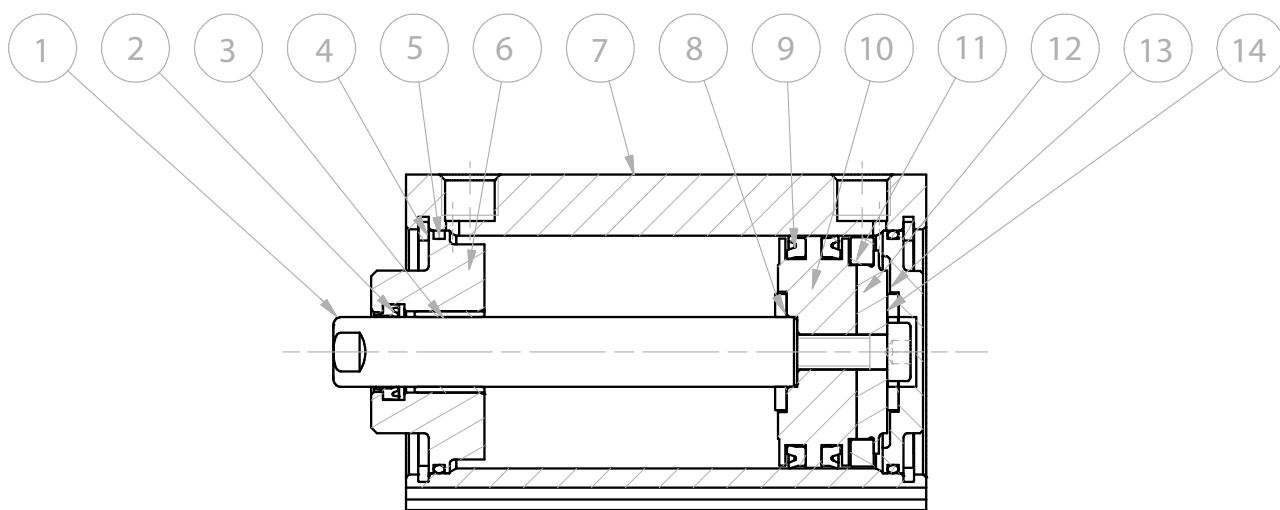


CARATTERISTICHE TECNICHE - TECHNICAL CHARACTERISTICS

Pressione di esercizio <i>Working pressure</i>	1 ÷ 10 bar (doppio effetto - <i>double acting</i>) 2 ÷ 10 bar (semplice effetto - <i>single acting</i>)
Temperatura di esercizio <i>Working temperature</i>	0 ÷ +80 °C (-20 °C con aria secca - <i>with dry air</i>) 0 ÷ +150 °C (con guarnizioni per alte temperature - <i>with high temperature seals</i>)
Versioni - Versions	semplice effetto - doppio effetto - antirrotazione - stelo passante <i>single acting - double acting - anti-rotation - double rod</i>
Alesaggi - Bores	Ø 12 - 16 - 20 - 25 - 32 - 40 - 50 - 63 - 80 - 100
Corse - Strokes	vedere tabelle corse standard - <i>see standard stroke tables</i>
Fluidi - Fluid	aria compressa, filtrata, non lubrificata - <i>compressed air, filtered, no lubrication</i>

CARATTERISTICHE COSTRUTTIVE - CONSTRUCTIVE CHARACTERISTICS

①	Stelo - Piston rod	acciaio inox AISI 303 - <i>stainless steel AISI 303</i>
② ⑤ ⑨	Guarnizioni - Seals	poliuretano-nbr - <i>polyurethane-nbr</i>
③	Boccola - Bush	acciaio+PTFE - <i>steel+PTFE</i>
④	Seeger - Retaining ring	acciaio - <i>steel</i>
⑥ ⑬	Testate - Covers	Ø 12÷25 ottone - <i>brass</i> Ø 32÷100 alluminio anodizzato - <i>anodized aluminium</i>
⑦	Tubo - Tube	alluminio anodizzato - <i>anodized aluminium</i>
⑧ ⑭	Ammortizzo - Cushioning	elastico - <i>elastic</i>
⑩ ⑫	Pistone - Piston	delrin - <i>delrin</i> alluminio - <i>aluminium</i>
⑪	Magnete - Magnet	plastoferrite - <i>rubber magnet</i>
	Molla - Spring	acciaio - <i>steel</i>



CHIAVE DI CODIFICA

KEY CODE

F D M 0 5 0 0 3 0 . G S . F .

		ALESAGGIO BORE (Ø)	CORSA STROKE (mm)			OPZIONE - OPTION
		012 - 016 - 020 - 025 - 032	vedere tabelle corse std see std stroke tables			CP cerniera posteriore montata hinge rear mounted
		040 - 050 - 063 - 080 - 100				OPZIONE - OPTION
						S seeger inox stainless steel retaining ring
		VERSIONE - VERSION				STELO - ROD
SR	semplice effetto single acting					F femmina female
SM	semplice effetto magnetico magnetic single acting					
SE	semplice effetto molla posteriore single acting rear spring					
SEM	semplice effetto molla posteriore magnetico magnetic single acting rear spring					
DR	doppio effetto double acting					
DM	doppio effetto magnetico magnetic double acting					
DA	doppio effetto antirotativo double acting					
DMA	doppio effetto magnetico antirotativo magnetic double acting					
DP	doppio effetto stelo passante double rod double acting					
DMP	doppio effetto magnetico stelo passante double rod magnetic double acting					
DPA	doppio effetto stelo passante antirotazione double rod double acting					
DMPA	doppio effetto magnetico stelo passante antirotazione double rod magnetic double acting					
		SERIE - SERIES				
		F tubo profilato con cave per sensori tube with slots for sensors				

ESECUZIONI A RICHIESTA - ON REQUEST

Stelo forato - Hollow piston rod

Stelo prolungato (W) - Extended piston rod (W)

Filetti speciali (se stelo maschio dado stelo non fornito) - Special thread (if male rod without rod nut)

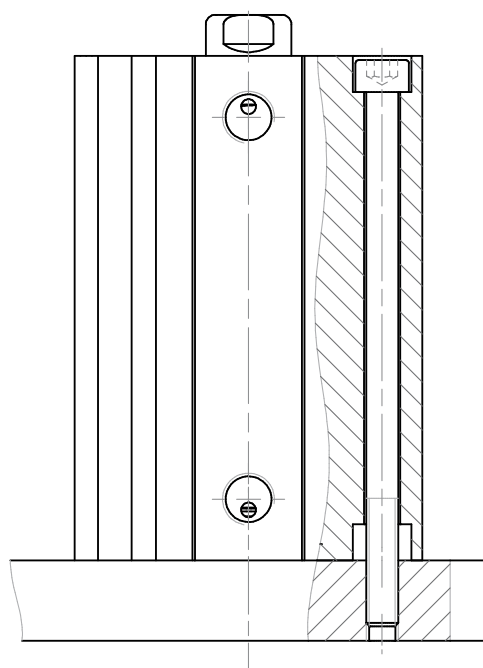
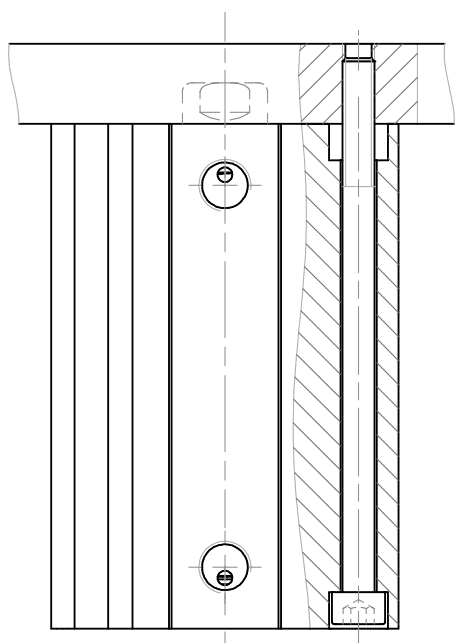
FORZE TEORICHE DI TRAZIONE (P=6bar)

THEORETICAL FORCES OF TRACTION (P=6bar)

		Ø	012	016	020	025	032	040	050	063	080	100
FSR FSM	IN SPINTA IN PUSH	[N]	51	106	170	258	441	729	1.070	1.720	2.880	4.440
	IN TIRO IN PULL	[N]	5	6	6	13	18	20	40	49	76	131
FDR FDM	IN SPINTA IN PUSH	[N]	58	114	176	277	462	763	1.110	1.770	2.990	4.650
	IN TIRO IN PULL	[N]	42	84	129	230	392	663	990	1.650	2.800	4.370
FDA FDMA	IN SPINTA IN PUSH	[N]	-	-	173	272	454	750	1.110	1.750	2.970	4.620
	IN TIRO IN PULL	[N]	-	-	123	225	385	653	980	1.630	2.770	4.330
FDP FDMP	IN SPINTA IN PUSH	[N]	42	84	129	230	392	663	990	1.650	2.800	4.370
	IN TIRO IN PULL	[N]	42	84	129	230	392	663	990	1.650	2.800	4.370

ESEMPIO DI FISSAGGIO

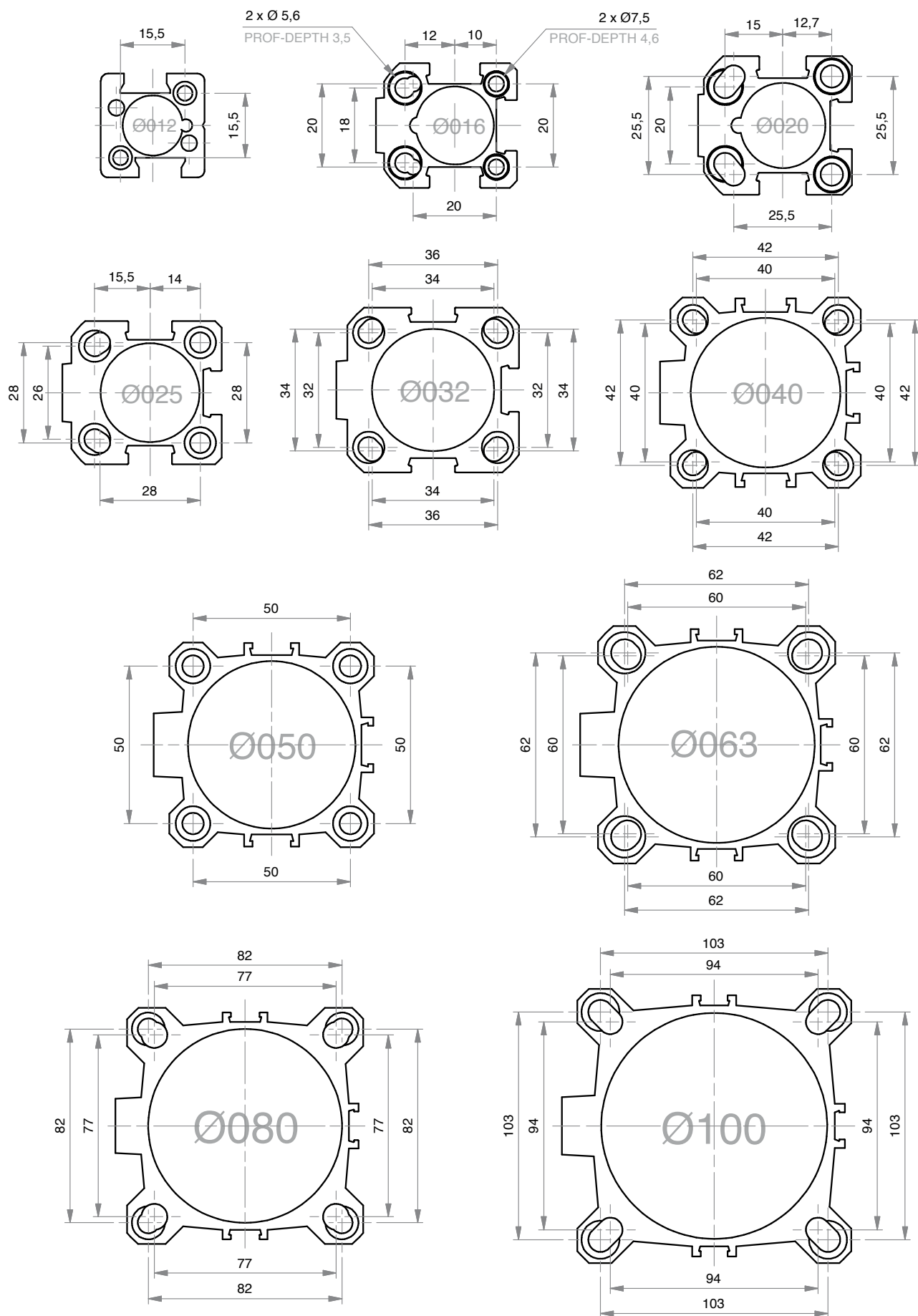
MOUNTING EXAMPLE



Il fissaggio deve avvenire mediante viti amagnetiche passanti attraverso il cilindro
The fixing must be with non-magnetic screws through the cylinder

PROFILO ESTRUSO DI ALLUMINIO

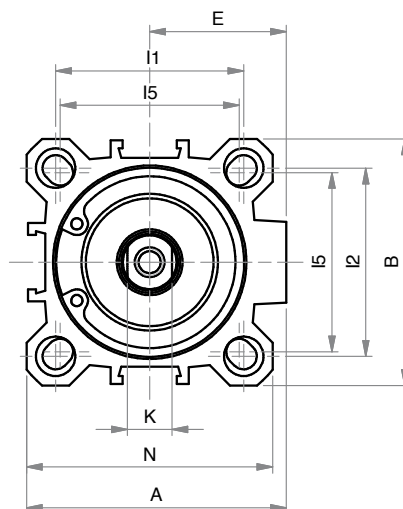
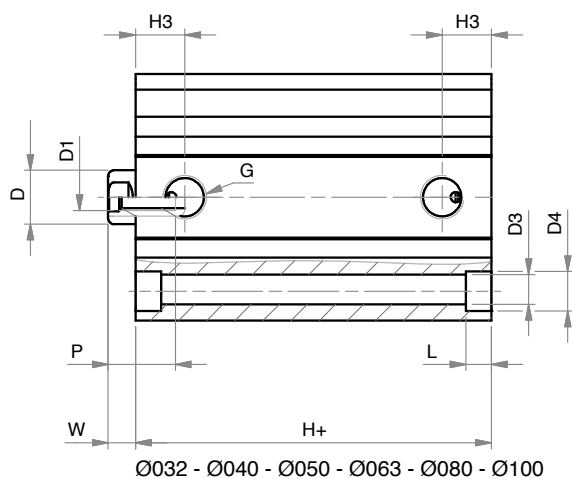
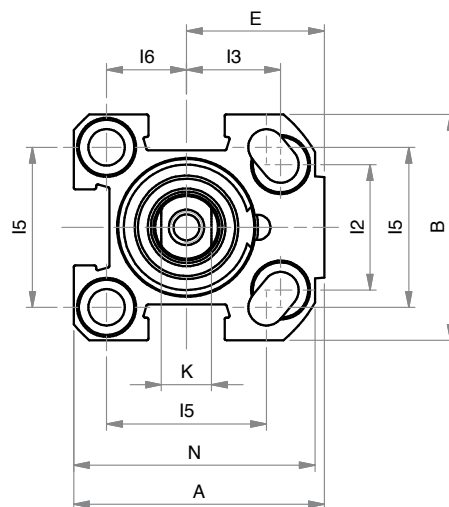
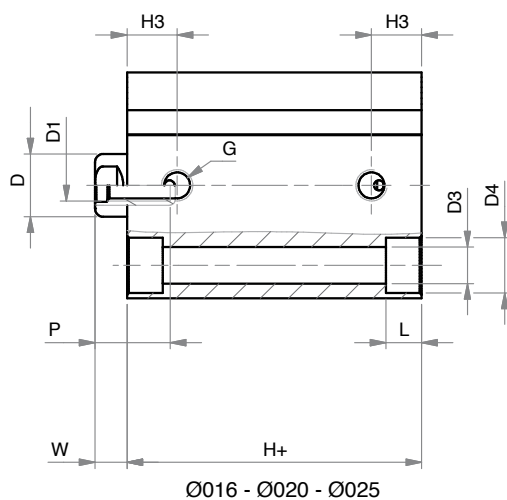
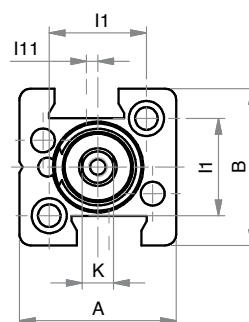
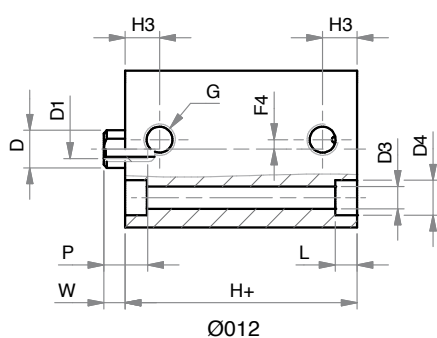
EXTRUDED ALUMINIUM PROFILE



SEMPLICE EFFETTO - MOLLA ANTERIORE

FSR

SINGLE ACTING - FRONT SPRING



DIMENSIONI - DIMENSIONS

Ø	012	016	020	025	032	040	050	063	080	100
A	25	34	40	44,5	51	58	70	89	105	131
B	25	30	36	40	46	55	65	80	100	124
Ø D	6	8	10	10	12	12	16	16	20	25
D1	M3	M4	M5	M5	M6	M6	M8	M8	M10	M12
Ø D3	3,7	**	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	5,6	**	9	9	9	9	11	14	14	17,2
E	-	19	22	24,5	27	30,5	37,5	46	55	69
G	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	17***	27	27	28,5	29,5*	29,5*	34,5*	37*	46*	56*
H3	5,5	8	8	10,5	11,5	11	11,5	11	14	16
I1	15,5	-	-	-	36	42	50	62	82	103
I2	-	18	20	26	32	42	50	62	82	103
I3	-	12	15	15,5	-	-	-	-	-	-
I5	-	20	25,5	28	34	40	50	60	77	94
I6	-	10	12,7	14	-	-	-	-	-	-
K	5	6	8	8	10	10	13	13	17	22
L	3,5	4,6	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	-	3,5	5,7	5,7	-	-	-	-	-	-
N	-	32	38,5	42	48	55	65	80	100	124
P	7	11	12	12	15	15	17	17	17	22
W	3,5	4,5	5	5,5	6	6	7,5	7	8	10

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes 040 - 050:

Ø 032-040-050-063-080-100 aggiungere - add +10 mm

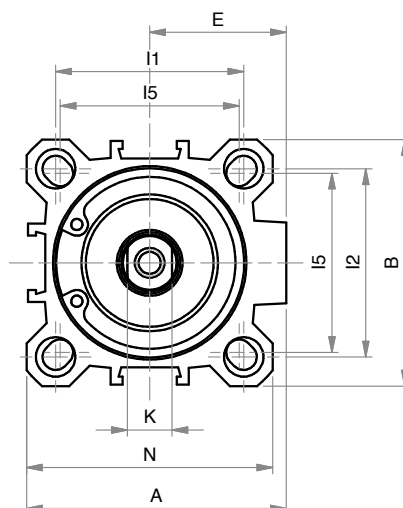
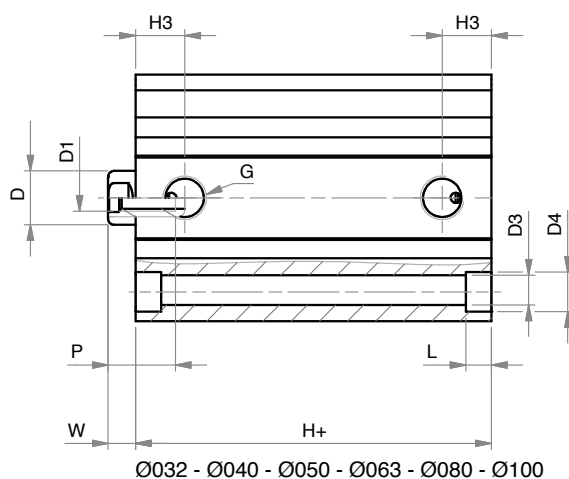
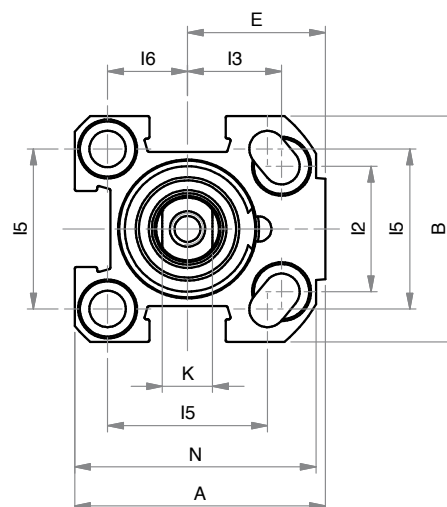
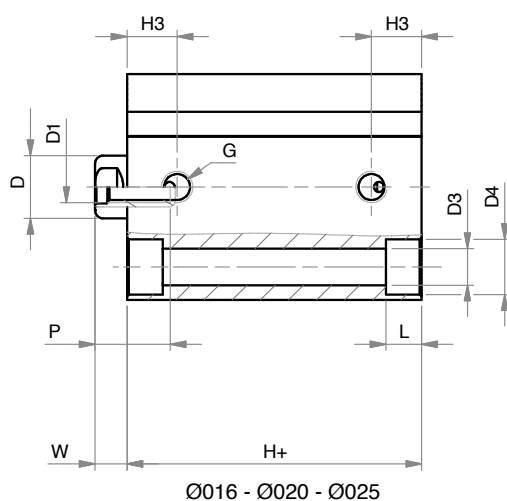
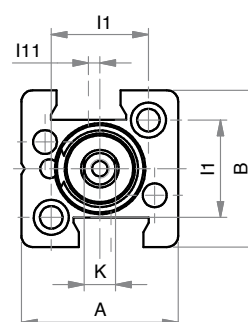
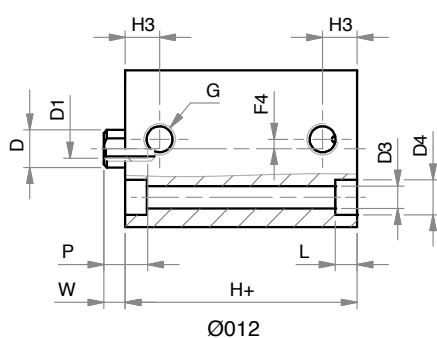
** vedi quote pag.117 - see dimensions page 117

*** per corse - for strokes 15-20-25

Ø 12 aggiungere - add + 5 mm

CORSE STANDARD - STANDARD STROKES

Ø	012	016	020	025	032	040	050	063	080	100
005	x	x	x	x	x	x	x	x	x	x
010	x	x	x	x	x	x	x	x	x	x
015	x	x	x	x	x	x	x	x	x	x
020	x	x	x	x	x	x	x	x	x	x
025	x	x	x	x	x	x	x	x	x	x
030					x	x	x	x	x	x
040					x	x	x	x	x	x
050					x	x	x	x	x	x



DIMENSIONI - DIMENSIONS

Ø	012	016	020	025	032	040	050	063	080	100
A	25	34	40	44,5	51	58	70	89	105	131
B	25	30	36	40	46	55	65	80	100	124
Ø D	6	8	10	10	12	12	16	16	20	25
D1	M3	M4	M5	M5	M6	M6	M8	M8	M10	M12
Ø D3	3,7	**	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	5,6	**	9	9	9	9	11	14	14	17,2
E	-	19	22	24,5	27	30,5	37,5	46	55	69
G	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	27	32*	32*	38,5*	39,5*	39,5*	39,5*	42*	46*	56*
H3	5,5	8	8	10,5	11,5	11	11,5	11	14	16
I1	15,5	-	-	-	36	42	50	62	82	103
I2	-	18	20	26	32	42	50	62	82	103
I3	-	12	15	15,5	-	-	-	-	-	-
I5	-	20	25,5	28	34	40	50	60	77	94
I6	-	10	12,7	14	-	-	-	-	-	-
K	5	6	8	8	10	10	13	13	17	22
L	3,5	4,6	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	-	3,5	5,7	5,7	-	-	-	-	-	-
N	-	32	38,5	42	48	55	65	80	100	124
P	7	11	12	12	15	15	17	17	17	22
W	3,5	4,5	4,5	5,5	5,5	6,5	7,5	6,5	8	10

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes 025:

Ø 016-020 aggiungere - add +6 mm

Ø 025 aggiungere - add +1 mm

* per corse - for stroke 040-050:

Ø 032-040-050-063-080-100 aggiungere - add +10 mm

** vedi quote pag.117 - see dimensions page 117

CORSE STANDARD - STANDARD STROKES

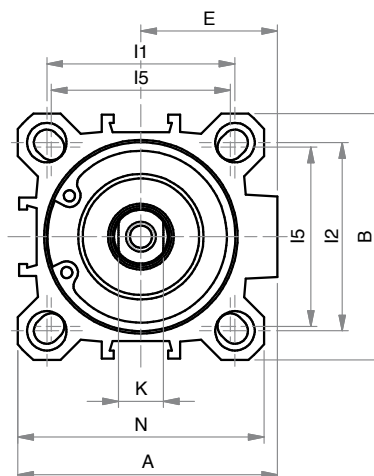
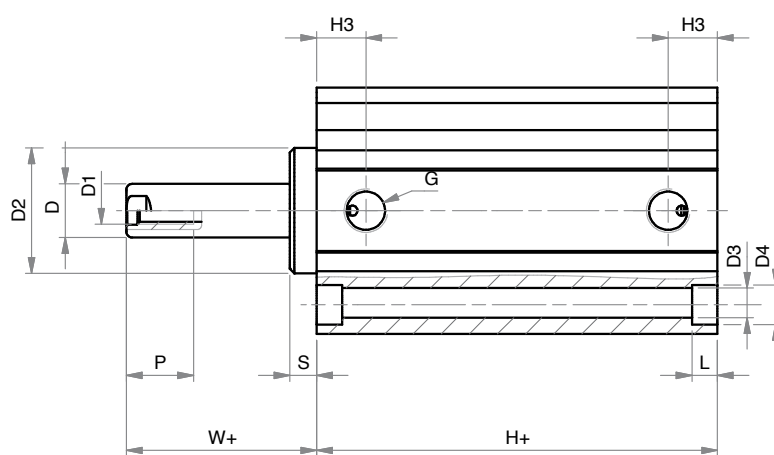
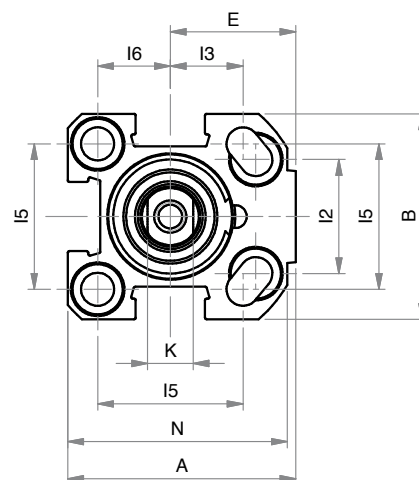
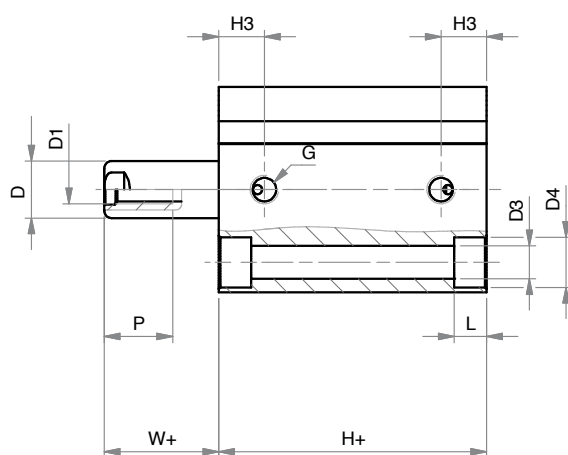
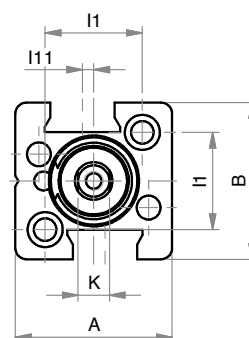
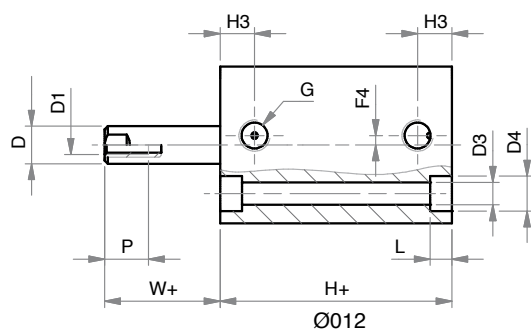
Ø	012	016	020	025	032	040	050	063	080	100
005	x	x	x	x	x	x				
010	x	x	x	x	x	x	x	x	x	x
015		x	x	x	x	x	x	x	x	x
020			x	x	x	x	x	x	x	x
025			x	x	x	x	x	x	x	x
030					x	x	x	x	x	x
040					x	x	x	x	x	x
050					x	x	x	x	x	x

SEMPLICE EFFETTO (MAGNETICO) - MOLLA POSTERIORE

FSE

FSEM

(MAGNETIC) SINGLE ACTING - REAR SPRING



DIMENSIONI - DIMENSIONS

Ø	012	016	020	025	032	040	050	063
A	25	34	40	44,5	51	58	70	89
B	25	30	36	40	46	55	65	80
Ø D	6	8	10	10	12	12	16	16
D1	M3	M4	M5	M5	M6	M6	M8	M8
Ø D2	-	-	-	-	24,5	28	34	38,5
Ø D3	3,7	**	5,8	5,8	5,8	5,8	6,8	9
Ø D4	5,6	**	9	9	9	9	11	14
E	-	19	22	24,5	27	30,5	37,5	46
G	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8
H+	***	32*	32*	38,5*	39,5	39,5	39,5	42
H3	5,5	8	8	10,5	11,5	11	11,5	11
I1	15,5	-	-	-	36	42	50	62
I2	-	18	20	26	32	42	50	62
I3	-	12	15	15,5	-	-	-	-
I5	-	20	25,5	28	34	40	50	60
I6	-	10	12,7	14	-	-	-	-
K	5	6	8	8	10	10	13	13
L	3,5	4,6	5,7	5,7	5,7	5,7	6,8	8,8
L1	-	3,5	5,7	5,7	-	-	-	-
N	-	32	38,5	42	48	55	65	80
P	7	11	12	12	15	15	17	17
S	-	-	-	-	5	6	6	8
W+	3,5	4,5	4,5	5,5	11	12,5	13,5	15

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes 020-025:

Ø 020 aggiungere - add +11 mm

Ø 025 aggiungere - add +6 mm

Ø 032 aggiungere - add +5 mm

* per corsa - for stroke 030:

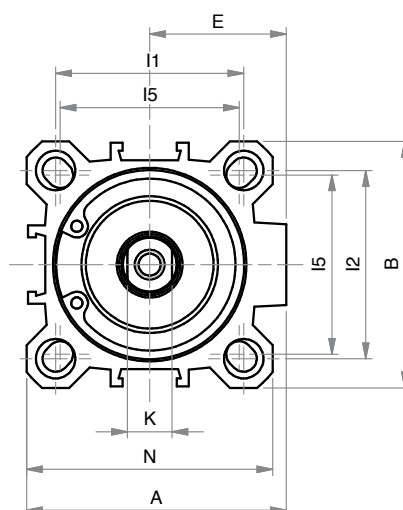
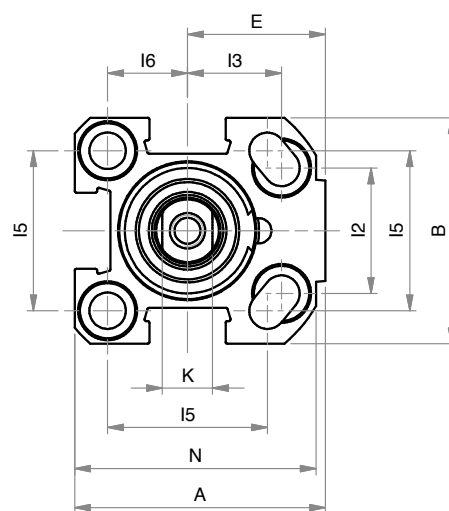
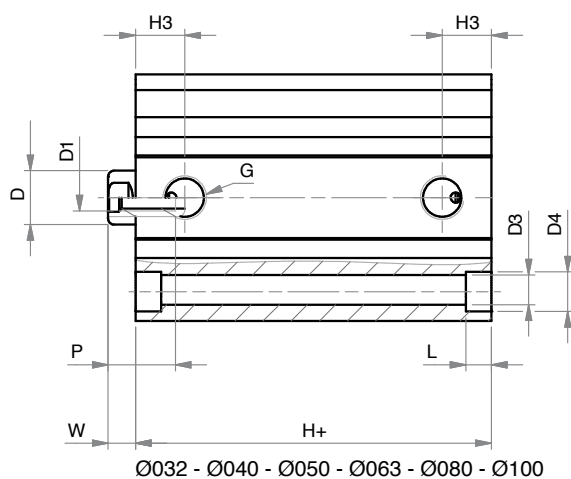
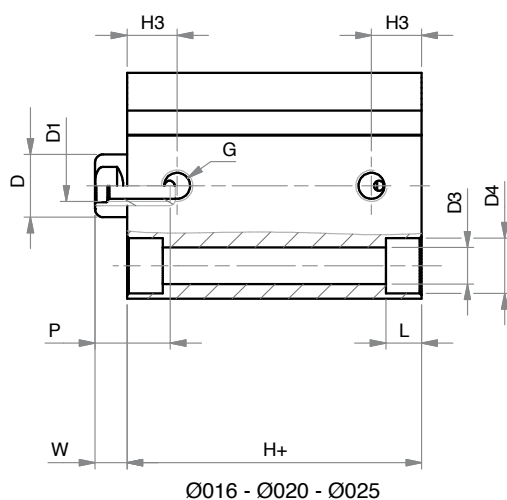
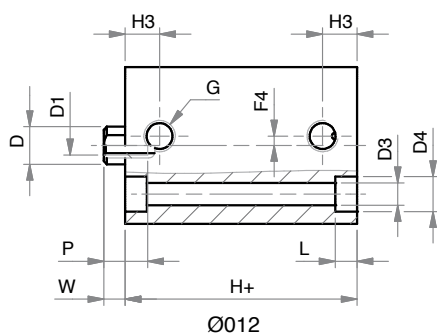
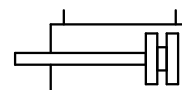
Ø 032 aggiungere - add +10 mm

** vedi quote pag.117 - see dimensions page 117

*** FSE=17 - FSEM=27

CORSE STANDARD - STANDARD STROKES

Ø	012	016	020	025	032	040	050	063
005	x	x	x	x	x			
010	x	x	x	x	x	x	x	x
015		x	x	x	x	x	x	x
020			x	x	x	x	x	x
025			x	x	x	x	x	x
030					x	x	x	x



DIMENSIONI - DIMENSIONS

Ø	012	016	020	025	032	040	050	063	080	100
A	25	34	40	44,5	51	58	70	89	105	131
B	25	30	36	40	46	55	65	80	100	124
Ø D	6	8	10	10	12	12	16	16	20	25
D1	M3	M4	M5	M5	M6	M6	M8	M8	M10	M12
Ø D3	3,7	**	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	5,6	**	9	9	9	9	11	14	14	17,2
E	-	19	22	24,5	27	30,5	37,5	46	55	69
G	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	17	27*	27*	28,5*	29,5	29,5	34,5	37	46	56
H3	5,5	8	8	10,5	11,5	11	11,5	11	14	16
I1	15,5	-	-	-	36	42	50	62	82	103
I2	-	18	20	26	32	42	50	62	82	103
I3	-	12	15	15,5	-	-	-	-	-	-
I5	-	20	25,5	28	34	40	50	60	77	94
I6	-	10	12,7	14	-	-	-	-	-	-
K	5	6	8	8	10	10	13	13	17	22
L	3,5	4,6	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	-	3,5	5,7	5,7	-	-	-	-	-	-
N	-	32	38,5	42	48	55	65	80	100	124
P	7	11	12	12	15	15	17	17	17	22
W	3,5	4,5	5	5,5	6	6	7,5	7	8	10

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes 030-040-050:

Ø 016-020 aggiungere - add +1 mm

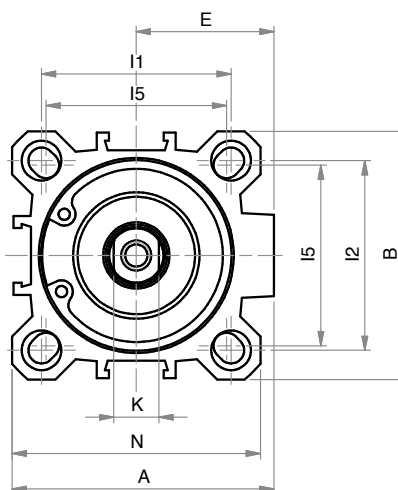
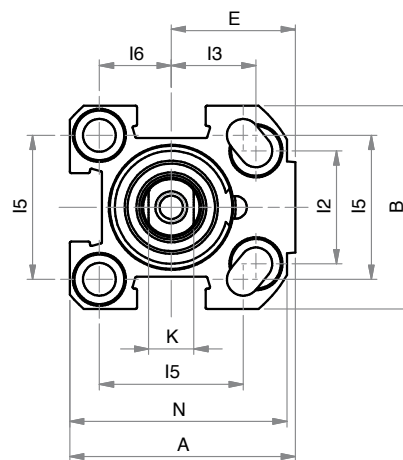
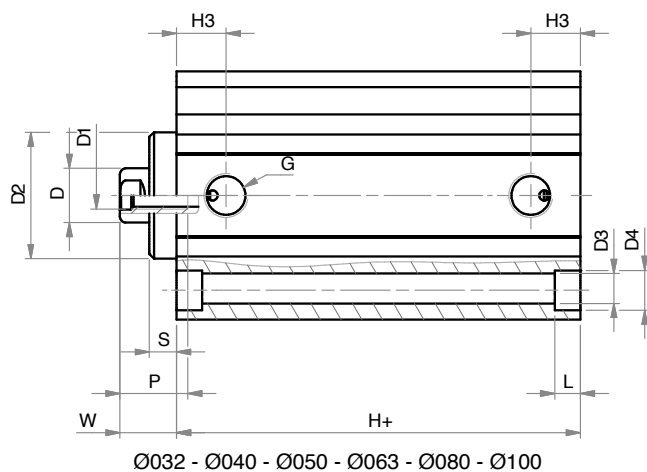
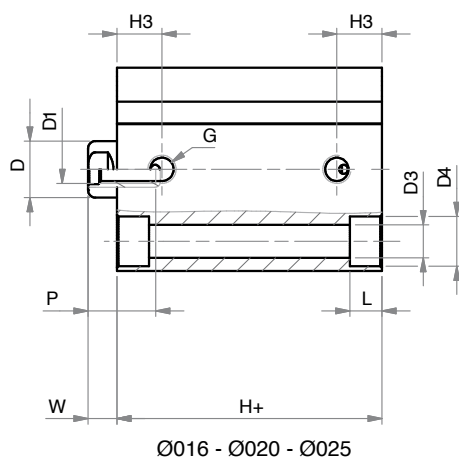
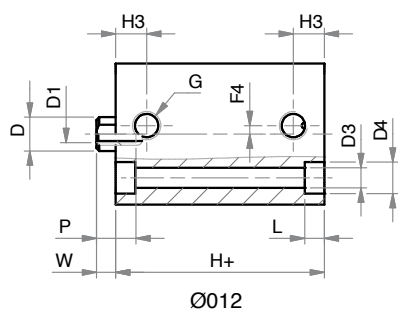
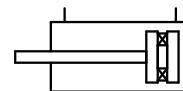
* per corse - for strokes 040-050:

Ø 025 aggiungere - add +1 mm

** vedi quote pag.117 - see dimensions page 117

CORSE STANDARD - STANDARD STROKES

Ø	012	016	020	025	032	040	050	063	080	100
005	x	x	x	x	x	x				
010	x	x	x	x	x	x	x	x	x	x
015	x	x	x	x	x	x	x	x	x	x
020	x	x	x	x	x	x	x	x	x	x
025	x	x	x	x	x	x	x	x	x	x
030	x	x	x	x	x	x	x	x	x	x
040	x	x	x	x	x	x	x	x	x	x
050	x	x	x	x	x	x	x	x	x	x
060					x	x	x	x	x	x
080					x	x	x	x	x	x
100					x	x	x	x	x	x
125									x	x
160									x	x
200									x	x
250									x	x



DIMENSIONI - DIMENSIONS

Ø	012	016	020	025	032	040	050	063	080	100
A	25	34	40	44,5	51	58	70	89	105	131
B	25	30	36	40	46	55	65	80	100	124
Ø D	6	8	10	10	12	12	16	16	20	25
D1	M3	M4	M5	M5	M6	M6	M8	M8	M10	M12
Ø D2	-	-	-	-	24,5	28	34	38,5	44	56
Ø D3	3,7	**	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	5,6	**	9	9	9	9	11	14	14	17,2
E	-	19	22	24,5	27	30,5	37,5	46	55	69
G	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	27	32*	32*	38,5*	39,5	39,5	39,5	42	46	56
H3	5,5	8	8	10,5	11,5	11	11,5	11	14	16
I1	15,5	-	-	-	36	42	50	62	82	103
I2	-	18	20	26	32	42	50	62	82	103
I3	-	12	15	15,5	-	-	-	-	-	-
I5	-	20	25,5	28	34	40	50	60	77	94
I6	-	10	12,7	14	-	-	-	-	-	-
K	5	6	8	8	10	10	13	13	17	22
L	3,5	4,6	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	-	3,5	5,7	5,7	-	-	-	-	-	-
N	-	32	38,5	42	48	55	65	80	100	124
P	7	11	12	12	15	15	17	17	17	22
S	-	-	-	-	5	6	6	8	10	10,5
W	3,5	4,5	4,5	5,5	11	12,5	13,5	15	18	20,5

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes >= 025:

Ø 016-020 aggiungere - add +6 mm

Ø 025 aggiungere - add +1 mm

** vedi quote pag.117 - see dimensions page 117

CORSE STANDARD - STANDARD STROKES

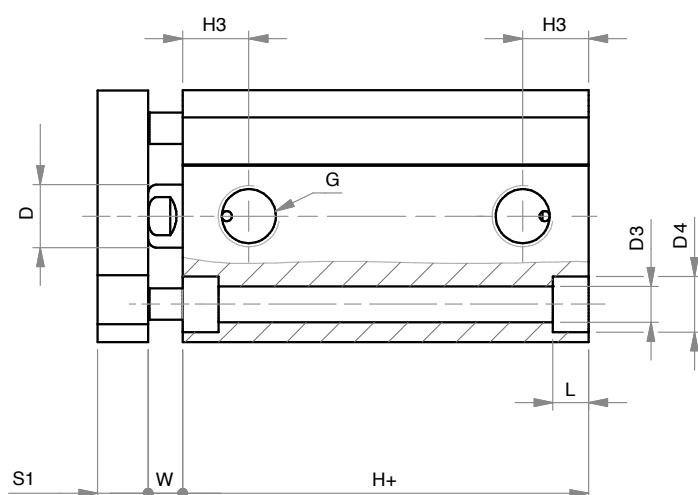
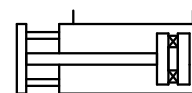
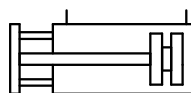
Ø	012	016	020	025	032	040	050	063	080	100
005	x	x	x	x	x	x				
010	x	x	x	x	x	x	x	x	x	x
015	x	x	x	x	x	x	x	x	x	x
020	x	x	x	x	x	x	x	x	x	x
025	x	x	x	x	x	x	x	x	x	x
030	x	x	x	x	x	x	x	x	x	x
040	x	x	x	x	x	x	x	x	x	x
050		x	x	x	x	x	x	x	x	x
060		x	x	x	x	x	x	x	x	x
080		x	x	x	x	x	x	x	x	x
100		x	x	x	x	x	x	x	x	x
125			x	x	x	x	x	x	x	x
160					x	x	x	x	x	x
200							x	x	x	x
250									x	x

DOPPIO EFFETTO (MAGNETICO) ANTIROTAZIONE

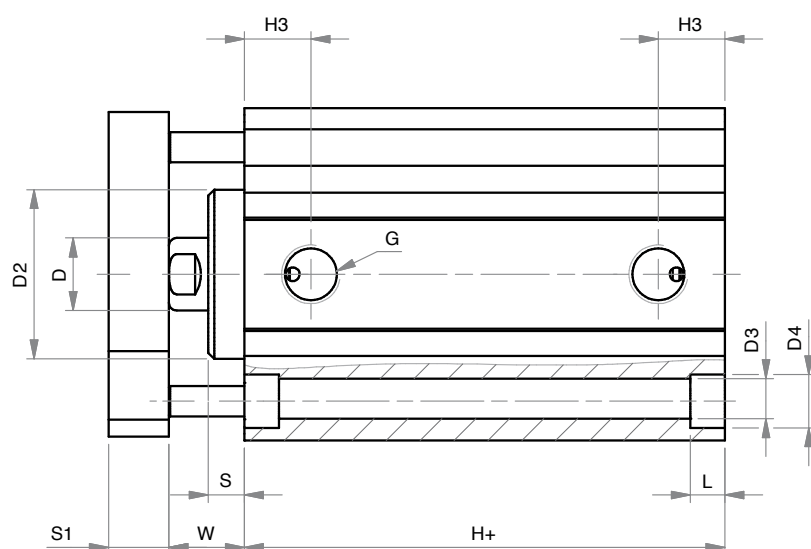
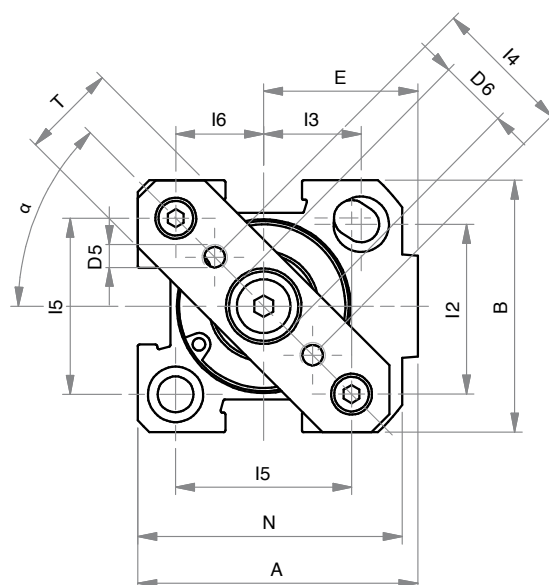
FDA

FDMA

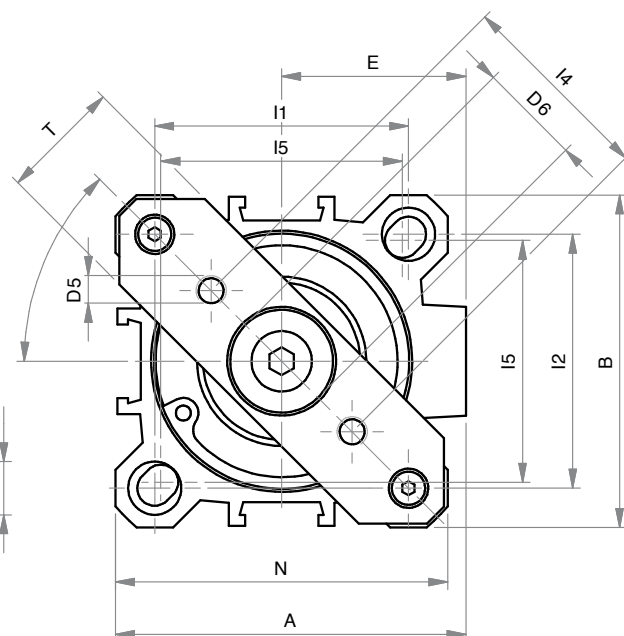
ANTI-ROTATION (MAGNETIC) DOUBLE ACTING



Ø016 - Ø020 - Ø025



Ø032 - Ø040 - Ø050 - Ø063 - Ø080 - Ø100



DIMENSIONI - DIMENSIONS

Ø	020	025	032	040	050	063	080	100
A	40	44,5	51	58	70	89	105	131
B	36	40	46	55	65	80	100	124
α	45°	45°	41,5°	45°	45°	45°	45°	45°
Ø D	10	10	12	12	16	16	20	25
Ø D2	-	-	24,5	28	34	38,5	44	56
Ø D3	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	9	9	9	9	11	14	14	17,2
D5	M4	M4	M5	M5	M6	M6	M8	M10
Ø D6	11	11	17	17	22	22	28	30
E	22	24,5	27	30,5	37,5	46	55	69
G	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	32*	38,5*	39,5	39,5	39,5	42	46	56
H3	8	10,5	11,5	11	11,5	11	14	16
I1	-	-	36	42	50	62	82	103
I2	20	26	32	42	50	62	82	103
I3	15	15,5	-	-	-	-	-	-
I4	20	22	28	33	42	50	65	80
I5	25,5	28	34	40	50	60	77	94
I6	12,7	14	-	-	-	-	-	-
K	8	8	10	10	13	13	17	22
L	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	5,7	5,7	-	-	-	-	-	-
N	38,5	42	48	55	65	80	100	124
S	-	-	5	6	6	8	10	10,5
S1	8	8	10	10	12	12	14	14
T	15	15	20	20	30	30	50	50
W	4,5	5,5	11	12,5	13,5	15	18	20,5

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes >= 025:

Ø 020 aggiungere - add +6 mm

Ø 025 aggiungere - add +1 mm

CORSE STANDARD - STANDARD STROKES

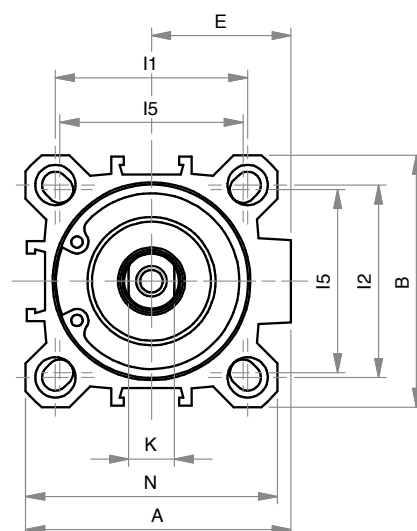
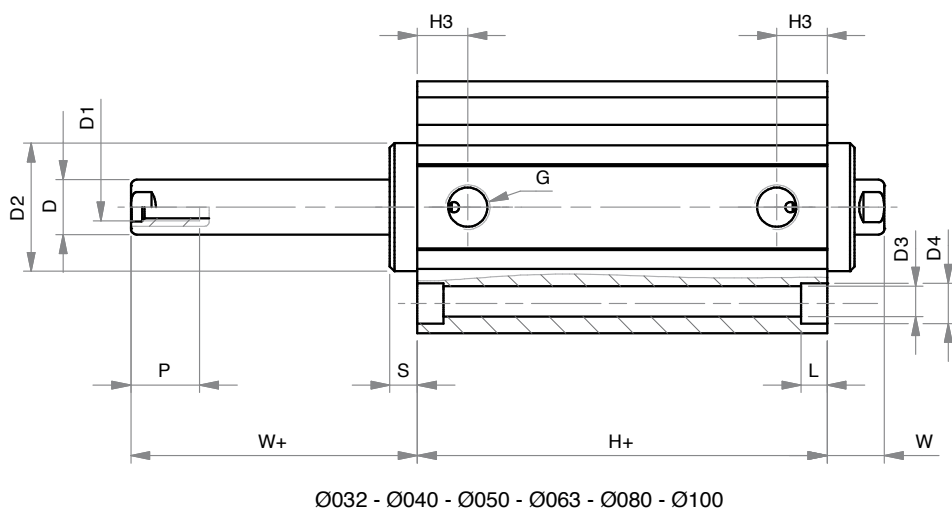
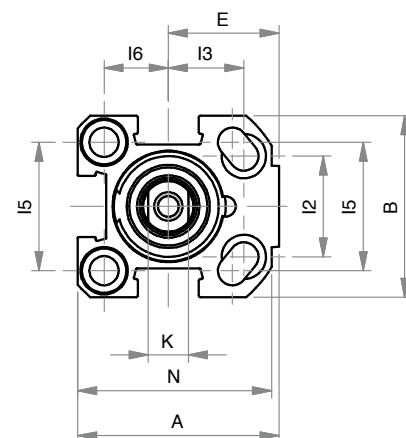
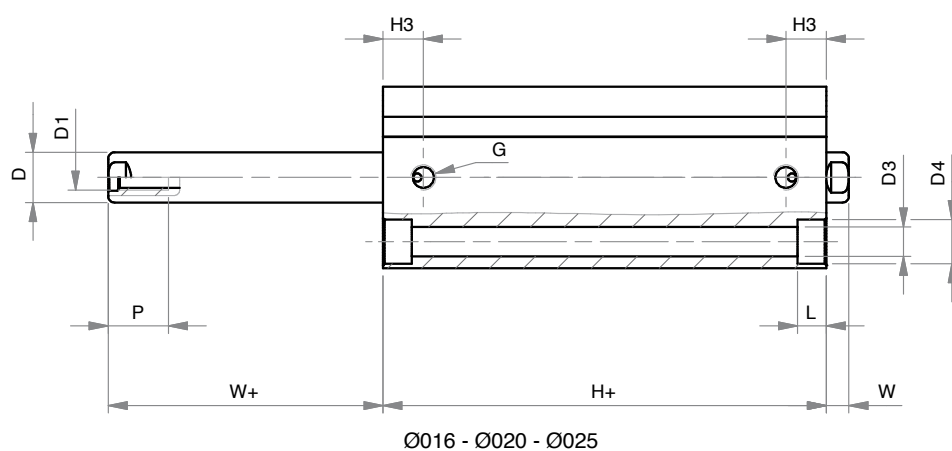
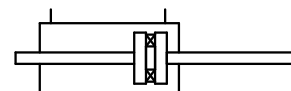
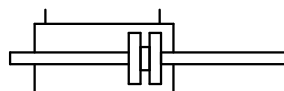
Ø	020	025	032	040	050	063	080	100
005	x	x	x	x				
010	x	x	x	x	x	x	x	x
015	x	x	x	x	x	x	x	x
020	x	x	x	x	x	x	x	x
025	x	x	x	x	x	x	x	x
030	x	x	x	x	x	x	x	x
040	x	x	x	x	x	x	x	x
050	x	x	x	x	x	x	x	x
060	x	x	x	x	x	x	x	x
080	x	x	x	x	x	x	x	x
100	x	x	x	x	x	x	x	x
125	x	x	x	x	x	x	x	x
160						x	x	x

DOPPIO EFFETTO (MAGNETICO) STELO PASSANTE

FDP

FDMP

DOUBLE ROD (MAGNETIC) DOUBLE ACTING



DIMENSIONI - DIMENSIONS

Ø	016	020	025	032	040	050	063	080	100
A	34	40	44,5	51	58	70	89	105	131
B	30	36	40	46	55	65	80	100	124
Ø D	8	10	10	12	12	16	16	20	25
D1	M4	M5	M5	M6	M6	M8	M8	M10	M12
Ø D2	-	-	-	24,5	28	34	38,5	44	56
Ø D3	**	5,8	5,8	5,8	5,8	6,8	9	9	11
Ø D4	**	9	9	9	9	11	14	14	17,2
E	19	22	24,5	27	30,5	37,5	46	55	69
G	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	G1/4
H+	32*	32*	38,5*	39,5	39,5	39,5	42	46	56
H3	8	8	10,5	11,5	11	11,5	11	14	16
I1	-	-	-	36	42	50	62	82	103
I2	18	20	26	32	42	50	62	82	103
I3	12	15	15,5	-	-	-	-	-	-
I5	20	25,5	28	34	40	50	60	77	94
I6	10	12,7	14	-	-	-	-	-	-
K	6	8	8	10	10	13	13	17	22
L	4,6	5,7	5,7	5,7	5,7	6,8	8,8	9	11
L1	3,5	5,7	5,7	-	-	-	-	-	-
N	32	38,5	42	48	55	65	80	100	124
P	11	12	12	15	15	17	17	17	22
S	-	-	-	5	6	6	8	10	10,5
W	4,5	4,5	5,5	11	12,5	13,5	15	18	20,5
W+	4,5	4,5	5,5	11	12,5	13,5	15	18	20,5

+ = aggiungere lunghezza corsa (mm) - add stroke length (mm)

* per corse - for strokes >= 025:

Ø 016-020 aggiungere - add +6 mm

Ø 025 aggiungere - add +1 mm

** vedi quote pag.117 - see dimensions page 117

CORSE STANDARD - STANDARD STROKES

Ø	016	020	025	032	040	050	063	080	100
005	x	x	x	x	x				
010	x	x	x	x	x	x	x	x	x
015	x	x	x	x	x	x	x	x	x
020	x	x	x	x	x	x	x	x	x
025	x	x	x	x	x	x	x	x	x
030	x	x	x	x	x	x	x	x	x
040	x	x	x	x	x	x	x	x	x
050	x	x	x	x	x	x	x	x	x
060	x	x	x	x	x	x	x	x	x
080	x	x	x	x	x	x	x	x	x
100	x	x	x	x	x	x	x	x	x
125		x	x	x	x	x	x	x	x
160				x	x	x	x	x	x
200						x	x	x	x
250								x	x