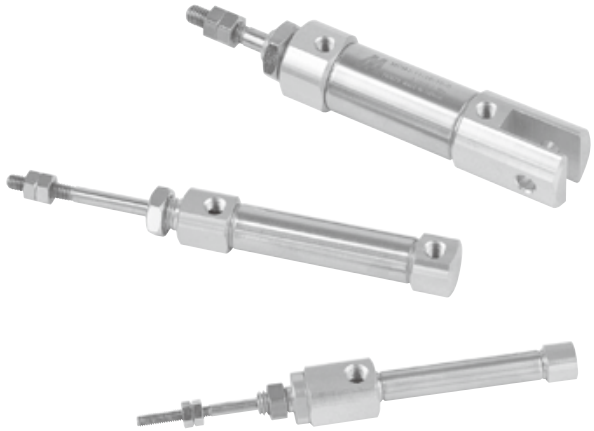
MCMJ serie

MINICILINDRO REDONDO



Características

- ■ Larga vida útil de gran calidad.
- ● Fijaciones de cilindros disponibles con una amplia gama de accesorios para montaje rígido o flexible.

Tabla para carrera estándar

Tipo		D.I. Tubo	Carrera (mm)	Máx. carrera (mm)
Simple efecto	13	ø6	15,30,45,60	60
	15	ø10	15,30,45,60	70
		ø16	15,30,45,60,75,100,125,150	150
Doble efecto	11	ø6	15,30,45,60,75,100	200
		ø10,16	↑ 150,200	300

* Carrera intermedia disponible, consúltenos.

Ejemplo de pedido

MCMJ — 11 — 16 — 45M — B

MODELO

TIPO
1: Vástago simple
2: Doble vástago

D.I. TUBO

CARRERA

M: Imán

TIPO TAPA

Código		Símbolo	Descripción
1	1		Doble efecto / Rosca macho
1	3		Simple efecto / vástago extendido / rosca macho
1	5		Simple efecto / vástago retraído / rosca macho

Código	Símbolo	D.I. Tubo
B		ø10,16
D		ø10,16
R		ø6,10,16

* Consulte la pág. 0-7 para ver un ejemplo de pedido con especificaciones especiales.
* Para pedido tipo **21**, **27** , consúltenos.

Especificaciones

Modelo		MCMJ		
D.I. Tubo (mm)		ø6	ø10	ø16
Tam. puerto		M5×0.8		
Medio		Aire		
Presión de funcionamiento máx.		0.7 MPa		
Presión de funcionamiento mín. (MPa)	Simple efecto normalmente extendido	0.25	0.15	
	Simple efecto normalmente retraído	0.2	0.15	
	Doble efecto	0.12	0.06	
Presión de prueba		1 MPa		
Lubricación		No requerida		
Temperatura ambiente		-5~+60°C (Sin congelación)		
Rango de velocidad disponible		50~500 mm/seg.		
Energía cinética máx. admisible (J)		0.16	0.27	0.4
Sensor final de carrera		RCM (Consulte la página 8-16)		
Abrazadera del sensor final de carrera		BM6	BM10	BM16

* Para conocer las precauciones, consulte la página 3-2.

PAR de apriete

D.I. Tubo	Rosca vástago	PAR de apriete (kgf·cm)	Rosca de la tapa final	PAR de apriete (kgf·cm)
ø6	M3×0.5	4.79	M6×1.0	24.6~26.6
ø10	M4×0.7	11.8	M8×1.0	60~65
ø16	M5×0.8	22.8	M10×1.0	110~120

* Asegúrese de que el par de apriete esté dentro del valor anterior y evite romper la rosca.
* La tolerancia del PAR de apriete es ±5%.

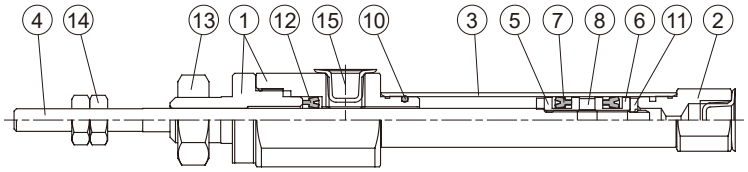
Pasador

Aplicable	Conector Y y I	Tipo tapa D
Código	**PIN-Y-P** (Con anillo elástico)	**PIN-D-P** (Con anillo elástico)
Higo / D.I. tubo		
ø6	–	–
ø10	**PIN-M4-10-1-P**	**PIN-M4-10-2-P**
ø16	**PIN-M4-16-1-P**	**PIN-M4-16-2-P**

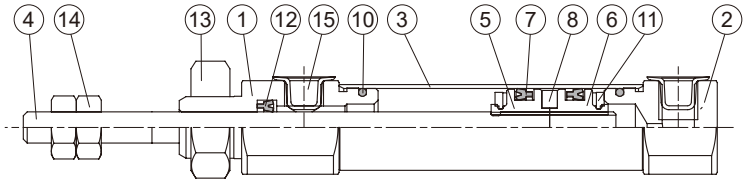
Ejemplo de pedido de accesorios de montaje y conector

	Accesorios					Conector	
Código	**LB**	**FA**	**T** (con I+PIN)	**NUT**		**Y**	**I**
Tipo tapa	B, R		D	–		Todo aplicable	
Montaje / D.I. tubo				Tuerca vástago	Tuerca fijación		
ø6	**LB-M4-6**	**FA-M4-6**	–	**NUT-M3x0.5x2.4Hx5.5B**	**NUT-M6x1.0x4Hx8B**	–	–
ø10	**LB-M4-10**	**FA-M4-10**	**T-M4-10**	**NUT-M4x0.7x3.2Hx7B**	**NUT-M8x1.0x4Hx11B**	**Y-M4-10**	**I-M4-10**
ø16	**LB-M4-16**	**FA-M4-16**	**T-M4-16**	**NUT-M5x0.8x4Hx8B**	**NUT-M10x1.0x4Hx14B**	**Y-M4-16**	**I-M4-16**

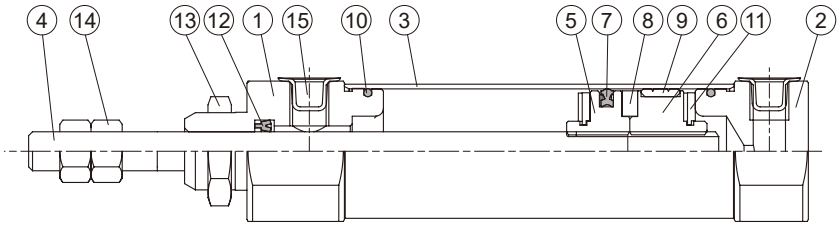
ø6

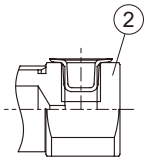


ø10

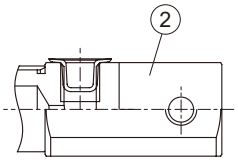


ø16

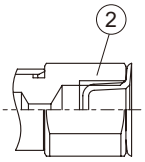




Tipo **B**: ø10, ø16



Tipo **D**: ø10, ø16



Tipo **R**: ø6, ø10, ø16

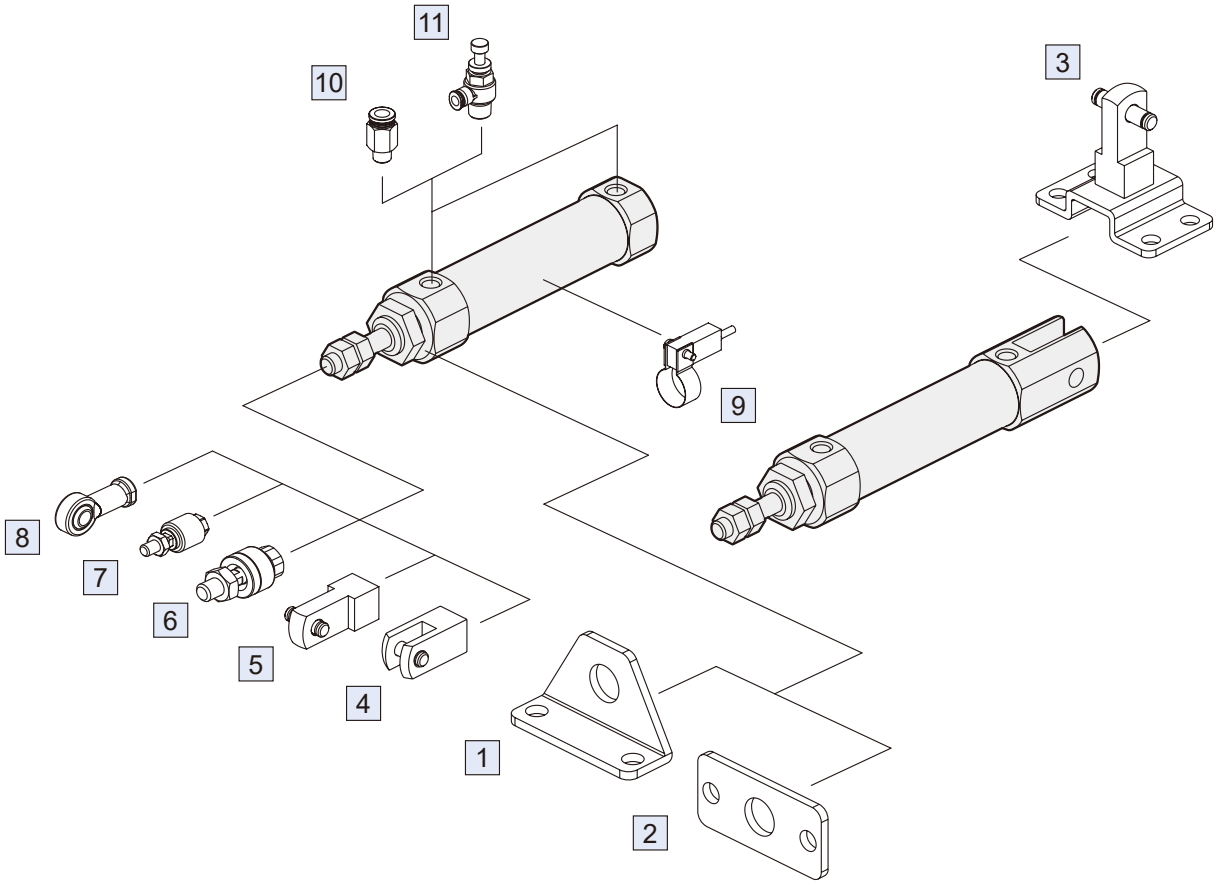
Material

Núm.	D.I. Tubo / Nombre de la pieza	6	10	16	Cant.	Componentes (incluidos)
1	Cubierta del vástago	Aleación de aluminio			1	●
2	Culata	Aleación de aluminio			1	●
3	Tubo	Acero inoxidable			1	
4	Vástago del pistón	Acero inoxidable			1	
5	Pistón-R	Aleación de aluminio			1	●
6	Pistón H	Aleación de aluminio			1	●
7	Juntas del pistón	NBR			2*1	●
8	Anillo magnético	Material magnético			1	●
9	Anillo de desgaste	—		Resina	1	●
10	Tórica	NBR			2	●
11	Junta de amortiguación	NBR			2	●
12	Anillo elástico	NBR			1	●
13	Tuerca fijación	Acero al carbono			1	●
14	Tuerca vástago front.	Acero al carbono			2	●
15	Conector	Plástico			2	●

*1. Diám. cilindro 6 (Cantidad requerida: 1 pza)

Ejemplo de pedido de componentes

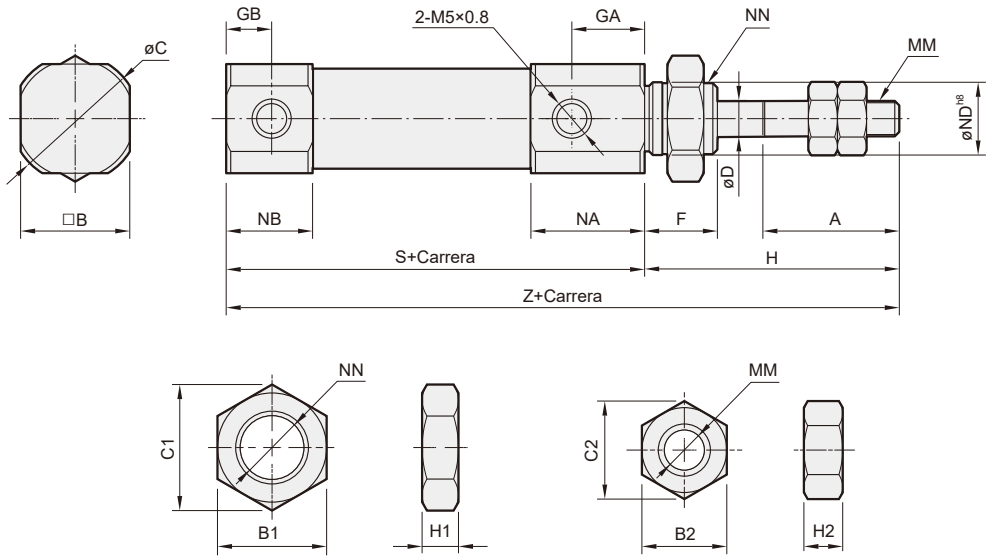
Tubo D.I.	Componentes
ø6	**CP-MCMJ-6-R**
ø10	**CP-MCMJ-10-R**
	CP-MCMJ-10-B
	CP-MCMJ-10-D
ø16	**CP-MCMJ-16-R**
	CP-MCMJ-16-B
	CP-MCMJ-16-D



Núm.	Accesorios	Material	Pág.
1	Accesorios de montaje LB	Acero al carbono	3-68, 70, 72
2	Accesorios de montaje FA	Acero al carbono	3-69, 71, 73
3	Accesorios de montaje T+I+PIN (*)	Acero al carbono	3-69, 71, 73, 74
4	Accesorios Y+PIN	Acero al carbono	3-74
5	Accesorios I+PIN	Acero al carbono	3-74
6	Junta flotante MFC	Acero al carbono	8-2
7	Junta flotante MFCS	Acero al carbono	8-5
8	Rótula PHS	Acero al carbono	8-6
9	Sensor final de carrera RCM+BM**	–	8-16
10	Racor PC (PISCO)	–	7-3 (Vol.1)
11	Controlador de velocidad JSC (PISCO)	–	7-15 (Vol.1)

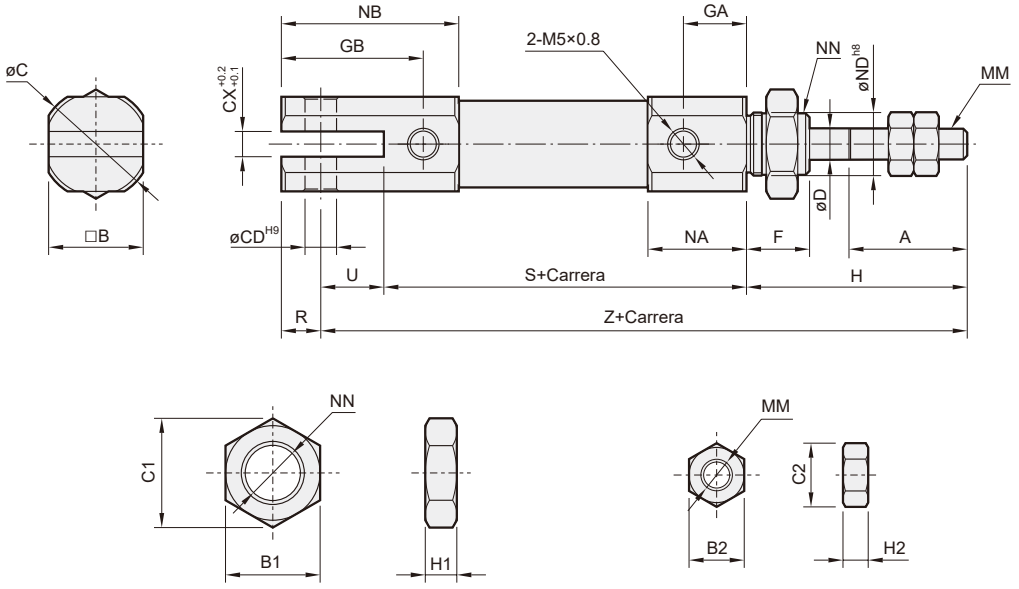
* Contiene I+Pasador
* Solo para tapa del extremo tipo "D".

B



Código / D.I. Tubo	A	B	B1	B2	C	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND h8	NN	S	Z
10	15	12	11	7	14	11.5	8.1	4	8	8	5	28	4	3.2	M4×0.7	12.5	9.5	8 $^{0}_{-0.022}$	M8×1.0	46	74
16	15	18	14	8	20	16.2	9.2	5	8	8	5	28	4	4	M5×0.8	12.5	9.5	10 $^{0}_{-0.022}$	M10×1.0	47	75

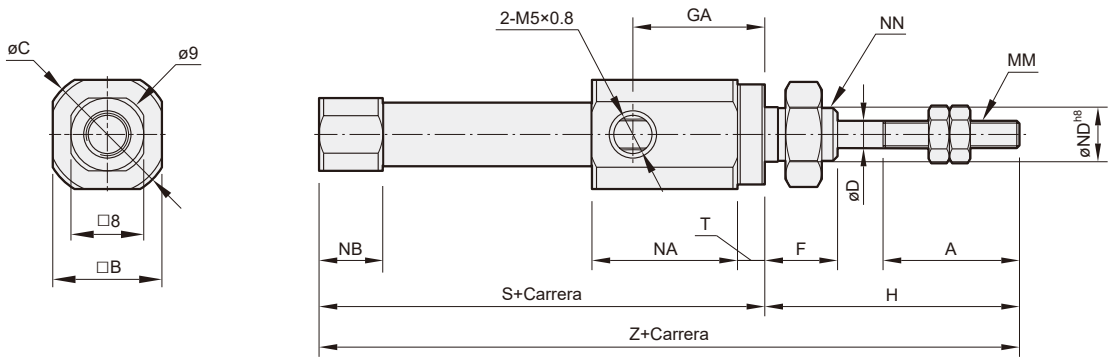
D



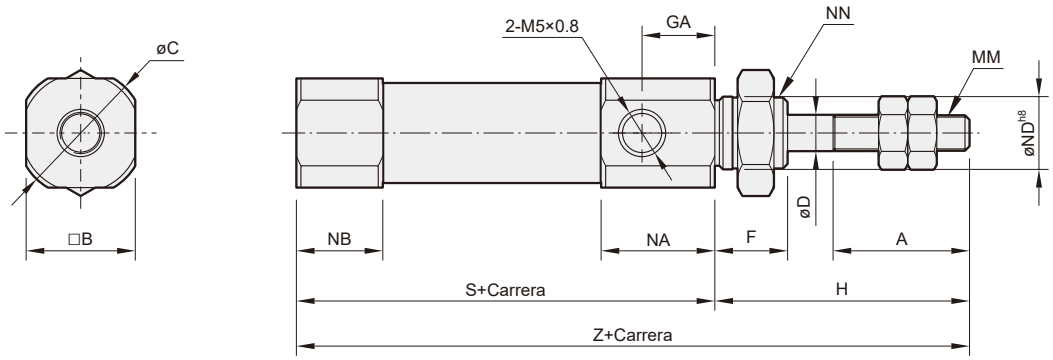
Código / D.I. Tubo	A	B	B1	B2	C	CD	CX	C1	C2	D	F	GA	GB	H	H1	H2	MM	NA	NB	ND h8	NN	R	S	U	Z
10	15	12	11	7	14	3.3	3.2	12.7	8.1	4	8	8	18	28	4	3.2	M4×0.7	12.5	22.5	8 $^{0}_{-0.022}$	M8×1.0	5	46	8	82
16	15	18	14	8	20	5	6.5	16.2	9.2	5	8	8	23	28	4	4	M5×0.8	12.5	27.5	10 $^{0}_{-0.022}$	M10×1.0	8	47	10	85

R

ø6



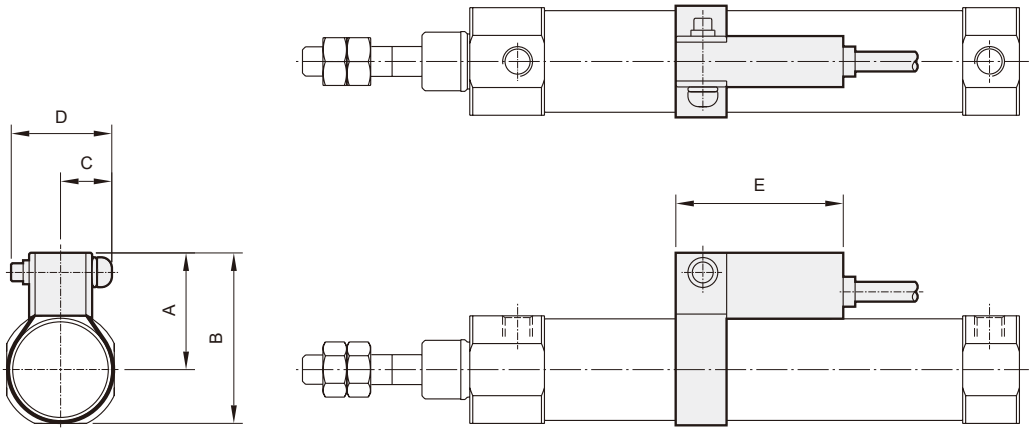
ø10~ø16



Código / D.I. Tubo	A	B	B1	B2	C	C1	C2	D	F	GA	H	H1	H2	MM	NA	NB	ND h8	NN	S	T	Z
6	15	12	8	5.5	14	9.2	6.4	3	8	14.5	28	4	2.4	M3×0.5	16	7	6 $^{0}_{-0.022}$	M6×1.0	49	3	77
10	15	12	11	7	14	12.7	8.1	4	8	8	28	4	3.2	M4×0.7	12.5	9.5	8 $^{0}_{-0.022}$	M8×1.0	46	–	74
16	15	18	14	8	20	16.2	9.2	5	8	8	28	4	4	M5×0.8	12.5	9.5	10 $^{0}_{-0.022}$	M10×1.0	47	–	75

Instalación de un sensor final de carrera

Sensor final de carrera: RCM
Abrazadera del sensor final de carrera: BM**



Código / D.I. Tubo	A	B	C	D	E
6	15	21	10	16	28
10	17	23	10	16	28
16	20	29	10	16	28

Peso del cilindro y accesorios

Peso del cilindro

Unidad: g

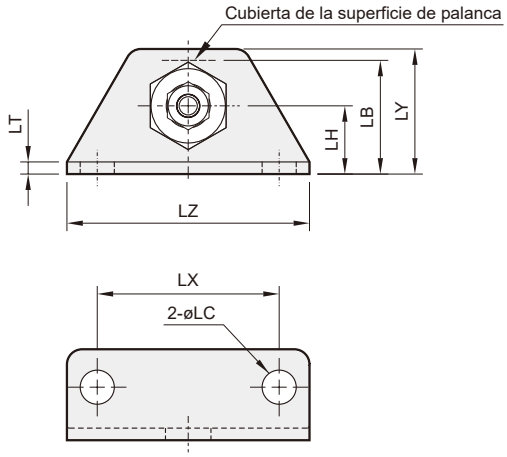
Modelo	Peso básico **MCMJ-11-B**	Carrera 15 mm **MCMJ-11-B**	Peso básico **MCMJ-11-D**	Carrera 15 mm **MCMJ-11-D**	Peso básico **MCMJ-11-R**	Carrera 15 mm **MCMJ-11-R**
D.I. Tubo						
ø6	–	–	–	–	18	2
ø10	21	4	24	4	23	3
ø16	46	7	52	8	46	7

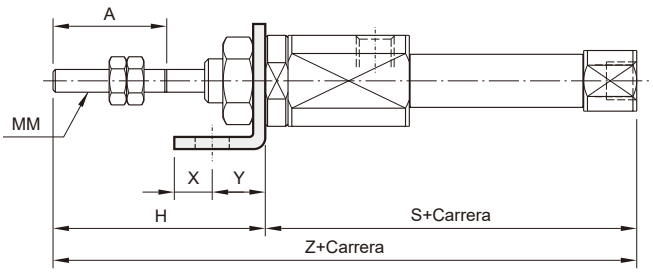
Peso de los accesorios

Modelo	LB	FA	T	Y	I	Pasador
D.I. Tubo						
ø6	9	5	–	–	–	–
ø10	9	5	14	22	16	1
ø16	21	13	54	17	21	3

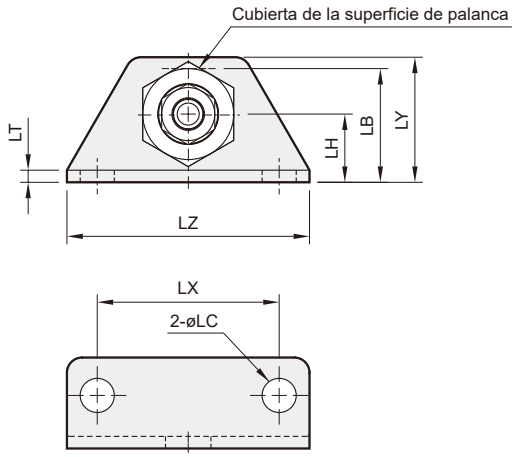
LB

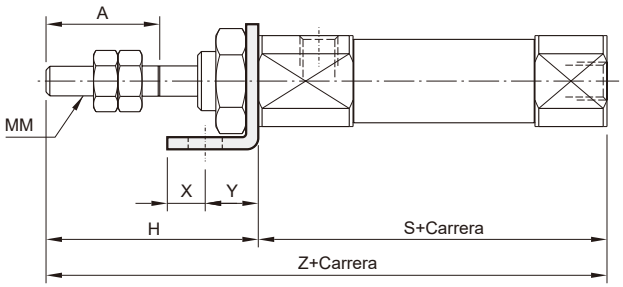
ø6





ø10~ø16

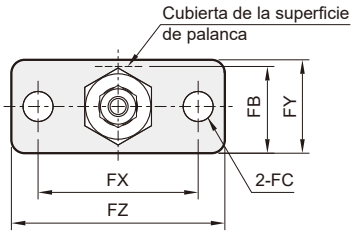


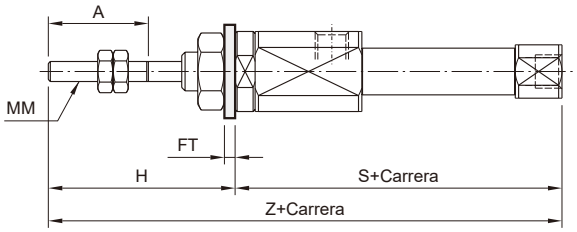


Código / D.I. Tubo	A	H	LB	LC	LH	LT	LX	LY	LZ	MM	S	X	Y	Z
6	15	28	15	4.5	9	1.6	24	16.5	32	M3×0.5	49	5	7	77
10	15	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	46	5	7	74
16	15	28	23	5.5	14	2.3	33	25	42	M5×0.8	47	6	9	75

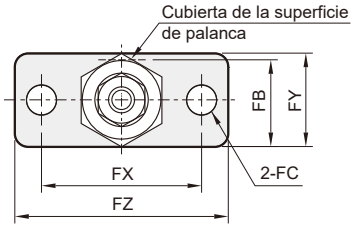
FA

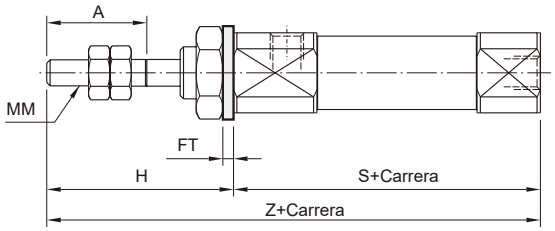
ø6





ø10~ø16

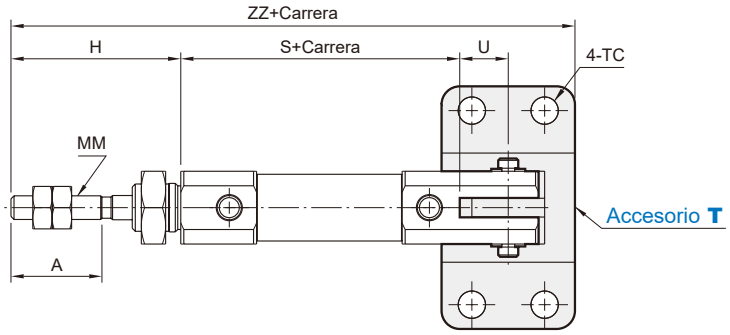


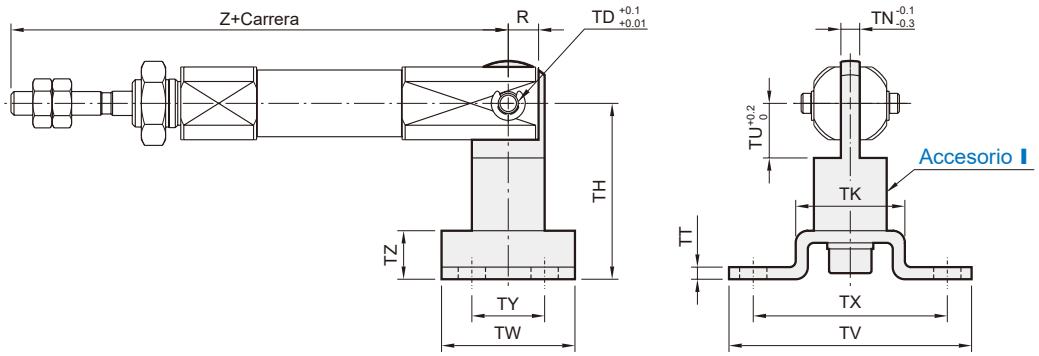


Código / D.I. Tubo	A	FB	FC	FT	FX	FY	FZ	H	MM	S	Z
6	15	13	4.5	1.6	24	14	32	28	M3×0.5	49	77
10	15	13	4.5	1.6	24	14	32	28	M4×0.7	46	74
16	15	19	5.5	2.3	33	20	42	28	M5×0.8	47	75

T

Contiene
I+Pasador

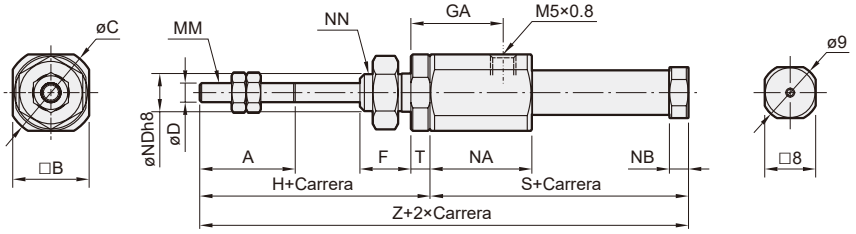




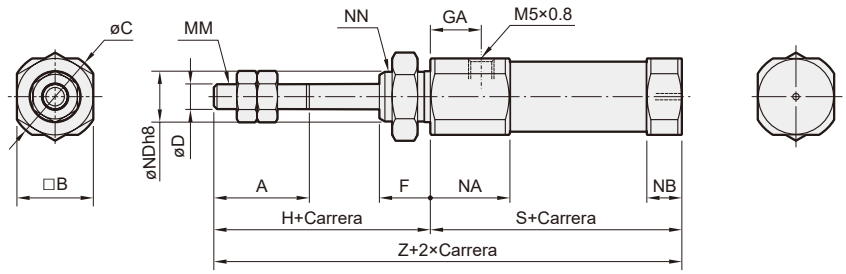
Código / D.I. Tubo	A	H	MM	R	S	TC	TD H10	TH	TK	TN	TT	TU	TV	TW	TX	TY	TZ	U	Z	ZZ
10	15	28	M4×0.7	5	46	4.5	3.3 +0.048 0	29	18	3.1	2	9	40	22	32	12	8	8	8	93
16	15	28	M5×0.8	8	47	5.5	5 +0.048 0	35	20	6.4	2.3	14	48	28	38	16	10	10	10	99

13

ø6



ø10, ø16



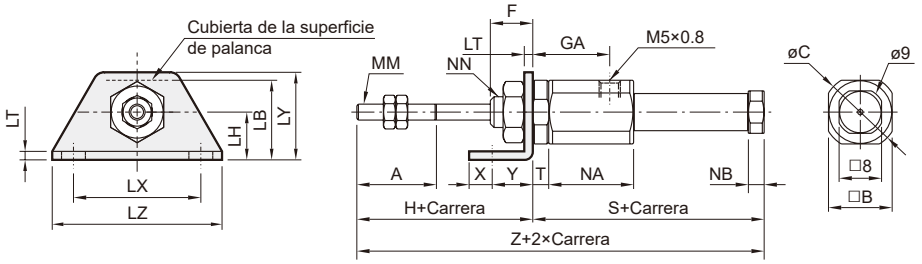
Código / D.I. Tubo	A	B	C	D	F	GA	H	MM	NA	NB	ND	NN	T
6	15	12	14	3	8	14.5	28	M3×0.5	16	3	$6\ ^{0}_{-0.018}$	M6×1.0	3
10	15	12	14	4	8	8	28	M4×0.7	12.5	5.5	$8\ ^{0}_{-0.022}$	M8×1.0	–
16	15	18	20	5	8	8	28	M5×0.8	12.5	5.5	$10\ ^{0}_{-0.022}$	M10×1.0	–

* (S), (Z) ( ) indican el tamaño con el anillo magnético.

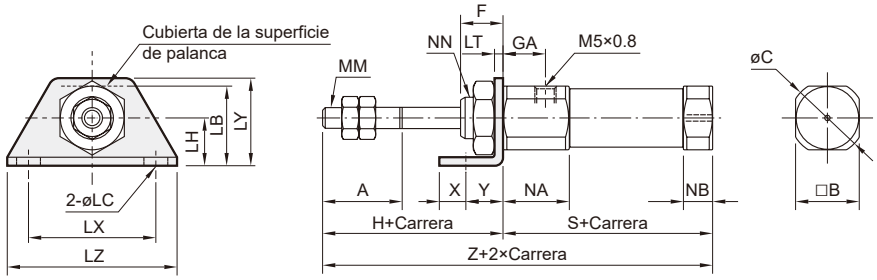
Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	–	–	–	–	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	–	–	–	–
10	48.5	56	68	80	–	–	–	–	76.5	84	96	108	–	–	–	–
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

LB

ø6



ø10, ø16



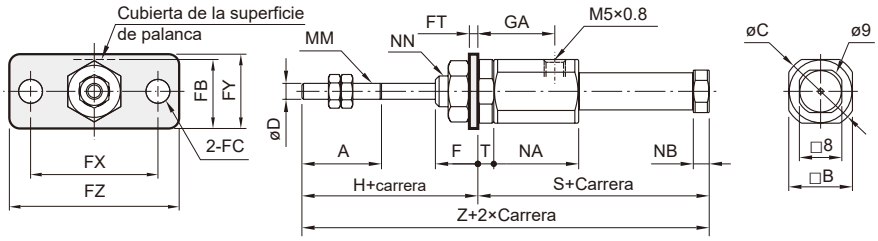
Código / D.I. Tubo	A	B	C	D	F	GA	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	15	4.5	9	1.6	24	16.5	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	12.5	5.5	M8×1.0	–	5	7
16	15	18	20	5	8	8	28	23	5.5	14	2.3	33	25	42	M5×0.8	12.5	5.5	M10×1.0	–	6	9

Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	–	–	–	–	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	–	–	–	–
10	48.5	56	68	80	–	–	–	–	76.5	84	96	108	–	–	–	–
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

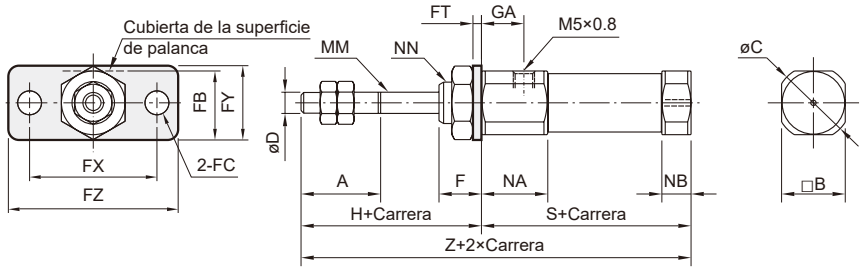
* (S), (Z) ( ) indican el tamaño con el anillo magnético.

FA

ø6



ø10~ø16



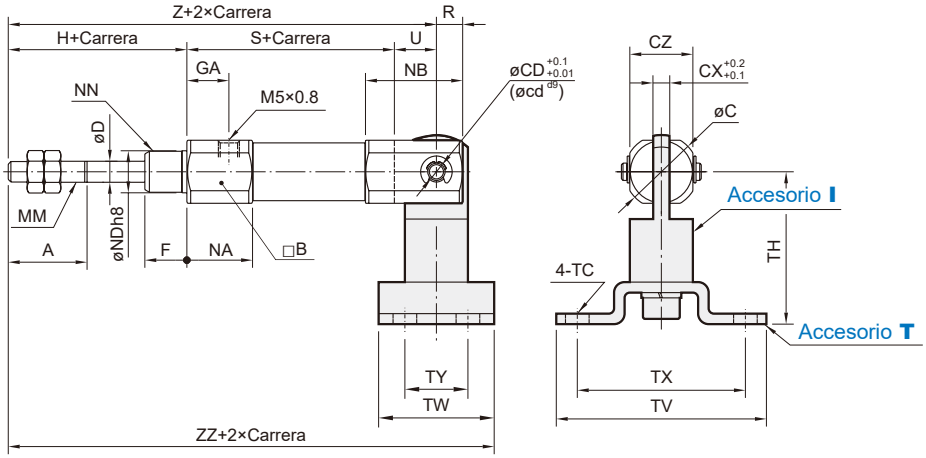
Código / D.I. Tubo	A	B	C	D	F	GA	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	T	X	Y
6	15	12	14	3	8	14.5	28	11	4.5	1.6	24	14	32	M3×0.5	16	3	M6×1.0	3	5	7
10	15	12	14	4	8	8	28	13	4.5	1.6	24	14	32	M4×0.7	12.5	5.5	M8×1.0	–	5	7
16	15	18	20	5	8	8	28	19	5.5	2.3	33	20	42	M5×0.8	12.5	5.5	M10×1.0	–	6	9

Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	–	–	–	–	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	–	–	–	–
10	48.5	56	68	80	–	–	–	–	76.5	84	96	108	–	–	–	–
16	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

* (S), (Z) ( ) indican el tamaño con el anillo magnético.

T

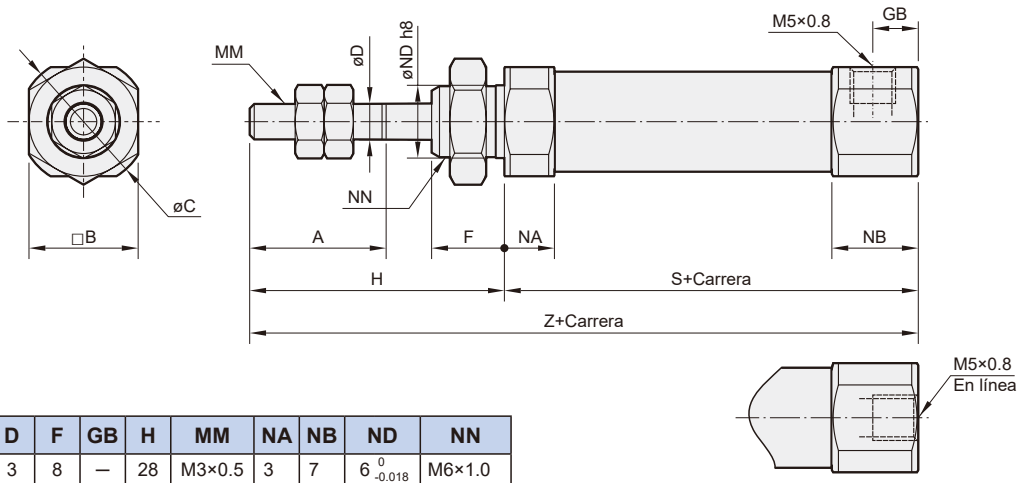
Contiene
I+Pasador



Código / D.I. Tubo	A	B	C	CD (cd)	CX	CZ	D	F	GA	H	MM	NA	NB	ND	NN	R	TC	TH	TV	TW	TX	TY	U
10	15	12	14	3.3	3.2	12	4	8	8	28	M4×0.7	12.5	18.5	8 0 -0.022	M8×1.0	5	4.5	29	40	22	32	12	8
16	15	18	20	5	6.5	18	5	8	8	28	M5×0.8	12.5	23.5	10 0 -0.022	M10×1.0	8	5.5	35	48	28	38	16	10

Código / Carrera / D.I. Tubo	S								Z								ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	48.5	56	68	80	–	–	–	–	84.5	92	104	116	–	–	–	–	95.5	103	115	127	–	–	–	–
16	48.5	57	69	81	87	111	129	141	86.5	95	107	119	125	149	167	179	100.5	109	121	133	139	163	181	193

15

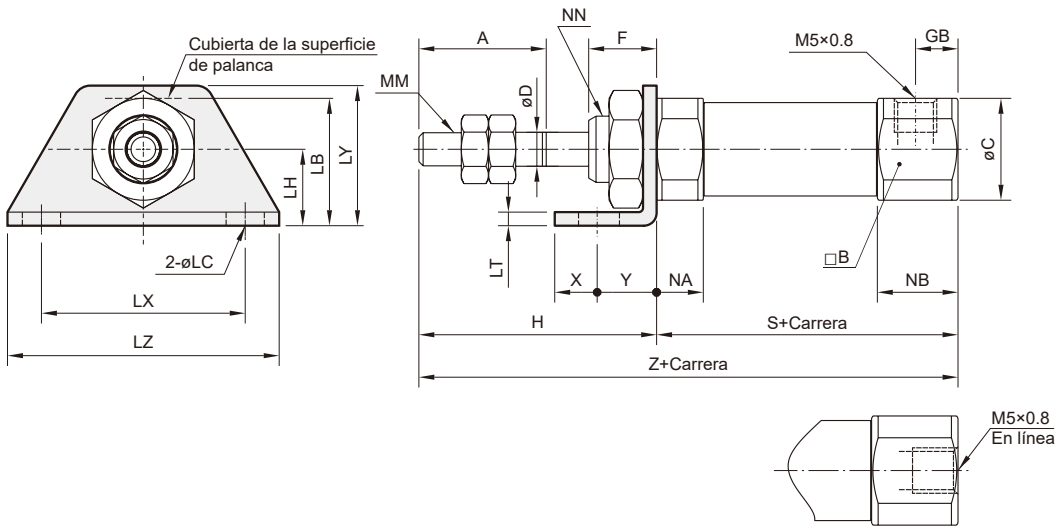


Código / D.I. Tubo	A	B	C	D	F	GB	H	MM	NA	NB	ND	NN
6	15	8	9	3	8	–	28	M3×0.5	3	7	$6^{\ 0}_{-0.018}$	M6×1.0
10	15	12	14	4	8	5	28	M4×0.7	5.5	9.5	$8^{\ 0}_{-0.022}$	M8×1.0
16	15	18	20	5	8	5	28	M5×0.8	5.5	9.5	$10^{\ 0}_{-0.022}$	M10×1.0

Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	–	–	–	–	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	–	–	–	–
10	45.5	53	65	77	–	–	–	–	73.5	81	93	105	–	–	–	–
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) ( ) indican el tamaño con el anillo magnético.

LB

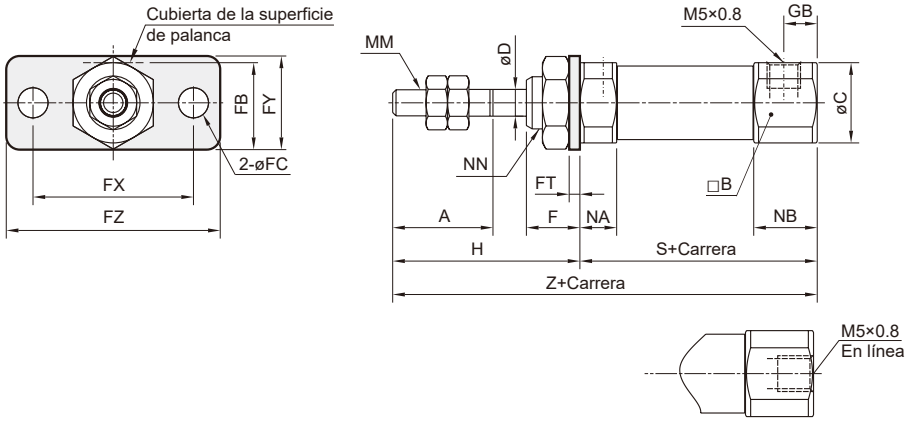


Código / D.I. Tubo	A	B	C	D	F	GB	H	LB	LC	LH	LT	LX	LY	LZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	–	28	13	4.5	9	1.6	24	16.5	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	15	4.5	9	1.6	24	16.5	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	23	5.5	14	2.3	33	25	42	M5×0.8	5.5	9.5	M10×1.0	6	9

Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	–	–	–	–	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	–	–	–	–
10	45.5	53	65	77	–	–	–	–	73.5	81	93	105	–	–	–	–
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) ( ) indican el tamaño con el anillo magnético.

FA



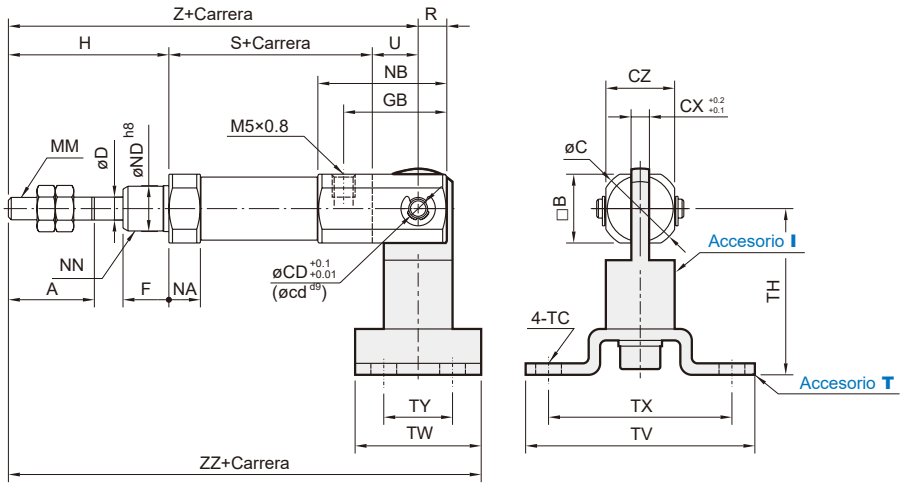
Código / D.I. Tubo	A	B	C	D	F	GB	H	FB	FC	FT	FX	FY	FZ	MM	NA	NB	NN	X	Y
6	15	8	9	3	8	–	28	11	4.5	1.6	24	14	32	M3×0.5	3	7	M6×1.0	5	7
10	15	12	14	4	8	5	28	13	4.5	1.6	24	14	32	M4×0.7	5.5	9.5	M8×1.0	5	7
16	15	18	20	5	8	5	28	19	5.5	2.3	33	20	42	M5×0.8	5.5	9.5	M10×1.0	6	9

Código / Carrera / D.I. Tubo	S *								Z *							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
6	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	–	–	–	–	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	–	–	–	–
10	45.5	53	65	77	–	–	–	–	73.5	81	93	105	–	–	–	–
16	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

* (S), (Z) ( ) indican el tamaño con el anillo magnético.

T

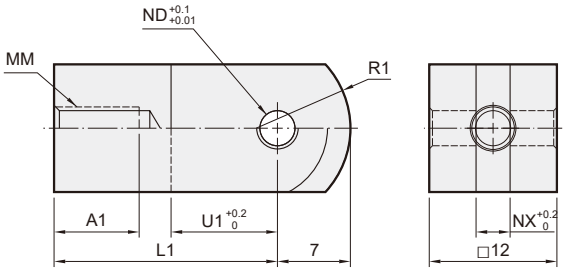
Contiene
I+Pasador



Código / D.I. Tubo	A	B	C	CD (cd)	CX	CZ	D	F	GB	H	MM	NA	NB	ND	NN	R	TC	TH	TV	TW	TX	TY	U
10	15	12	14	3.3	3.2	12	4	8	18	28	M4×0.7	5.5	22.5	8 $^{0}_{-0.022}$	M8×1.0	5	4.5	29	40	22	32	12	8
16	15	18	20	5	6.5	18	5	8	23	28	M5×0.8	5.5	27.5	10 $^{0}_{-0.022}$	M10×1.0	8	5.5	35	48	28	38	16	10

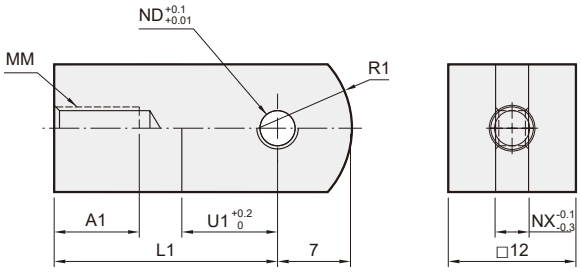
Código / Carrera / D.I. Tubo	S								Z								ZZ							
	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150	5~15	16~30	31~45	46~60	61~75	76~100	101~125	126~150
10	45.5	53	65	77	–	–	–	–	81.5	89	101	113	–	–	–	–	92.5	100	112	124	–	–	–	–
16	45.5	54	66	78	84	108	126	138	83.5	92	104	116	122	146	164	176	97.5	106	118	130	136	160	178	190

Conector Y



Código / D.I. Tubo	A1	L1	MM	ND H10	NX	R1	U1
10	8	21	M4×0.7	3.3 +0.048 0	3.2	8	10
16	11	21	M5×0.8	5 +0.048 0	6.5	12	10

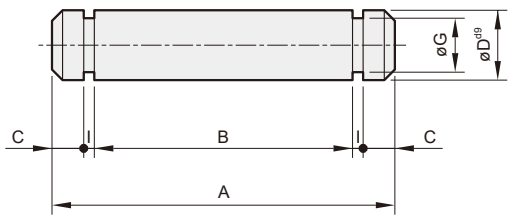
Conector I



Código / D.I. Tubo	A1	L1	MM	ND H10	NX	R1	U1
10	8	21	M4×0.7	3.3 +0.048 0	3.1	8	9
16	8	25	M5×0.8	5 +0.048 0	6.4	12	14

PASADOR

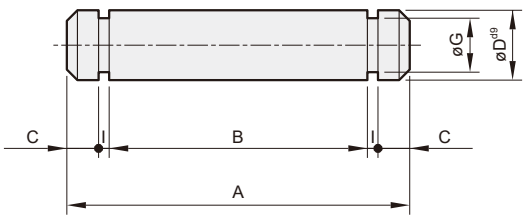
P



para conectores Y y I

Código / D.I. Tubo	A	B	C	D d9	G	I	Pasador suelto
10	16.2	12.2	1.5	3.3 -0.03 -0.06	2.5	0.5	E-2.5
16	16.2	12.2	1.5	5 -0.03 -0.06	4	0.7	E-4

P



para tapa tipo D

Código / D.I. Tubo	A	B	C	D d9	G	I	Pasador suelto
10	15.2	12.2	1	3.3 -0.03 -0.06	2.5	0.5	E-2.5
16	22.7	18.3	1.5	5 -0.03 -0.06	4	0.7	E-4