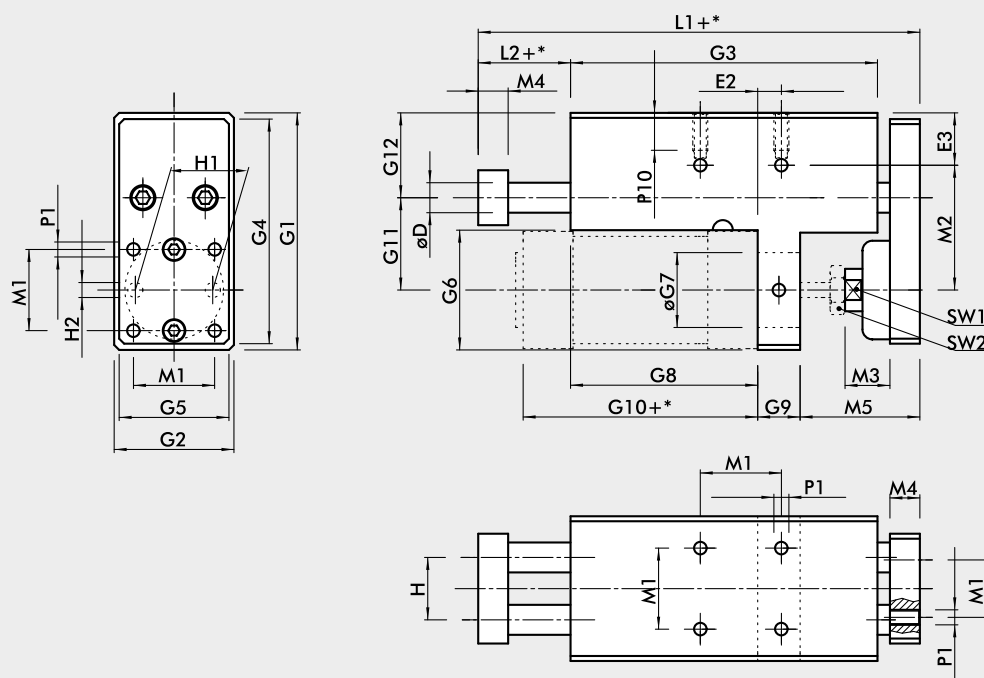
* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

PER CILINDRI DIN/ISO 15552 Ø 32÷63
FOR CYLINDERS SERIES DIN/ISO 15552 Ø 32-63



DIMENSIONI / DIMENSIONS

+ = CORSA / STROKE



Ø	D	G ₁	G ₂	G ₃	G ₄	G ₅	G ₆	Ø G ₇	G ₈	G ₉	G ₁₀	G ₁₁	G ₁₂	H	H ₁	H ₂	L ₁	L ₂	E ₂	E ₃	M ₁	M ₂	M ₃	M ₄	M ₅	Ø P ₁	P ₁₀	SW ₁	SW ₂
32	12	95	48	123	90	44	48	30	75	17	94	37	34	25	31	Ø6H7	177	37	9.5	21	32.5	50	18	12	48	M6	15	15	17
40	16	109	58	138	104	54	58	35	80	21	105	43	37	30	36	Ø6H7	192	37	10	21	38	69	21	15	54	M6	18	15	19
50	20	125	68	148	120	64	68	40	77	26	106	50	41	36	45	Ø6H7	202	37	19.2	22	46.5	69	24	15	62	M8	18	22	24
63	20	136	79	180	131	75	79	45	110	26	121	56	41	47	45	Ø6H7	236	37	14.3	22	56.5	85	24	15	63	M8	18	22	24

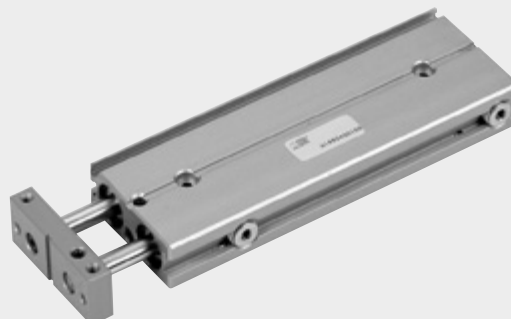
CHIAVI DI CODIFICA / KEY TO CODE

Cod.	AMLX TIPOLOGIA TYPE	032 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		032 Ø 32	Corsa in mm	BA Bronzine
		040 Ø 40	Stroke in mm	BB Bronze bushing
		050 Ø 50		BB Sfere
		063 Ø 63		BB Ball bushing

* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

DOPPIO CILINDRO SERIE S10

TWIN CYLINDER SERIES S10



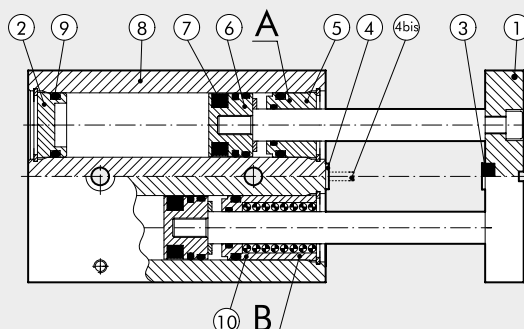
DATI TECNICI / TECHNICAL DATA		S10-12	S10-16	S10-20	S10-25	S10-30
Pressione d'esercizio / Pressure range	bar	3 ÷ 7				
	MPa	0.3 ÷ 0.7				
	psi	43.5 ÷ 101				
Temperatura d'esercizio / Temperature range	°C	-10 ÷ +80				
	Fluid / Fluid	Aria filtrata 20 µm essicata o lubrificata, se utilizzata la lubrificazione deve essere continua Dried or lubricated 20 µm filtered air. Lubrication, if used, must be continuous.				
Velocità max del pistone / Piston speed	mm/s	30 ÷ 100				
Versioni / Versions		Con bussole a strisciamento / Con bussole a sfere / Con vite di fermo System with sliding bushes / System with ball bushes available with stop screw				
Taglie / Sizes		12	16	20	25	30
Alesaggi / Bores	mm	2 x 12	2 x 16	2 x 20	2 x 25	2 x 30
Diametro stelo / Piston rod diameter	mm	6	8	10	12	16
Corse / Strokes	mm	15	15	25	25	25
	mm	25	25	50	50	50
	mm	50	50	75	75	75
	mm	—	75	100	100	100
Peso (C = corsa in mm) / Weight (C = stroke mm)		—	—	—	125	125
• Versione a bronzine / Bushes version	kg	0.12 + (0.002 x C)	0.24 + (0.0025 x C)	0.51 + (0.005 x C)	0.76 + (0.006 x C)	1.3 + (0.009 x C)
• Versione a sfere / Ball bearing version	kg	0.21 + (0.002 x C)	0.48 + (0.0025 x C)	0.77 + (0.005 x C)	0.18 + (0.006 x C)	1.92 + (0.009 x C)
Spinta teorica (P = pressione relativa in bar) / Theoretical thrust (P = relative pressure in bar)		(il valore indicato è da moltiplicarsi per la pressione in bar) (Multiply the value shown by the pressure in bar)				
• Forza di spinta / Thrust force	da N	2.26 x P	4 x P	6.28 x P	9.8 x P	14.1 x P
• Forza di tiro / Pull force	da N	1.69 x P	3 x P	4.11 x P	7.5 x P	10.1 x P
Carichi ammessi / Max. loads		(i valori indicati si riferiscono alla corsa min e max) (The values shown refer to the min. and max. strokes)				
• Versione a bronzine / Bushes version	N	6 ÷ 4	11 ÷ 6	20 ÷ 7	26 ÷ 8	36 ÷ 11
• Versione a sfere / Ball bearing version	N	3 ÷ 1.5	6 ÷ 3	10 ÷ 3.5	12 ÷ 5.6	20 ÷ 7

COMPONENTI / COMPONENTS

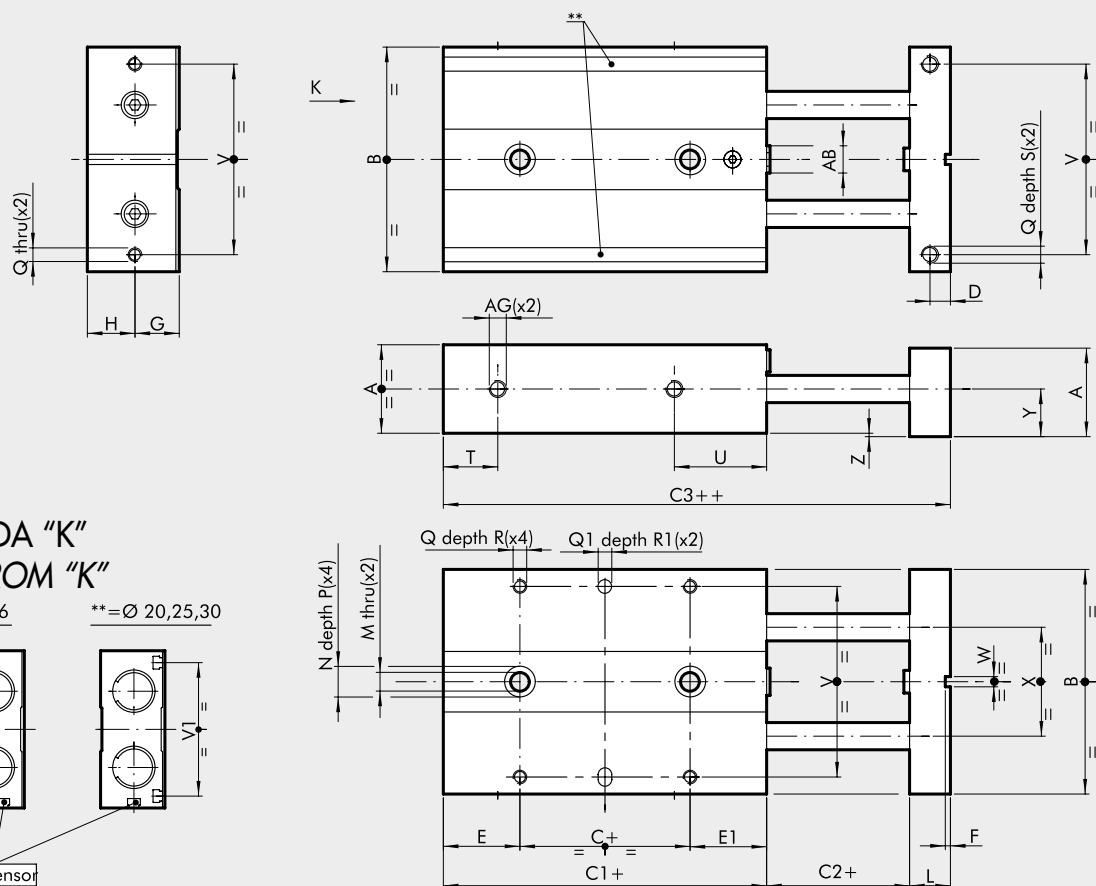
- ① FLANGIA: alluminio anodizzato / FLANGE: anodized aluminium
- ② FONDELLO POSTERIORE: alluminio anodizzato / REAR BASE: anodized aluminium
- ③ PARACOLPO: gomma / BUFFER: rubber
- ④ BATTUTA REGOLABILE: acciaio zincato / ADJUSTABLE STRIKER PLATE: Zinc-plated steel
- ④bis DECELERATORE IDRAULICO (a richiesta) / HYDRAULIC DECELERATOR (on request)
- ⑤ FONDELLO ANTERIORE: ottone / FRONT BASE: brass
- ⑥ PISTONE: ottone / PISTON: brass
- ⑦ MAGNETE: plastroferrite / MAGNET: Plastroferrite
- ⑧ CORPO CILINDRO: alluminio anodizzato / CYLINDER BODY: anodized aluminium
- ⑨ OR STATICI: NBR / STATIC O-RING: NBR
- ⑩ BUSSOLA A RICICOLO DI SFERE / BALL RE-CIRCULATION BUSH

VERSIONE / VERSIONS:

- Ⓐ Con bussole a scorrimento / With sliding bushes
 Ⓑ Con bussole a sfere / With ball bushes



DIMENSIONI CILINDRO DOPPIO SERIE S10 A BRONZINE Ø 12 ÷ 30 mm
DIMENSIONS OF TWIN CYLINDER SERIES S10, ON BUSHES Ø 12 to 30 mm



+ = AGGIUNGERE LA CORSA / ADD THE STROKE
++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

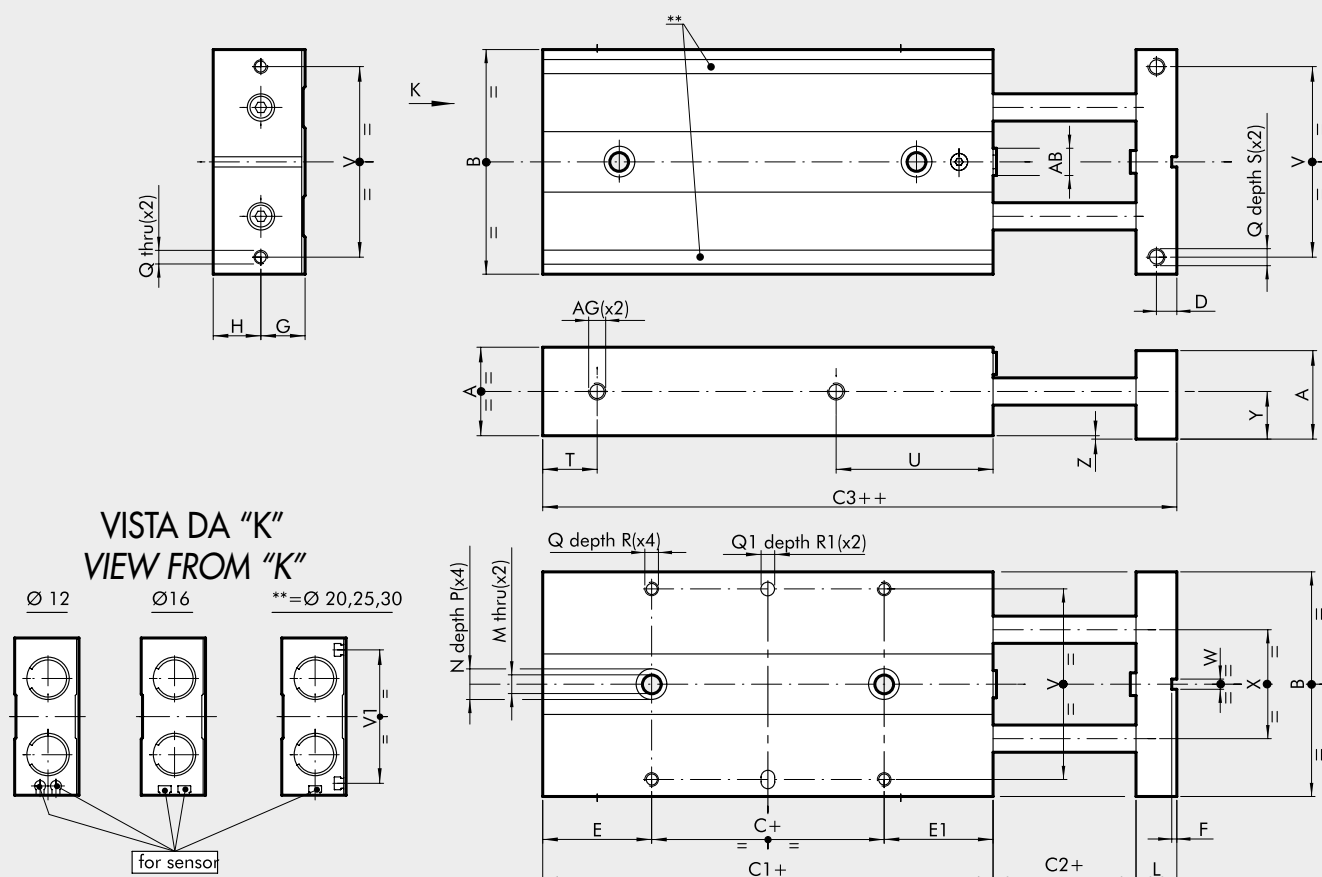
Cod.	Ø	A	B	C	C1	C2	C3	D	E	E1	F	G	H	L	M	N	P	Q	Q1 ^{H7}	R	R1	S	T
W1440122...	12	18	46	10	50	2	60	4	20	20	1.5	9	10	8	4.3	8	4	M3	4	5	3	8	9
W1440162...	16	22	56	16	62	2	74	5	26	20	1.5	11	12	10	4.3	8	4	M4	4	6	3	8	10
W1440202...	20	26	66	10	68	2	82	6	29	29	1.5	13	14	12	5.5	9	5	M4	4	7	3	10	11
W1440252...	25	32	78	10	74	2	90	7	32.5	31.5	2.5	16	17	14	6.5	10.5	6	M5	4	7	3	12	11
W1440302...	30	36	98	10	87	2	105	8	37.5	39.5	2.5	18	19	16	8.5	14	8	M6	6	8	5	12	13

Ø	U	V	V1	W	X	Y	Z	AB	AG
12	28	38	–	3	20	10	1	M5	M5
16	33	46	–	3	26	12	1	M6	M5
20	40	56	54	3	30	14	1	M8	M5
25	42	66	64	5	39	17	1	M10	M5
30	51	86	82	5	52	19	1	M12	G 1/8"

... Inserire la corsa in mm (esempio: Ø 12 corsa 50 = W1440122050) / ...Enter the stroke in mm (e.g. Ø 12 stroke 50 = W1440122050)

Corse alesaggio 12 mm / Strokes for bore 12 mm	15; 25; 50;
Corse alesaggio 16 mm / Strokes for bore 16 mm	15; 25; 50; 75;
Corse alesaggio 20 mm / Strokes for bore 20 mm	25; 50; 75; 100;
Corse alesaggio 25 mm / Strokes for bore 25 mm	25; 50; 75; 100; 125;
Corse alesaggio 30 mm / Strokes for bore 30 mm	25; 50; 75; 100; 125;

DIMENSIONI CILINDRO DOPPIO SERIE S10 A RICIRCOLO DI SFERE Ø 12 ÷ 30 mm
DIMENSIONS OF TWIN CYLINDER SERIES S10, ON BALL BEARINGS Ø 12 to 30 mm



+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	D	E	E1	F	G	H	L	M	N	P	Q	Q1 ^{H7}	R	R1	S	T
W1440123...	12	18	46	10	69	2	79	4	29.5	29.5	1.5	9	10	8	4.3	8	4	M3	4	5	3	8	9
W1440163...	16	22	56	10	90	2	98	5	42	38	1.5	11	12	10	4.3	8	4	M4	4	6	3	8	10
W1440203...	20	26	66	10	100	2	111	6	46.5	43.5	1.5	13	14	12	5.5	9	5	M4	4	7	3	10	11
W1440253...	25	32	78	10	108	2	120	7	51.5	46.5	2.5	16	17	14	6.5	10.5	6	M5	4	7	3	12	11
W1440303...	30	36	98	10	124	2	142	8	56	58	2.5	18	19	16	8.5	14	8	M6	6	8	5	12	13

Ø	U	V	V1	W	X	Y	Z	AB	AG
12	47	38	-	3	20	10	1	M5	M5
16	57	46	-	3	26	12	1	M6	M5
20	69	56	54	3	30	14	1	M8	M5
25	72	66	64	5	39	17	1	M10	M5
30	88	86	82	5	52	19	1	M12	G 1/8"

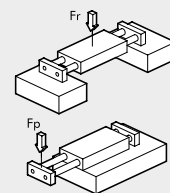
... Inserire la corsa in mm (esempio: Ø 12 corsa 50 = W1440123050) / ...Enter the stroke in mm (e.g. Ø 12 stroke 50 = W1440123050)

Corse alesaggio 12 mm / Strokes for bore 12 mm 15; 25; 50;
 Corse alesaggio 16 mm / Strokes for bore 16 mm 15; 25; 50; 75;
 Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100;
 Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125;
 Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125;

SLITTA A DOPPIO CILINDRO A CORPO FISSO SERIE S11 TWIN CYLINDER SLIDE WITH FIXED BODY SERIES S11



DATI TECNICI / TECHNICAL DATA		S11-12	S11-16	S11-20	S11-25	S11-30
Fluido / Fluid		Aria filtrata 20 µm / 20 µm filtered air				
Pressione di esercizio / Pressure range	bar	1.5 ÷ 7				
	MPa	0.15 ÷ 0.7				
	psi	43.5 ÷ 101				
Temperatura di esercizio / Temperature range	°C	-10 ÷ +80				
Velocità del pistone / Piston speed	mm/s	30 ÷ 200				
Versioni / Versions		Con bussola a strisciamento / Con bussola a sfere / Con vite di fermo / Con deceleratori idraulici With sliding bushes / With ball bearing bushes / With stop screw / With hydraulic shock absorbers				
Alesaggi / Bores	mm	12	16	20	25	30
Diametro steli / Piston rod diameter	mm	6	8	10	12	16
Corse / Strokes	mm	25	25	25	25	25
		50	50	50	50	50
		75	75	75	75	75
		—	100	100	100	100
		—	—	125	125	125
Peso = X + (Y · C) dove C = corsa / Weight = X + (Y · C) where C = stroke kg		—	—	—	150	150
		X = 0.14	X = 0.25	X = 0.5	X = 0.7	X = 1.24
		Y = 0.002	Y = 0.0035	Y = 0.045	Y = 0.007	Y = 0.01
		X = 0.25	X = 0.37	X = 0.78	X = 1.04	X = 1.98
		Y = 0.002	Y = 0.0035	Y = 0.045	Y = 0.007	Y = 0.01
Spinta teorica (P = pressione relativa in bar) Theoretical thrust (P = relative pressure in bar)	N	16.9 x P	30 x P	47 x P	75 x P	101 x P
Carichi ammessi / Max. loads		(i valori indicati si riferiscono alla corsa min. e max.) (The values shown refer to the min. and max. strokes)				
• Versione a bronzine / Bushes version	N	Fr: 13 ÷ 5 Fp: 6 ÷ 3	Fr: 35 ÷ 6.5 Fp: 11 ÷ 3	Fr: 58 ÷ 7 Fp: 18 ÷ 5	Fr: 80 ÷ 8 Fp: 23 ÷ 6	Fr: 130 ÷ 18 Fp: 50 ÷ 8
		Fr: 7 ÷ 3 Fp: 4 ÷ 1.5	Fr: 20 ÷ 4 Fp: 4 ÷ 1.5	Fr: 35 ÷ 4.5 Fp: 12 ÷ 3	Fr: 50 ÷ 5.4 Fp: 15 ÷ 3.5	Fr: 80 ÷ 12 Fp: 20 ÷ 4.5
• Versione a sfere / Ball bearing version	N					

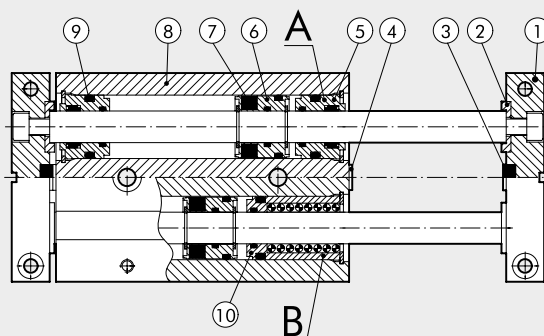


COMPONENTI / COMPONENTS

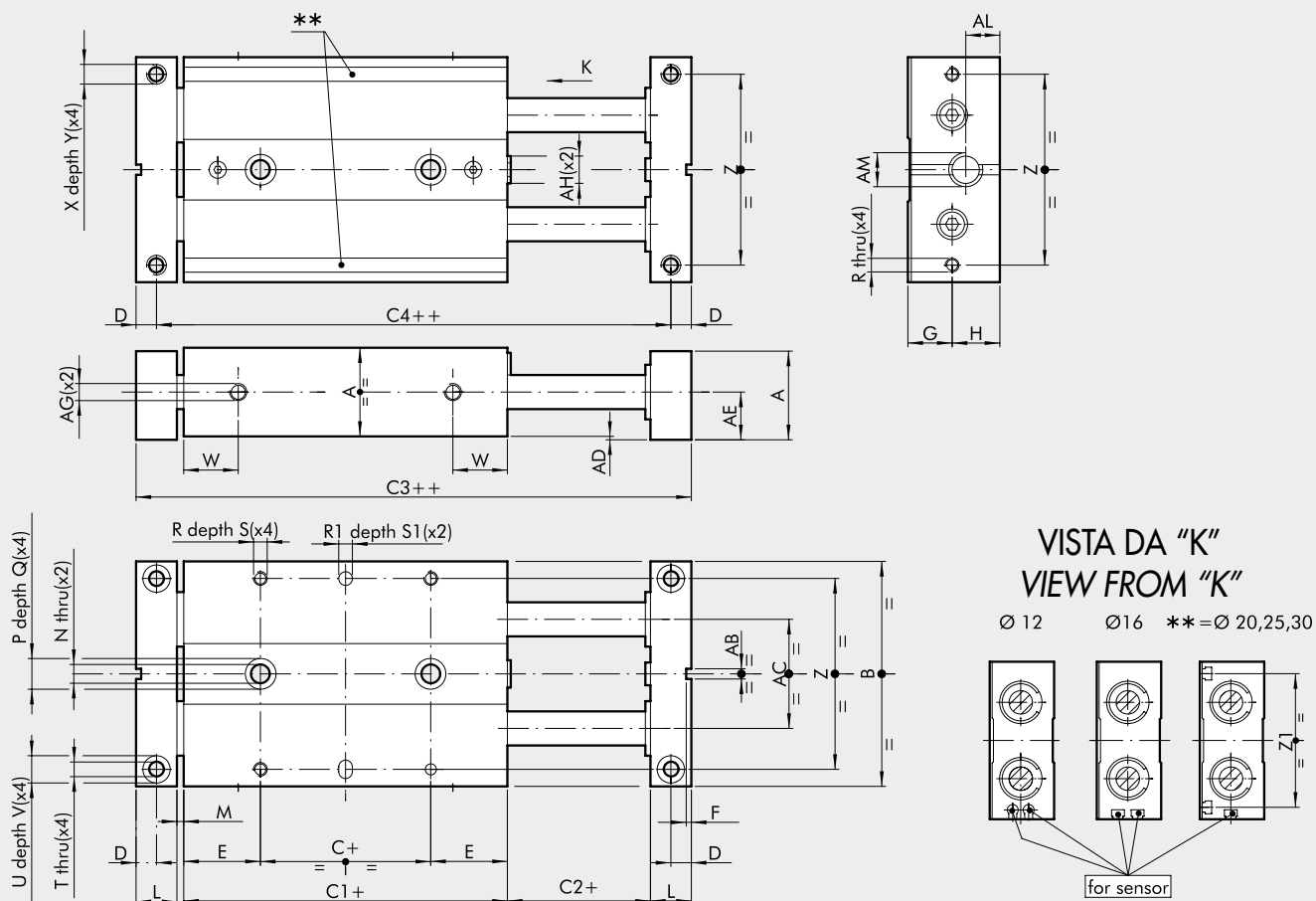
- FLANGIA: alluminio anodizzato / FLANGE: anodized aluminium
- RONDELLA: acciaio / WASHER: steel
- PARACOLPO: gomma / BUFFER: rubber
- BATTUTA REGOLABILE: acciaio zincato / ADJUSTABLE STRIKER PLATE: Zinc-plated steel
- FONDELLO: ottone / BASE: brass
- PISTONE: ottone / PISTON: brass
- MAGNETE: plastoferrite / MAGNET: plastoferrite
- CORPO CILINDRO: alluminio anodizzato / CYLINDER BODY: anodized aluminium
- OR statici: NBR / STATIC O-RINGS: NBR
- BUSSOLA: a ricircolo di sfere / BUSH: ball bearing

VERSIONE / VERSIONS:

- Ⓐ Con bussole a scorrimento / With sliding bushes
 Ⓑ Con bussole a ricircolo di sfere / With ball bearing bushes



DIMENSIONI SLITTA SERIE S11 A BRONZINE - Ø 12 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER GUIDE UNITS SERIES S11, ON BUSHES Ø 12 to 30



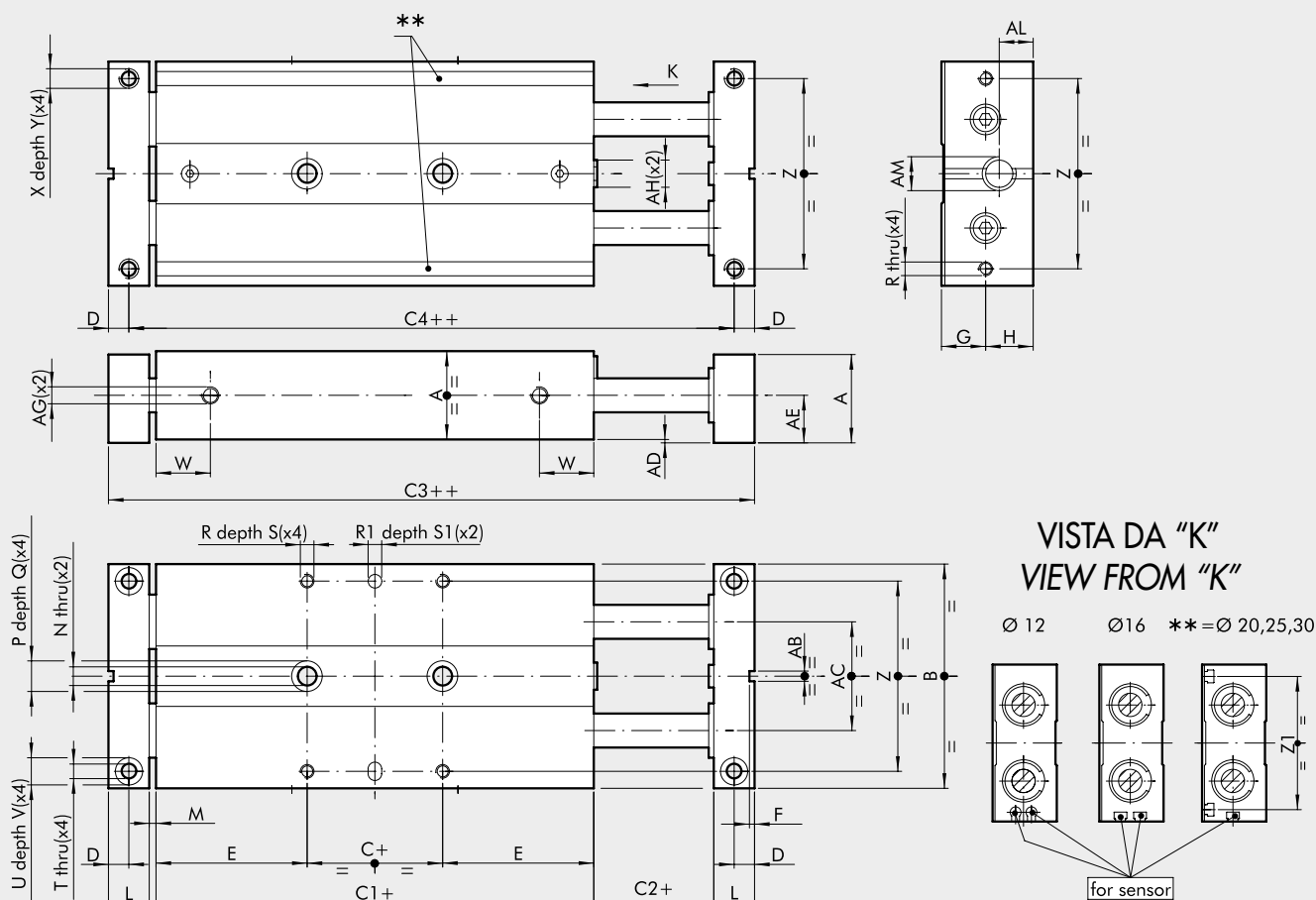
+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁷	S	S1	T
W1450122...	12	18	46	5	45	2	65	57	4	20	1.5	9	10	8	2	4.3	8	4	M3	4	5	3	3.3
W1450162...	16	22	56	10	50	2	74	64	5	20	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1450202...	20	26	66	10	55	2	83	71	6	22.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1450252...	25	32	78	10	60	2	92	78	7	25	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1450302...	30	36	98	10	70	2	106	90	8	30	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AM	AL
12	6	3	14	M4	6	38	-	3	20	1	10	4	M5	M8x1	7
16	8	4	15	M5	8	46	-	3	26	1	12	5	M5	M10x1	8.5
20	8	4	16	M5	10	56	54	3	30	1	14	5	M5	M10x1	9
25	9	5	19	M6	12	66	64	5	39	1	17	6	M5	M12x1	10
30	9	5	21	M6	12	86	82	5	52	1	19	6	G 1/8	M14x1.5	12

... Inserire la corsa in mm (esempio: Ø 12 corsa 50 = W1450122050) / ...Enter the stroke in mm (e.g. Ø 12 stroke 50 = W1450122050)

Corse alesaggio 12 mm / Strokes for bore 12 mm 25; 50; 75
 Corse alesaggio 16 mm / Strokes for bore 16 mm 25; 50; 75; 100
 Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100; 125
 Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125; 150
 Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

DIMENSIONI SLITTA SERIE S11 A RICIRCOLO DI SFERE - Ø 12 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER GUIDE UNITS SERIES S11, ON BALL BEARINGS Ø 12 to 30


+ = AGGIUNGERE LA CORSA / ADD THE STROKE

++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁷	S	S1	T
W1450123...	12	18	46	5	71	2	91	83	4	33	1.5	9	10	8	2	4.3	8	4	M3	4	5	3	3.3
W1450163...	16	22	56	10	85	2	109	99	5	37.5	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1450203...	20	26	66	10	99	2	127	115	6	44.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1450253...	25	32	78	10	105	2	137	123	7	47.5	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1450303...	30	36	98	10	128	2	164	148	8	59	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
12	6	3	28	M4	6	38	-	3	20	1	10	4	M5	M5	M8x1	7
16	8	4	33	M5	8	46	-	3	26	1	12	5	M5	M6	M10x1	8.5
20	8	4	40	M5	10	56	54	3	30	1	14	5	M5	M8	M10x1	9
25	9	5	42	M6	6	66	64	5	39	1	17	6	M5	M10	M12x1	10
30	9	5	50	M6	12	86	82	5	52	1	19	6	G 1/8	M12	M14x1.5	12

... Inserire la corsa in mm (esempio: Ø 12 corsa 50 = W1450123050) / ...Enter the stroke in mm (e.g. Ø 12 stroke 50 = W1450123050)

Corse alesaggio 12 mm / Strokes for bore 12 mm

25; 50; 75

Corse alesaggio 16 mm / Strokes for bore 16 mm

25; 50; 75; 100

Corse alesaggio 20 mm / Strokes for bore 20 mm

25; 50; 75; 100; 125

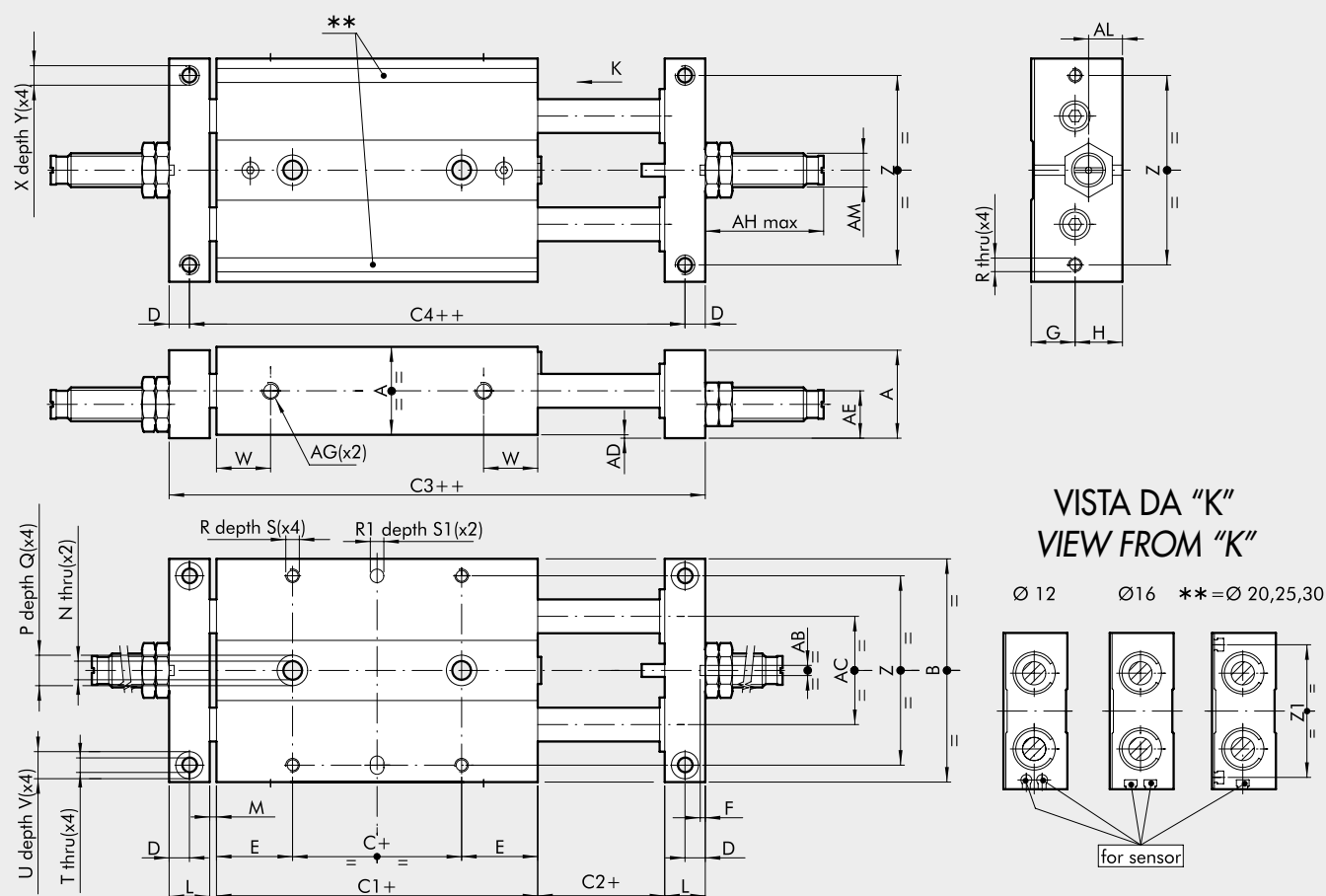
Corse alesaggio 25 mm / Strokes for bore 25 mm

25; 50; 75; 100; 125; 150

Corse alesaggio 30 mm / Strokes for bore 30 mm

25; 50; 75; 100; 125; 150

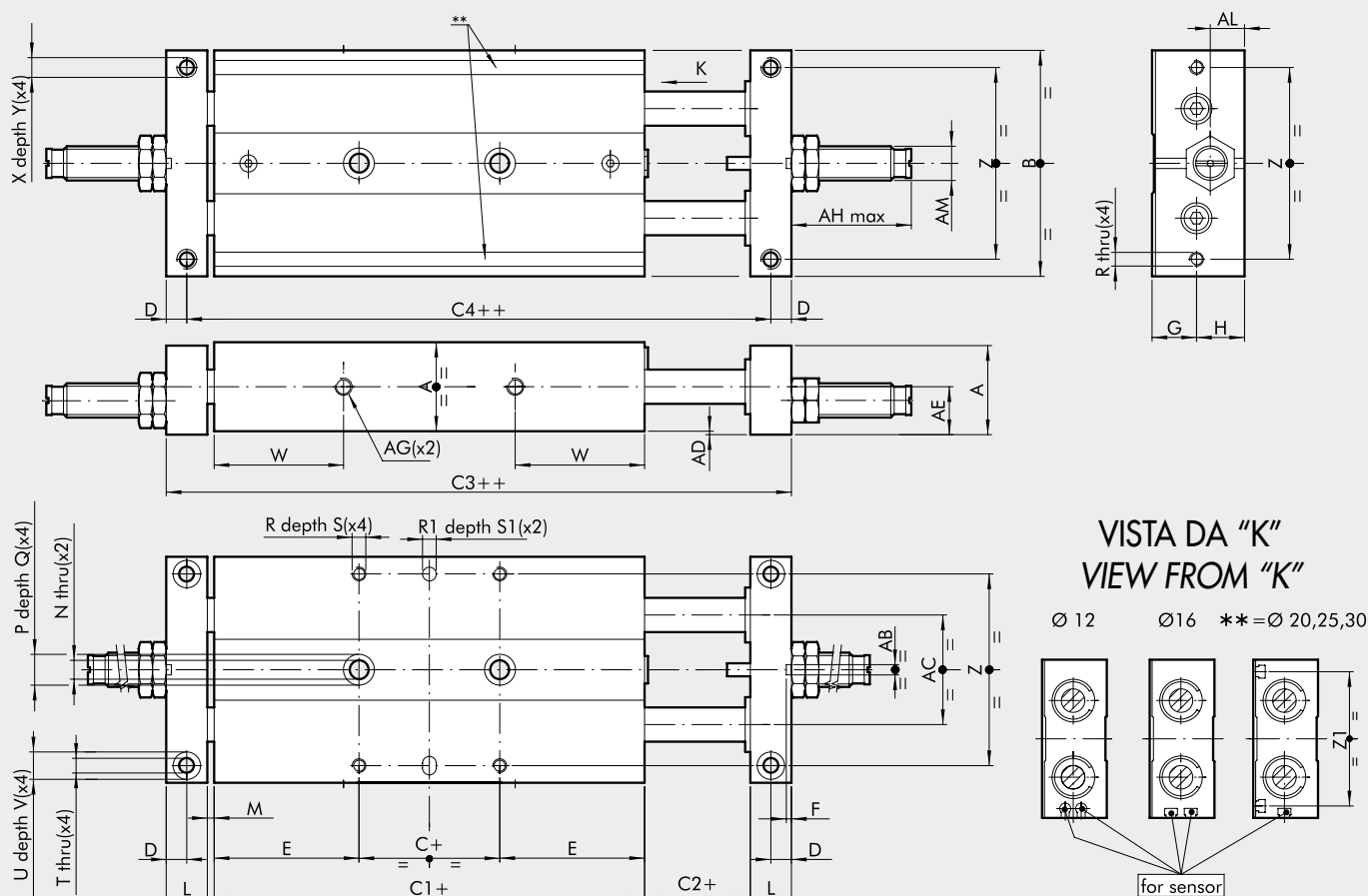
ATTUATORI / ACTUATORS



Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ^{H7}	S	S1	T
W1450124...	12	18	46	5	45	2	65	57	4	20	1.5	9	10	8	2	4.3	8	4	M3	4	5	3	3.3
W1450164...	16	22	56	10	50	2	74	64	5	20	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1450204...	20	26	66	10	55	2	83	71	6	22.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1450254...	25	32	78	10	60	2	92	78	7	25	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1450304...	30	36	98	10	70	2	106	90	8	30	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
12	6	3	14	M4	6	38	–	3	20	1	10	4	M5	30	M8x1	7
16	8	4	15	M5	8	46	–	3	26	1	12	5	M5	35	M10x1	8.5
20	8	4	16	M5	10	56	54	3	30	1	14	5	M5	35	M10x1	9
25	9	5	19	M6	12	66	69	5	39	1	17	6	M5	36	M12x1	10
30	9	5	21	M6	12	86	82	5	52	1	19	6	G 1/8	60	M14x1.5	12

Corse alesaggio 12 mm / Strokes for bore 12 mm	25; 50; 75
Corse alesaggio 16 mm / Strokes for bore 16 mm	25; 50; 75; 100
Corse alesaggio 20 mm / Strokes for bore 20 mm	25; 50; 75; 100; 125
Corse alesaggio 25 mm / Strokes for bore 25 mm	25; 50; 75; 100; 125; 150
Corse alesaggio 30 mm / Strokes for bore 30 mm	25; 50; 75; 100; 125; 150

DIMENSIONI SLITTA SERIE S11 A RICIRCOLO DI SFERE CON DECELERATORE - Ø 12 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER GUIDE UNITS WITH SHOCK ABSORBERS SERIES S11, ON BALL BEARING Ø 12 to 30


+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁷	S	S1	T
W1450125...	12	18	46	5	71	2	91	83	4	33	1.5	9	10	8	2	4.3	8	4	M3	4	5	3	3.3
W1450165...	16	22	56	10	85	2	109	99	5	37.5	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1450205...	20	26	66	10	99	2	127	115	6	44.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1450255...	25	32	78	10	105	2	137	123	7	47.5	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1450305...	30	36	98	10	128	2	164	148	8	59	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
12	6	3	28	M4	6	38	-	3	20	1	10	4	M5	30	M8x1	7
16	8	4	33	M5	8	46	-	3	26	1	12	5	M5	35	M10x1	8.5
20	8	4	40	M5	10	56	54	3	30	1	14	5	M5	35	M10x1	9
25	9	5	42	M6	6	66	64	5	39	1	17	6	M5	36	M12x1	10
30	9	5	50	M6	12	86	82	5	52	1	19	6	G 1/8	60	M14x1.5	12

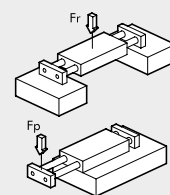
... Inserire la corsa in mm (esempio: Ø 12 corsa 50 = W1450125050) / ...Enter the stroke in mm (e.g. Ø 12 stroke 50 = W1450125050)

Corse alesaggio 12 mm / Strokes for bore 12 mm 25; 50; 75
 Corse alesaggio 16 mm / Strokes for bore 16 mm 25; 50; 75; 100
 Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100; 125
 Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125; 150
 Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

SLITTA A DOPPIO CILINDRO A PIASTRE FISSE SERIE S12 TWIN CYLINDER SLIDE WITH FIXED PLATES SERIES S12



DATI TECNICI / TECHNICAL DATA		S12-16	S12-20	S12-25	S12-30
Fluido / Fluid		Aria filtrata 20 µm / 20 µm filtered air			
Pressione di esercizio / Pressure range	bar	1.5 ÷ 7			
	MPa	0.15 ÷ 0.7			
	psi	21.5 ÷ 101			
Temperatura di esercizio / Temperature range	°C	-10 ÷ +80			
Velocità del pistone / Piston speed	mm/s	30 ÷ 200			
Versioni / Versions		Con bussole a strisciamento / Con bussole a sfere / Con vite di fermo / Con deceleratori idraulici With sliding bushes / With ball bearing bushes / With stop screw / With hydraulic shock absorbers			
Alesaggi / Bores	mm	16	20	25	30
Diametro steli / Piston rod diameter	mm	8	10	12	16
Corse / Strokes	mm	25	25	25	25
		50	50	50	50
		75	75	75	75
		100	100	100	100
		-	125	125	125
Peso = X + (Y · C) dove C = corsa / Weight = X + (Y · C) where C = stroke kg					
		-	-	150	150
• Versione a bronzine / Bushes version		X = 0.25 Y = 0.0035	X = 0.5 Y = 0.045	X = 0.7 Y = 0.007	X = 1.24 Y = 0.01
• Versione a sfere / Ball bearing version		X = 0.37 Y = 0.0035	X = 0.78 Y = 0.045	X = 1.04 Y = 0.007	X = 1.98 Y = 0.01
Spinta teorica (P = pressione relativa in bar) Theoretical thrust (P = relative pressure in bar)	N	30 x P	47 x P	75 x P	101 x P
Carichi ammessi / Max. loads		(i valori indicati si riferiscono alla corsa min. e max.) (The values shown refer to the min. and max. strokes)			
• Versione a bronzine / Bushes version	N	Fr: 35 ÷ 6.5 Fp: 11 ÷ 3	Fr: 58 ÷ 7 Fp: 18 ÷ 5	Fr: 80 ÷ 8 Fp: 23 ÷ 6	Fr: 130 ÷ 18 Fp: 50 ÷ 8
• Versione a sfere / Ball bearing version	N	Fr: 20 ÷ 4 Fp: 4 ÷ 1.5	Fr: 35 ÷ 4.5 Fp: 12 ÷ 3	Fr: 50 ÷ 5.4 Fp: 15 ÷ 3.5	Fr: 80 ÷ 12 Fp: 20 ÷ 4.5

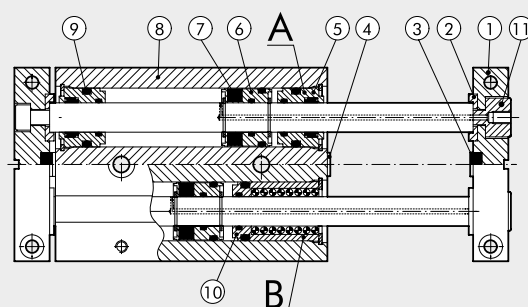


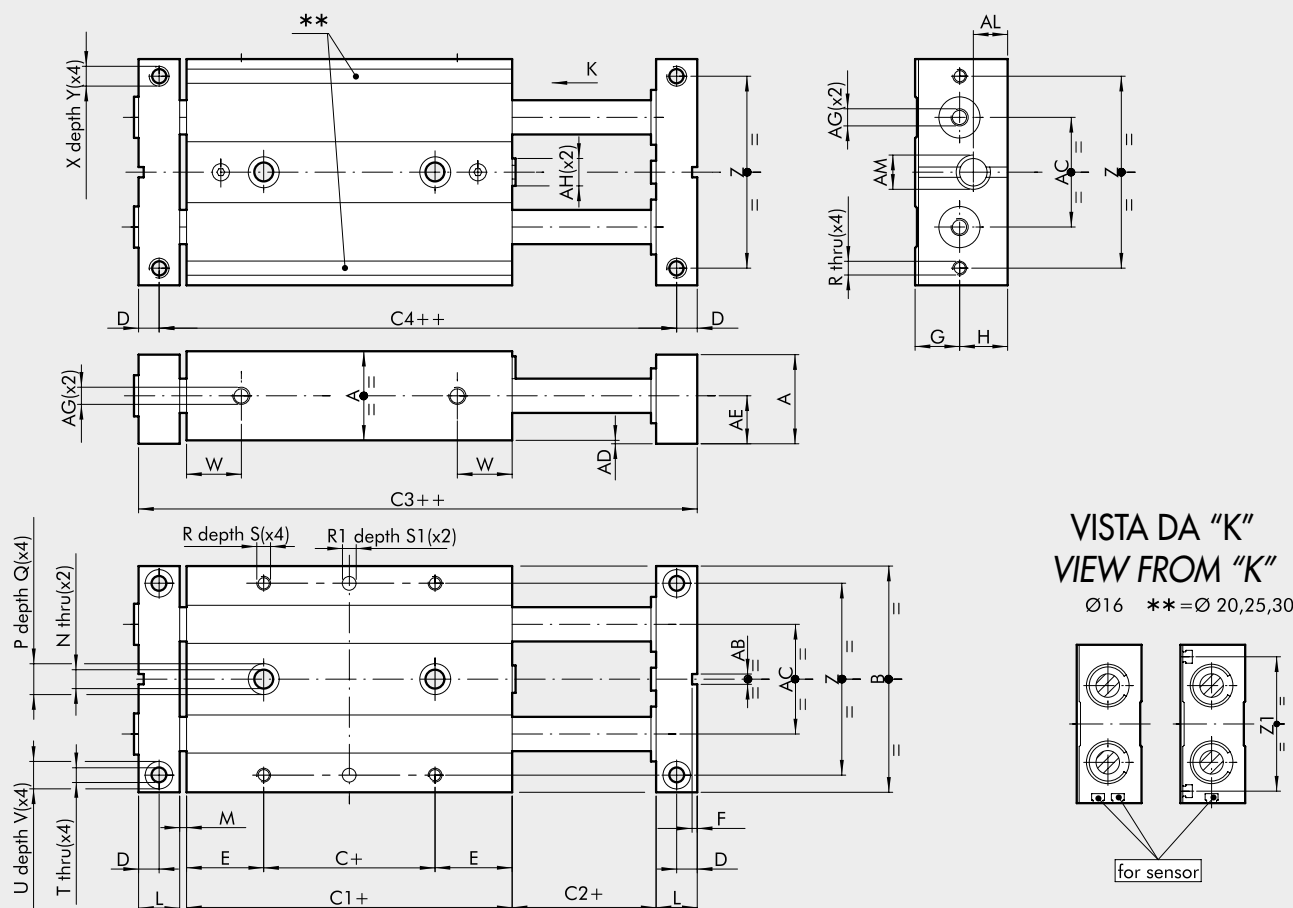
COMPONENTI / COMPONENTS

- 1 FLANGIA: alluminio anodizzato / FLANGE: anodized aluminium
- 2 RONDELLA: acciaio / WASHER: steel
- 3 PARACOLPO: gomma / BUFFER: rubber
- 4 BATTUTA REGOLABILE: acciaio zincato / ADJUSTABLE STRIKER PLATE: Zinc-plated steel
- 5 FONDELLO: ottone / BASE: brass
- 6 PISTONE: ottone / PISTON: brass
- 7 MAGNETE: plastroferrite / MAGNET: plastroferrite
- 8 CORPO CILINDRO: alluminio anodizzato / CYLINDER BODY: anodized aluminium
- 9 OR statici: NBR / STATIC O-RINGS: NBR
- 10 BUSSOLA: a ricircolo di sfere / BUSH: ball bearing
- 11 VITE: con alimentazione pneumatica / SCREW: pneumatically powered

VERSIONE / VERSIONS:

- A Con bussole a scorrimento / With sliding bushes
- B Con bussole a ricircolo di sfere / With ball bearing bushes



DIMENSIONI SLITTA SERIE S12 A BRONZINE Ø 16 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER SLIDE SERIES S12, ON BUSHES Ø 16 to 30


+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁷	S	S1	T
W1460162...	16	22	56	10	50	2	74	64	5	20	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1460202...	20	26	66	10	55	2	83	71	6	22.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1460252...	25	32	78	10	60	2	92	78	7	25	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1460302...	30	36	98	10	70	2	106	90	8	30	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
16	8	4	15	M5	8	46	-	3	26	1	12	5	M5	M6	M10x1	8.5
20	8	4	16	M5	10	56	54	3	30	1	14	5	M5	M8	M10x1	9
25	9	5	19	M6	12	66	64	5	39	1	17	6	M5	M10	M12x1	10
30	9	5	21	M6	12	86	82	5	52	1	19	6	G 1/8	M12	M14x1.5	12

... Inserire la corsa in mm (esempio: Ø 16 corsa 50 = W1450162050) / ...Enter the stroke in mm (e.g. Ø 16 stroke 50 = W1450162050)

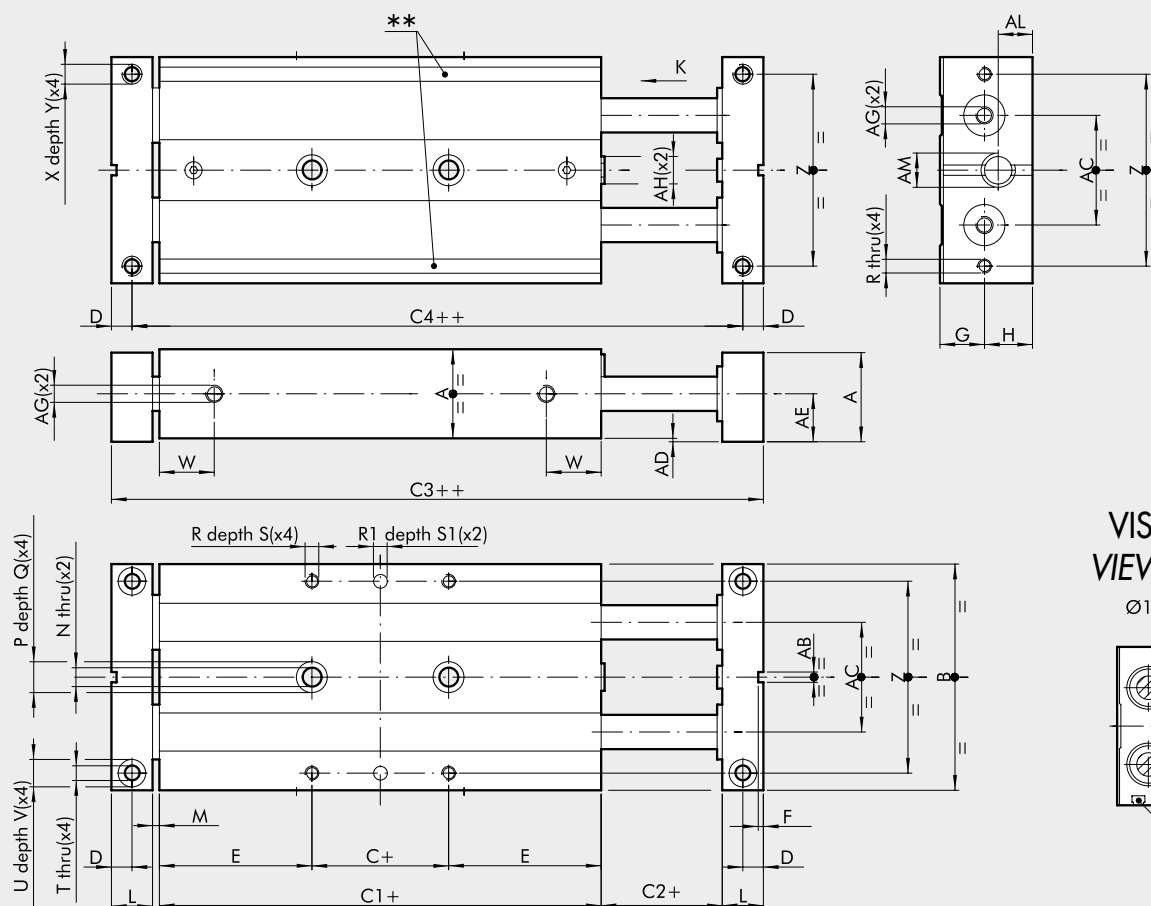
Corse alesaggio 16 mm / Strokes for bore 16 mm 25; 50; 75; 100

Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100; 125

Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125; 150

Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

ATTUATORI / ACTUATORS



VISTA DA "K"
VIEW FROM "K"

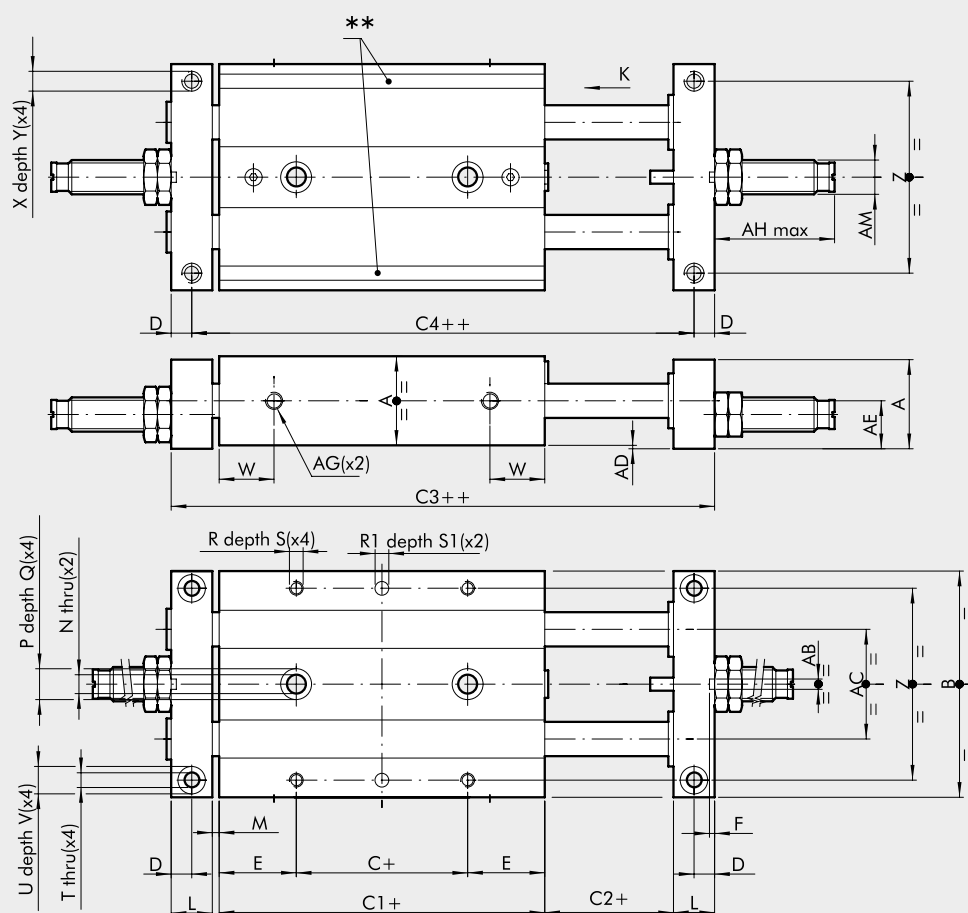
Ø16 ** = Ø 20,25,30

for sensor

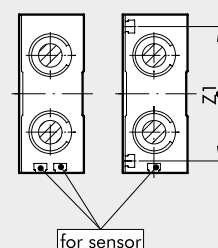
Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ^{H7}	S	S1	T
W1460163...	16	22	56	10	85	2	109	99	5	37.5	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1460203...	20	26	66	10	99	2	127	115	6	44.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1460253...	25	32	78	10	105	2	137	123	7	47.5	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1460303...	30	36	98	10	128	2	164	148	8	59	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
16	8	4	33	M5	8	46	–	3	26	1	12	5	M5	M6	M10x1	8.5
20	8	4	40	M5	10	56	54	3	30	1	14	5	M5	M8	M10x1	9
25	9	5	42	M6	6	66	64	5	39	1	17	6	M5	M10	M12x1	10
30	9	5	50	M6	12	86	82	5	52	1	19	6	G 1/8	M12	M14x1.5	12

Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

DIMENSIONI SLITTA SERIE S12 A BRONZINE CON DECELERATORE Ø 16 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER SLIDE WITH SHOCK ABSORBERS SERIES S12, ON BUSHES Ø 16 to 30

VISTA DA "K"
VIEW FROM "K"

Ø16 ** = Ø 20, 25, 30


 + = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁴⁷	S	S1	T
W1460164...	16	22	56	10	50	2	74	64	5	20	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1460204...	20	26	66	10	55	2	83	71	6	22.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1460254...	25	32	78	10	60	2	92	78	7	25	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1460304...	30	36	98	10	70	2	106	90	8	30	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
16	8	4	15	M5	8	46	-	3	26	1	12	5	M5	35	M10x1	8.5
20	8	4	16	M5	10	56	54	3	30	1	14	5	M5	35	M10x1	9
25	9	5	19	M6	12	66	64	5	39	1	17	6	M5	36	M12x1	10
30	9	5	21	M6	12	86	82	5	52	1	19	6	G 1/8	60	M14x1.5	12

... Inserire la corsa in mm (esempio: Ø 16 corsa 50 = W1450162050) / ...Enter the stroke in mm (e.g. Ø 16 stroke 50 = W1450162050)

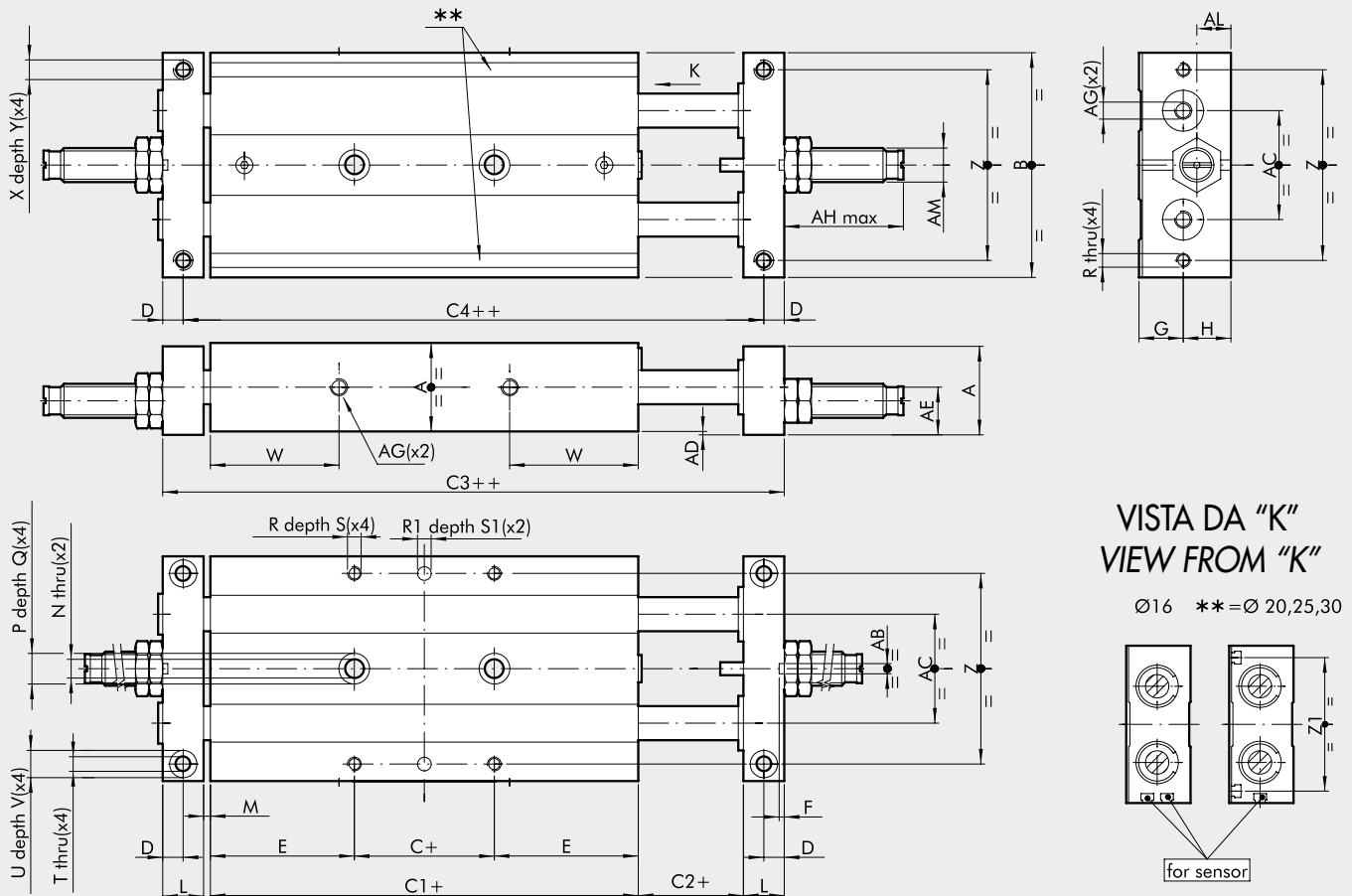
Corse alesaggio 16 mm / Strokes for bore 16 mm 25; 50; 75; 100

Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100; 125

Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125; 150

Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

DIMENSIONI SLITTA SERIE S12 A RICIRCOLO DI SFERE CON DECELERATORE Ø 16 ÷ 30 mm
DIMENSIONS OF TWIN-CYLINDER SLIDE WITH SHOCK ABSORBERS SERIES S12, ON BALL BEARING Ø 16 to 30



+ = AGGIUNGERE LA CORSA / ADD THE STROKE
 ++ = AGGIUNGERE 2 VOLTE LA CORSA / ADD TWICE THE STROKE

Cod.	Ø	A	B	C	C1	C2	C3	C4	D	E	F	G	H	L	M	N	P	Q	R	R1 ¹⁷	S	S1	T
W1460165...	16	22	56	10	85	2	109	99	5	37.5	1.5	11	12	10	2	4.3	8	4	M4	4	6	3	4.3
W1460205...	20	26	66	10	99	2	127	115	6	44.5	1.5	13	14	12	2	5.5	9	5	M4	4	7	3	4.3
W1460255...	25	32	78	10	105	2	137	123	7	47.5	2.5	16	17	14	2	6.5	10.5	6	M5	4	7	3	5.2
W1460305...	30	36	98	10	128	2	164	148	8	59	2.5	18	19	16	2	8.5	14	8	M6	6	8	5	5.2

Ø	U	V	W	X	Y	Z	Z1	AB	AC	AD	AE	AF	AG	AH	AM	AL
16	8	4	33	M5	8	46	-	3	26	1	12	5	M5	35	M10x1	8.5
20	8	4	40	M5	10	56	54	3	30	1	14	5	M5	35	M10x1	9
25	9	5	42	M6	6	66	64	5	39	1	17	6	M5	36	M12x1	10
30	9	5	50	M6	12	86	82	5	52	1	19	6	G 1/8	60	M14x1	12

... Inserire la corsa in mm (esempio: Ø 16 corsa 50 = W1450162050) / ...Enter the stroke in mm (e.g. Ø 16 stroke 50 = W1450162050)

Corse alesaggio 16 mm / Strokes for bore 16 mm 25; 50; 75; 100

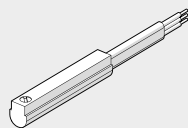
Corse alesaggio 20 mm / Strokes for bore 20 mm 25; 50; 75; 100; 125

Corse alesaggio 25 mm / Strokes for bore 25 mm 25; 50; 75; 100; 125; 150

Corse alesaggio 30 mm / Strokes for bore 30 mm 25; 50; 75; 100; 125; 150

ACCESSORI PER SLITTA S10-S11-S12 / ACCESSORIES FOR SLIDES S10-S11-S12

SENSORE Ø 4, PER SLITTA Ø 12 / SENSOR Ø 4, FOR SLIDE Ø 12

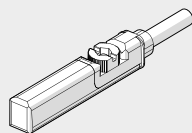


Per codici e dati tecnici vedere **capitolo dati tecnici**.
For codes and technical data, see **chapter technical data**.

SENSORE A SCOMPARSA, PER SLITTE Ø 16 ÷ 30 / RETRACTABLE SENSOR, FOR SLIDE Ø16 to 30

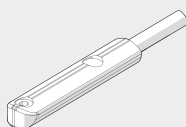
SENSORE TIPO SQUARE

Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
Latest generation, secure fixing



SENSORE TIPO OVALE

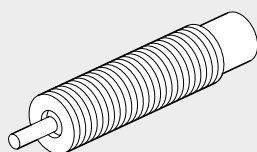
Tradizionale
SENSOR, OVAL TYPE
Traditional



Per codici e dati tecnici vedere **capitolo dati tecnici**.
For codes and technical data, see **chapter technical data**.

RICAMBI / SPARE PARTS

DECELERATORI / SHOCK ABSORBERS



Cod.	Ø	Descrizione / Description
0950004001	12	Deceleratore ECO8 MC2 + dado M8x1 Shock absorbers ECO 8 MC2 + nut M8x1
0950004002	16 - 20	Deceleratore ECO10 MF2 + dado M10x1 Shock absorbers ECO 10 MF2 + nut M10x1
0950004003	25	Deceleratore ECO15 MF1 + dado M12x1 Shock absorbers ECO 15 MF1 + nut M12x1
0950004004	30	Deceleratore ECO25 MC2 + dado M14x1.5 Shock absorbers ECO 25 MC2 + nut M14x1.5

NOTE / NOTES

SLITTA DI PRECISIONE SERIE S13

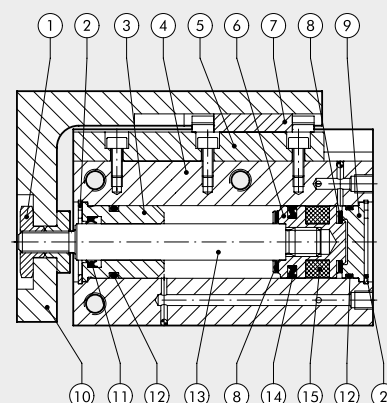
PRECISION SLIDE SERIES S13



DATI TECNICI / TECHNICAL DATA		Ø 6	Ø 10	Ø 16	Ø 20
Pressione d'esercizio / Operating pressure	bar	2 ÷ 8			
	MPa	0.2 ÷ 0.8			
	psi	29 ÷ 116			
Temperatura d'esercizio / Operating temperature	°C	-10 ÷ +80			
	Fluido / Fluid	Aria filtrata a 20 µm non lubrificata, se lubrificata la lubrificazione deve essere continua Lubricated and unlubricated compressed air at 20 µm, must be uninterrupted when lubricated			
Velocità minima e massima / Minimum and maximum speed	mm/s	30 ÷ 500			
Attacchi pneumatici / Pneumatic fittings		M5			
Tipo di guida / Type of guide		A ricircolo di sfere / Ball recirculation			
Versioni / Versions		Doppio effetto magnetico con paracolpo in gomma Magnetic dual-acting with rubber buffer			
Corse / Strokes	mm	10	10	10	10
		25	25	25	25
		---	---	50	50
Forza teorica in spinta, a 6 bar / Theoretical thrust force, at 6 bar	N	17	47	120	188
Forza teorica in tiro, a 6 bar / Theoretical pull force, at 6 bar	N	13	40	104	158
Carichi ammessi / Admitted loads		Vedere pagina seguente / See next page			
Energia cinetica ammessa / Admitted kinetic energy	Joule	0.012	0.025	0.050	0.100
Tolleranza sulla corsa / Stroke tolerance	mm	0 / +1.0			
Orientamento di montaggio / Assembly position		Qualsiasi (orizzontale o verticale) / Any (horizontal and vertical)			
Peso / Weight	Kg	Vedere pagina seguente / See next page			

COMPONENTI / COMPONENTS

- ① DADO: acciaio inossidabile / NUT: stainless steel
- ② SEEGER: acciaio zincato / SNAP RING: galvanised steel
- ③ FONDELLO ANTERIORE: bronzo / FRONT BASE: bronze
- ④ CORPO: alluminio anodizzato / BODY: anodized aluminium
- ⑤ GUIDA: acciaio temprato inossidabile / GUIDE: tempered stainless steel
- ⑥ PISTONE: alluminio / PISTON: aluminium
- ⑦ PATTINO A RICIRCOLO DI SFERE: acciaio inossidabile / BALL RECIRCULATION PAD: stainless steel
- ⑧ PARACOLPI: NBR / BUFFER: NBR
- ⑨ FONDELLO POSTERIORE: alluminio anodizzato / REAR BASE: anodized aluminium
- ⑩ PIASTRA: alluminio anodizzato / PLATE: anodized aluminium
- ⑪ GUARNIZIONE STELO: tipo EM, in NBR / PISTON ROD GASKET: type EM, NBR
- ⑫ O RING: NBR / O-RING: NBR
- ⑬ STELO: acciaio inossidabile / PISTON ROD: stainless steel
- ⑭ GUARNIZIONE PISTONE: tipo PZ, in NBR / PISTON GASKET: type PZ, NBR
- ⑮ MAGNETE: neodimio (Ø 6 e Ø 10) plastroferrite (Ø 16 e Ø 20)
MAGNET: neodymium (Ø 6 and Ø 10) plastroferrite (Ø 16 and Ø 20)



PESI / WEIGHTS**PESO [gr] / WEIGHT [gr]**

Corsa / Stroke	Alesaggio / Bore			
	6	8	16	20
10	68	125	230	455
25	90	160	280	550
50	---	---	350	660

PESO PARTE IN MOVIMENTO [gr] / WEIGHT OF MOVING PART [gr]

Corsa / Stroke	Alesaggio / Bore			
	6	8	16	20
10	30	50	100	180
25	40	68	125	220
50	---	---	167	290

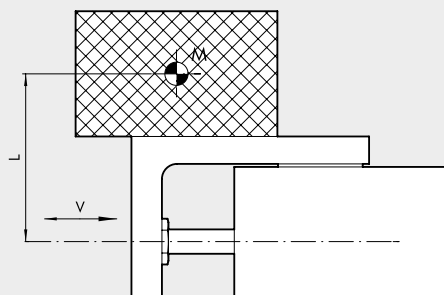
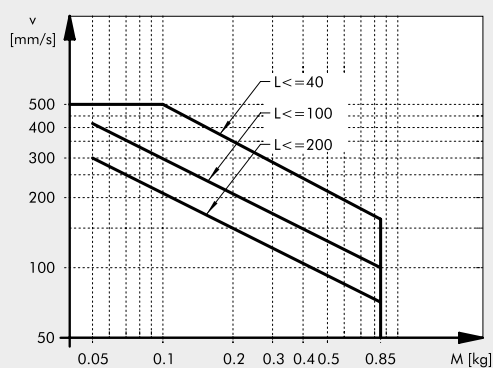
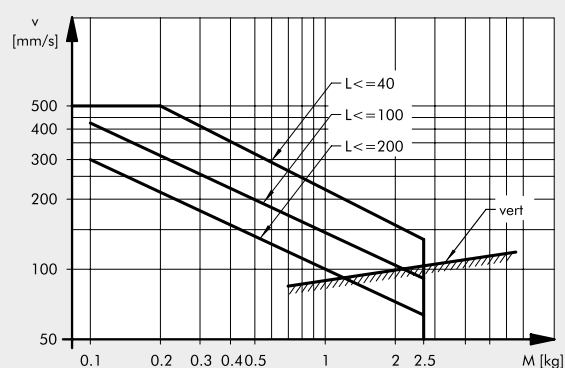
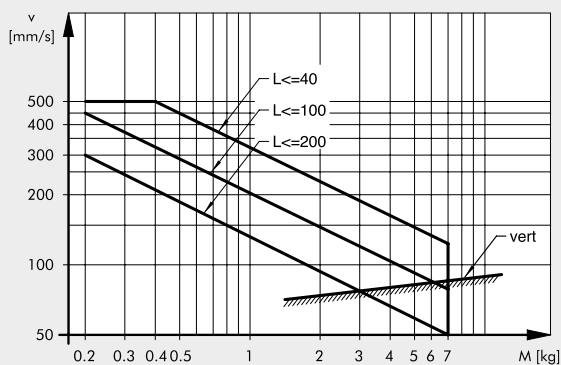
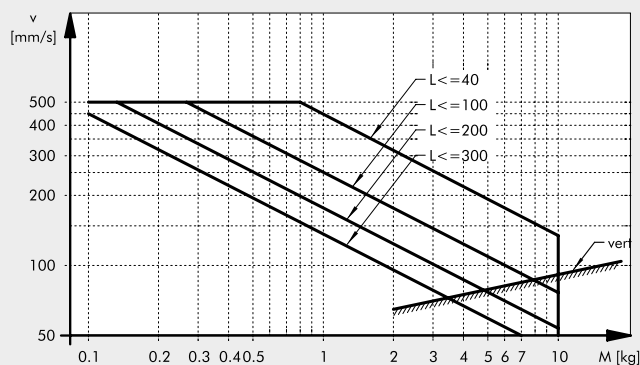
DIAGRAMMI MASSA-VELOCITÀ / MASS-VELOCITY DIAGRAM

M (kg) = Massa applicata / Mass applied

L (mm) = Distanza tra l'asse dello stelo e il baricentro della massa
Distance between the axis of the piston rod and the barycentre of the mass

v (mm/s) = Velocità della slitta / Velocity of the slide

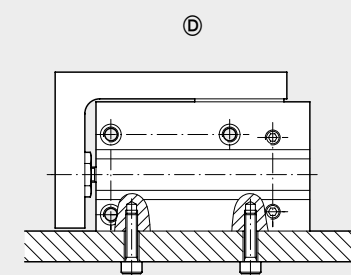
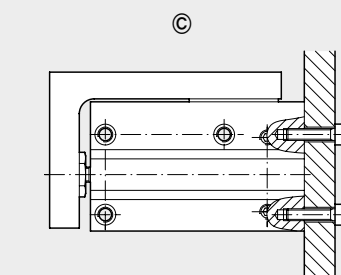
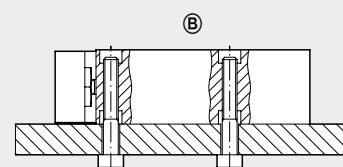
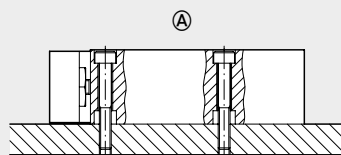
vert = Limite in caso di montaggio con movimento verticale
Limit with vertical movement

**DIAGRAMMI CARICHI AMMESSI / ADMITTED LOADS DIAGRAM****S13-6****S13-10****S13-16****S13-20**

POSSIBILITÀ DI FISSAGGIO / FIXING OPTIONS

FISSAGGI DEL CORPO / FIXING THE BODY

- Ⓐ Fissaggio laterale attraverso i fori passanti
Lateral, via the through holes
- Ⓑ Fissaggio laterale sui filetti dei fori
Lateral, on the hole threads
- Ⓒ Fissaggio posteriore sui fori filettati
Rear, on the threaded holes
- Ⓓ Fissaggio verticale sui fori filettati
Vertical, on the threaded holes



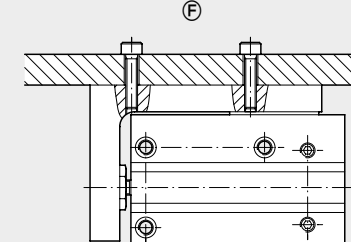
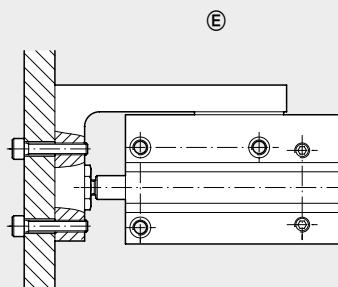
FISSAGGI DELLA TAVOLA MOBILE FIXING THE MOVING TABLE

- Ⓔ Fissaggio frontale sui fori filettati
Front, on the threaded holes
- Ⓕ Fissaggio superiore sui fori filettati
Top, on the threaded holes

N.B.: dato che la tavola è supportata da guida/pattino a sfere, evitare di applicare coppie o sforzi eccessivi sulle stesse.

Perciò, quando si fissano le viti, tenere ferma la tavola e non il corpo in modo che le coppie non si scarichino attraverso al pattino a sfere.

N.B. Since the table is supported by a ball guide/pad, avoid applying excessive torques or forces. When securing the screws, hold the table, not the body, so that the torque discharges through the ball pad.



ALIMENTAZIONE PNEUMATICA / COMPRESSED-AIR SUPPLY

Possibilità di alimentare pneumaticamente da dietro, da sinistra o da destra.

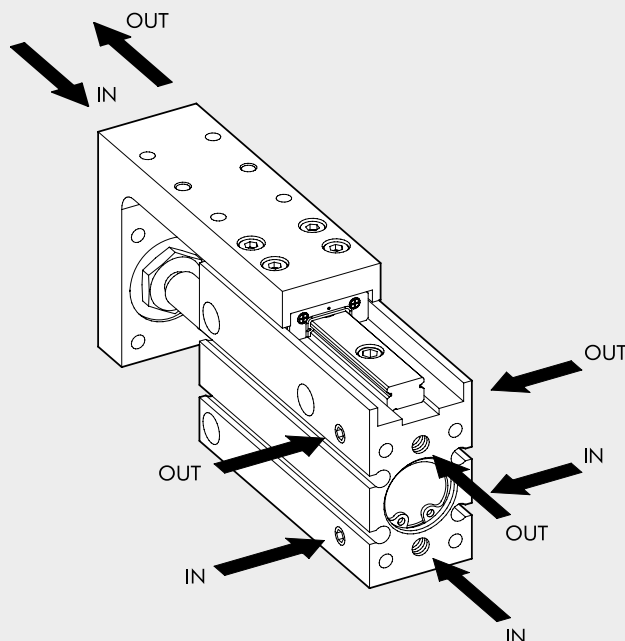
La slitta viene fornita con i fori a sinistra e a destra tappati da grani con O-ring.

Se si desidera utilizzarli, asportare le viti e gli O-ring e applicarli nei fori del lato posteriore, applicando una goccia di collante sul filetto dei grani.

The compressed air supply can be from the back, from the left or from the right.

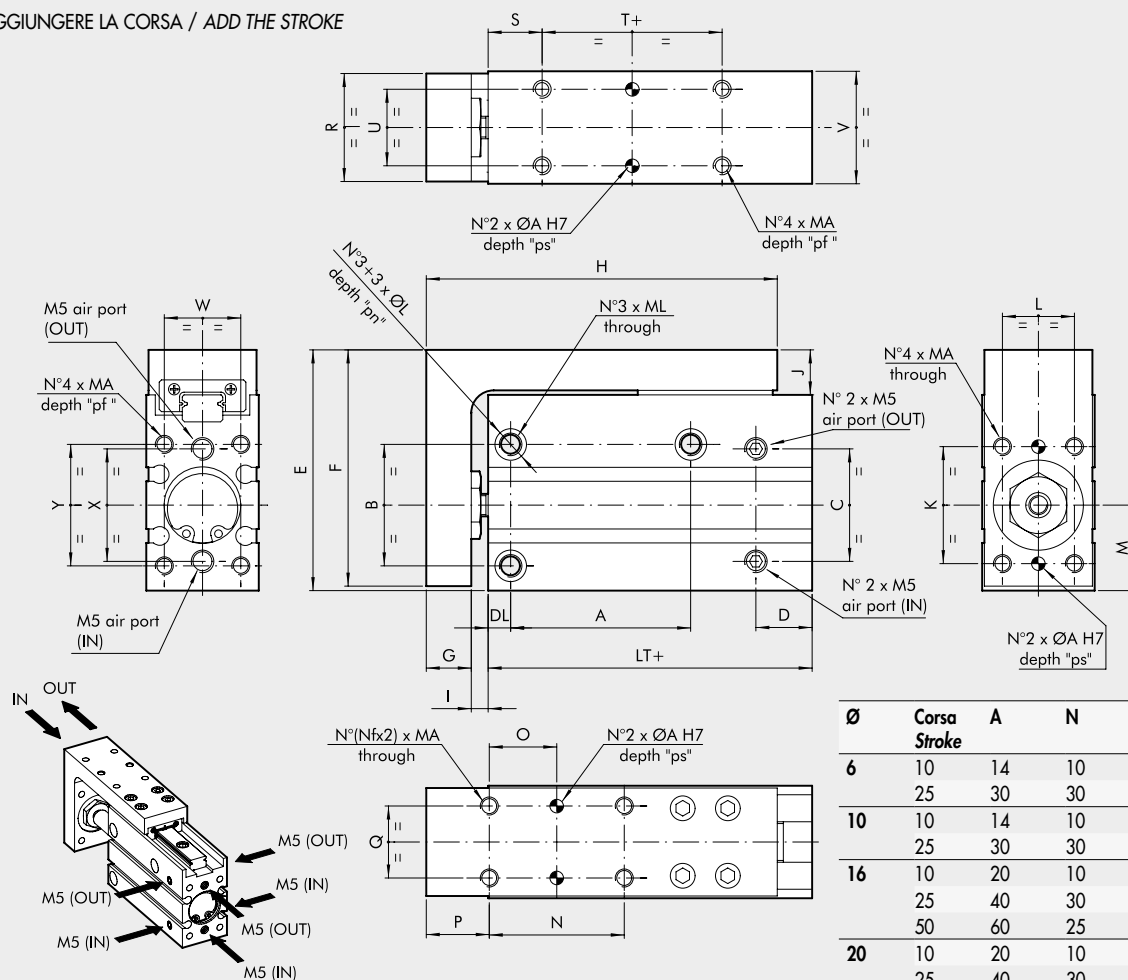
The slide comes with holes on the left and right that are plugged with screws and O-ring seals.

If you wish to use the holes, remove the screws and O-rings and fix them in the holes in the back, applying a drop of adhesive to the screw thread.



DIMENSIONI / DIMENSIONS

+ = AGGIUNGERE LA CORSA / ADD THE STROKE



Ø	Corsa Stroke	A	N	H	NF
6	10	14	10	42	2
	25	30	30	62	2
10	10	14	10	49	2
	25	30	30	69	2
16	10	20	10	58	2
	25	40	30	78	2
	50	60	25	98	3
20	10	20	10	64	2
	25	40	30	84	2
	50	70	25	104	3

Cod.	Ø	LT	B	C	D	E	F	G	I	J	K	MA	pf	ØA	ps	L	M	O	P	Q	R	S
W1471063...*	6	31	19	18	10	39	38	5.5	2.9	7.5	15	M3	5	2	4.5	9	14.5	N/2	8	9	15	10
W1471103...*	10	35	23	20	12.5	47	46	7.5	4	9	18	M4	6	2	4.5	11	15.5	N/2	11	11	19	12
W1471163...*	16	42	27	25	12.5	53.5	52.5	10	3.75	10	26	M4	7	3	7.5	16	19	N/2	14	16	24	12
W1471203...*	20	52.5	34	32	15	64.5	63.5	11	4.5	10.5	34	M5	9	3	7.5	20	23	N/2	14	20	31	15

Ø	T	U	V	W	X	Y	ØL	pn	ML	DL
6	5	9	16	10.5	18	19	6	3.5	M4	4
10	5	13	20	13	20	23	7.5	4.5	M5	5
16	10	17	25	17	25	27	7.5	4.5	M5	5
20	10	20	32	20	32	34	9.5	7.5	M6	6

* Inserire la corsa, in mm (esempio Ø 6 corsa 10 = W1471063010) / * Enter the stroke in mm (e.g. Ø 6 stroke 10=W1471063010)

Corse standard / Standard strokes:

Alesaggio / Bore Ø 6 -> 10; 25 mm

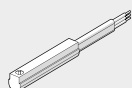
Alesaggio / Bore Ø 10 -> 10; 25 mm

Alesaggio / Bore Ø 16 -> 10; 25; 50 mm

Alesaggio / Bore Ø 20 -> 10; 25; 50 mm

ACCESSORI / ACCESSORIES

SENSORE Ø 4 / SENSOR Ø 4

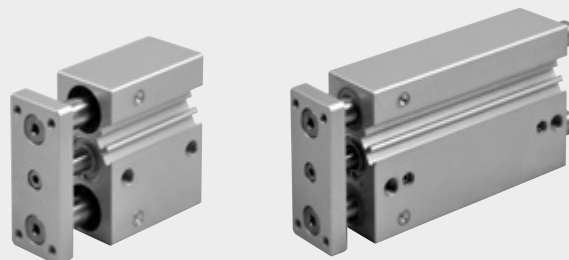


Per codici e dati tecnici vedere capitolo dati tecnici.

For codes and technical data, see chapter technical data.

CILINDRO COMPATTO GUIDATO TIPO AMCCG BA/BB COMPACT GUIDE CYLINDERS TYPE AMCCG BA/BB

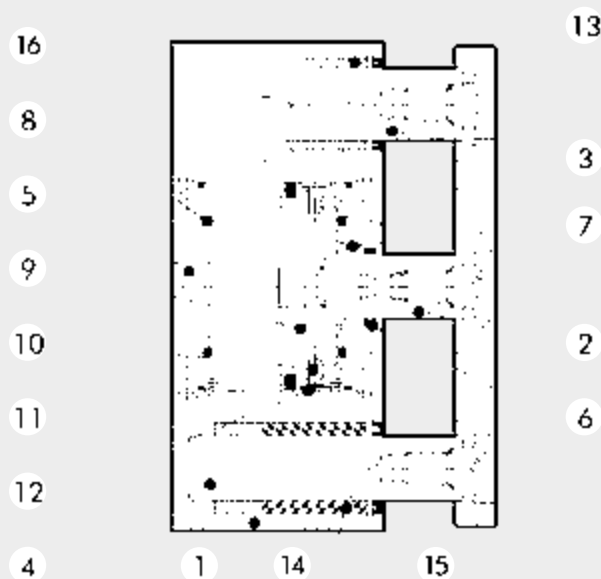
Ø16÷100



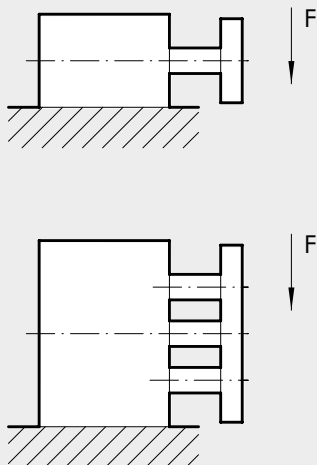
DATI TECNICI / TECHNICAL DATA		AMMORTIZZATO / CUSHIONED	NON AMMORTIZZATO / NO-CUSHIONED
Pressione d'esercizio / Operating pressure	bar		1 ÷ 10
	MPa		0.1 ÷ 1
			14.5 ÷ 145
psi			0 ÷ 80°
			32 ÷ 176°
Temperatura d'esercizio / Operating temperature	°C		
	°F		
Diametri / Bores	mm	Ø 16; 20; 25; 32; 40; 50; 63	Ø 16; 20; 25; 32; 40; 50; 63; 80; 100
	mm	Ø 16: 20-30-40-50	Ø 16: 10-20-25*-30-40-50-75-100-150-200
Corse / Strokes	mm	Ø 20; Ø 25: 20-30-40-50-75-100-150	Ø 20; Ø 25: 20-25*-30-40-50-75-100-150-200
	mm	Ø 32 ÷ Ø 63: 25-50-75-100-150-175	Ø 32 ÷ Ø 100: 25-50-75-100-150-200
		Inoltre Ø 32: 125 a bronzine / Moreover Ø 32: 125 with bronze bushing	A richiesta fornibili altre corse, ma gli ingombri del cilindro sono quelli della corsa standard immediatamente superiore Other strokes on request but with the same cylinder dimensions as the standard stroke immediately above
		Con boccole in bronzo / With bronze bushings	
		Con cuscinetti a sfera / With ball bearings	
Versione / Version		* Solo per versione con boccole in bronzo / * Only bronze bushings version	

COMPONENTI / COMPONENTS

- ① CAMICIA: lega di alluminio anodizzato
JACKET: anodized aluminium alloy
- ② STELO: acciaio cromato e rettificato
PISTON ROD: grinded chrome steel
- ③ STELO DI GUIDA: acciaio cromato e rettificato
GUIDE ROD: grinded chrome steel
- ④ STELO DI GUIDA: acciaio al cromo temprato e cromato
GUIDE ROD: hardened and tempered chrome steel
- ⑤ FONDELLO POSTERIORE: lega di alluminio anodizzato
REAR BASE: anodized aluminium alloy
- ⑥ FONDELLO ANTERIORE: lega di alluminio anodizzato
FRONT BASE: anodized aluminium alloy
- ⑦ BOCCOLA DI GUIDA: bronzo autolubrificante
GUIDE BUSHING: self-lubricating bronze
- ⑧ GUARNIZIONE PARACOLPI: NBR
BUFFER GASKET: NBR
- ⑨ PISTONE: lega di alluminio
PISTON: aluminium alloy
- ⑩ MAGNETE: plastroferrite
MAGNET: plastroferrite
- ⑪ GUARNIZIONE PISTONE: NBR (PARKER PRADIFA)
PISTON GASKET: (PARKER PRADIFA) NBR
- ⑫ ANELLO DI GUIDA: PTFE
GUIDE RING: PTFE
- ⑬ BRONZINA DI SCORRIMENTO: bronzo sinterizzato
SLIDE BUSHING: sintered bronze
- ⑭ CUSCINETTI A SFERE
BALL BEARINGS
- ⑮ GUARNIZIONE RASCHIAPOLVERE: NBR o FKM/FPM
DUST SCRAPER RING: NBR or FKM/FPM
- ⑯ INGRASSATORI: zincati o inox
GREASE NIPPLES: zinc-plated or stainless steel



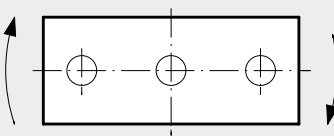
CARICO LATERALE MASSIMO AMMISSIBILE / MAXIMUM SIDE LOAD



Ø mm	Guida / Guide unit	Corse / Stroke [mm]										
		16	20	25	30	40	50	75	100	150	175	200
16	Bronzine / Bushes	35	29	27	26	23	20	16	14	10	–	8
	Sfere / Ball	29	31	–	27	38	34	29	24	12	–	8
20	Bronzine / Bushes	–	52	50	45	39	35	58	49	38	–	31
	Sfere / Ball	–	56	–	48	79	70	54	50	27	–	32
25	Bronzine / Bushes	–	71	67	61	54	48	78	66	50	–	41
	Sfere / Ball	–	72	–	62	78	73	60	52	37	–	30
32	Bronzine / Bushes	–	–	197	–	–	168	138	109	78	70	65
	Sfere / Ball	–	–	89	–	–	60	276	217	138	122	110
40	Bronzine / Bushes	–	–	197	–	–	168	138	109	78	70	65
	Sfere / Ball	–	–	89	–	–	60	276	217	138	122	110
50	Bronzine / Bushes	–	–	295	–	–	256	216	177	125	112	103
	Sfere / Ball	–	–	138	–	–	89	393	314	184	163	148
63	Bronzine / Bushes	–	–	295	–	–	256	216	177	125	112	103
	Sfere / Ball	–	–	138	–	–	89	393	314	184	163	148
80	Bronzine / Bushes	–	–	354	–	–	305	256	207	153	–	128
	Sfere / Ball	–	–	236	–	–	158	864	687	413	–	335
100	Bronzine / Bushes	–	–	540	–	–	471	413	344	254	–	213
	Sfere / Ball	–	–	471	–	–	314	1374	1074	629	–	511

N.B.: Le forze indicate in tabella sono espresse in N / NB: Forces are expressed in N

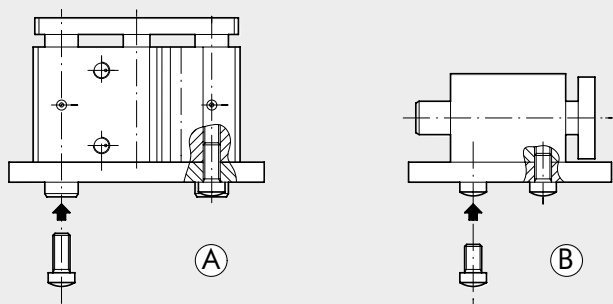
MOMENTO MASSIMO AMMISSIBILE SULLA PIASTRA / MAXIMUM TORQUE ON PLATE



Ø mm	Guida / Guide unit	Corse / Stroke [mm]										
		16	20	25	30	40	50	75	100	150	175	200
16	Bronzine / Bushes	0.51	0.45	0.40	0.36	0.32	0.28	0.24	0.20	0.46	–	0.12
	Sfere / Ball	0.74	0.60	–	0.50	0.72	0.65	0.54	0.45	0.35	–	0.25
20	Bronzine / Bushes	–	0.92	0.85	0.79	0.72	0.64	1.05	0.90	0.69	–	0.56
	Sfere / Ball	–	1.28	–	1.08	1.78	1.59	1.24	1	0.61	–	0.49
25	Bronzine / Bushes	–	1.55	1.42	1.32	1.18	1.04	1.70	1.44	1.10	–	0.90
	Sfere / Ball	–	1.98	–	1.70	2.16	2.20	1.66	1.4	1.02	–	0.82
32	Bronzine / Bushes	–	–	3.94	–	–	2.95	2.46	1.97	1.55	1.38	1.24
	Sfere / Ball	–	–	1.97	–	–	1	2.96	2.44	2.40	2.43	2.18
40	Bronzine / Bushes	–	–	4.40	–	–	3.45	2.96	2.46	1.70	1.55	1.40
	Sfere / Ball	–	–	2.46	–	–	1.45	6.38	5.4	3	2.73	2.40
50	Bronzine / Bushes	–	–	7.36	–	–	5.9	4.90	4.4	3	2.78	2.50
	Sfere / Ball	–	–	3.45	–	–	2.44	10.8	8.35	4.5	4.06	3.60
63	Bronzine / Bushes	–	–	7.85	–	–	6.38	5.40	4.9	3.4	3.05	2.80
	Sfere / Ball	–	–	3.94	–	–	2.46	11.77	9.3	5	4.46	4
80	Bronzine / Bushes	–	–	11.78	–	–	9.80	7.84	6.88	5.30	–	4.40
	Sfere / Ball	–	–	9.34	–	–	5.88	31.38	24.5	10.40	–	11.7
100	Bronzine / Bushes	–	–	22.55	–	–	19.62	16.68	14.7	10.65	–	8.90
	Sfere / Ball	–	–	21.56	–	–	13.73	63.72	49.1	26.6	–	21.6

N.B.: Le forze indicate in tabella sono espresse in Nm / NB: Forces are expressed in Nm

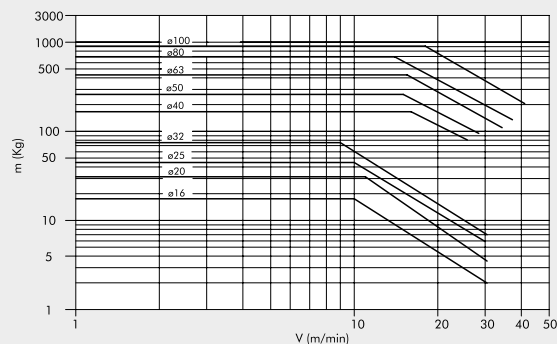
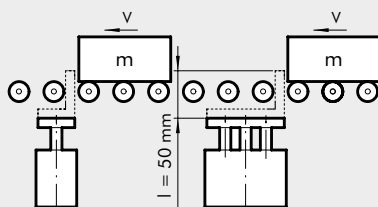
POSSIBILITÀ DI MONTAGGIO / ASSEMBLY OPTIONS



Se il cilindro Compatto Guidato viene montato come in figura **A** è opportuno prevedere, nella struttura su cui viene montato, due fori passanti per le due colonne di guida.

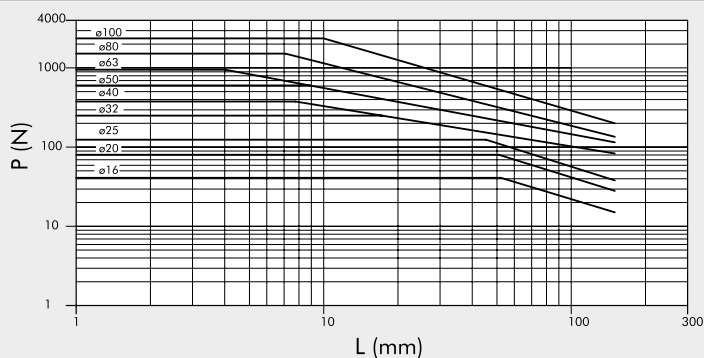
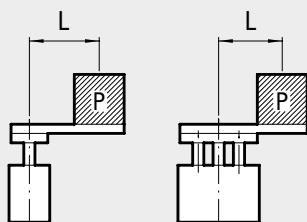
If the compact guided cylinder is mounted as shown in figure **A**, there need to be two through holes in the frame for the guide columns.

UTILIZZO FUNZIONI STOPPER / STOPPER FUNCTIONS

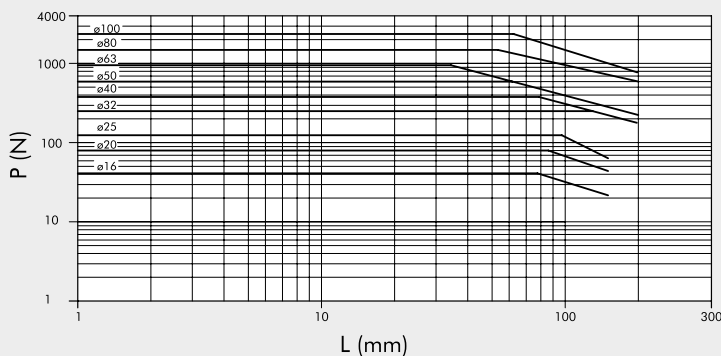


Il grafico di riferisce a un cilindro con corsa 50 mm
 The graph refers to a 50mm-stroke cylinder.

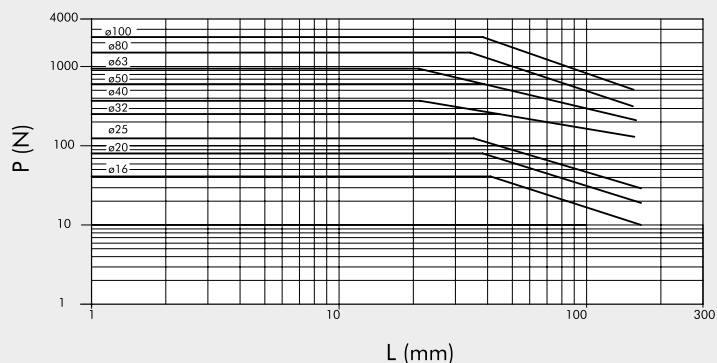
UTILIZZO FUNZIONI DI SOLLEVAMENTO / LIFTING FUNCTIONS



Il grafico si riferisce a cilindri con corse 25÷50 mm con guida a ricircolo di sfere
 The graph refers from 25 to 50 mm-stroke cylinders with ball re-circulation guide unit.



Il grafico si riferisce a cilindri con corse 75÷100 mm con guida a ricircolo di sfere
 The graph refers from 75 to 100 mm-stroke cylinders with ball re-circulation guide unit.



Il grafico si riferisce a cilindri con corsa 50 mm con guida a bronzine
 The graph refers to 50mm-stroke cylinders with bushing guide unit.

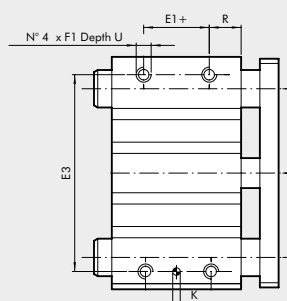
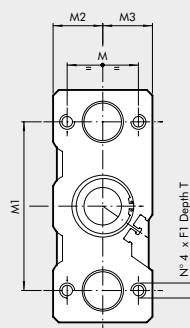
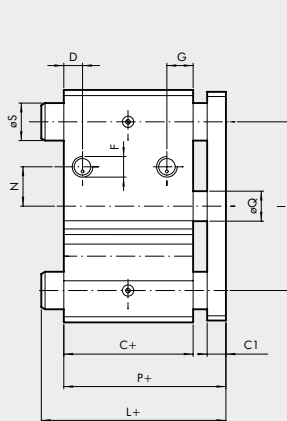
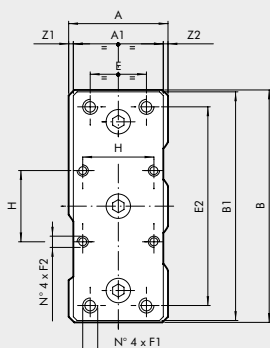
CILINDRO COMPATTO GUIDATO TIPO AMCCG BA/BB COMPACT GUIDE CYLINDERS TYPE AMCCG BA/BB

Ø16÷100



DIMENSIONI / DIMENSIONS

* = CORSA / STROKE



Ø	Ø S	
	Versione BA (bronzine) Bronze-Bushings	Versione BB (sfere) Ball-Bearings
16	10	10
20	12	10
25	16	16
32	20	20
40	20	20
50	25	**
63	25	**
80	28	25
100	35	30

** per corse 25 e 50 = 20 / for stroke 25 and 50 = 20
per corse ≥ 75 = 25 / for stroke ≥ 75 = 25

* =	corsa / stroke
Ø	0÷50 75÷200
16	55 74.5
20	49 79
25	49.5 79.5

Ø	A	A1	B	B1	C	C1	D	E	E1	E2	E3	F	F1	F2	G	H	K ^{HT}	I	L	M	M1	M2	M3	N	P	ØQ	R	T	U	Z1	Z2
16	33	25	64	62	33	10	9	16	7	52	54	M5	M5	-	10.5	-	4	40	*	22	42	15	18	6	46	8	13	20	8	5.5	2.5
20	36	29	74	72	37	10	9	18	10	60	64	1/8 M5	M5	-	11	-	5	46	*	26	52	17	19	8	49	10	13	20	8	4.5	2.5
25	42	38	88	86	37.5	10	9	26	10	70	76	1/8 M6	M6	-	11.5	-	5	56	*	32	62	21	21	8	49.5	12	14	25	9	2	2
32	51	48	114	112	37.5	10	9	30	5	96	100	1/8 M8	M8	M6	12.5	32.5	6	80	73.5	38	80	25.5	25.5	14	49.5	16	16	20	11	1.5	1.5
40	51	48	124	122	44	10	11	30	10	106	110	1/8 M8	M8	M6	14	38	6	90	73.5	38	90	25.5	25.5	21	56	16	17	20	11	1.5	1.5
50	59	56	140	138	44	12	11	40	10	120	124	1/4 M10	M8	M8	14	46.5	6	100	83	44	100	29.5	29.5	27	58	20	17	25	12.5	1.5	1.5
63	72	69	150	148	49	12	11	50	10	130	132	1/4 M10	M8	M8	14	56.5	6	110	83	44	110	36	36	33	63	20	20	25	15	1.5	1.5
80	92	88	188	185	56.5	16	15.5	60	15	160	166	3/8 M12	M10	M10	19	72	6	140	93	56	140	46	46	36	74.5	25	21	30	18	2	2
100	112	108	224	221	66	16	19	80	15	190	200	3/8 M14	M10	M10	23	89	8	170	105	62	170	56	56	40	84	30	25	35	21	2	2

CHIAVI DI CODIFICA / KEY TO CODE

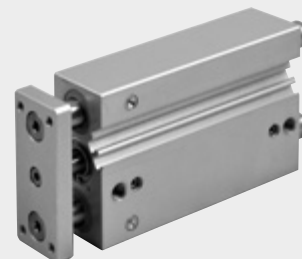
Cod.	AMCCG TIPOLOGIA TYPE	016 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION
		016 Ø 16	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing
		032 Ø 32		BB Sfere Ball bushing
		040 Ø 40		
		050 Ø 50		
		063 Ø 63		
		080 Ø 80		
		100 Ø 100		

* Inserire la corsa a 3 cifre (esempio 50 = 050)
Enter the stroke in 3 digits (e.g. 50 = 050)

	Corse mm / Strokes mm
16	10; 20; 25; 30; 40; 50; 75; 100; 150; 200
20	20; 25*; 30; 40; 50; 75; 100; 150; 200
25-100	25; 50; 75; 100; 150; 200

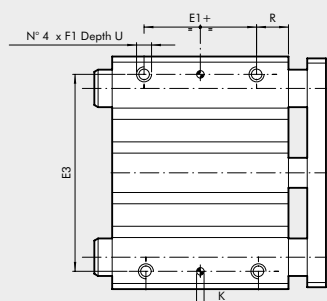
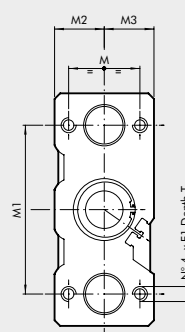
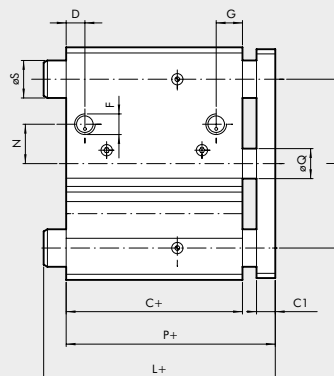
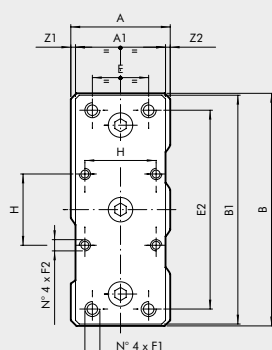
CILINDRO COMPATTO GUIDATO AMMORTIZZATO TIPO AMCCG BA/AM CUSHIONED COMPACT GUIDE CYLINDERS TYPE AMCCG BA/AM

Ø16÷63



DIMENSIONI / DIMENSIONS

* = CORSA / STROKE



* =	corsa / stroke
Ø	0÷50 75÷200
16	73 -
20	78 105.5
25	78.5 108.5

Ø	Ø S	
	Versione BA (bronzine) Bronze-Bushings	Versione BB (sfere) Ball-Bearings
16	10	10
20	12	10
25	16	16
32	20	20
40	20	20
50	25	**
63	25	**

** per corse 25 e 50 = 20 / for stroke 25 and 50 = 20
per corse ≥ 75 = 25 / for stroke ≥ 75 = 25

Ø	A	A1	B	B1	C	C1	D	E	E1	E2	E3	F	F1	F2	G	H	K ^{1/2}	I	L	M	M1	M2	M3	N	P	ØQ	R	T	U	Z1	Z2
16	33	25	64	62	58	10	9	16	32	52	54	M5	M5	-	10.5	-	4	40	*	22	42	15	18	8	73	8	13	20	8	5.5	2.5
20	36	29	74	72	62	10	9	18	35	60	64	1/8	M5	-	11	-	5	46	*	26	52	16.5	19.5	8.5	78	10	13	20	8	4.5	2.5
25	42	38	88	86	62.5	10	9	26	35	70	76	1/8	M6	-	11.5	-	5	56	*	32	62	21	21	13.5	78.5	12	14	25	9	2	2
32	51	48	114	112	62.5	10	9	30	30	96	100	1/8	M8	M6	12.5	32.5	6	80	106.5	38	80	25.5	25.5	15	82.5	16	16.5	20	11	1.5	1.5
40	51	48	124	122	69	10	11	30	35	106	110	1/8	M8	M6	14	38	6	90	106.5	38	90	25.5	25.5	20.5	89	16	17	20	11	1.5	1.5
50	59	56	140	138	69	12	11	40	35	120	124	1/4	M10	M8	14	46.5	6	100	118	44	100	29.5	29.5	37	93	20	17	25	12.5	1.5	1.5
63	72	69	150	148	74	12	11	50	35	130	132	1/4	M10	M8	14	56.5	6	110	118	44	110	36	36	31.5	98	20	20	25	15	1.5	1.5

CHIAVI DI CODIFICA / KEY TO CODE

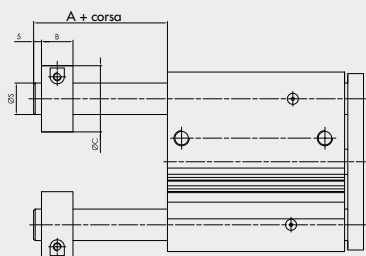
Cod.	AMCCG TIPOLOGIA TYPE	016 DIAMETRO BORE	100 * CORSA STROKE	BA VERSIONE VERSION	AM VERSIONE VERSION
		016 Ø 16	Corsa in mm Stroke in mm	BA Bronzine Bronze bushing	AM Ammortizzato Cushioned
		032 Ø 32		BB Sfere Ball bushing	
		040 Ø 40			
		050 Ø 50			
		063 Ø 63			
		080 Ø 80			
		100 Ø 100			

* Inserire la corsa a 3 cifre
(esempio 50 = 050)
Enter the stroke in 3 digits
(e.g. 50 = 050)

Ø	Corse mm / Strokes mm
16	20; 30; 40; 50
20-25	20; 30; 40; 50; 75; 100; 150
32-63	25; 50; 75; 100; 150; 175

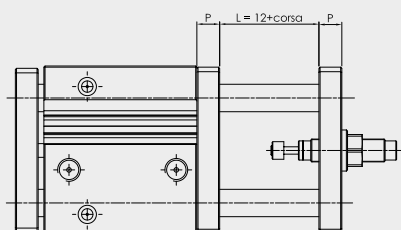
CILINDRO COMPATTO GUIDATO, VERSIONI CON REGOLAZIONI DELLA CORSA FORNIBILI SU RICHIESTA
GUIDED COMPACT CYLINDER, VERSIONS HAVING STROKE REGULATIONS SUPPLIED ON REQUEST

Finecorsa meccanico della fuoriuscita della piastra
Mechanical end stroke of the plate coming out



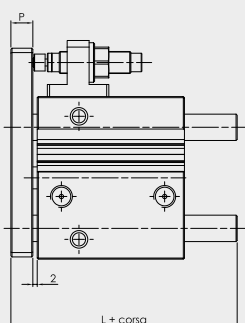
Alesaggio / Bore	ØS	A	B	C
16	10	20	15	25
20	12	21	16	30
25	16	22	17	34
32	20	25	20	40
40	20	25	20	40
50	25	25	20	45
63	25	25	20	45

Finecorsa della fuoriuscita della piastra con deceleratore
End stroke of the plate coming out with decelerator



Alesaggio / Bore	P
16	10
20	10
25	10
32	10
40	10
50	12
63	12

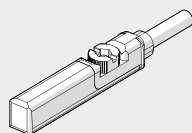
Finecorsa del rientro della piastra con deceleratore
End stroke of the plate return with decelerator



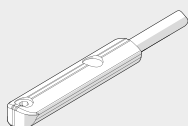
Alesaggio / Bore	P	L	* Corsa / Stroke 0÷50	Corsa / Stroke 75÷100
16	10	*	45	-
20	10	*	49	76
25	10	*	49.5	79.5
32	10	73.5		
40	10	73.5		
50	12	83		
63	12	83		

ACCESSORI / ACCESSORIES
SENSORE A SCOMPARSA CON L'INSERIMENTO DALL'ALTO / RETRACTABLE SENSOR WITH INSERTION FROM ABOVE
SENSORE TIPO SQUARE

Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
Latest generation, secure fixing


SENSORE TIPO OVALE

Tradizionale
SENSOR, OVAL TYPE
Traditional



Per codici e dati tecnici vedere **capitolo dati tecnici**.
*For codes and technical data, see **chapter technical data**.*

CILINDRO COMPATTO GUIDATO SERIE MULTIFIX COMPACT GUIDED CYLINDER SERIES MULTIFIX



DATI TECNICI / TECHNICAL DATA		SILENZIATO / SILENCED	CON AMMORTIZZO PNEUMATICO WITH PNEUMATIC CUSHIONING
Pressione d'esercizio / Operating pressure	bar		1 ÷ 10
	MPa		0.1 ÷ 1
	psi		14.5 ÷ 145
Temperatura d'esercizio / Temperature range	°C		-20 ÷ +80
	°F		14 ÷ 176
Fluido / Fluid		Aria senza lubrificazione, se si utilizza aria lubrificata la lubrificazione deve essere continua Unlubricated air. Lubrication, if used, must be continuous	
Diametri / Bores	mm	16; 20; 25; 32; 40	
Corse / Strokes	mm	Ø 16: 10-20-30-40-50-75-100-125-150-175-200-250 Ø 20, Ø 25: 20-30-40-50-75-100-125-150-175-200 250-300-350-400 Ø 32 ÷ 40: 25-50-75-100-125-150-175-200-250-300 350-400 A richiesta fornibili altre corse, ma gli ingombri del cilindro sono quelli della corsa immediatamente superiore Other strokes on request but with the same cylinder dimensions as the standard stroke immediately above	Ø 16: 25-50-75-100-125-150-175-200-250 Ø 20 ÷ 40: 25-50-75-100-125-150-175-200-250-300 350-400
Versioni / Version		Con boccole in bronzo - Con cuscinetti a ricircolo di sfere / With bronze bushings, with ball recirculating bearings	
Magnete per sensori / Magnet for sensors		Sì	
Pressione di spunto / Inrush pressure	bar	Ø 16; 20; 25 = 0.8	
con boccole in bronzo / with bronze bushings		Ø 32; 40 = 0.5	
con cuscinetti a ricircolo di sfere / with ball recirculating bearings		Ø 16; 20; 25 = 0.6	
		Ø 32; 40 = 0.4	
Forze sviluppate in spinta/trazione / Forces generated in thrust/retraction		Vedere "Dati tecnici generali cilindri" all'inizio del capitolo See cylinder "General technical data" at the beginning of the chapter	

PESI [kg] / WEIGHTS [kg]

VERSIONE SILENZIATA / SILENCED VERSION

Alesaggio / Bore		Corse [mm] / Strokes [mm]															
	10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400	
16	0.3	0.35	–	0.4	0.45	0.5	0.7	0.85	1	1.15	1.3	1.45	1.6	–	–	–	
20	–	0.55	–	0.65	0.75	0.85	1.15	1.35	1.55	1.75	1.95	2.15	2.5	2.9	3.3	3.7	
25	–	0.9	–	1.05	1.2	1.35	1.9	2.25	2.55	2.85	3.15	3.35	4	4.35	4.7	5	
32	–	–	1.5	–	–	1.85	2.25	2.6	3	3.35	3.7	4.05	5.2	5.9	6.6	7.3	
40	–	–	1.75	–	–	2.15	2.55	2.95	3.35	3.75	4.15	4.55	5.8	6.6	7.4	8.2	

VERSIONE CON AMMORTIZZO PNEUMATICO / VERSION WITH PNEUMATIC CUSHIONING

VERSIONE CON STANDARDIZED FREELINE VERSION WITH FREELINE COORDINATES												
Alesaggio / Bore		Corse [mm] / Strokes [mm]										
	25	50	75	100	125	150	175	200	250	300	350	400
16	0.55	0.65	0.8	0.95	1.2	1.35	1.5	1.65	1.8	–	–	–
20	0.8	1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5
25	1.3	1.6	2	2.4	2.7	3	3.3	3.6	4.2	4.8	5.4	6
32	1.8	2.1	2.5	2.9	3.3	3.7	4.1	4.5	5.3	6.1	6.9	7.7
40	2.1	2.5	2.9	3.4	3.8	4.2	4.6	5	6.1	7.1	8.2	9.3

COMPONENTI VERSIONE SILENZIATA / COMPONENTS SILENCED VERSION

- ① CORPO: lega di alluminio estruso anodizzato
BODY: anodized extruded aluminium alloy
- ② STELO: acciaio cromato e rettificato
PISTON ROD: grinded chromed steel
- ③ FONDELLO POSTERIORE: lega di alluminio anodizzato
REAR BASE: anodized aluminium alloy
- ④ FONDELLO ANTERIORE: lega di alluminio anodizzato
FRONT BASE: anodized aluminium alloy
- ⑤ PISTONE: lega di alluminio
PISTON: aluminium alloy
- ⑥ MAGNETE: plastroferrite
MAGNET: plastroferrite
- ⑦ GUARNIZIONE PISTONE: NBR o poliuretano
PISTON GASKET: NBR or polyurethane
- ⑧ GUARNIZIONI O-RING: NBR
GASKET O-Ring: NBR
- ⑨ FLANGIA: lega di alluminio anodizzato
FLANGE: anodized aluminium alloy
- ⑩ PARACOLPO ELASTICO: poliuretano
ELASTIC BUFFER: polyurethane
- ⑪ TAPPO FILETTATO: ottone nichelato con O-Ring
THREADED PLUG: nickel-plated brass with O-Ring

N.B.: per utilizzare le alimentazioni pneumatiche laterali svitare i ed avvitare sui filetti delle alimentazioni pneumatiche sul lato superiore.

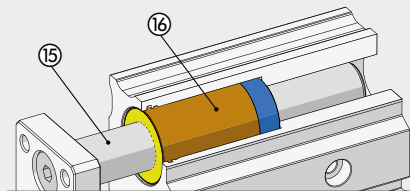
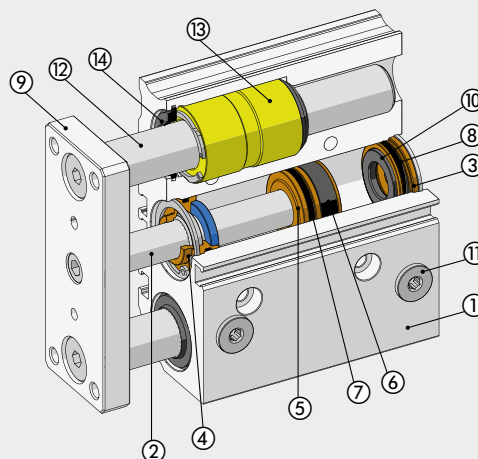
N.B.: when using side compressed air supplies, unscrew the caps tighten them onto the threads of the compressed air supplies on the upper side.

Versione con boccole in bronzo / Version with bronze bushings

- ⑫ STELO DI GUIDA: acciaio cromato e rettificato
GUIDE ROD: grinded chromed steel
- ⑬ BRONZINA DI SCORRIMENTO: bronzo sinterizzato
SLIDE BUSHING: sintered bronze
- ⑭ RASCHIATORE: NBR
WIPER RING: NBR

Versione con cuscinetti a ricircolo di sfere / Version with ball recirculating bearings

- ⑮ STELO DI GUIDA: acciaio al cromo temprato e cromato
GUIDE ROD: tempered and chromed chrome steel
- ⑯ CUSCINETTO A RICIRCOLO DI SFERE
BALL RECIRCULATING BEARING

**Versione con cuscinetti a ricircolo di sfere
Version with ball recirculating bearings****Versione con boccole in bronzo
Version with bronze bushings****NOTE / NOTES**

COMPONENTI VERSIONE CON AMMORTIZZO PNEUMATICO / COMPONENTS VERSION WITH PNEUMATIC CUSHIONING

- ① CORPO: lega di alluminio estruso anodizzato
BODY: anodized extruded aluminium alloy
- ② STELO: acciaio cromato e rettificato
PISTON ROD: grinded chromed steel
- ③ FONDELLO POSTERIORE: lega di alluminio anodizzato
REAR BASE: anodized aluminium alloy
- ④ FONDELLO ANTERIORE: lega di alluminio anodizzato
FRONT BASE: anodized aluminium alloy
- ⑤ PISTONE: lega di alluminio
PISTON: aluminium alloy
- ⑥ MAGNETE: plastroferrite
MAGNET: plastroferrite
- ⑦ GUARNIZIONE PISTONE: NBR o poliuretano
PISTON GASKET: NBR or polyurethane
- ⑧ GUARNIZIONI O-RING: NBR
GASKET O-Ring: NBR
- ⑨ FLANGIA: lega di alluminio anodizzato
FLANGE: anodized aluminium alloy
- ⑩ GUARNIZIONE AMMORTIZZO: NBR
CUSHIONING GASKET: NBR
- ⑪ SPILLO AMMORTIZZO: ottone
CUSHIONING NEEDLE: brass
- ⑫ TAPPO FILETTATO: ottone nichelato con O-ring
THREADED PLUG: nickel-plated brass with O-Ring

N.B.: per utilizzare le alimentazioni pneumatiche laterali svitare i tappi ed avvitarli sui filetti delle alimentazioni pneumatiche sul superiore.

N.B.: when using side compressed air supplies, unscrew the caps and tighten them onto the threads of the compressed air supplies on the upper side.

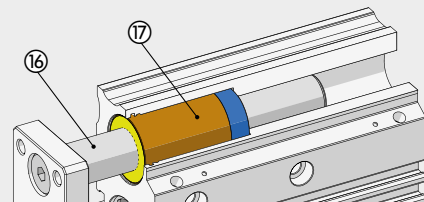
Versione con boccole in bronzo / Version with bronze bushings

- ⑬ STELO DI GUIDA: acciaio cromato e rettificato
GUIDE ROD: grinded chromed steel
- ⑭ BRONZINA DI SCORRIMENTO: bronzo sinterizzato
SLIDE BUSHING: sintered bronze
- ⑮ RASCHIATORE: NBR
WIPER RING: NBR

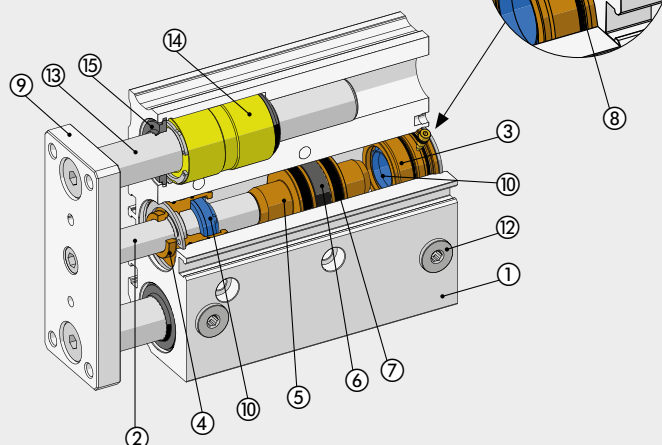
Versione con cuscinetti a ricircolo di sfere / Version with ball recirculating bearings

- ⑯ STELO DI GUIDA: acciaio al cromo temprato e cromato
GUIDE ROD: tempered and chromed chrome steel
- ⑰ CUSCINETTO A RICIRCOLO DI SFERE
BALL RECIRCULATING BEARING

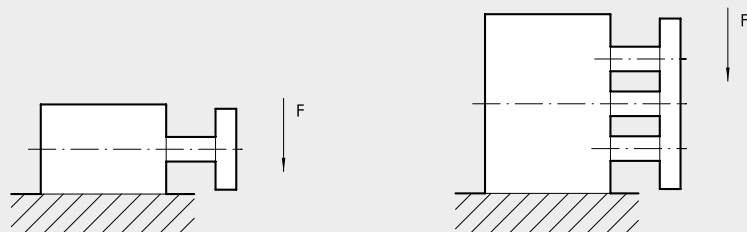
Versione con cuscinetti a ricircolo di sfere Version with ball recirculating bearings



Versione con boccole in bronzo Version with bronze bushings



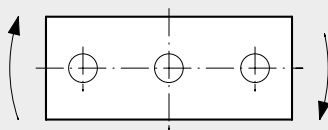
NOTE / NOTES

CARICO LATERALE MASSIMO AMMISSIBILE / MAXIMUM SIDE LOAD


Ø	Guida / Guide unit	Corse [mm] / Stroke [mm]															
[mm]		10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400
16	Bronzine / Bushes	40	35	32	29	25	24	25	20	19	18	16	13	10			
	Sfere / Balls	35	38	33	30	29	28	35	24	21	19	16	13	10			
20	Bronzine / Bushes	–	40	35	33	32	30	63	52	49	40	36	32	26	22	14	10
	Sfere / Balls	–	40	34	32	31	28	55	50	45	38	34	30	25	21	12	8
25	Bronzine / Bushes	–	70	60	50	40	36	80	70	65	55	50	45	35	25	18	10
	Sfere / Balls	–	70	60	50	40	36	65	55	62	52	45	42	30	23	15	6
32	Bronzine / Bushes	–	–	140	130	125	120	150	120	110	90	80	70	50	40	20	10
	Sfere / Balls	–	–	120	115	110	100	180	140	125	120	110	90	80	60	30	15
40	Bronzine / Bushes	–	–	140	130	125	120	150	120	110	90	80	70	50	40	20	10
	Sfere / Balls	–	–	120	115	110	100	180	140	125	120	110	90	80	60	30	15

Distanza baricentro da piano anteriore = 50 mm / Centre of gravity distance from the front plane = 50 mm

N.B.: Le forze indicate in tabella sono espresse in N / N.B.: Forces are expressed in N

MOMENTO MASSIMO AMMISSIBILE SULLA PIASTRA / MAXIMUM TORQUE ON PLATE


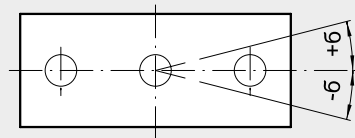
Ø	Guida / Guide unit	Corse [mm] / Stroke [mm]															
[mm]		10	20	25	30	40	50	75	100	125	150	175	200	250	300	350	400
16	Bronzine / Bushes	0.71	0.60	0.54	0.50	0.44	0.39	0.71	0.60	0.52	0.45	0.41	0.37	0.31	–	–	–
	Sfere / Balls	1.02	0.76	0.62	0.61	1.02	0.89	0.67	0.54	0.44	0.38	0.33	0.29	0.24	–	–	–
20	Bronzine / Bushes	–	1.08	1.03	0.96	0.85	0.77	1.94	1.68	1.48	1.32	1.19	1.09	0.93	0.80	0.71	0.64
	Sfere / Balls	–	1.30	1.13	1.06	2.24	2.00	1.57	1.29	1.38	1.21	1.06	0.96	0.78	0.67	0.58	0.50
25	Bronzine / Bushes	–	1.81	1.67	1.60	1.42	1.29	3.05	2.65	2.33	2.08	1.88	1.72	1.46	1.28	1.12	1.01
	Sfere / Balls	–	2.17	2.01	1.80	3.47	3.11	2.45	2.03	2.11	1.83	1.63	1.45	1.19	1.01	0.88	0.76
32	Bronzine / Bushes	–	–	6.54	–	–	5.28	5.86	5.12	4.55	4.10	3.72	3.41	2.93	2.55	2.27	2.04
	Sfere / Balls	–	–	6.13	–	–	5.04	5.26	4.65	6.53	5.96	5.49	5.08	4.42	3.89	3.48	3.13
40	Bronzine / Bushes	–	–	7.21	–	–	5.83	6.46	5.64	5.02	4.51	4.10	3.76	3.22	2.82	2.50	2.26
	Sfere / Balls	–	–	6.75	–	–	5.55	5.79	5.11	7.19	6.57	6.05	5.59	4.86	4.28	3.82	3.45

N.B.: Le forze indicate in tabella sono espresse in Nm / N.B.: Forces are expressed in Nm

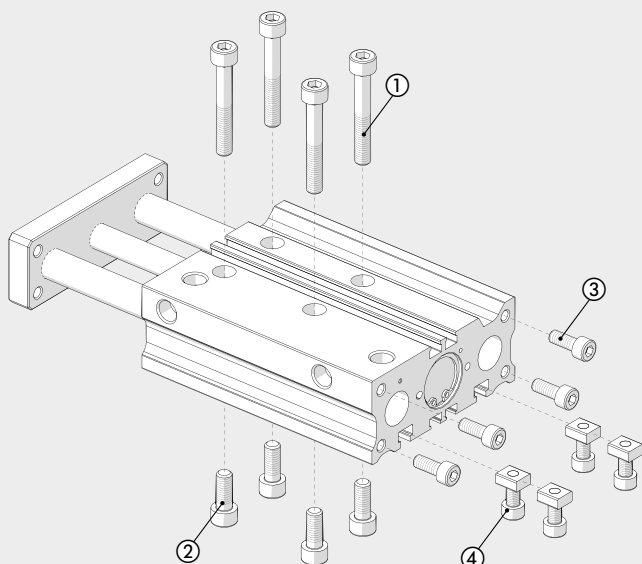
GIOCO TORSIONALE / TORSIONAL BACKLASH

Gioco torsionale 6 con steli in posizione retratta e senza carichi applicati.
Torsional backlash 6 with piston rods retracted and without applied loads.

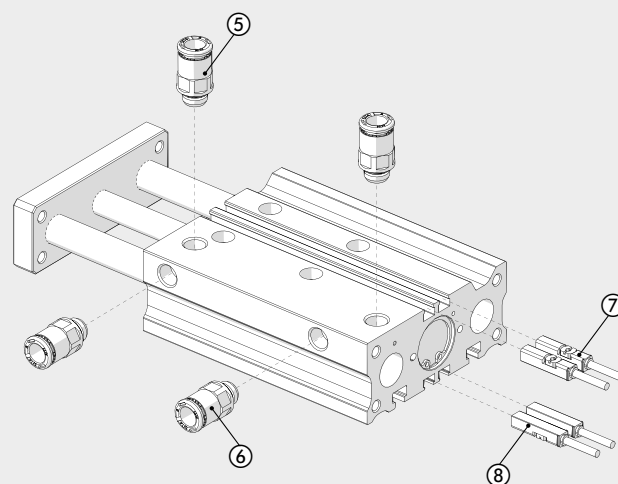
Gioco torsionale 6 [°]	Ø [mm]				
	16	20	25	32	40
Torsional backlash 6					
Con boccole in bronzo <i>With bronze bushings</i>	±0,07	±0,06	±0,06	±0,05	±0,05
Con cuscinetti a ricircolo di sfere <i>With ball recirculating bearings</i>	±0,05	±0,04	±0,04	±0,03	±0,03



POSSIBILITÀ DI FISSAGGIO / MOUNTING OPTIONS



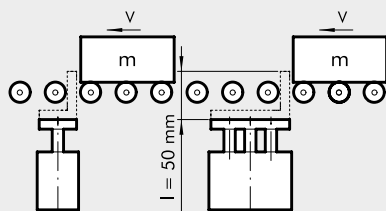
- ① Fissaggio con viti passanti
Fixing with through screws
- ② Fissaggio mediante fori filettati
Fixing with threaded holes
- ③ Fissaggio dal lato posteriore, mediante fori filettati
Fixing from the back side, using threaded holes
- ④ Fissaggio con tasselli inseriti nelle cave a T
Fixing with plugs inserted into the T-slots



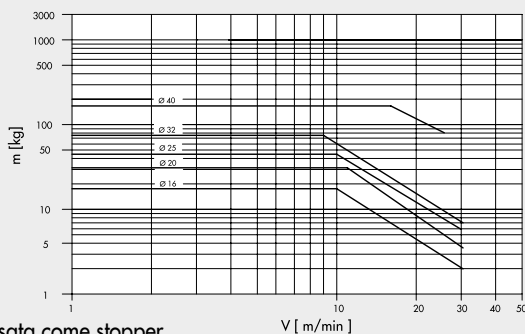
- ⑤ Alimentazioni pneumatiche sulla faccia superiore
Compressed air supply on the upper side
- ⑥ Alimentazioni pneumatiche sulla faccia laterale
Compressed air supply on the lateral side
- ⑦ Numero due cave per sensori sulla faccia superiore
Two sensor slots on the upper side
- ⑧ Numero due cave per sensori sulla faccia inferiore
Two sensor slots on the lower side

NOTE / NOTES

UTILIZZO FUNZIONI STOPPER / STOPPER FUNCTIONS



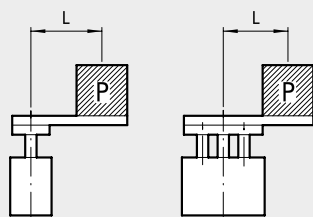
Il grafico si riferisce a un cilindro con corsa massima di 50 mm con guida a bronzine
The graph refers to a cylinder with a maximum stroke of 50 mm and with bushing guides.



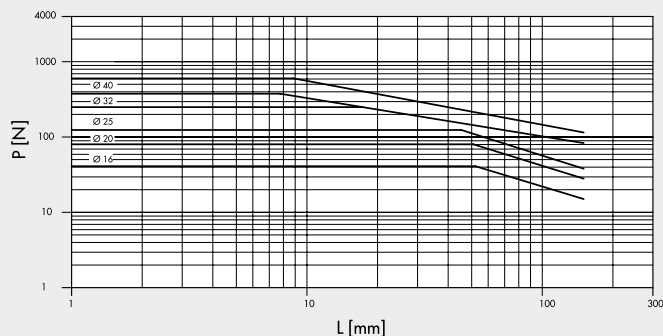
N.B.: La versione con boccia a sfere non deve essere usata come stopper.

N.B.: The version with a ball bushing must not be used as a stopper.

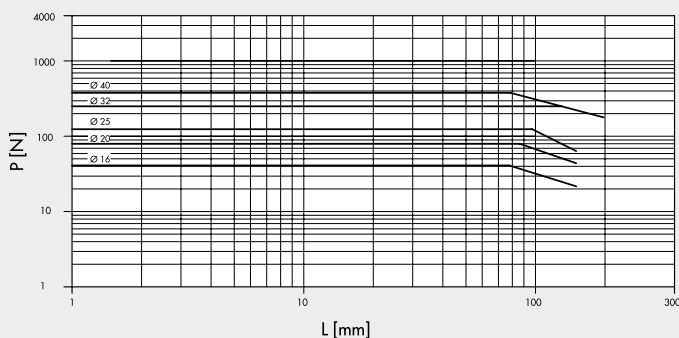
UTILIZZO FUNZIONI DI SOLLEVAMENTO / LIFTING FUNCTIONS



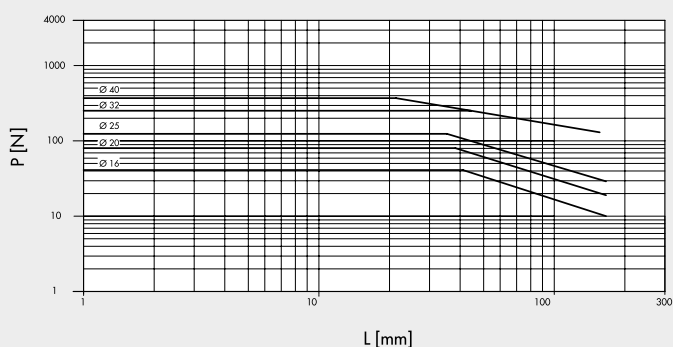
Il grafico si riferisce a cilindri con corse sino a 50 mm con guida a ricircolo di sfere
The graph refers to cylinders with a stroke of up to 50 mm with a ball recirculation guide.



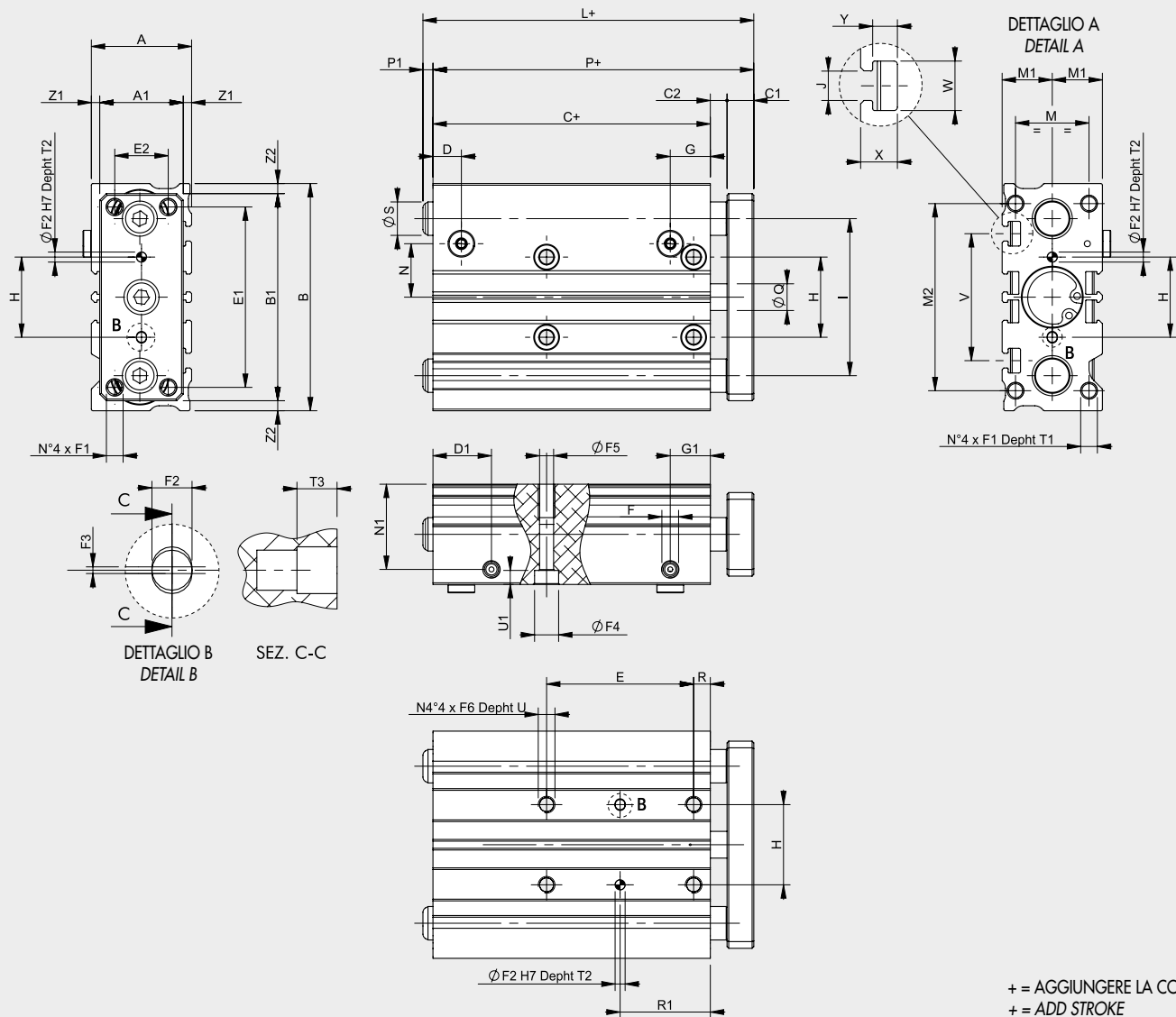
Il grafico si riferisce a cilindri con corse maggiori di 50 mm con guida a ricircolo di sfere
The graph refers to cylinders with a stroke greater than 50 mm with a ball recirculation guide.



Il grafico si riferisce a cilindri con guida a bronzine
The graph refers to cylinders with a bushing guide.



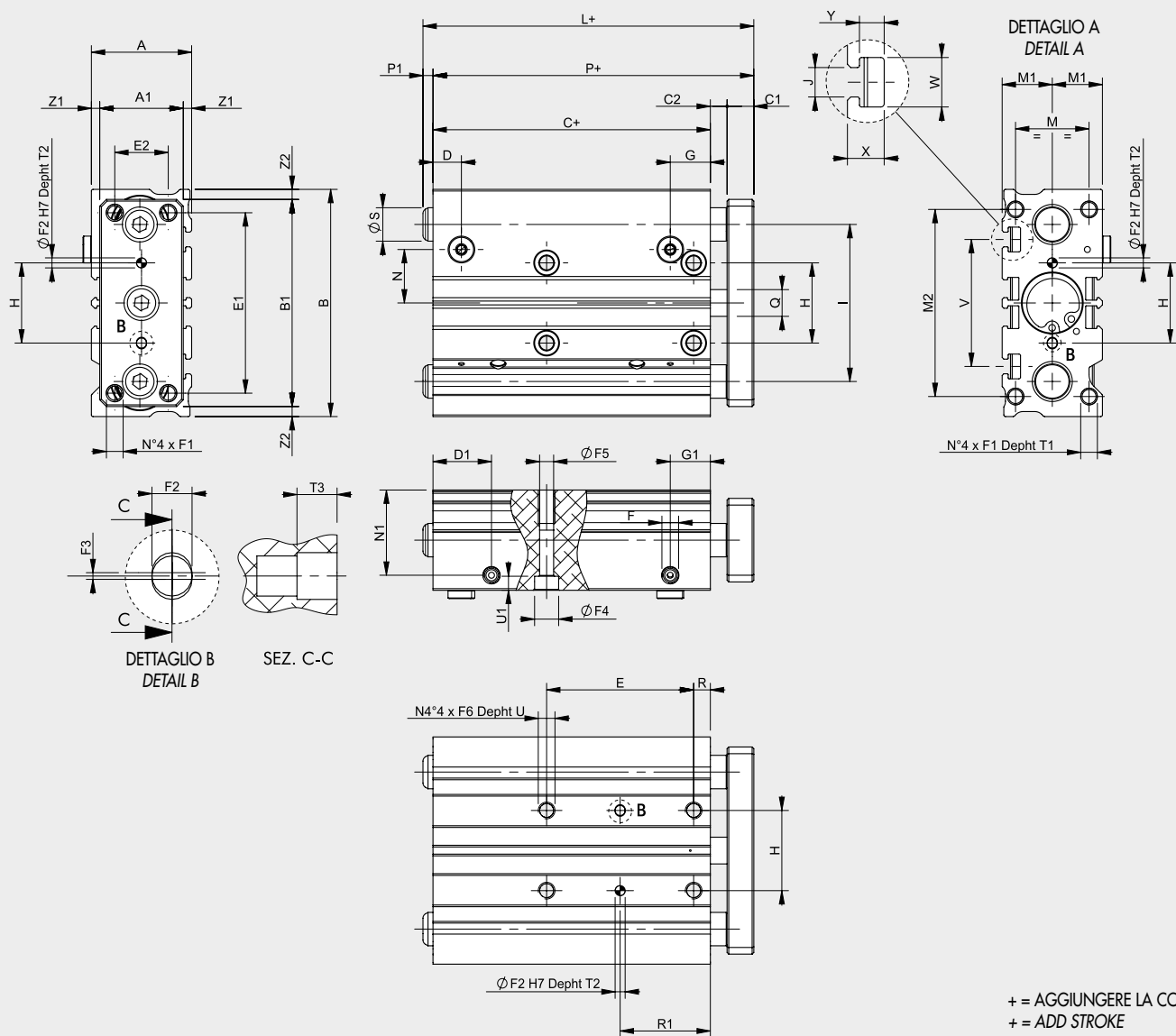
DIMENSIONI VERSIONE SILENZIATA / DIMENSIONS SILENCED VERSION



Ø	A	A1	B	B1	C	C1	C2	D	D1	E1	E2	F	F1	F2 ^{H7}	F3	F4	F5	F6	G	G1	H ^{±0.025}	I	J	M	M1	M2
16	30	25	68	62	33	8	5	8.5	17.5	54	16	M5	M5	3	0.5	7.2	4.2	M5	12	12	24	47	4.4	22	15	56
20	36	30	83	81	37	10	6	9.5	24.5	70	18	G1/8	M5	3	0.5	8.8	5.2	M6	10.5	10.5	28	54	5.4	24	18	72
25	42	38	101	91	37.5	10	6	10	24.5	78	26	G1/8	M6	4	0.5	8.8	5.2	M6	10	10	34	68	5.4	30	21	82
32	48	44	112	110	37.5	12	10	10	28	96	30	G1/8	M8	4	0.5	10.2	6.8	M8	10.5	10.5	42	78	6.5	34	24	98
40	54	44	120	118	44	12	10	12.5	31	104	30	G1/8	M8	4	0.5	10.2	6.8	M8	12.5	12.5	50	86	6.5	40	27	106

Ø	N	N1	P	Q	R	S	T1	T2	T3	U	U1	V	W	X	Y	Z1	Z2
16	16	25.5	46	8	5	10	10	6	3	10	4.2	38	7.4	5.5	3.7	2.5	3
20	25	29.5	53	10	17	12	12	6	3	12	5.2	44	8.4	7	4.5	3	1
25	25.5	36	53.5	12	17	16	12	6	3	12	5.2	50	8.4	7	4.5	2	5
32	35.5	41	59.5	16	21	20	16	6	3	16	6.2	63	10.5	7.5	5.5	2	1
40	36	46.5	66	16	22	20	16	6	3	16	6.2	72	10.5	7.5	5.5	5	1

Ø	E					R1					L			P1		
	Corse / Stroke					Corse / Stroke					Corse / Stroke			Corse / Stroke		
	10÷30	40÷100	125÷200	250-300	350-400	10÷30	40÷100	125÷200	250-300	350-400	10÷50	75÷200	250÷400	10÷50	75÷200	250÷400
16	24	44	110	200	-	17	27	60	105	-	49	79	109	3	33	63
20	24	44	120	200	300	29	39	77	117	167	58	88	118	5	35	65
25	24	44	120	200	300	29	39	77	117	167	70.5	103	118	17	49.5	64.5
32	24	48	124	200	300	33	45	83	121	171	88	88	138	28.5	28.5	78.5
40	24	48	124	200	300	34	46	84	122	172	88	88	138	22	22	72

DIMENSIONI VERSIONE CON AMMORTIZZO PNEUMATICO / DIMENSIONS WITH PNEUMATIC CUSHIONING VERSION


+ = AGGIUNGERE LA CORSA
+ = ADD STROKE

Ø	A	A1	B	B1	C	C1	C2	D	D1	E1	E2	F	F1	F2 ^{H7}	F3	F4	F5	F6	G	G1	H ^{±0.025}	I	J	M	M1	M2
16	30	25	68	62	58	8	5	8.5	17.5	54	16	M5	M5	3	0.5	7.2	4.2	M5	12	12	24	47	4.4	22	15	56
20	36	30	83	81	62	10	6	9	24.5	70	18	G1/8	M5	3	0.5	8.8	5.2	M6	11.5	11.5	28	54	5.4	24	18	72
25	42	38	101	91	62.5	10	6	9.5	24.5	78	26	G1/8	M6	4	0.5	8.8	5.2	M6	10	10	34	68	5.4	30	21	82
32	48	44	112	110	62.5	12	10	9	28	96	30	G1/8	M8	4	0.5	10.2	6.8	M8	9	9	42	78	6.5	34	24	98
40	54	44	120	118	69	12	10	10	31	104	30	G1/8	M8	4	0.5	10.2	6.8	M8	10	10	50	86	6.5	40	27	106

Ø	N	N1	P	Q	R	S	T1	T2	T3	U	U1	V	W	X	Y	Z1	Z2
16	16	25.5	71	8	5	10	10	6	3	10	4.2	38	7.4	5.5	3.7	2.5	3
20	25	29.5	78	10	17	12	12	6	3	12	5.2	44	8.4	7	4.5	3	1
25	25.5	36	78.5	12	17	16	12	6	3	12	5.2	50	8.4	7	4.5	2	5
32	35.5	41	84.5	16	21	20	16	6	3	16	6.2	63	10.5	7.5	5.5	2	1
40	36	46.5	91	16	22	20	16	6	3	16	6.2	72	10.5	7.5	5.5	5	1

Ø	E				R1				L			P1		
	Corse / Stroke				Corse / Stroke				Corse / Stroke			Corse / Stroke		
	25÷75	100÷175	200-250	300÷400	25÷75	100÷175	200-250	300÷400	25÷50	75÷200	250÷400	25÷50	75÷200	250÷400
16	44	110	200	-	27	60	105	-	71	79	109	0	8	38
20	44	120	200	300	39	77	117	167	78	88	118	0	10	40
25	44	120	200	300	39	77	117	167	78.5	103	118	0	24.5	39.5
32	48	124	200	300	45	83	121	171	88	88	138	3.5	3.5	53.5
40	48	124	200	300	46	84	122	172	91	91	138	0	0	47

CHIAVE DI CODIFICA / KEY TO CODES

W 1 4 3 TIPOLOGIA TYPE	0 2 0 ALESAGGIO DIAMETER	D VERSIONE VERSION	0 7 5 CORSO STROKE
Cilindro compatto guidato Compact guided cylinder	016 16 020 20 025 25 032 32 040 40	A Con boccole in bronzo, silenziato <i>Bronze bushings, silenced</i> B Con cuscinetti a ricircolo di sfere, silenziato <i>Ball recirculating bearings, silenced</i> C Con boccole in bronzo, con ammortizzo pneumatico <i>Bronze bushings with pneumatic cushioning</i> D Con cuscinetti a ricircolo di sfere, con ammortizzo pneumatico <i>Ball recirculating bearings with pneumatic cushioning</i>	VERSIONE SILENZIATA ♦ <i>SILENCED VERSION ♦</i> Ø 16: 10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250 Ø 20 ÷ 25: 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400 Ø 32 ÷ 40: 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400 VERSIONE CON AMMORTIZZO PNEUMATICO <i>WITH PNEUMATIC CUSHIONING VERSION</i> Ø 16: 25, 50, 75, 100, 125, 150, 175, 200, 250 Ø 20 ÷ 40: 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400 ♦ A richiesta fornibili altre corse, ma gli ingombri del cilindro sono quelli della corsa standard immediatamente superiore <i>Other strokes on request but with the same cylinder dimensions as the standard stroke immediately above.</i>

ACCESSORI / ACCESSORIES

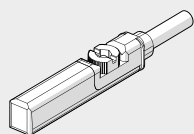
SENSORE A SCOMPARSA / RETRACTABLE SENSOR

SENSORE TIPO SQUARE

Ultima generazione,
fissaggio robusto

SENSOR, SQUARE TYPE

Latest generation,
secure fixing

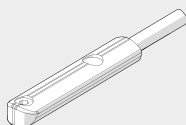


SENSORE TIPO OVALE

Tradizionale

SENSOR, OVAL TYPE

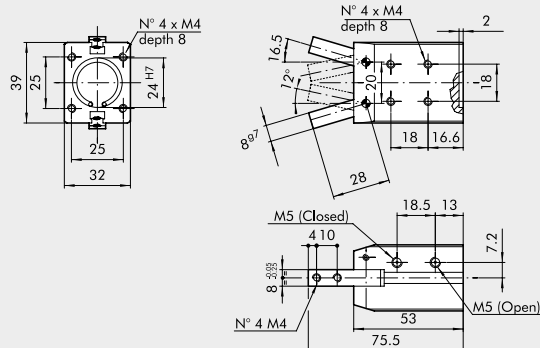
Traditional



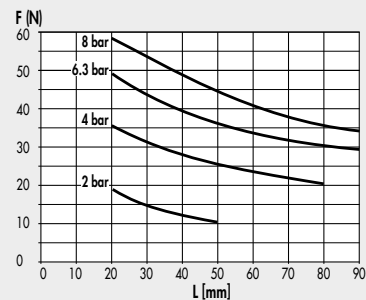
Per codici e dati tecnici vedere capitolo A6.
 For codes and technical data, see chapter A6.

NOTES

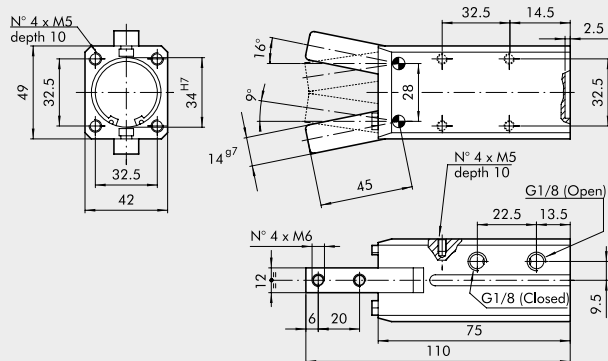
DIMENSIONI PINZE PFP-20 / DIMENSIONS OF GRIPPERS PFP-20



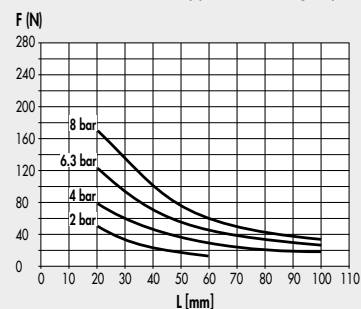
Cod. W1590200200 **Descrizione / Description**
 Pinza 2 griffe fulcrata PFP-20
 Gripper with 2 hinged jaws PFP-20



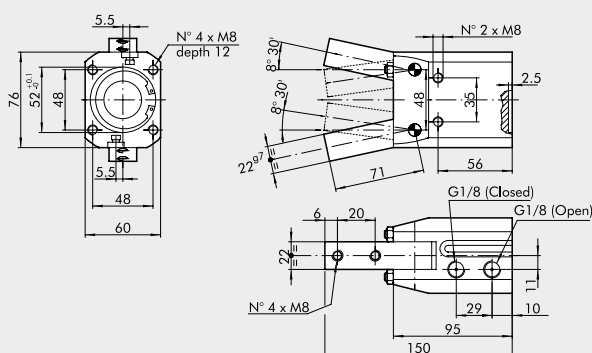
DIMENSIONI PINZE PFP-32 / DIMENSIONS OF GRIPPERS PFP-32



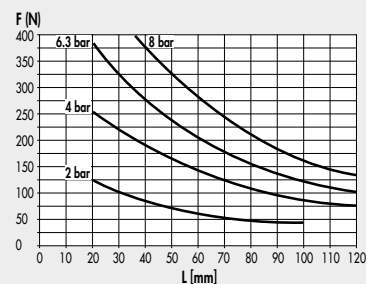
Cod. W1590320200 **Descrizione / Description**
 Pinza 2 griffe fulcrata PFP-32
 Gripper with 2 hinged jaws PFP-32



DIMENSIONI PINZE PFP-50 / DIMENSIONS OF GRIPPERS PFP-50



Cod. W1590500200 **Descrizione / Description**
 Pinza 2 griffe fulcrata PFP-50
 Gripper with 2 hinged jaws PFP-50

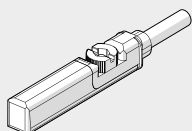


ACCESSORI / ACCESSORIES

SENSORE A SCOMPARSA CON L'INSERIMENTO DALL'ALTO / RETRACTABLE SENSOR WITH INSERTION FROM ABOVE

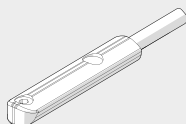
SENSORE TIPO SQUARE

Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
 Latest generation, secure fixing



SENSORE TIPO OVALE

Tradizionale
SENSOR, OVAL TYPE
 Traditional



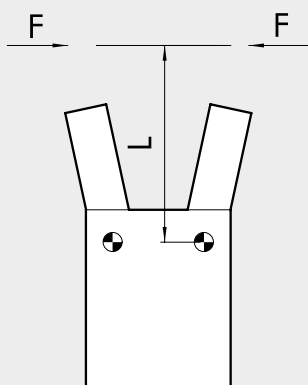
Per codici e dati tecnici vedere **capitolo dati tecnici**.
 For codes and technical data, see **chapter technical data**.

**PINZE A DUE GRIFFE FULCRATE
180° SERIE P9
GRIPPER 180° WITH 2 HINGED
JAWS SERIES P9**

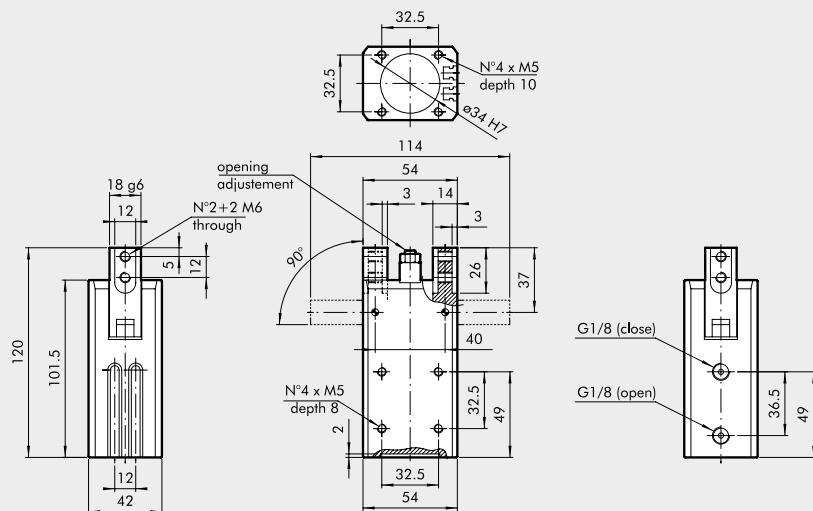


DATI TECNICI / TECHNICAL DATA		P9-32	P9-40
Pressione d'esercizio / <i>Operating pressure</i>	bar	2 ÷ 8	
	MPa	0.2 ÷ 0.8	
	psi	29 ÷ 116	
Temperatura d'esercizio / <i>Temperature range</i>	°C	-10 ÷ +80	
Fluido / <i>Fluid</i>		Aria filtrata 20 µm con o senza lubrificazione Se si utilizza aria lubrificata la lubrificazione deve essere continua <i>Filtered, lubricated or unlubricated air; lubrication if used, it must be continuous</i>	
Alesaggi / <i>Bores</i>	mm	32	40
Angolo di apertura delle griffe / <i>Jaw opening angle</i>		180° con possibilità di regolazione <i>Adjustable 180°</i>	
Forza di serraggio (a 6.3 bar) a 40 mm di distanza dal fulcro delle griffe, w in apertura o chiusura <i>Clamping force at 6.3 bar 40 mm from the jaw pivot during opening and closing</i>	N	160	260
Peso / <i>Weight</i>	kg	0.85	1.5

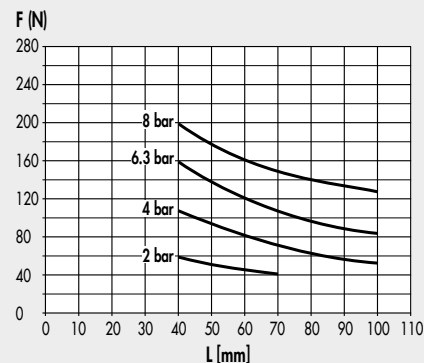
SCHEMA FORZA DI SERRAGGIO IN FUNZIONE DEL PUNTO DI APPLICAZIONE
TABLE OF CLAMPING FORCES FOR VARIOUS POINTS OF APPLICATION



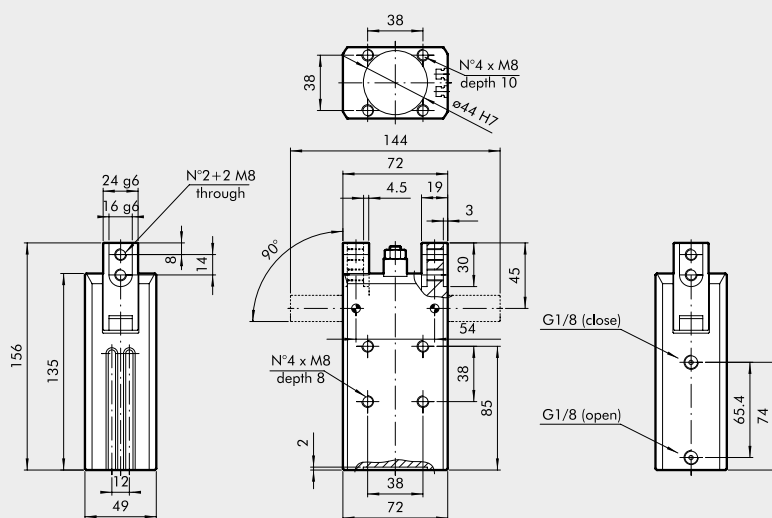
DIMENSIONI PINZA P9-32 / DIMENSIONS OF GRIPPER P9-32



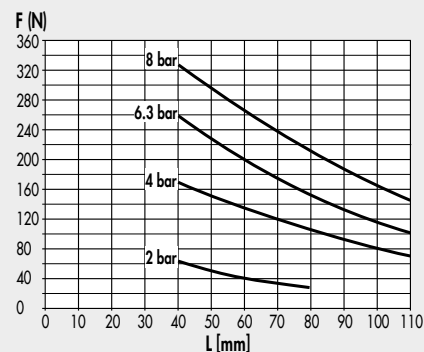
Cod.	Descrizione / Description
W1530320180	Pinza a due griffe fulcrate P9-32 Hinged gripper P9-32



DIMENSIONI PINZA P9-40 / DIMENSIONS OF GRIPPER P9-40



Cod.	Descrizione / Description
W1530400180	Pinza a due griffe fulcrate P9-40 Hinged gripper P9-40



ACCESSORI / ACCESSORIES

SENSORE A SCOMPARSA CON L'INSERIMENTO DALL'ALTO / RETRACTABLE SENSOR WITH INSERTION FROM ABOVE

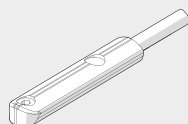
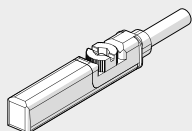
SENSORE TIPO SQUARE

Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
 Latest generation, secure fixing

SENSORE TIPO OVALE

Tradizionale
SENSOR, OVAL TYPE
 Traditional

Per codici e dati tecnici vedere capitolo dati tecnici.
 For codes and technical data, see chapter technical data.





PINZA PNEUMATICA PARALLELA SERIE PP PNEUMATIC PARALLEL GRIPPER TYPE PP

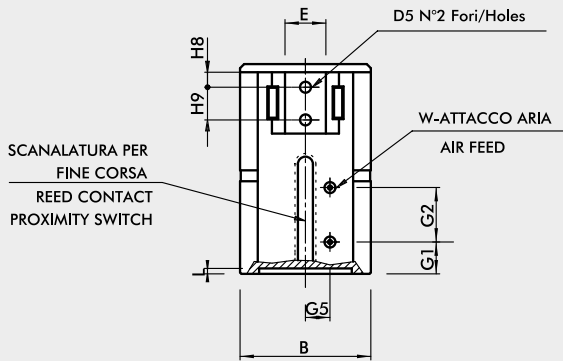
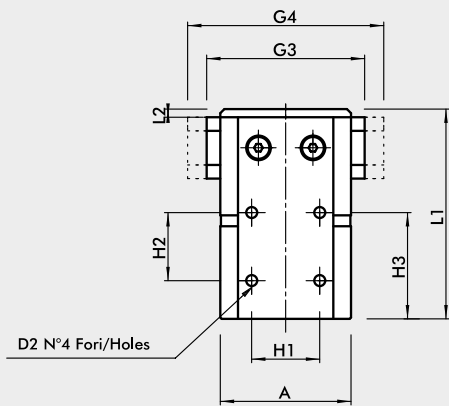
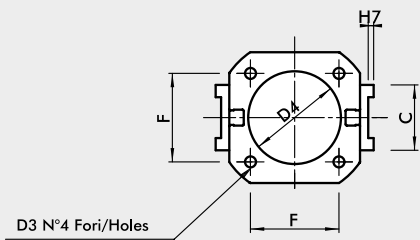
ATTUATORI / ACTUATORS

PINZA PNEUMATICA PARALLELA SERIE PP
PNEUMATIC PARALLEL GRIPPER TYPE PP

Ø20, Ø32



DATI TECNICI / TECHNICAL DATA		PP-20	PP-32
Pressione d'esercizio / Operating pressure	bar	2 ÷ 6	
	MPa	0.2 ÷ 0.6	
	psi	29 ÷ 87	
	°C	5 ÷ 70	
Temperatura d'esercizio / Temperature range		Aria filtrata 20 µm con o senza lubrificazione	
Fluido / Fluid		Se si utilizza aria lubrificata la lubrificazione deve essere continuo	
		20 µm filtered, lubricated or unlubricated air;	
		lubrication if used, it must be continuous	
Alesaggi / Bores	mm	20	32
Forza di serraggio a 6.3 bar / Clamping force at 6.3 bar	N	180	420
Corsa singola griffa / Single jaw stroke	mm	5	5
Peso / Weight	kg	0.40	0.50



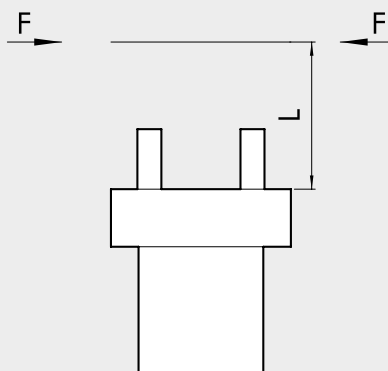
Ø	A	B	C	ØD ₂	ØD ₃	ØD ₄	ØD ₅	E	F	G ₁	G ₂	G ₃	G ₄	G ₅	H ₁	H ₂	H ₃	H ₇	H ₈	H ₉	L	L ₁	L ₂	W
20	39	39	18	M4	M4	22	M4	10 ^{H7}	25	8	21	44	54	7	18	18	35	2	3.5	9	1.5	69	2.7	M5
32	48	48	24	M5	M5	34 ^{H7}	M5	15 ^{G6}	32.5	11.5	22	54	64	11	25	25	39.5	2	5	12	2.2	78	2.5	G1/8

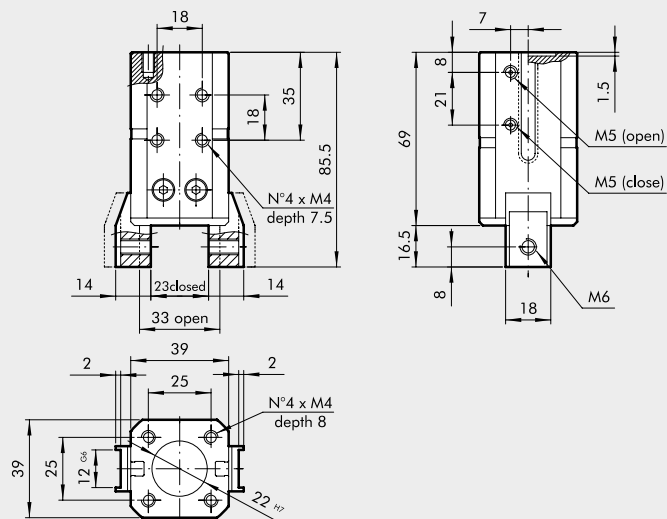
**PINZA A DUE GRIFFE PARALLELE
SERIE P1
GRIPPER WITH TWO PARALLEL JAWS
SERIES P1**

Ø20, Ø32

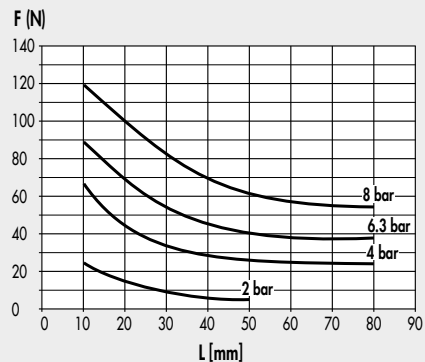
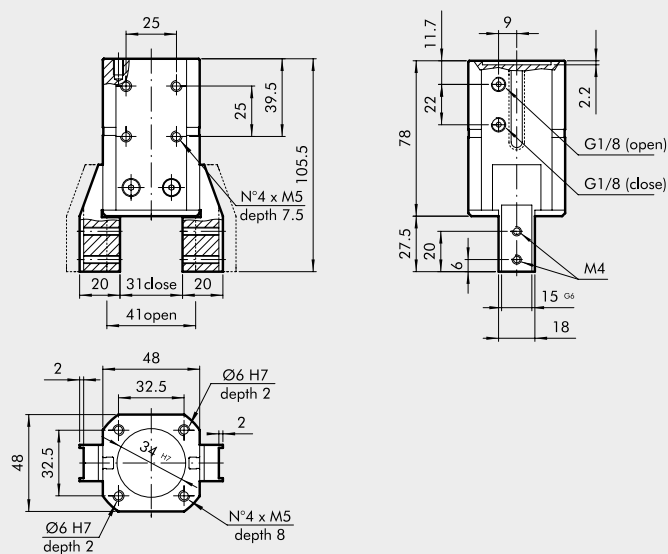
[illegible]

SCHEMA FORZA DI SERRAGGIO IN FUNZIONE DEL PUNTO DI APPLICAZIONE
TABLE OF CLAMPING FORCES FOR VARIOUS POINTS OF APPLICATION

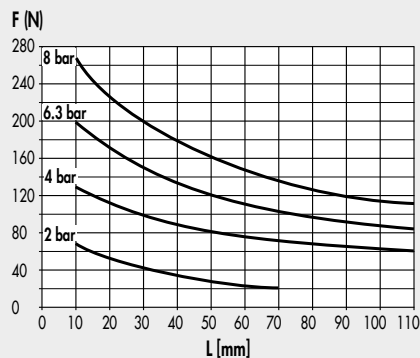


DIMENSIONI PINZA P1-20 / DIMENSIONS OF GRIPPER P1-20


Cod.	Descrizione / Description
W1550200001	Pinza a 2 griffe parallele P1-20 Gripper with 2 parallel jaws P1-20


DIMENSIONI PINZA P1-32 / DIMENSIONS OF GRIPPER P1-32


Cod.	Descrizione / Description
W1550320001	Pinza a 2 griffe parallele P1-32 Gripper with 2 parallel jaws P1-32

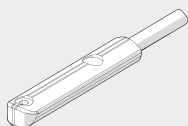
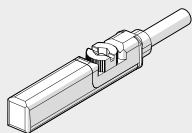

ACCESSORI / ACCESSORIES
SENSORE A SCOMPARSA CON L'INSERIMENTO DALL'ALTO / RETRACTABLE SENSOR WITH INSERTION FROM ABOVE
SENSORE TIPO SQUARE

Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
Latest generation, secure fixing

SENSORE TIPO OVALE

Tradizionale
SENSOR, OVAL TYPE
Traditional

Per codici e dati tecnici vedere capitolo dati tecnici.
For codes and technical data, see chapter technical data.

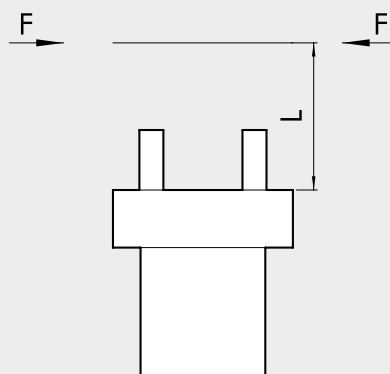


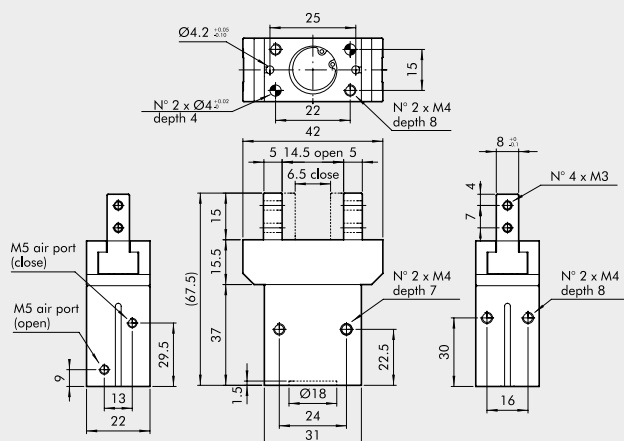
PINZA A DUE GRIFFE PARALLELE SERIE P2 GRIPPER WITH TWO PARALLEL JAWS SERIES P2



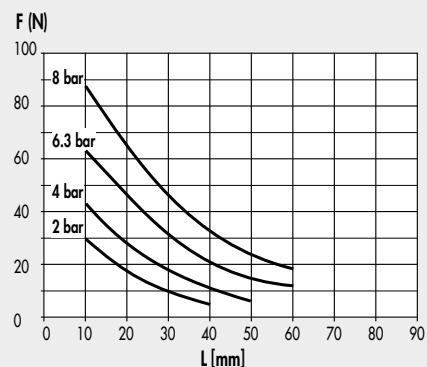
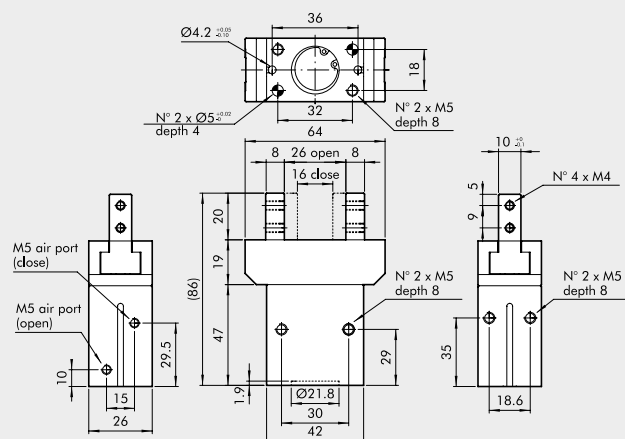
DATI TECNICI / TECHNICAL DATA		P2 -16	P2-20	P2- 25
Pressione d'esercizio / Operating pressure	bar		2 ÷ 8	
	MPa		0.2 ÷ 0.8	
	psi		29 ÷ 116	
Temperatura d'esercizio / Operating temperature	°C		-10 ÷ +80	
Frequenza max di utilizzo / Maximum operating frequency	cicli / cycles/s		2	
Fluido / Fluid		Aria filtrata 20 µm con o senza lubrificazione se utilizzata la lubrificazione deve essere continua 20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous		
Taglia / Size		16	20	25
Alesaggio / Bore	mm	16	20	25
Corsa singola griffa / Single jaw stroke	mm	4	5	7
Forza di serraggio (a 6.3 bar) a 20 mm di distanza dal piano superiore, in apertura o chiusura Clamping force at 6.3 bar 20 mm from the top surface during opening and closing	N	45	100	135
Peso / Weight	kg	0.2	0.4	0.75

SCHEMA FORZA DI SERRAGGIO IN FUNZIONE DEL PUNTO DI APPLICAZIONE
TABLE OF CLAMPING FORCES FOR VARIOUS POINTS OF APPLICATION

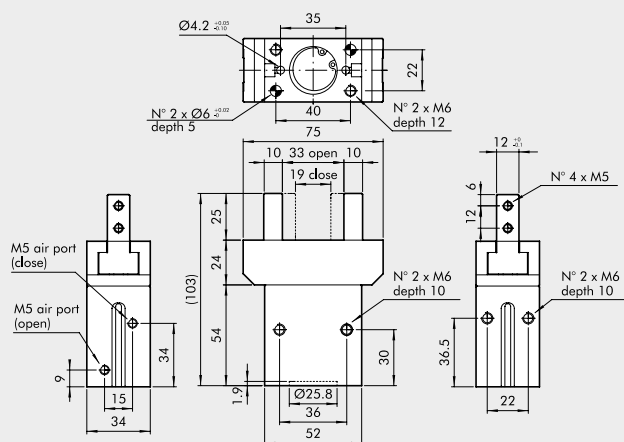


DIMENSIONI PINZA P2-16 / DIMENSIONS OF GRIPPER P2-16

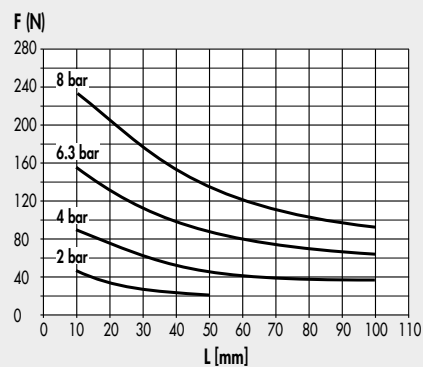
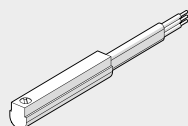
Cod. W1570160200 **Descrizione / Description**
Pinza 2 griffe parallele P2-16
Gripper with 2 parallel jaws P2-16

**DIMENSIONI PINZA P2-20 / DIMENSIONS OF GRIPPER P2-20**

Cod. W1570200200 **Descrizione / Description**
Pinza 2 griffe parallele P2-20
Gripper with 2 parallel jaws P2-20

**DIMENSIONI PINZA P2-25 / DIMENSIONS OF GRIPPER P2-25**

Cod. W1570250200 **Descrizione / Description**
Pinza 2 griffe parallele P2-25
Gripper with 2 parallel jaws P2-25

**ACCESSORI / ACCESSORIES****SENSORE Ø 4 / SENSOR Ø 4**

Per codici e dati tecnici vedere capitolo dati tecnici.
For codes and technical data, see chapter technical data.

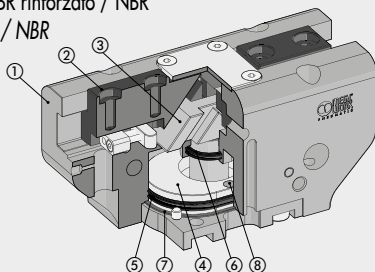
PINZA A DUE GRIFFE PARALLELE SERIE P3 GRIPPER WITH TWO PARALLEL JAWS SERIES P3



DATI TECNICI / TECHNICAL DATA		P3-40	P3-64	P3-80		P3-100	
				Standard	Forza maggiorata Increased force	Standard	Forza maggiorata Increased force
Pressione d'esercizio / Operating pressure	bar				2 ÷ 8		
	MPa				0.2 ÷ 0.8		
	psi				29 ÷ 116		
Temperatura d'esercizio / Temperature range	°C				-10 ÷ 80		
Fluido / Fluid		Aria filtrata 20 µm con o senza lubrificazione. Se si utilizza aria lubrificata la lubrificazione deve essere continua 20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Forza di serraggio di una singola griffa a 6,3 bar a 20 mm dal piano superiore, in apertura e chiusura Clamping force of a single jaw at 6.3 bar, 20 mm from the upper surface, on opening and closing	N	75	125	265	445	360	790
Massimo peso movimentabile / Maximum movable weight	kg	0.65	1.3	2.5	5	3.5	7
Corsa di una singola griffa / Stroke of each jaw	mm	2.5	6	8	4	10	5
Tempo minimo apertura/chiusura Minimum opening/closing time	s			0.05			
Ripetibilità / Repeatability	mm			0.01			
Momento d'inerzia rispetto all'asse del pistone Moment of inertia as regards the piston axis	kg cm ²	1.8	4	4.5		12	
Carichi massimi statici ammissibili: Max. admissible static loads:							
- Fa	N	250	1100	1500		2000	
- Mx	Nm	10	40	90		80	
- My	Nm	5	60	55		115	
- Mz	Nm	12	40	55		70	
Peso / Weight	kg	0.12	0.35	0.5		0.9	

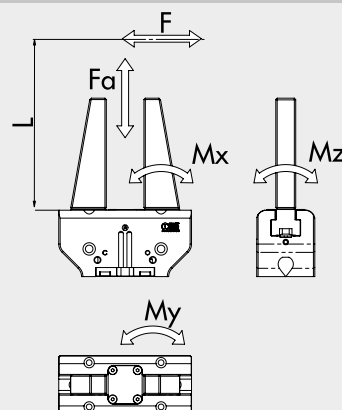
COMPONENTI / COMPONENTS

- ① CORPO: alluminio anodizzato duro / BODY: hard-anodised aluminium
- ② GRIFFE: acciaio nitratato / JAWS: nitrided steel
- ③ STELO + GUIDA: acciaio nitratato / PISTON ROD + GUIDE: nitrided steel
- ④ PISTONE: alluminio anodizzato duro / PISTON: hard-anodised aluminium
- ⑤ GUARNIZIONE PISTONE: NBR / PISTON GASKET: NBR
- ⑥ GUARNIZIONE STELO: NBR / poliuretano
PISTON ROD GASKET: NBR / polyurethane
- ⑦ GUARNIZIONE FONDELLO: SBR rinforzato / NBR
BASE GASKET: reinforced SBR / NBR
- ⑧ MAGNETE: neodimio
MAGNET: neodymium



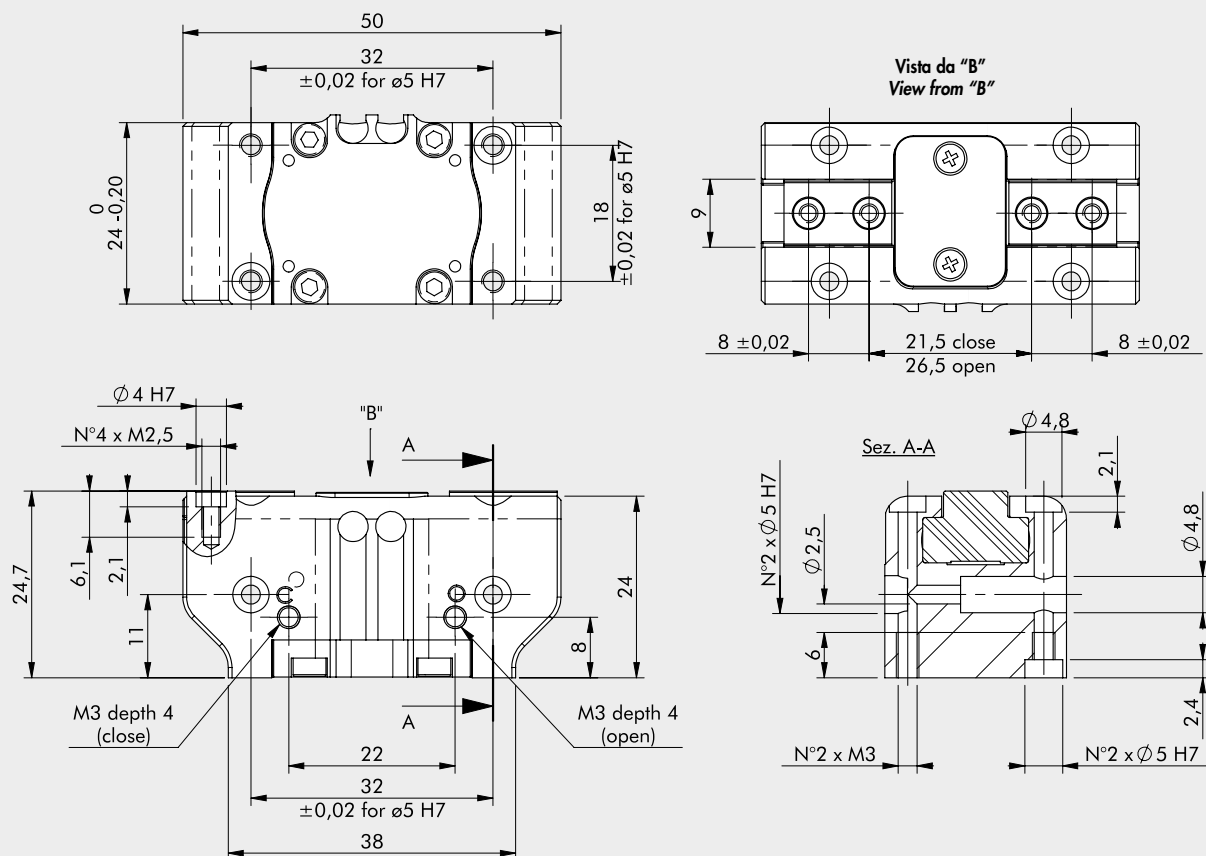
SCHEMA FORZE E MOMENTI

DIAGRAM OF FORCES AND MOMENTS

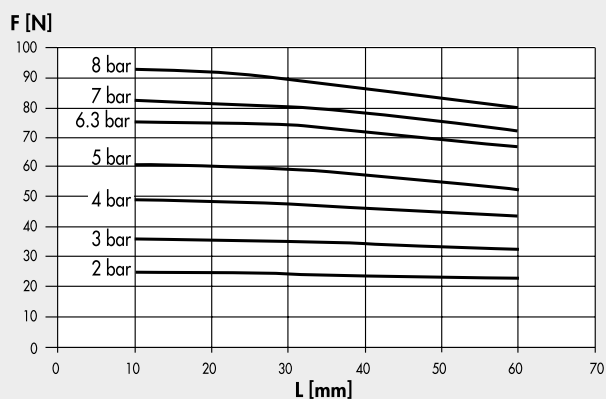


F Forza di serraggio per ogni griffa / Clamping force for each jaw
Fa Forza assiale statica massima / Maximum static axial force
Mx, My, Mz Momenti statici massimi / Maximum static moments

DIMENSIONE PINZA P3-40 / DIMENSIONS OF GRIPPER P3-40

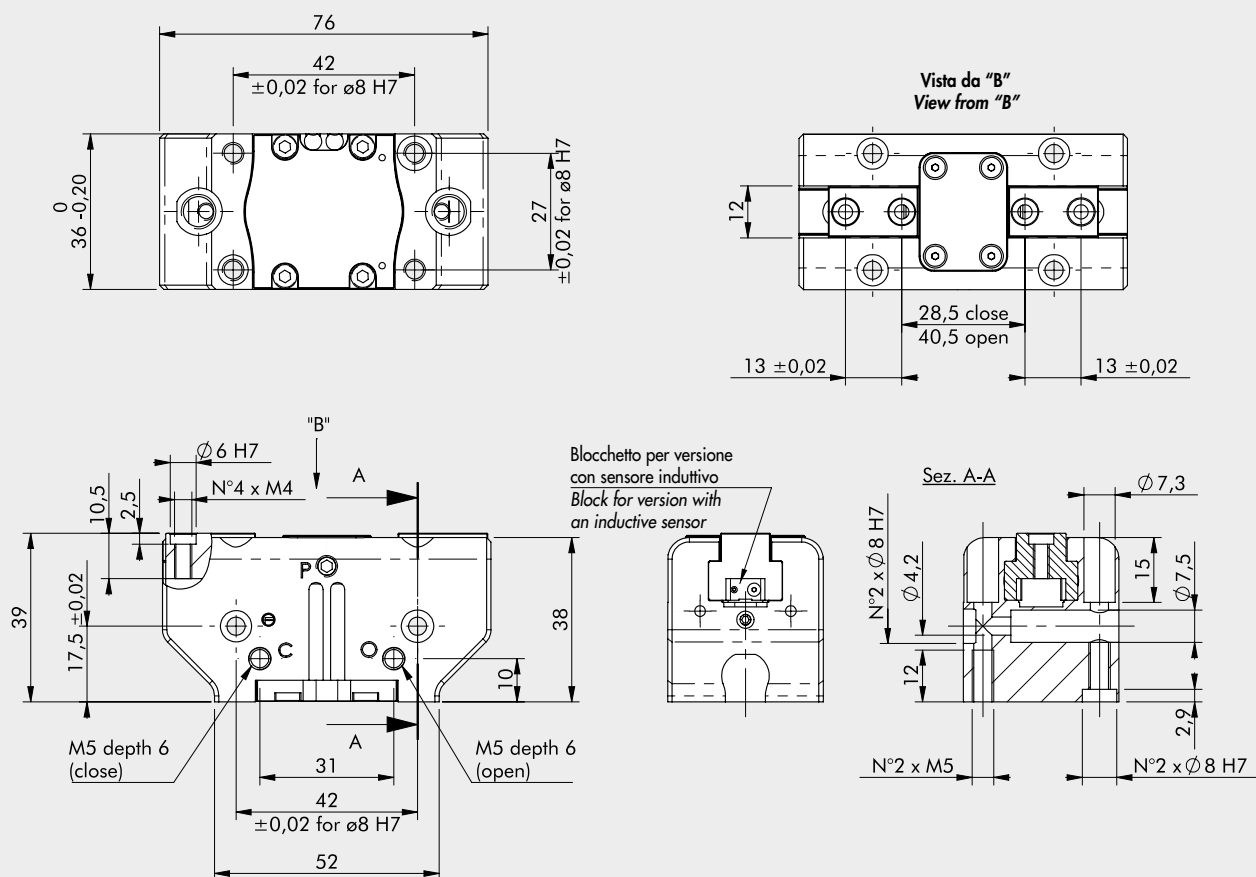


* Attacco aria per pressurizzazione di spurgo (sul lato opposto) / Air purge connection (on the opposite side)

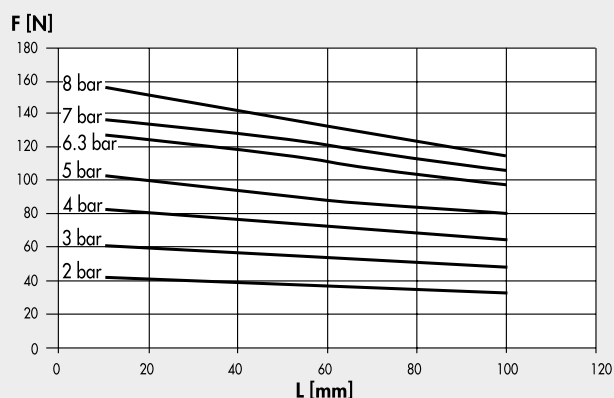


Cod. W1560400200 Descrizione / Description Pinza 2 griffe parallele P3-40 / Gripper with 2 parallel jaws P3-40

DIMENSIONE PINZA P3-64 / DIMENSIONS OF GRIPPER P3-64

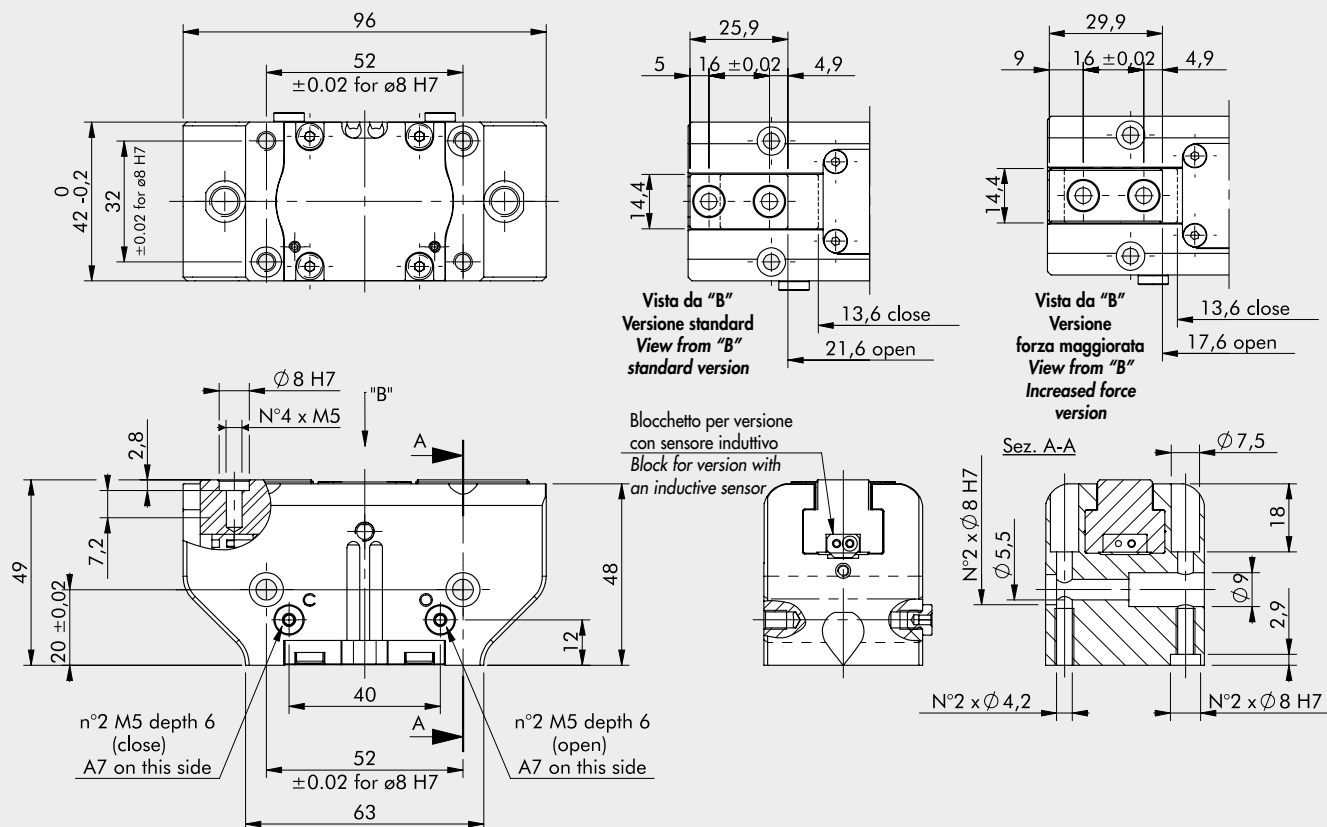


* Attacco aria per pressurizzazione di spurgo / Air purge connection



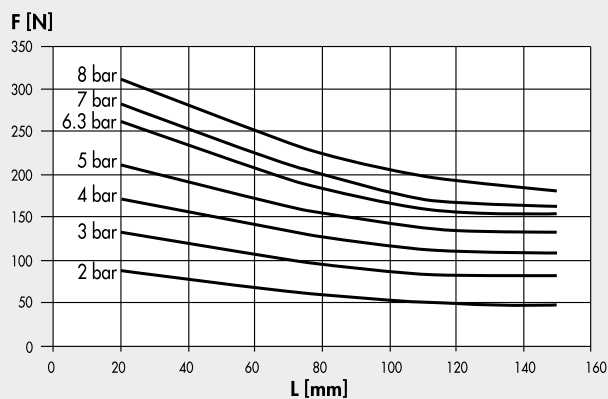
Cod.	Descrizione / Description
W1560640200	Pinza 2 griffe parallele P3-64 / Gripper with 2 parallel jaws P3-64
W1560640201	Pinza 2 griffe parallele P3-64 per sensore induttivo / Gripper with 2 parallel jaws P3-64 for inductive sensors

DIMENSIONE PINZA P3-80 / DIMENSIONS OF GRIPPER P3-80

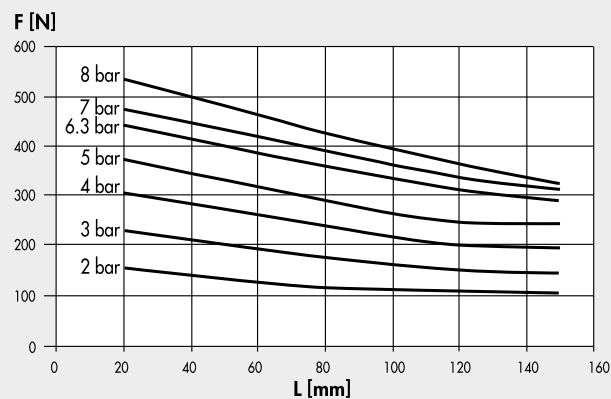


* Attacco aria per pressurizzazione di spurgo / Air purge connection

Versione standard / Standard version

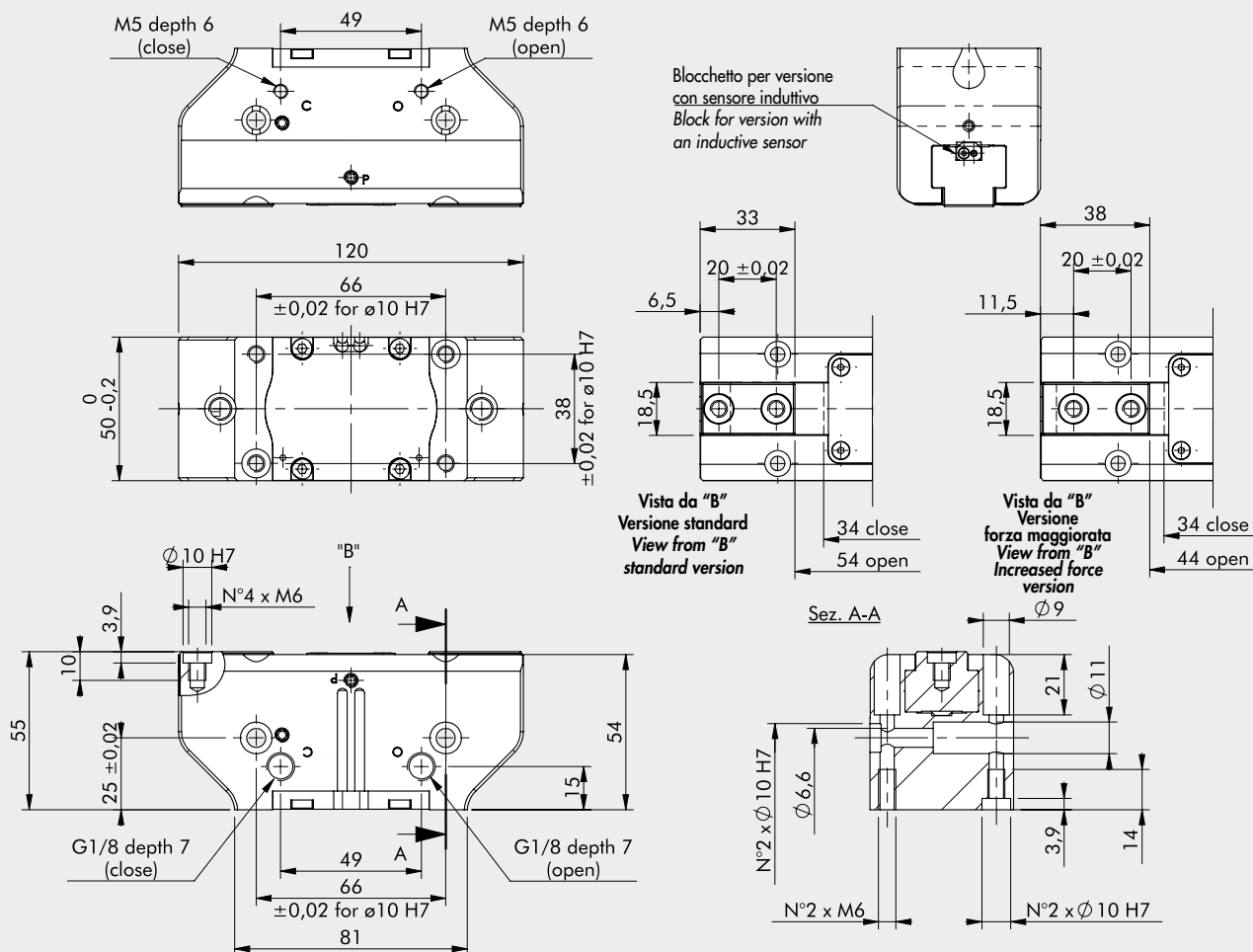


Versione forza maggiorata / Increased force version



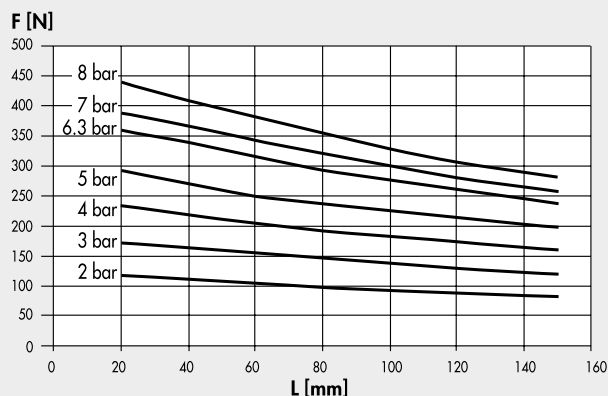
Cod.	Descrizione / Description
W1560800200	Pinza 2 griffe parallele P3-80 / Gripper with 2 parallel jaws P3-80
W1560800201	Pinza 2 griffe parallele P3-80 per sensore induttivo / Gripper with 2 parallel jaws P3-80 for inductive sensors
W1560800220	Pinza 2 griffe parallele P3-80 forza maggiorata / Gripper with 2 parallel jaws P3-80 increased force
W1560800221	Pinza 2 griffe parallele P3-80 forza maggiorata per sensore induttivo / Gripper with 2 parallel jaws P3-80 increased force for inductive sensors

DIMENSIONE PINZA P3-100 / DIMENSIONS OF GRIPPER P3-100

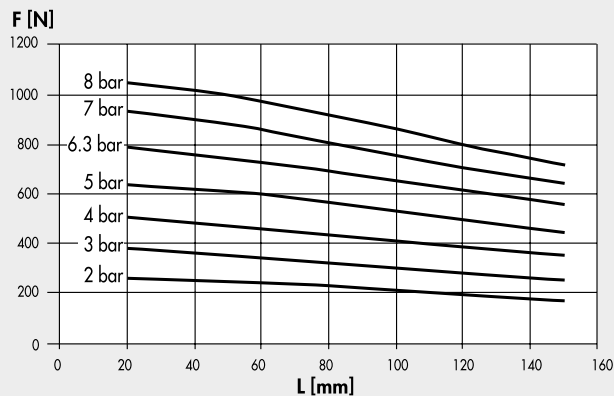


* Attacco aria per pressurizzazione di spurgo / Air purge connection

Versione standard / Standard version



Versione forza maggiorata / Increased force version



Cod.	Descrizione / Description
W1561000200	Pinza 2 griffe parallele P3-100 / Gripper with 2 parallel jaws P3-100
W1561000201	Pinza 2 griffe parallele P3-100 per sensore induttivo / Gripper with 2 parallel jaws P3-100 for inductive sensors
W1561000220	Pinza 2 griffe parallele P3-100 forza maggiorata / Gripper with 2 parallel jaws P3-100 increased force
W1561000221	Pinza 2 griffe parallele P3-100 forza maggiorata per sensore induttivo / Gripper with 2 parallel jaws P3-100 increased force for inductive sensors

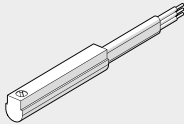


ACCESSORI / ACCESSORIES

ATTUATORI / ACTUATORS

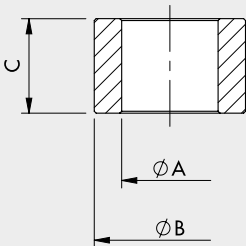
PINZA A DUE GRIFFE PARALLELE SERIE P3
GRIPPER WITH TWO PARALLEL JAWS SERIES P3

SENSORE Ø 4 / SENSOR Ø 4



Per codici e dati tecnici vedere capitolo dati tecnici.
For codes and technical data, see chapter technical data.

ANELLO DI CENTRAGGIO / CENTRING RING



Cod.	Taglia / Size	ØA	ØB ¹⁷	C
W1560409201	40	3 ⁰ _{-0.1}	4	4 ⁰ _{-0.1}
W1560649201	64	4.5 ⁰ _{-0.1}	6	5 ⁰ _{-0.1}
W1560809201	80	5.1 ⁰ _{-0.1}	8	5 ⁰ _{-0.05}
W1561009201	100	6.2 ⁺⁰ _{-0.1}	10	6.9 ⁰ _{-0.1}

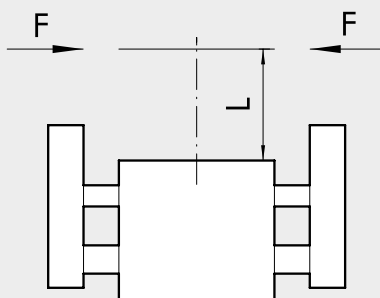
Nota: n. 2 pezzi per confezione / Note: 2-pieces pack

NOTE / NOTES

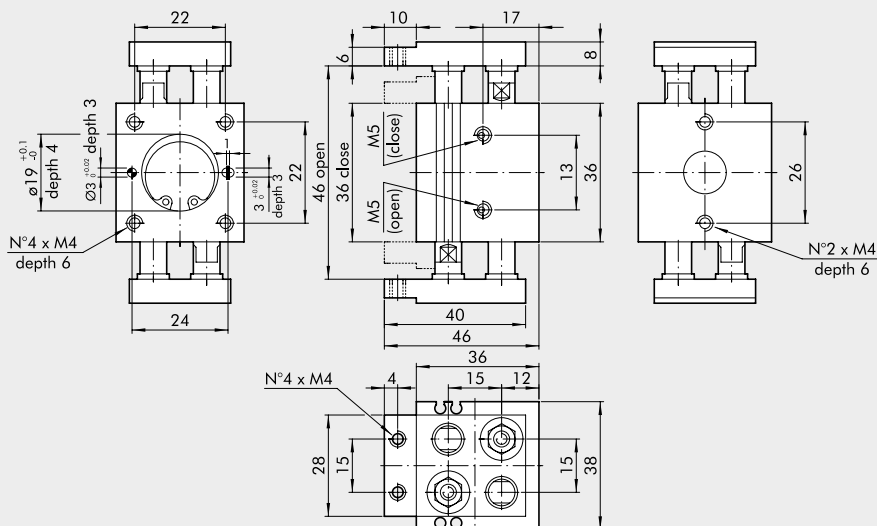
**PINZA A DUE GRIFFE PARALLELE
A CORSA LUNGA SERIE P4
GRIPPER WITH TWO PARALLEL
LONG-STROKE JAWS, SERIES P4**

[illegible]

SCHEMA FORZA DI SERRAGGIO IN FUNZIONE DEL PUNTO DI APPLICAZIONE
TABLE OF CLAMPING FORCES FOR VARIOUS POINTS OF APPLICATION



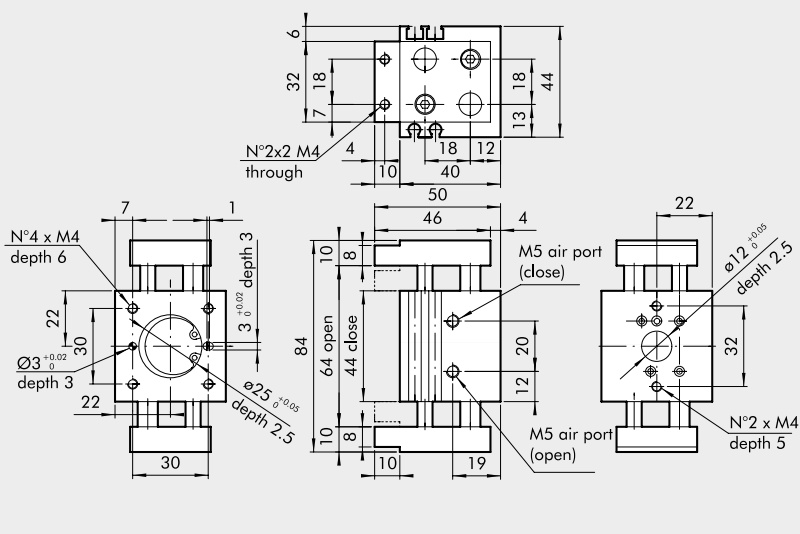
DIMENSIONI PINZA P4-10 / DIMENSIONS OF GRIPPER P4-10



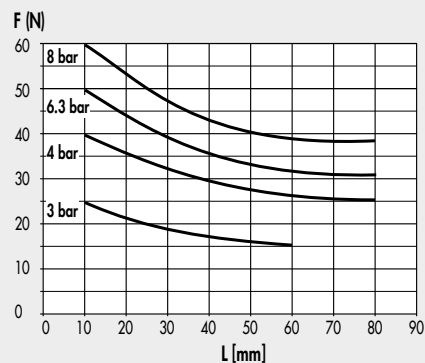
Cod.	Descrizione / Description
W1580100200	Pinza 2 griffe parallele corsa lunga P4-10 Gripper with 2 parallel long-stroke jaws P4-10



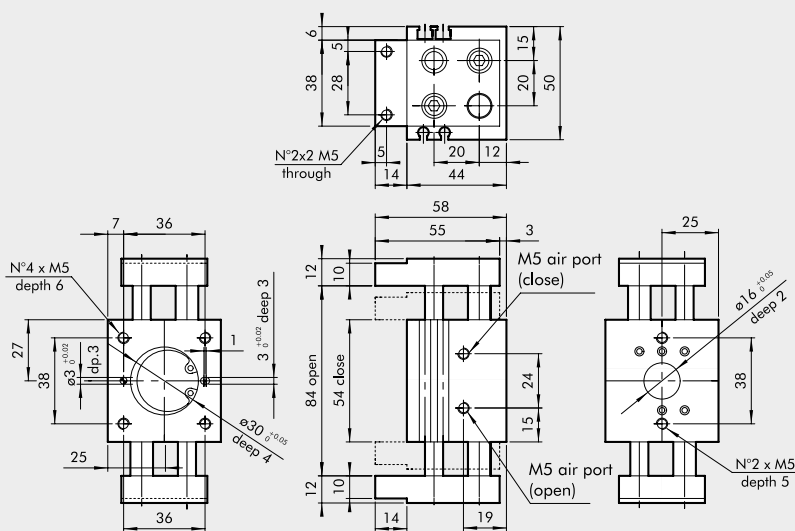
DIMENSIONI PINZA P4-12 / DIMENSIONS OF GRIPPER P4-12



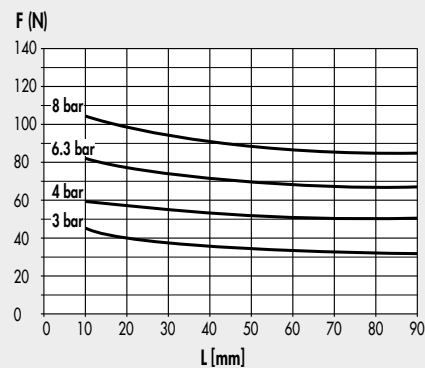
Cod.	Descrizione / Description
W1580120200	Pinza 2 griffe parallele corsa lunga P4-12 Gripper with 2 parallel long-stroke jaws P4-12



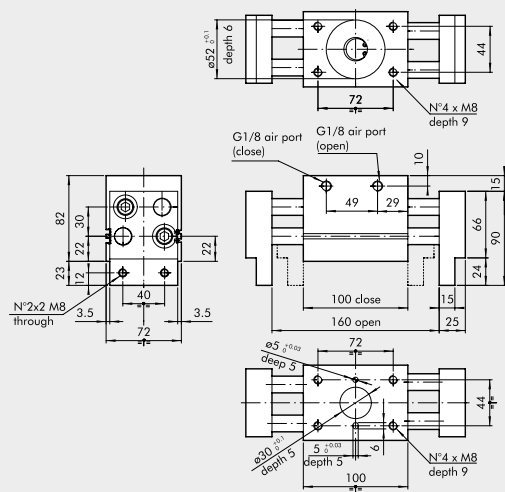
DIMENSIONI PINZA P4-16 / DIMENSIONS OF GRIPPER P4-16



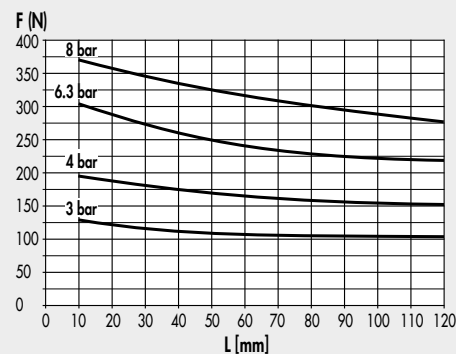
Cod.	Descrizione / Description
W1580160200	Pinza 2 griffe parallele corsa lunga P4-16 Gripper with 2 parallel long-stroke jaws P4-16



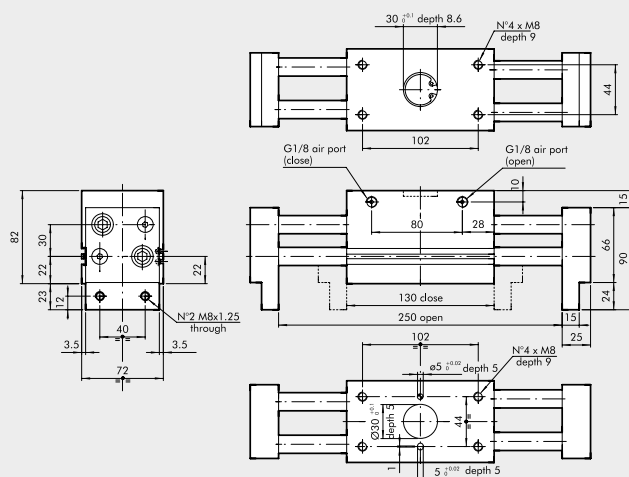
DIMENSIONI PINZA P4-25 / DIMENSIONS OF GRIPPER P4-25



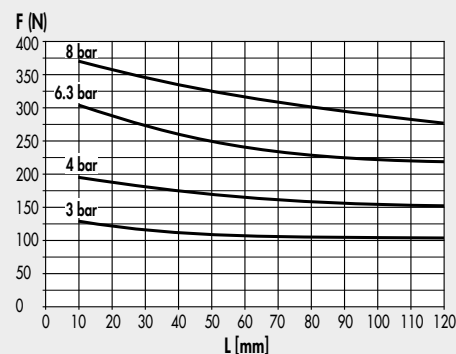
Cod.	Descrizione / Description
W1580250200	Pinza 2 griffe parallele corsa lunga P4-25 Gripper with 2 parallel long-stroke jaws P4-25



DIMENSIONI PINZA P4-30 / DIMENSIONS OF GRIPPER P4-30

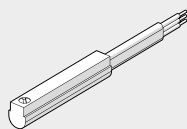


Cod.	Descrizione / Description
W1580300200	Pinza 2 griffe parallele corsa lunga P4-30 Gripper with 2 parallel long-stroke jaws P4-30



ACCESSORI / ACCESSORIES

SENSORE Ø 4 PER PINZA P4-10 ÷ 30 / SENSOR Ø 4 FOR P4 10-30



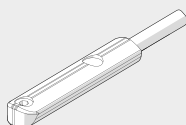
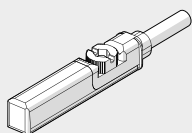
Per codici e dati tecnici vedere **capitolo dati tecnici**
 For codes and technical data, see **chapter technical data**.

SENSORE A SCOMPARSA, PER PINZE P4-12 ÷ 30 / RETRACTABLE SENSOR FOR P4-12-30

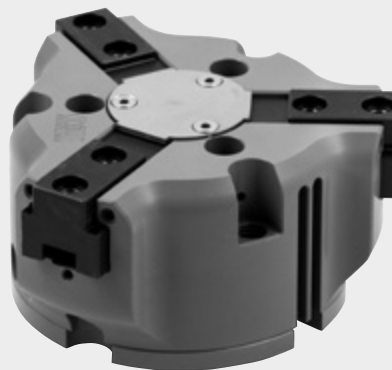
SENSORE TIPO SQUARE
 Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
 Latest generation, secure fixing

SENSORE TIPO OVALE
 Tradizionale
SENSOR, OVAL TYPE
 Traditional

Per codici e dati tecnici vedere **capitolo dati tecnici**
 For codes and technical data, see **chapter technical data**.



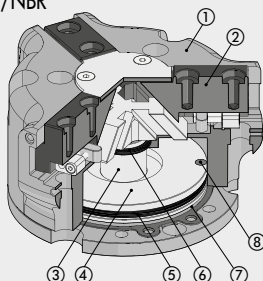
PINZA A TRE GRIFFE PARALLELE SERIE P12 GRIPPER WITH THREE PARALLEL JAWS, SERIES P12



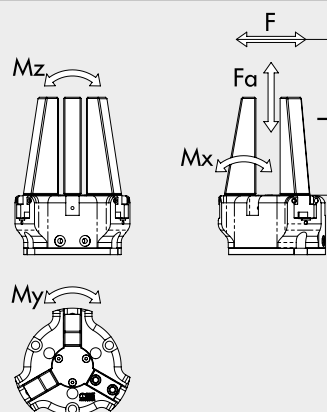
DATI TECNICI / TECHNICAL DATA		P12-40	P12-64	P12-80		P12-100	
				Standard	Forza maggiorata Increased force	Standard	Forza maggiorata Increased force
Pressione d'esercizio / Operating pressure	bar				2 ÷ 8		
	MPa				0.2 ÷ 0.8		
	psi				29 ÷ 116		
Temperatura d'esercizio / Temperature range	°C				-10 ÷ 80		
Fluido / Fluid		Aria filtrata 20 µm con o senza lubrificazione. Se si utilizza aria lubrificata la lubrificazione deve essere continua 20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Forza di serraggio di una singola griffa a 6,3 bar a 20 mm dal piano superiore, in apertura e chiusura Clamping force of a single jaw at 6.3 bar, 20 mm from the upper surface, on opening and closing	N	130	310	435	860	840	1450
Massimo peso movimentabile / Maximum movable weight	kg	1.3	2.9	4.5	9	9	20
Corsa di una singola griffa / Stroke of each jaw	mm	2.5	6	8	4	10	5
Tempo minimo apertura/chiusura Minimum opening/closing time	s			0.05			
Ripetibilità / Repeatability	mm			0.01			
Momento d'inerzia rispetto all'asse del pistone Moment of inertia as regards the piston axis	kg cm ²	2.1	6	6.5		19	
Carichi massimi statici ammissibili: Max. admissible static loads:							
- Fa	N	250	1100	1500		2000	
- Mx	Nm	10	40	90		80	
- My	Nm	5	60	55		115	
- Mz	Nm	12	40	55		70	
Peso / Weight	kg	0.2	0.7	0.75		1.4	

COMPONENTI / COMPONENTS

- ① CORPO: alluminio anodizzato duro / BODY: hard-anodised aluminium
- ② GRIFFE: acciaio nitruato / JAWS: nitrided steel
- ③ STELO + GUIDA: acciaio nitruato / PISTON ROD + GUIDE: nitrided steel
- ④ PISTONE: alluminio anodizzato duro / PISTON: hard-anodised aluminium
- ⑤ GUARNIZIONE PISTONE: NBR / PISTON GASKET: NBR
- ⑥ GUARNIZIONE STELO: NBR / poliuretano
PISTON ROD GASKET: NBR / polyurethane
- ⑦ GUARNIZIONE FONDELLO: SBR rinforzato / NBR
BASE GASKET: reinforced SBR / NBR
- ⑧ MAGNETE: neodimio
MAGNET: neodymium

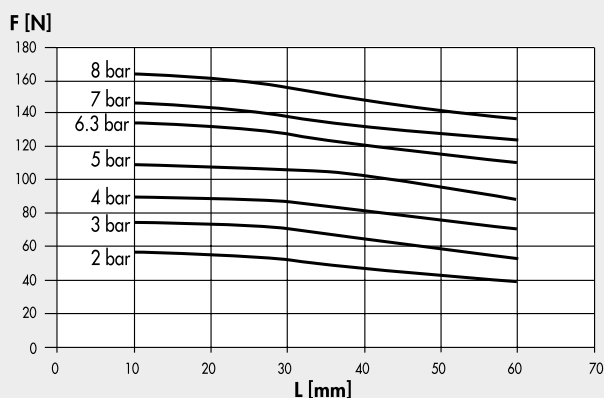
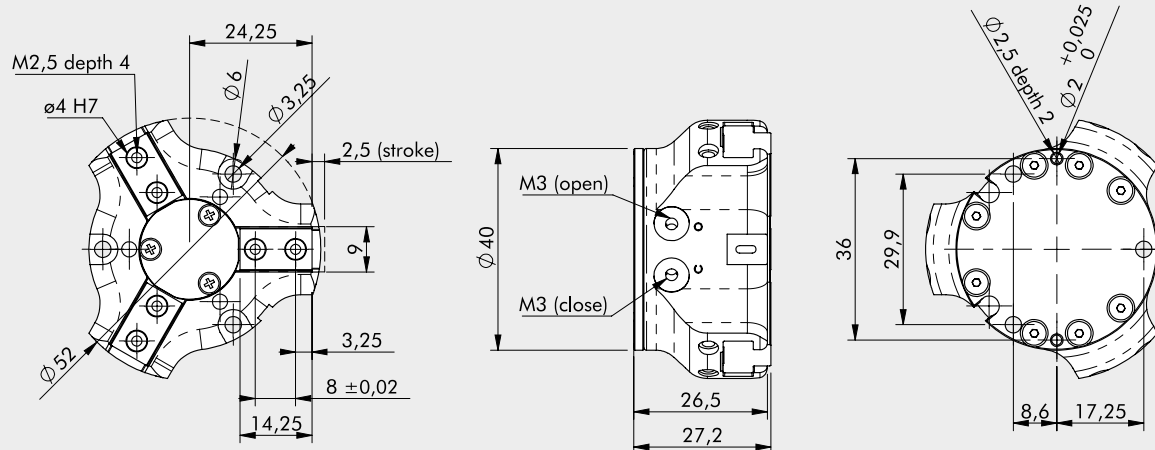


SCHEMA FORZE E MOMENTI / DIAGRAM OF FORCES AND MOMENTS



F Forza di serraggio per ogni griffa / Clamping force for each jaw
 Fa Forza assiale statica massima / Maximum static axial force
 Mx, My, Mz Momenti statici massimi / Maximum static moments

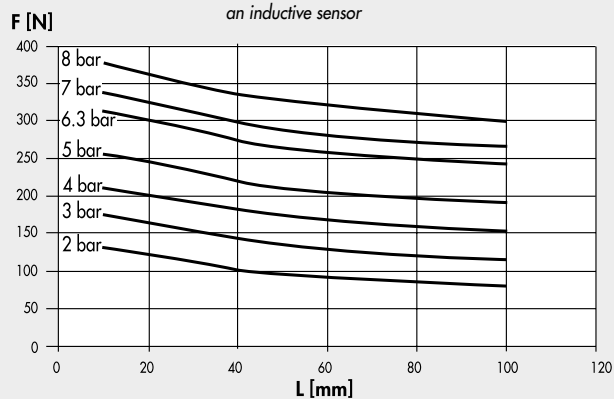
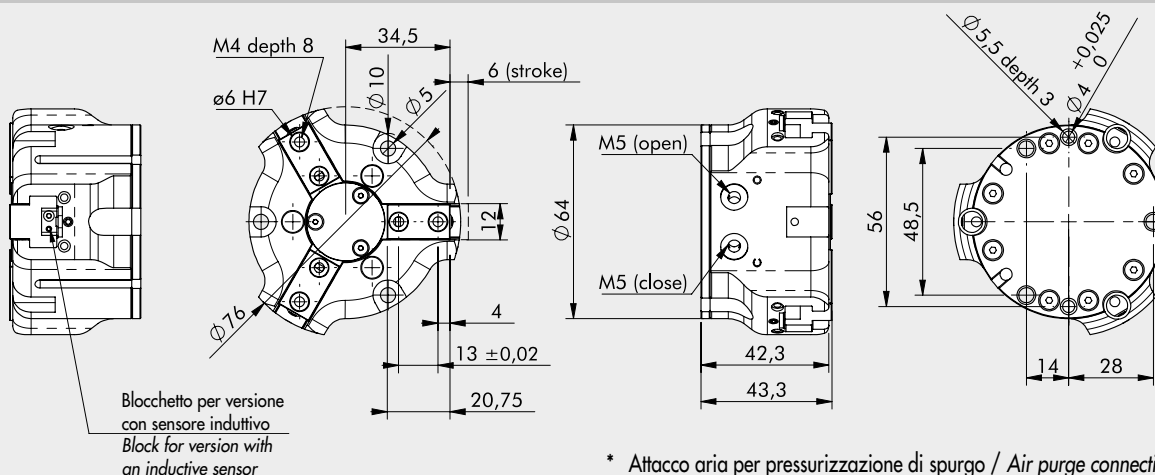
DIMENSIONE PINZA P12-40 / DIMENSIONS OF GRIPPER P12-40



* Attacco aria per pressurizzazione di spurgo / Air purge connection

Cod.	Descrizione / Description
W1560400300	Pinza 3 griffe parallele P12-40 Gripper with 3 parallel jaws P12-40

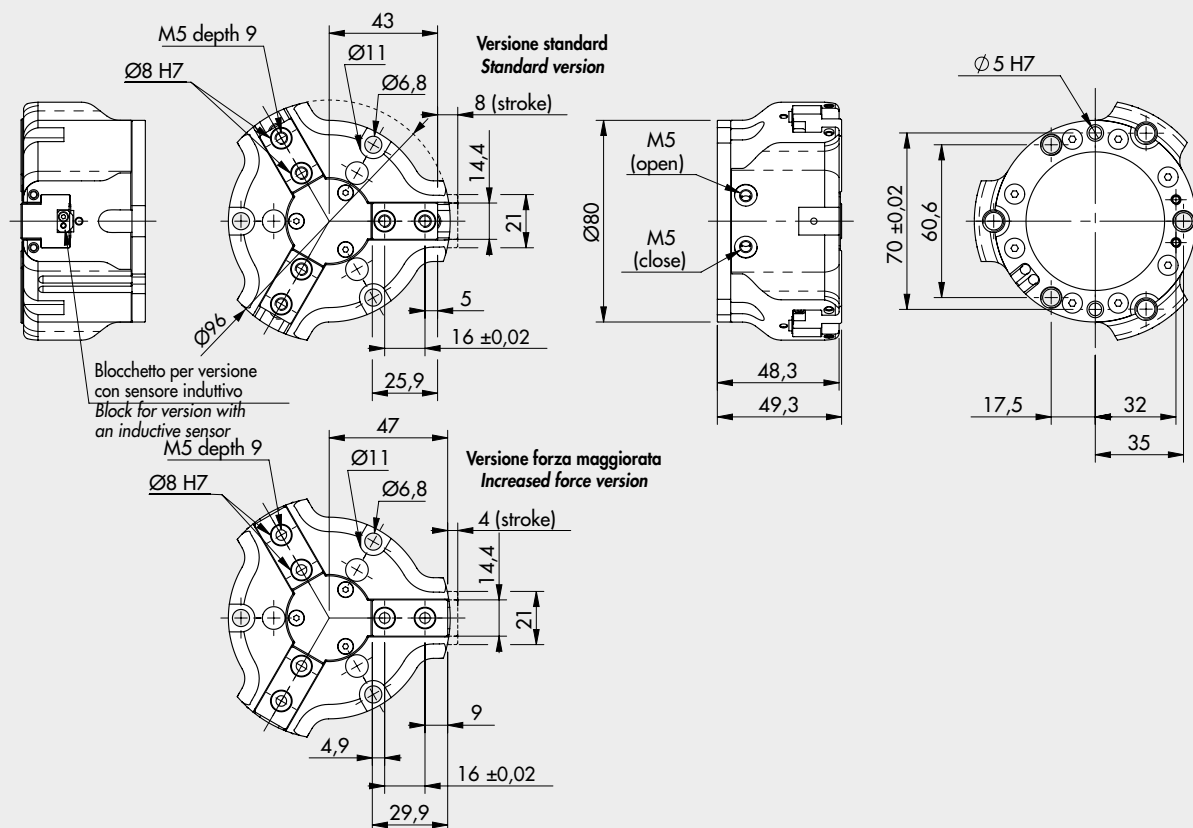
DIMENSIONE PINZA P12-64 / DIMENSIONS OF GRIPPER P12-64



* Attacco aria per pressurizzazione di spurgo / Air purge connection

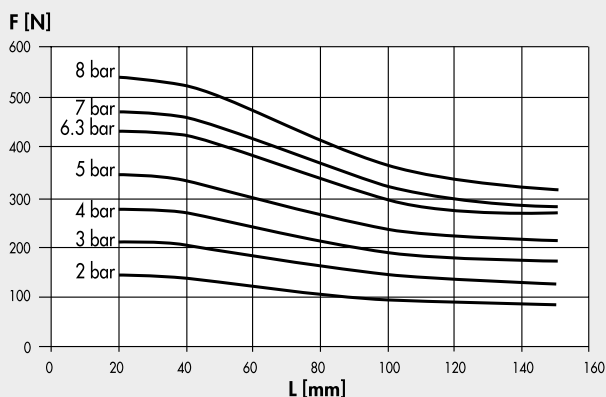
Cod.	Descrizione / Description
W1560640300	Pinza 3 griffe parallele P12-64 Gripper with 3 parallel jaws P12-64
W1560640301	Pinza 3 griffe parallele P12-64 per sensore induttivo Gripper with 3 parallel jaws P12-64 for inductive sensors

DIMENSIONE PINZA P12-80 / DIMENSIONS OF GRIPPER P12-80

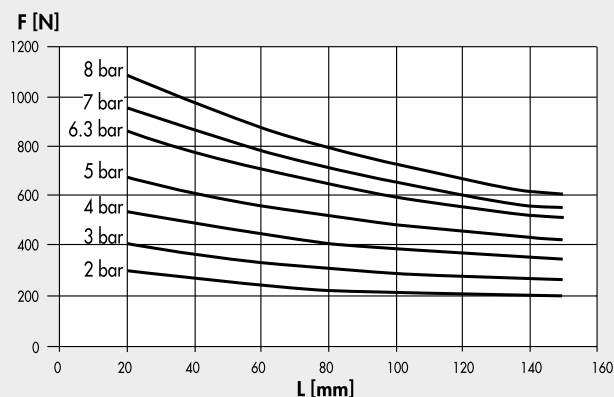


* Attacco aria per pressurizzazione di spurgo / Air purge connection

Versione standard / Standard version



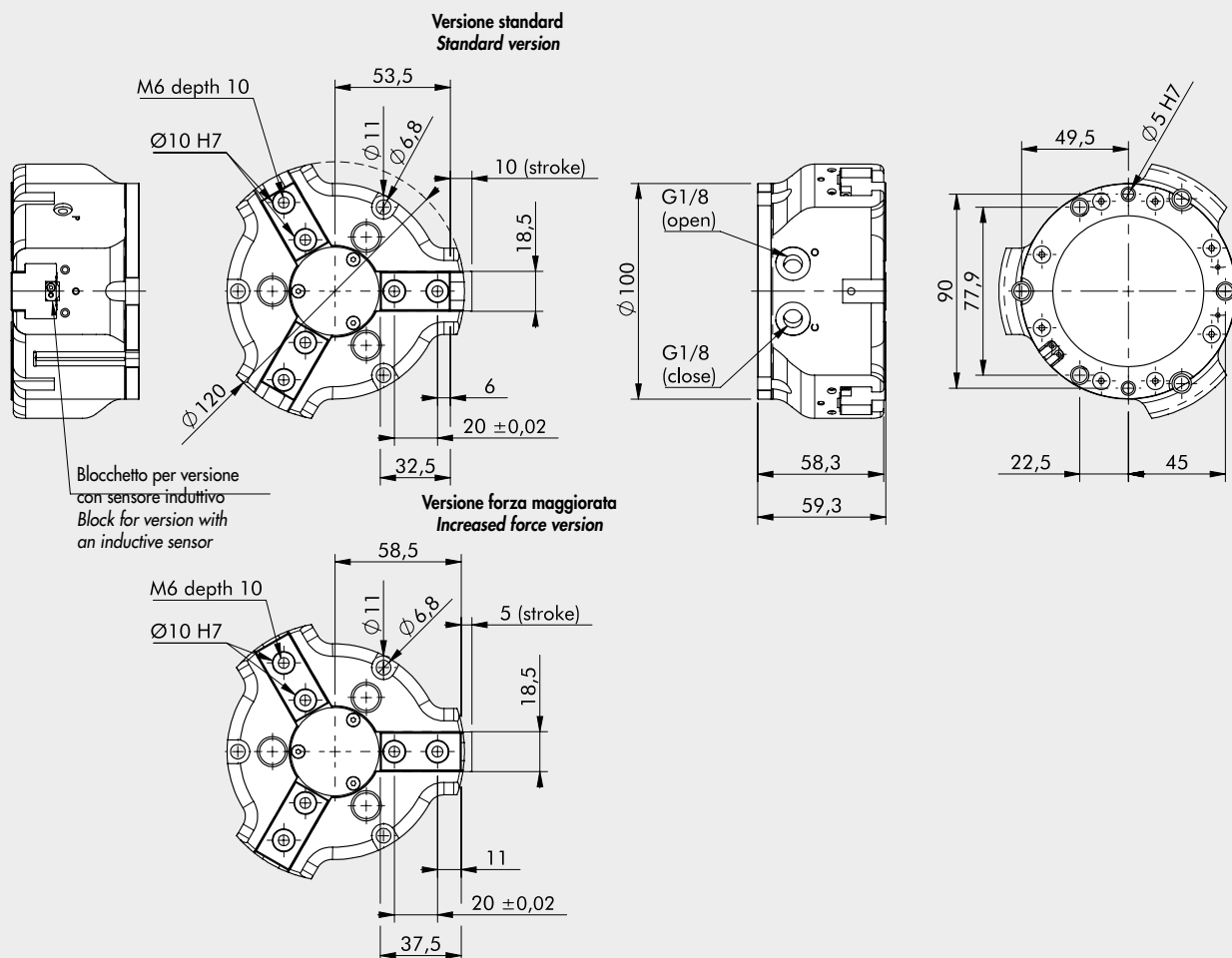
Versione forza maggiorata / Increased force version



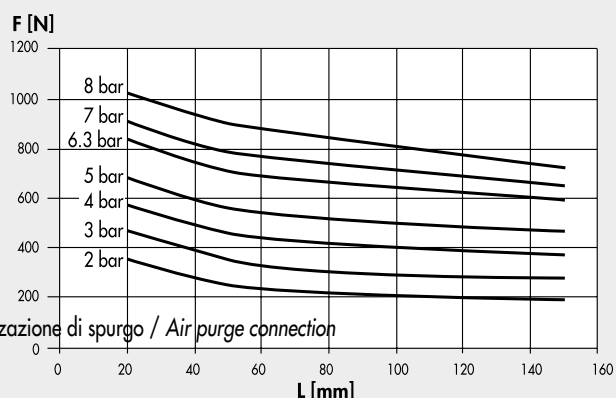
* Attacco aria p

Cod.	Descrizione / Description
W1560800300	Pinza 3 griffe parallele P12-80 / Gripper with 3 parallel jaws P12-80
W1560800301	Pinza 3 griffe parallele P12-80 per sensore induttivo / Gripper with 3 parallel jaws P12-80 for inductive sensors
W1560800320	Pinza 3 griffe parallele P12-80 forza maggiorata / Gripper with 3 parallel jaws P12-80 increased force
W1560800321	Pinza 3 griffe parallele P12-80 forza maggiorata per sensore induttivo / Gripper with 3 parallel jaws P12-80 increased force for inductive sensors

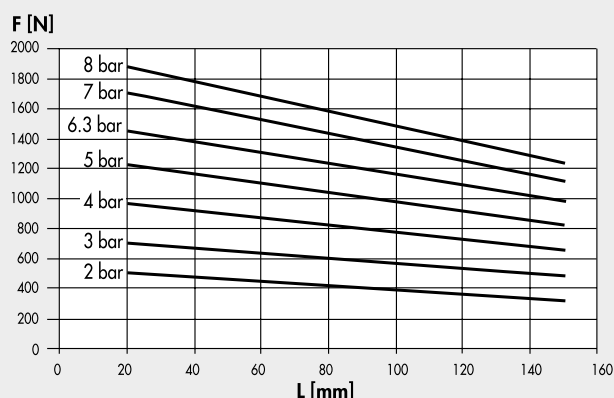
DIMENSIONE PINZA P12-100 / DIMENSIONS OF GRIPPER P12-100



* Attacco aria per pressurizzazione di spurgo / Air purge connection

Versione standard / Standard version

per pressurizzazione di spurgo / Air purge connection

Versione forza maggiorata / Increased force version

Cod.	Descrizione / Description
W1561000300	Pinza 3 griffe parallele P12-100 / Gripper with 3 parallel jaws P12-100
W1561000301	Pinza 3 griffe parallele P12-100 per sensore induttivo / Gripper with 3 parallel jaws P12-100 for inductive sensors
W1561000320	Pinza 3 griffe parallele P12-100 forza maggiorata / Gripper with 3 parallel jaws P12-100 increased force
W1561000321	Pinza 3 griffe parallele P12-100 forza maggiorata per sensore induttivo / Gripper with 3 parallel jaws P12-100 increased force for inductive sensors

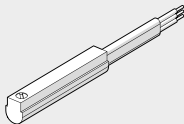


ACCESSORI / ACCESSORIES

ATTUATORI / ACTUATORS

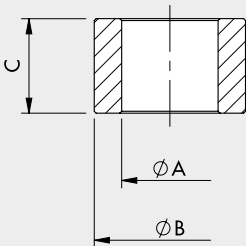
PINZA A TRE GRIFFE PARALLELE SERIE P12
GRIPPER WITH THREE PARALLEL JAWS, SERIES P12

SENSORE Ø 4 / SENSOR Ø 4



Per codici e dati tecnici vedere capitolo dati tecnici.
For codes and technical data, see chapter technical data.

ANELLO DI CENTRAGGIO / CENTRING RING



Cod.	Taglia / Size	ØA	ØB ¹⁷	C
W1560409201	40	3 ⁰ _{-0.1}	4	4 ⁰ _{-0.1}
W1560649201	64	4.5 ⁰ _{-0.1}	6	5 ⁰ _{-0.1}
W1560809201	80	5.1 ⁰ _{-0.1}	8	5 ⁰ _{-0.05}
W1561009201	100	6.2 ⁺⁰ _{-0.1}	10	6.9 ⁰ _{-0.1}

Nota: n. 2 pezzi per confezione / Note: 2-pieces pack

NOTE / NOTES

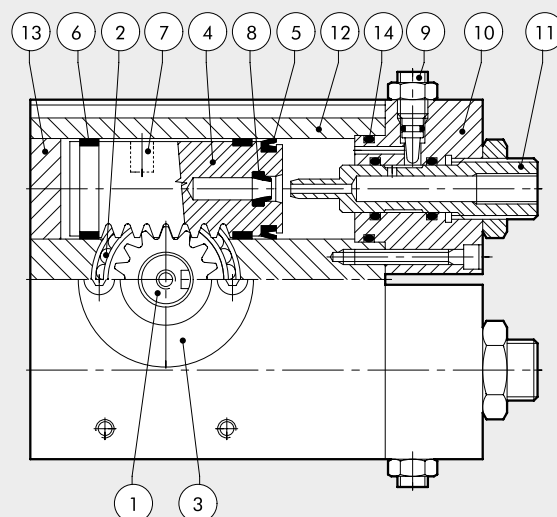
ATTUATORE ROTANTE SERIE R2 ROTARY ACTUATOR SERIES R2



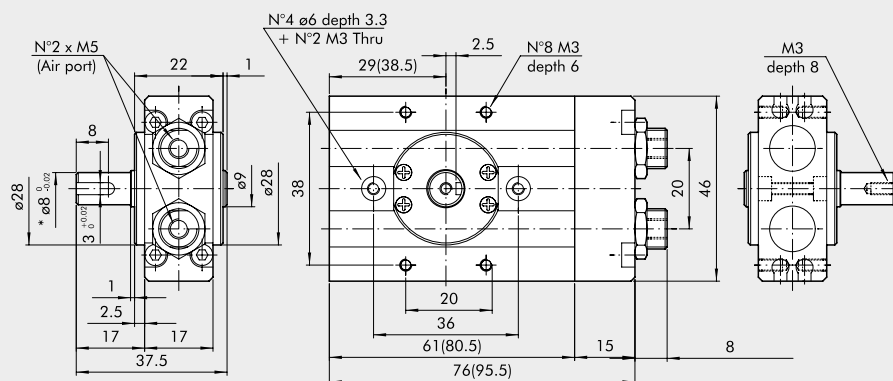
DATI TECNICI / TECHNICAL DATA		R2-12	R2-16	R2-20	R2-25
Pressione d'esercizio / Operating pressure	bar	1.5 ÷ 7			
	MPa	0.15 ÷ 0.7			
	psi	22 ÷ 101			
	°C	-10 ÷ +80			
Temperatura d'esercizio / Temperature range	°C	35° (+10° - 25° circa) / (about +10° -25°)			
Regolazione angolare / Angle adjustment	gradi / degrees	90° di rotazione / 180° di rotazione			
Fluidi / Fluid		90°/180° rotation			
		Entrambe frontali / Both at the front			
Versioni / Versions					
Attacchi / Ports					
Alesaggio / Sizes	mm	12	16	20	25
Coppia teorica (ΔP = pressione in bar) - Theoretical torque (ΔP = pressure in bar)	Nm	0.065 x P	0.11 x P	0.21 x P	0.48 x P
Carico assiale MAX / Max. axial load	N	8	14	40	80
Carico radiale MAX / Max. radial load	N	8	14	40	80
Peso con rotazione 90° / Weight with 90° rotation	kg	0.18	0.26	0.63	0.8
Peso con rotazione 180° / Weight with 180° rotation	kg	0.21	0.31	0.72	1
Tempo di rotazione senza carico: / Rotation time without load:					
• angolo 90° / 90° angle	s	0.2	0.2	0.2	0.2
• angolo 180° / 180° angle	s	0.3	0.3	0.3	0.3

COMPONENTI / COMPONENTS

- ① ALBERO ROTANTE - PIGNONE: acciaio temprato
ROTARY SHAFT - PINION: hardened and tempered steel
- ② CUSCINETTO A SFERE / BALL BEARING
- ③ FLANGIA: alluminio anodizzato / FLANGE: anodised aluminium
- ④ PISTONE - CREMAGLIERA: acciaio temprato
PISTON-RACK: hardened and tempered steel
- ⑤ GUARNIZIONE PISTONE: NBR / PISTON GASKET: NBR
- ⑥ PATTINO DI GUIDA: PTFE / GUIDE PAD: PTFE
- ⑦ MAGNETE: neodimio / MAGNET: neodymium
- ⑧ GUARNIZIONE DI AMMORTIZZO: NBR
CUSHIONING GASKET: NBR
- ⑨ SPILLO DI AMMORTIZZO: acciaio zincato
CUSHIONING PIN: zinc-plated steel
- ⑩ TESTATA: alluminio anodizzato / HEAD: anodised aluminium
- ⑪ CONNESSIONE PNEUMATICA - REGISTRAZIONE CORSA: acciaio
PNEUMATIC CONNECTION - STROKE ADJUSTMENT: steel
- ⑫ CAMICIA: alluminio anodizzato / BARREL: anodised aluminium
- ⑬ FONDELLO: alluminio anodizzato / BASE: anodised aluminium
- ⑭ GUARNIZIONE DI TENUTA: NBR / SEAL: NBR



ATTUATORE ROTANTE R2-12 90°/180° / ROTARY ACTUATOR R2-12 90°/180°



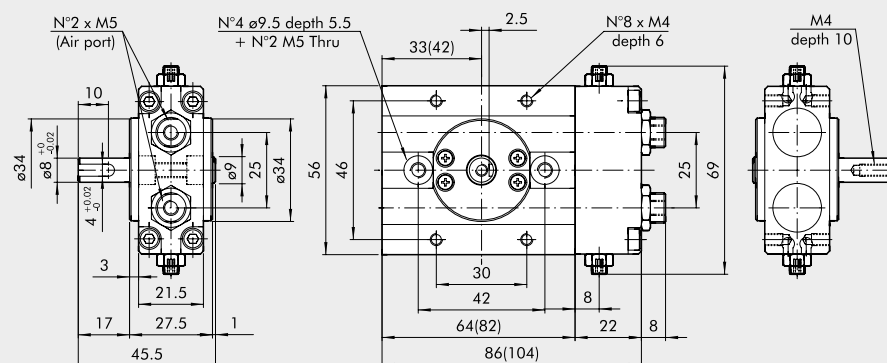
* Era Ø 6 mm. Sono ancora fornibili attuatori di ricambio codice W1620122091

* For the version R2-12-90° it was Ø6 mm; spare actuators code W1620122091 can be still supplied

Nelle parentesi sono riportate le dimensioni relative alla rotazione 180°

Dimensions for 180° rotation are given in brackets

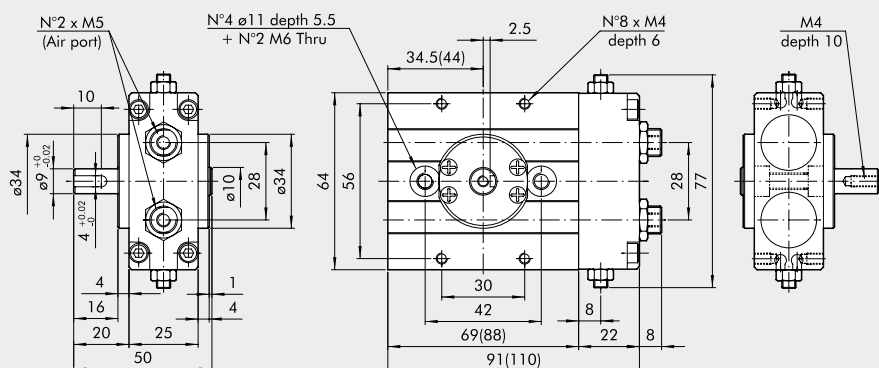
ATTUATORE ROTANTE R2-16 90°/180° / ROTARY ACTUATOR R2-16 90°/180°



Nelle parentesi sono riportate le dimensioni relative alla rotazione 180°

Dimensions for 180° rotation are given in brackets

ATTUATORE ROTANTE R2-20 90°/180° / ROTARY ACTUATOR R2-20 90°/180°



Nelle parentesi sono riportate le dimensioni relative alla rotazione 180°

Dimensions for 180° rotation are given in brackets

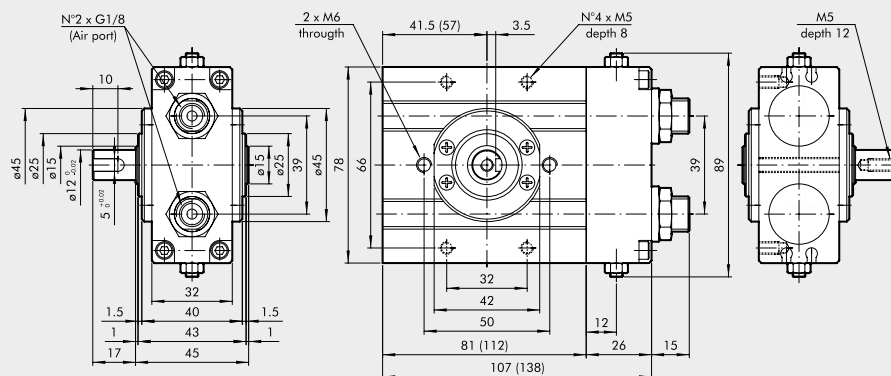
Cod.	Descrizione / Description
W1620122090	Attuatore rotante con albero R2-12-90° <i>Rotary actuator R2-12-90°</i>
W1620122180	Attuatore rotante con albero R2-12-180° <i>Rotary actuator R2-12-180°</i>

Cod.	Descrizione / Description
W1620162090	Attuatore rotante con albero R2-16-90° <i>Rotary actuator R2-16-90°</i>
W1620162180	Attuatore rotante con albero R2-16-180° <i>Rotary actuator R2-16-180°</i>

Cod.	Descrizione / Description
W1620202090	Attuatore rotante con albero R2-20-90° <i>Rotary actuator R2-20-90°</i>
W1620202180	Attuatore rotante con albero R2-20-180° <i>Rotary actuator R2-20-180°</i>

ATTUATORE ROTANTE R2-25 90°/180° / ROTARY ACTUATOR R2-25 90°/180°

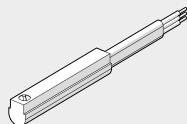
Cod.	Descrizione / Description
W1620252090	Attuatore rotante con albero R2-25-90° Rotary actuator R2-25-90°
W1620252180	Attuatore rotante con albero R2-25-180° Rotary actuator R2-25-180°



Nelle parentesi sono riportate le dimensioni relative alla rotazione 180°
 Dimensions for 180° rotation are given in brackets

ACCESSORI / ACCESSORIES

SENSORE Ø 4 / SENSOR Ø 4



Per codici e dati tecnici vedere **capitolo dati tecnici**.
 For codes and technical data, see **chapter technical data**.

NOTE / NOTES

**DATI TECNICI / TECHNICAL DATA**

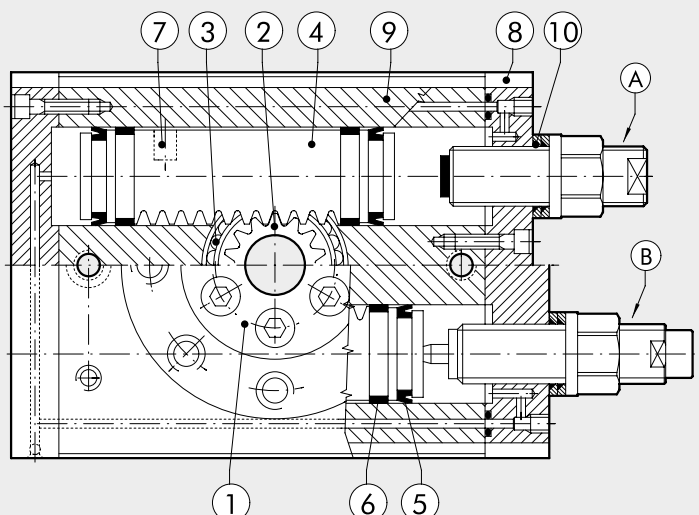
		R3-16	R3-20	R3-22	R3-25	R3-30	R3-40
Pressione d'esercizio / Operating pressure	bar	3 ÷ 7					
	MPa	0.3 ÷ 0.7					
	psi	43.5 ÷ 101					
	°C	-10 ÷ +80					
Temperatura d'esercizio / Temperature range	°C	-10 ÷ +80					
Campo di regolazione / Angle adjustment	gradi / degrees	0° ÷ 180°					
Fluido / Fluid		Aria filtrata 20 µm essicata o lubrificata, se utilizzata la lubrificazione deve essere continua 20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Versioni / Versions		Con fine corsa meccanico / Con deceleratore idraulico With mechanical stop / hydraulic decelerator					
Alesaggio / Sizes	mm						
Alesaggi / Bores	mm	16	20	22	25	30	40
Coppia teorica a 6 bar / Theoretical torque at 6 bar	Nm	2 x 16	2 x 20	2 x 22	2 x 25	2 x 30	2 x 40
Carico assiale MAX / Max. axial load	N	0.9	1.8	2.7	4.6	9.3	22
Carico radiale MAX / Max. radial load	N	74	135	195	300	340	360
Peso / Weight	kg	78	137	360	450	490	560
Tempo di rotazione senza carico / Rotation time without load	s	0.53	0.99	1.29	2.08	3.9	6.7
		0.2	0.2	0.2	0.2	0.3	0.3
Energia cinetica ammissibile / Admissible kinetic energy	Joule						
CON FINECORSO MECCANICO / WITH MECHANICAL STOP		0.007	0.025	0.049	0.082	0.090	0.150
(con flangia W1630__2180 e con albero W1630__5180) (with flange W1630__2180 and with shaft W1630__5180)							
CON DECELERATORI INTERNI / WITH HYDRAULIC DECELERATOR		-	-	-	0.29	1.10	1.60
(con flangia W1630__2180 e con albero W1630__5180) (with flange W1630__2180 and with shaft W1630__5180)							

COMPONENTI / COMPONENTS

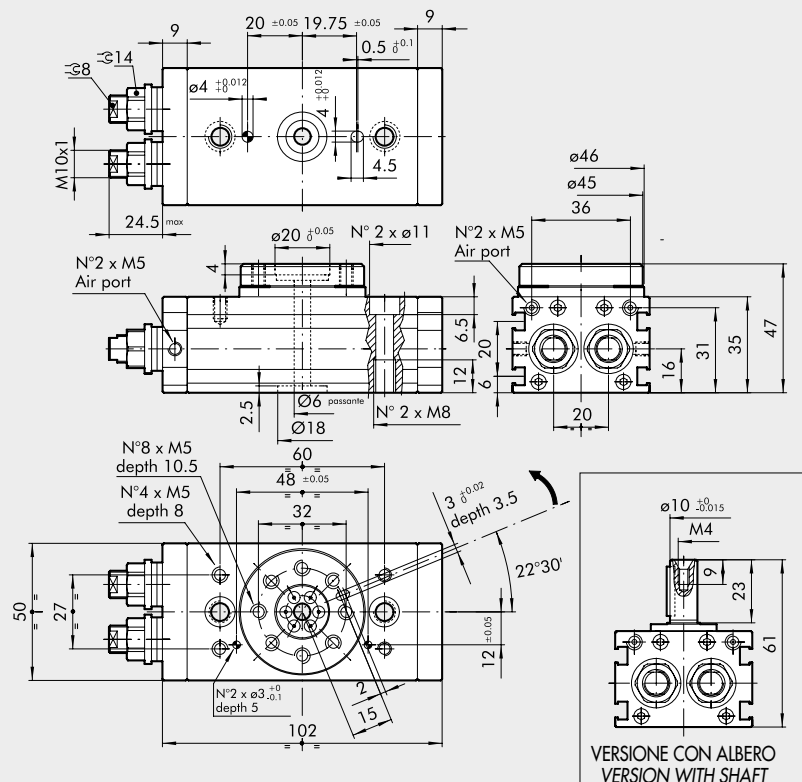
- ① FLANGIA ROTANTE: alluminio anodizzato
ROTARY FLANGE: anodised aluminium
- ② PIGNONE: acciaio temprato
PINION: hardened and tempered steel
- ③ CUSCINETTO A SFERE / BALL BEARING
- ④ PISTONE - CREMAGLIERA: acciaio temprato
PISTON / RACK: hardened and tempered steel
- ⑤ GUARNIZIONE PISTONE: NBR / CUSHIONING GASKET: NBR
- ⑥ PATTINO DI GUIDA: PTFE / GUIDE PAD: PTFE
- ⑦ MAGNETE: neodimio / MAGNET: neodymium
- ⑧ TESTATA: alluminio anodizzato / HEAD: anodised aluminium
- ⑨ CAMICIA: alluminio anodizzato / BARREL: anodised aluminium
- ⑩ GUARNIZIONE DI TENUTA: NBR / SEAL: NBR

VERSIONE: / VERSIONS:

- Ⓐ Regolatore corsa / Stroke adjustment
- Ⓑ Regolatore corsa con deceleratore idraulico
(a partire dal Ø 25)
Stroke adjustment with inside hydraulic shock
absorbers (available from Ø 25)



ATTUATORE ROTANTE R3-16 / ROTARY ACTUATOR R3-16

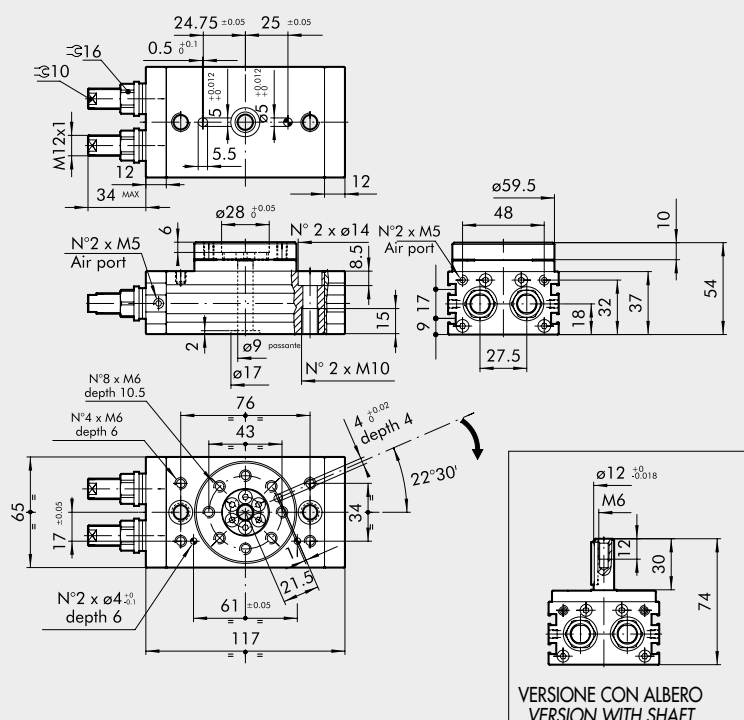


Cod.	Descrizione / Description
W1630162180	Attuatore rotante con flangia R3-16 Rotary actuator with flange R3-16
W1630165180	Attuatore rotante con albero R3-16 Rotary actuator with shaft R3-16

ATTUATORI / ACTUATORS

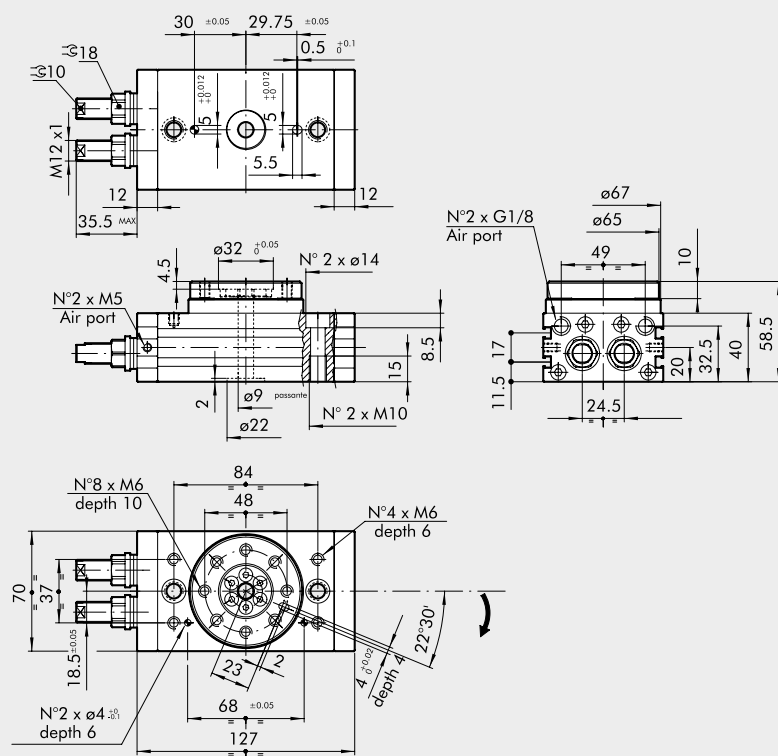
ATTUATORE ROTANTE SERIE R3
 ROTARY ACTUATOR SERIES R3

ATTUATORE ROTANTE R3-20 / ROTARY ACTUATOR R3-20

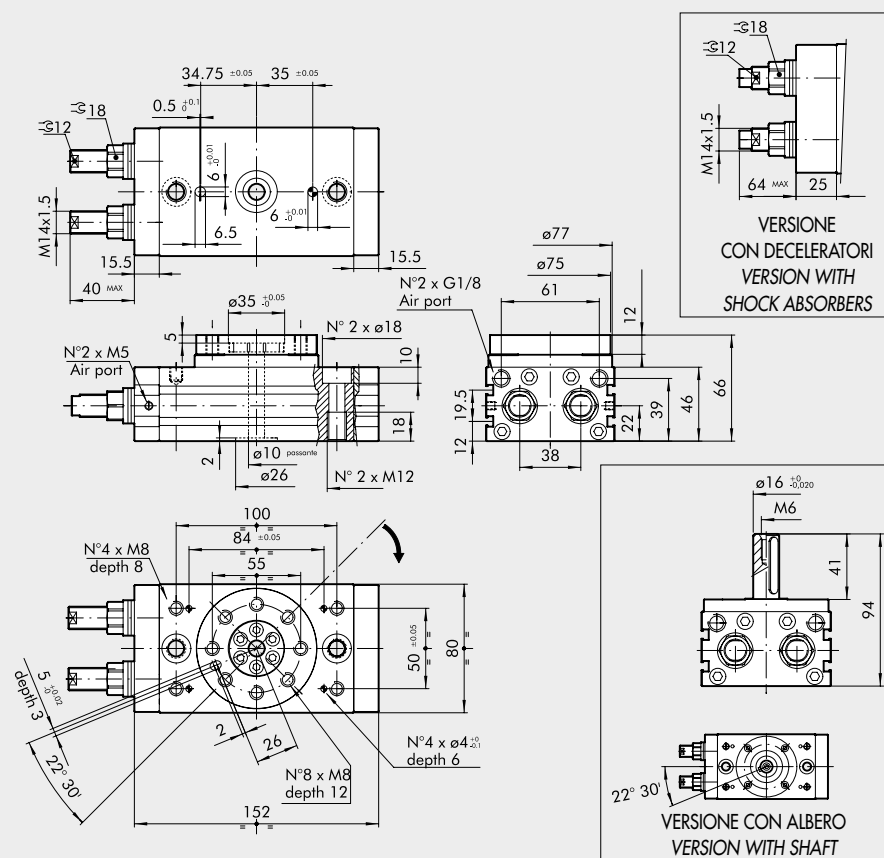


Cod.	Descrizione / Description
W1630202180	Attuatore rotante con flangia R3-20 Rotary actuator with flange R3-20
W1630205180	Attuatore rotante con albero R3-20 Rotary actuator with shaft R3-20

ATTUATORE ROTANTE R3-22 / ROTARY ACTUATOR R3-22



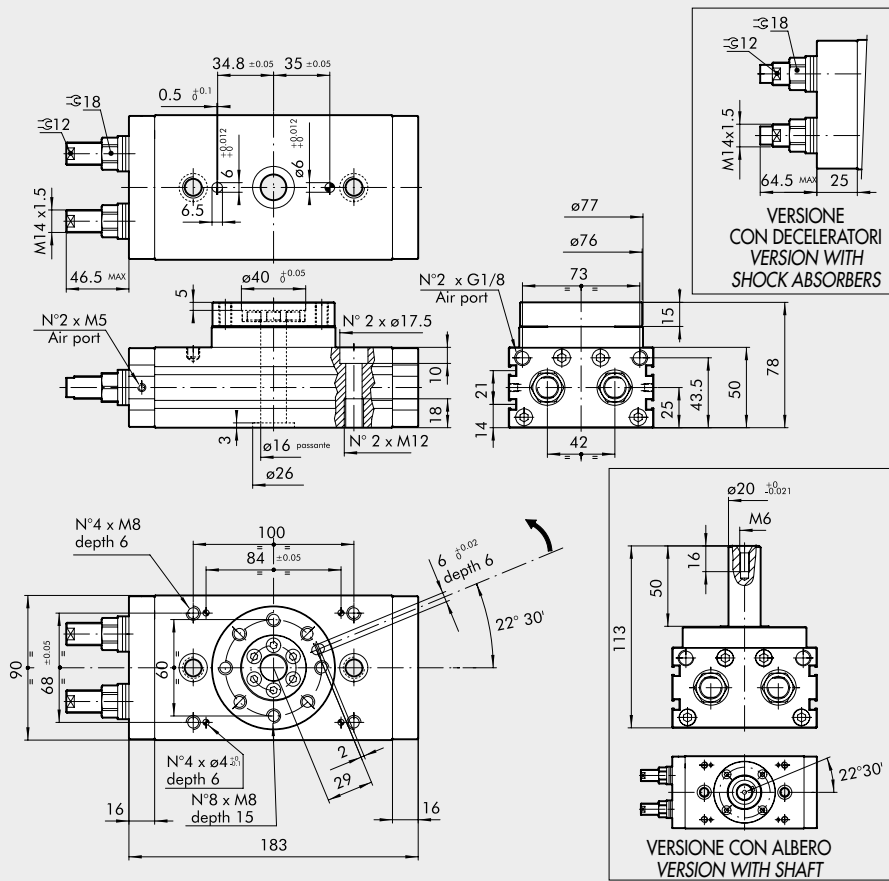
ATTUATORE ROTANTE R3-25 / ROTARY ACTUATOR R3-25



Cod.	Descrizione / Description
W1630222180	Attuatore rotante con flangia R3-22 Rotary actuator with flange R3-22

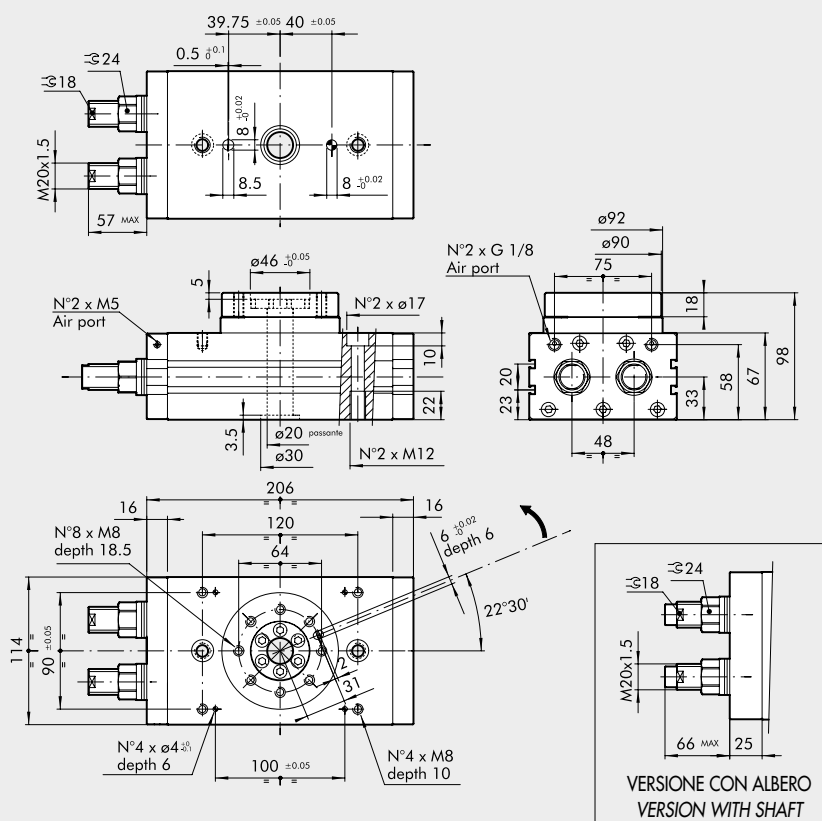
Cod.	Descrizione / <i>Description</i>
W1630252180	Attuatore rotante con flangia R3-25 <i>Rotary actuator with flange R3-25</i>
W1630253180	Attuatore rotante con flangia + deceleratore R3-25 <i>Rotary actuator with flange + shock absorbers R3-25</i>
W1630255180	Attuatore rotante con albero R3-25 <i>Rotary actuator with shaft R3-25</i>
W1630256180	Attuatore rotante con albero + deceleratore R3-25 <i>Rotary actuator with shaft + shock absorbers R3-25</i>

ATTUATORE ROTANTE R3-30 / ROTARY ACTUATOR SERIES R3-30



Cod.	Descrizione / Description
W1630302180	Attuatore rotante con flangia R3-30 Rotary actuator with flange R3-30
W1630303180	Attuatore rotante con flangia + deceleratore R3-30 Rotary actuator with flange + shock absorbers R3-30
W1630305180	Attuatore rotante con albero R3-30 Rotary actuator with shaft R3-30
W1630306180	Attuatore rotante con albero + deceleratore R3-30 Rotary actuator with shaft + shock absorbers R3-30

ATTUATORE ROTANTE R3-40 / ROTARY ACTUATOR SERIES R3-40



Cod.	Descrizione / Description
W1630402180	Attuatore rotante con flangia R3-40 Rotary actuator with flange R3-40
W1630403180	Attuatore rotante con flangia + deceleratore R3-40 Rotary actuator with flange + shock absorbers R3-40



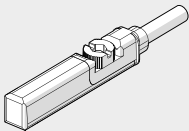
ACCESSORI / ACCESSORIES

ATTUATORI / ACTUATORS

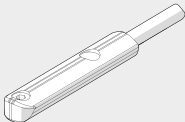
ATTUATORE ROTANTE SERIE R3
ROTARY ACTUATOR SERIES R3

SENSORE A SCOMPARSA / RETRACTABLE SENSOR

SENSORE TIPO SQUARE
Ultima generazione, fissaggio robusto
SENSOR, SQUARE TYPE
Latest generation, secure fixing

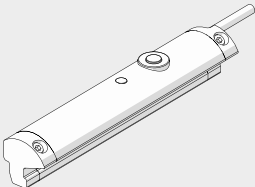


SENSORE TIPO OVALE
Tradizionale
SENSOR, OVAL TYPE
Traditional



Per codici e dati tecnici vedere **capitolo dati tecnici**.
*For codes and technical data, see **chapter technical data**.*

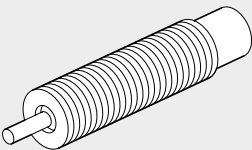
TRASDUTTORI DI POSIZIONE LTS / LTS POSITION SENSORS



Per codici e dati tecnici vedere **capitolo dati tecnici**.
*For codes and technical data, see **chapter technical data**.*

RICAMBI / SPARE PARTS

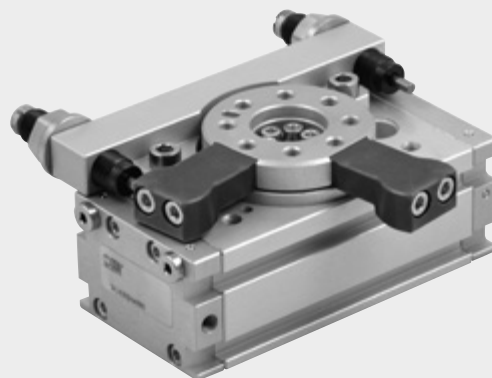
DECELERATORI / SHOCK ABSORBERS



Cod.	Ø	Descrizione / Description
0950004015	Ø 25	Deceleratore ECO S 25 MC2 corto M14 x 1.5 <i>Shock absorbers ECO S 25 MC2 short M14x1.5</i>
0950004008	Ø 30	Deceleratore ECO25 MC4 M14 x 1.5 <i>Shock absorbers ECO 25 MC4 M14x1.5</i>
0950004005	Ø 40	Deceleratore ECO50 MC2 + dado M20 x 1.5 <i>Shock absorbers ECO 50 MC2 + nut M20x1.5</i>

NOTE / NOTES

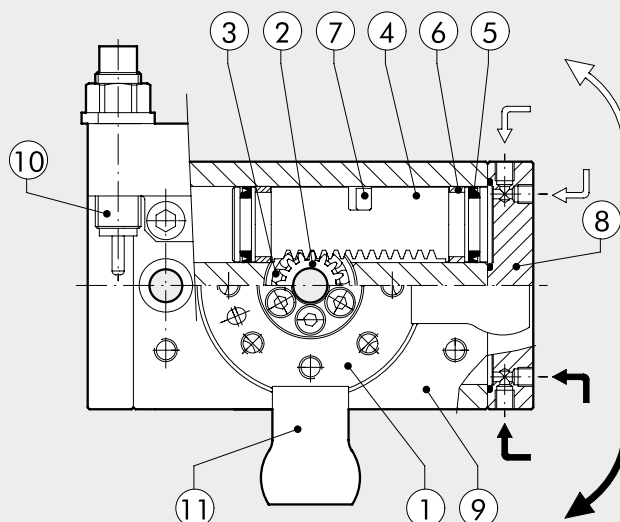
ATTUATORE ROTANTE SERIE R3 CON DECELERATORI ESTERNI ROTARY ACTUATOR SERIES R3 WITH EXTERNAL SHOCK ABSORBERS



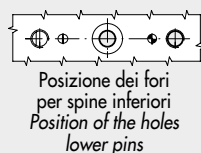
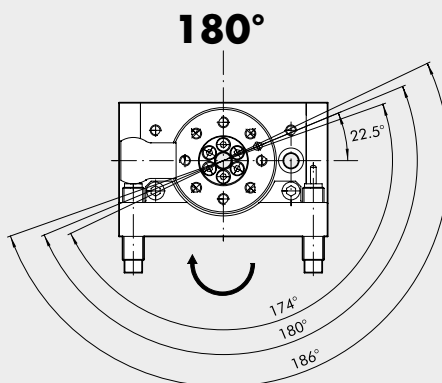
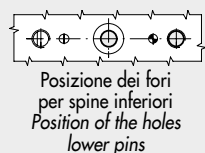
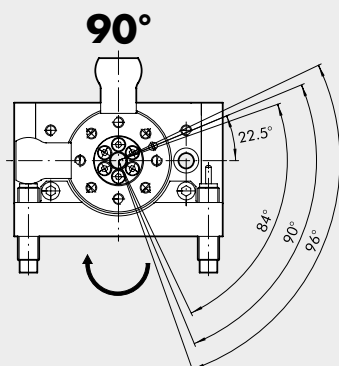
DATI TECNICI / TECHNICAL DATA		R3-16	R3-20	R3-22	R3-25	R3-30	R3-40
Pressione d'esercizio / Operating pressure	bar	3 ÷ 7					
	MPa	0.3 ÷ 0.7					
	psi	43.5 ÷ 101					
Temperatura d'esercizio / Temperature range	°C	-10 ÷ +80					
	gradi / degrees	90° o 180° ± 3°					
Rotazione / Angle adjustment		Aria filtrata 20 µm essicata o lubrificata, se utilizzata la lubrificazione deve essere continua					
Fluido / Fluid		20 µm filtered, lubricated or unlubricated air; lubrication if used, it must be continuous					
Alesaggio / Sizes	mm	16	20	22	25	30	40
Alesaggi / Bore	mm	2 x 16	2 x 20	2 x 22	2 x 25	2 x 30	2 x 40
Coppia teorica a 6 bar / Theoretical torque at 6 bar	Nm	0.9	1.8	2.7	4.6	9.3	22
Carico assiale MAX / Max. axial load	N	74	135	195	300	340	360
Carico radiale MAX / Max. radial load	N	78	137	360	450	490	560
Momento ribaltante MAX / Max overturning moment	Nm	2.4	4	5.3	9.7	12	18
Energia cinetica ammissibile / Admissible kinetic energy	J	0.16	0.55	0.85	1.40	1.85	3.35
Tempo di rotazione senza carico / Rotation time without load	s	0.2	0.2	0.2	0.2	0.3	0.3

COMPONENTI / COMPONENTS

- ① FLANGIA ROTANTE: alluminio anodizzato
ROTARY FLANGE: anodised aluminium
- ② PIGNONE: acciaio temprato
PINION: hardened and tempered steel
- ③ CUSCINETTO A SFERE
BALL BEARING
- ④ PISTONE - CREMAGLIERA: acciaio temprato
PISTON / RACK: hardened and tempered steel
- ⑤ GUARNIZIONE PISTONE: NBR / CUSHIONING GASKET: NBR
- ⑥ PATTINO DI GUIDA: PTFE / GUIDE PAD: PTFE
- ⑦ MAGNETE: neodimio / MAGNET: neodymium
- ⑧ TESTATA: alluminio anodizzato / HEAD: anodised aluminium
- ⑨ CAMICIA: alluminio anodizzato / BARREL: anodised aluminium
- ⑩ REGOLATORE CORSA CON DECELERATORE IDRAULICO
STROKE REGULATOR WITH HYDRAULIC SHOCK ABSORBERS
- ⑪ FERMO per versione 90° / Block for 90° version



ANGOLI DI ROTAZIONE / ROTATION ANGLE

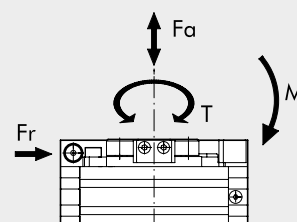


ENERGIA CINETICA AMMISSIBILE Joule [J] ADMISSIBLE KINETIC ENERGY Joule [J]

Alesaggio Bore Ø	Con flangia, rotazione 90°: W1630_4090 With flange, 90° rotation°: W1630_4090 Con flangia, rotazione 180°: W1630_4180 With flange, 180° rotation°: W1630_4180
16	0.16
20	0.55
22	0.85
25	1.40
30	1.85
40	3.35

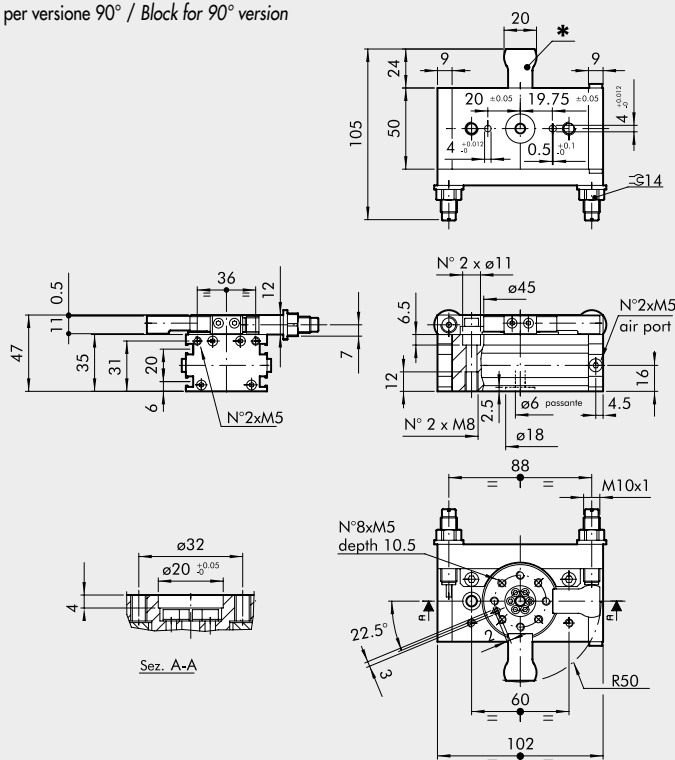
DIMENSIONAMENTO - FORZE E MOMENTO / DIMENSIONES - FORCES AND MOMENTS

Alesaggio Bore Ø	T [Nm] Coppia teorica a 6 bar Theoretical torque at 6 bar	FA [N] Carico assiale Max Max. axial load	FR [N] Carico radiale Max Max. radial load	M [Nm] Momento ribaltante Averturing momnet
16	0.9	74	78	2.4
20	1.8	135	137	4
22	2.7	195	360	5.3
25	4.6	300	450	9.7
30	9.3	340	490	12
40	22	360	560	18



ATTUATORE ROTANTE CON DECELERATORI ESTERNI R3-16 90/180° ROTARY ACTUATOR SERIES R3-16 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

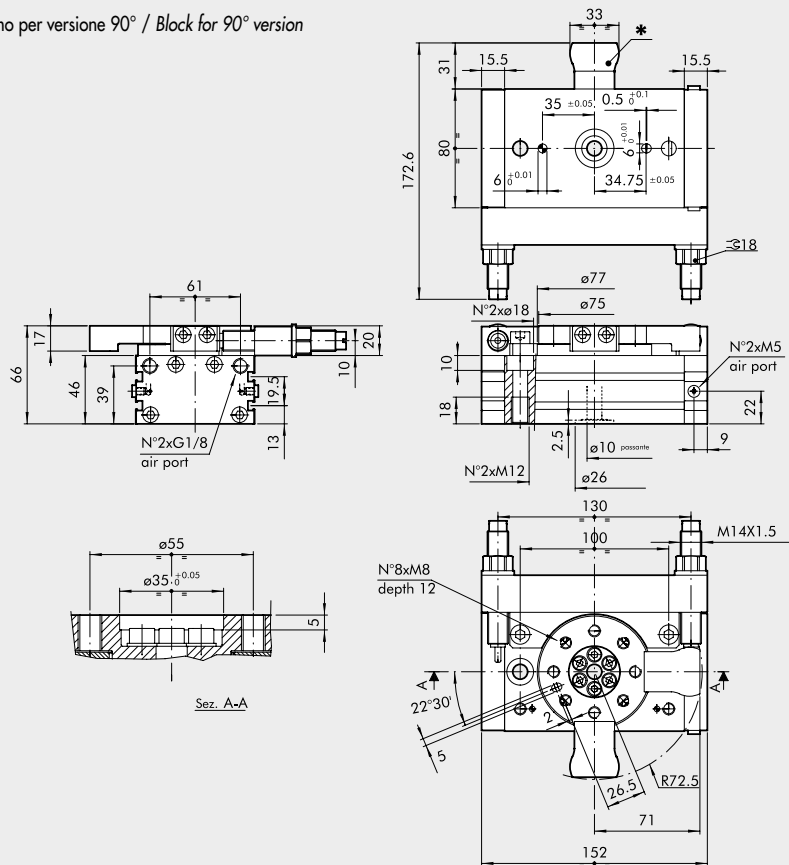
* Fermo per versione 90° / Block for 90° version



Cod.	Descrizione / Description
W1630164090	Attuatore rotante con flangia + deceleratore esterno R3-16-90 Rotary actuator with flange + shock absorbers R3-16-90
W1630164180	Attuatore rotante con flangia + deceleratore esterno R3-16-180 Rotary actuator with flange + shock absorbers R3-16-180

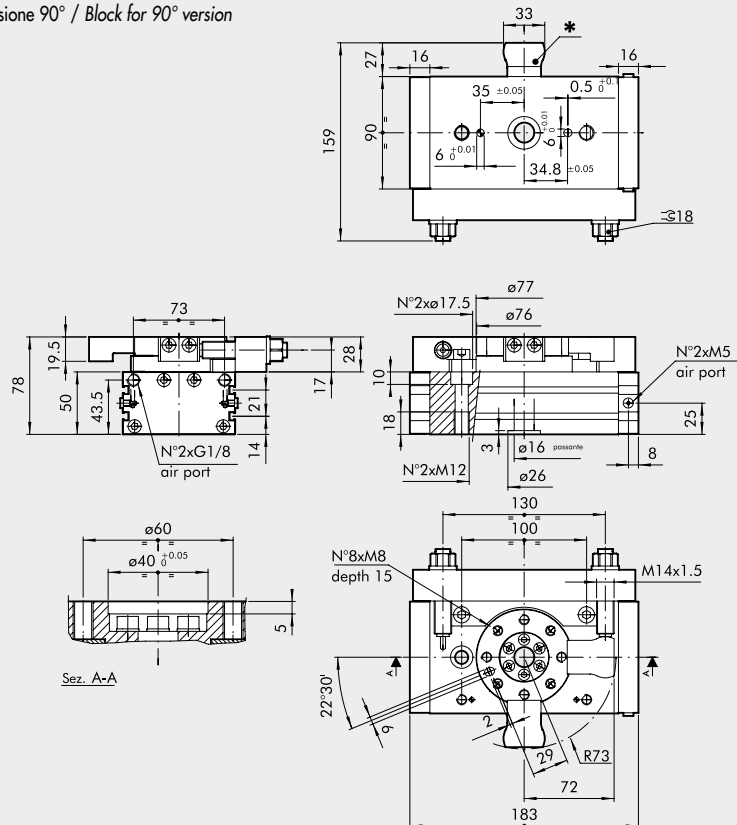
ATTUATORE ROTANTE CON DECELERATORI ESTERNI R3-25 90/180°
ROTARY ACTUATOR SERIES R3-25 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

* Fermo per versione 90° / Block for 90° version



ATTUATORE ROTANTE CON DECELERATORI ESTERNI R3-30 90/180°
ROTARY ACTUATOR SERIES R3-30 WITH EXTERNAL SHOCK ABSORBERS, 90/180°

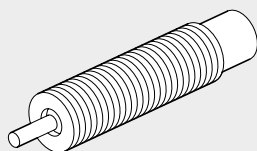
* Fermo per versione 90° / Block for 90° version



Cod.	Descrizione / Description
W1630254090	Attuatore rotante con flangia + deceleratore esterno R3-25-90 <i>Rotary actuator with flange + shock absorbers R3-25-90</i>
W1630254180	Attuatore rotante con flangia + deceleratore esterno R3-25-180 <i>Rotary actuator with flange + shock absorbers R3-25-180</i>

Cod.	Descrizione / Description
W1630304090	Attuatore rotante con flangia + deceleratore esterno R3-30-90 <i>Rotary actuator with flange + shock absorbers R3-30-90</i>
W1630304180	Attuatore rotante con flangia + deceleratore esterno R3-30-180 <i>Rotary actuator with flange + shock absorbers R3-30-180</i>

DECELERATORI / SHOCK ABSORBERS

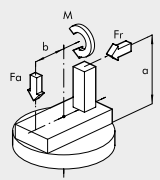


Cod.	Ø	Descrizione / Description
0950004009	Ø 16	Deceleratore ECO10 MF3 M10x1 <i>Shock absorbers ECO 10 MF3 M10x1</i>
0950004010	Ø 22	Deceleratore ECO15 MF4 M12x1 <i>Shock absorbers ECO 15 MF4 M12x1</i>
0950004015	Ø 25 ÷ 30	Deceleratore ECO S 25 MC2 M14x1.5 <i>Shock absorbers ECO S 25 MC2 M14x1.5</i>
0950004005	Ø 40	Deceleratore ECO50 MC2 + dado M20x1.5 <i>Shock absorbers ECO MC2 + nut M20x1.5</i>

NOTE / NOTES

DIMENSIONAMENTO ATTUATORI ROTANTI/ ROTARY ACTUATORS SIZING

CALCOLO ENERGIA CINETICA, FORZE E MOMENTO / HOW TO CALCULATE KINETIC ENERGY

	Denominazione <i>Denomination</i>	Unità di misura <i>Unit of measurement</i>	Formula <i>Formula</i>	Esempio <i>Example</i>
				
α	Angolo di rotazione <i>Angle of rotation</i>	rad	$= \text{gradi} \cdot \frac{\pi}{180}$ $= \text{degrees}$	$= 90^\circ = \frac{\pi}{2} \text{ rad.}$
t	Tempo di rotazione <i>Rotation time</i>	s		2
J _{ta}	Momento d'inerzia delle masse in rotazione N.B.: sommare quello delle singole masse <i>Moment of inertia of rotating masses</i> N.B.: added those of the individual masses	kg m ²	$= \sum J_i$	$= 0.078 + 0.02 + 0.133 = 0.232$
E	Energia cinetica <i>Kinetic energy</i>	Nm	$= 1/2 J \omega^2 = 2J \cdot \left(\frac{\alpha}{t}\right)^2$	$= 2 \cdot 0.232 \cdot \left(\frac{\pi/2}{2}\right)^2 = 0.57$
Fr	Forza radiale (Ricordarsi di considerare le forze centrifughe) <i>Radial force</i> (Remember to take into account centrifugal forces)	N	$(F_c = M \cdot \omega^2 \cdot R)$	50
Fa	Forza assiale <i>Axial force</i>	N		10
M	Momento ribaltante <i>Overturning moment</i>	Nm	$= M + Fr \cdot a + Fa \cdot b$	$= 50 \times 0.1 + 10 \times 0 = 5$

MOMENTI D'INERZIA PER LE FORME PIÙ FREQUENTI / MOMENTS OF INERTIA FOR THE MOST COMMON SHAPES

	Denominazione <i>Denomination</i>	Unità di misura <i>Unit of measurement</i>	Formula <i>Formula</i>	Esempio <i>Example</i>
			Disco <i>Disk</i>	
M	Massa del disco <i>Disk mass</i>	kg		7
d	Diametro del disco <i>Disk diameter</i>	m		0.3
J	Momento d'inerzia del disco <i>Moment of inertia of the disk</i>	kg m ²	$= \frac{Md^2}{8}$	$= \frac{7 \cdot 0.3^2}{8} = 0.0787$
			Massa lontana dall'asse di rotazione <i>Mass distant from rotation axis</i>	
M	Massa <i>Mass</i>	kg		0.5
R	Distanza tra baricentro e l'asse di rotazione <i>Distance between barycenter and rotation axis</i>	m		0.2
J	Momento d'inerzia della massa <i>Moment of inertia of the mass</i>	kg m ²	$= MR^2$	$= 0.5 \times 0.2^2 = 0.02$
			Parallelepipedo con baricentro sull'asse di rotazione <i>Parallelepiped with barycenter on rotation axis</i>	
M	Massa <i>Mass</i>	kg		10
L	Lato maggiore del parallelepipedo <i>Side of the parallelepiped</i>	m		0.4
J	Momento d'inerzia della massa <i>Moment of inertia of the mass</i>	kg m ²	$= M \frac{L^2}{12}$	$= \frac{10 \cdot 0.4^2}{12} = 0.13$