

RACORES AUTOMÁTICOS

Los racores automáticos Metal Work representan el elemento de conjunción tubo-actuador por excelencia.

Práctico y veloz el racor automático Metal Work se puede re-utilizar miles de veces sin comprometer la perfecta retención neumática y mecánica. Disponible en diversas configuraciones, asegura una flexibilidad de empleo prácticamente ilimitada; el muelle de sujeción, prende el tubo sin grabarlo ni deformarlo permitiendo así una mayor simplicidad en la operación de conectar o desconectar el racor del tubo. En los racores el anillo del racor dispone de unas ranuras para el destornillador (PATENT.) para facilitar la desconexión en aplicaciones inaccesibles a los dedos, además las figuras RL19, RL21, RL22, RL23, RL23M, RL24, RL44, RL45 y RL49 ofrecen la posibilidad de fijación a pared gracias a dos agujeros pasantes asimétricos.

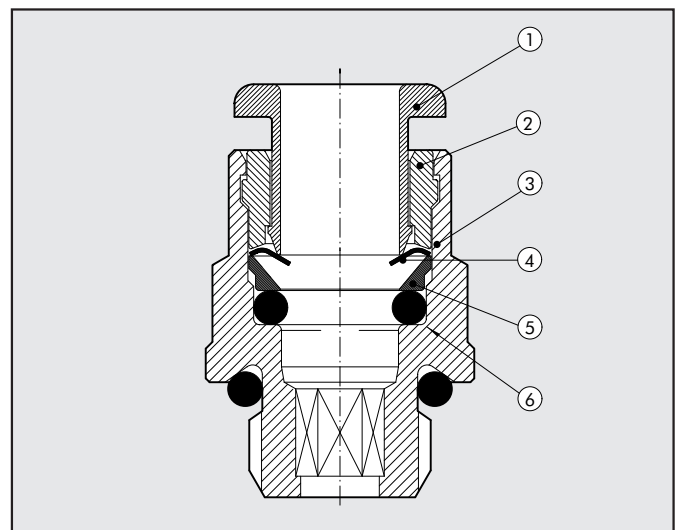


DATOS TÉCNICOS

Roscas		M3 - M5 - M7 - 1/8" - 1/4" - 3/8" - 1/2"
Diámetros	mm	Ø 3 - Ø 3,17 - Ø 4 - Ø 5 - Ø 6 - Ø 8 - Ø 10 - Ø 12 - Ø 14
Rango de temperaturas para racores de latón	°C	-20 ÷ +80
	°F	-4 ÷ 162
Rango de temperaturas para racores de tecnopolímero	°C	-20 ÷ +60
	°F	-4 ÷ 140
Rango de presión racores de latón		-0,99 bar ... 16 bar / -0,099 MPa ... 1,6 MPa
Rango de presión racores de tecnopolímero		-0,99 bar ... 12 bar / -0,099 MPa ... 1,2 MPa
Tubo recomendado		Rilsan PA11, Nylon 6, Poliamida 12, Polipropileno.
Fluido		Vacio - Aire comprimido

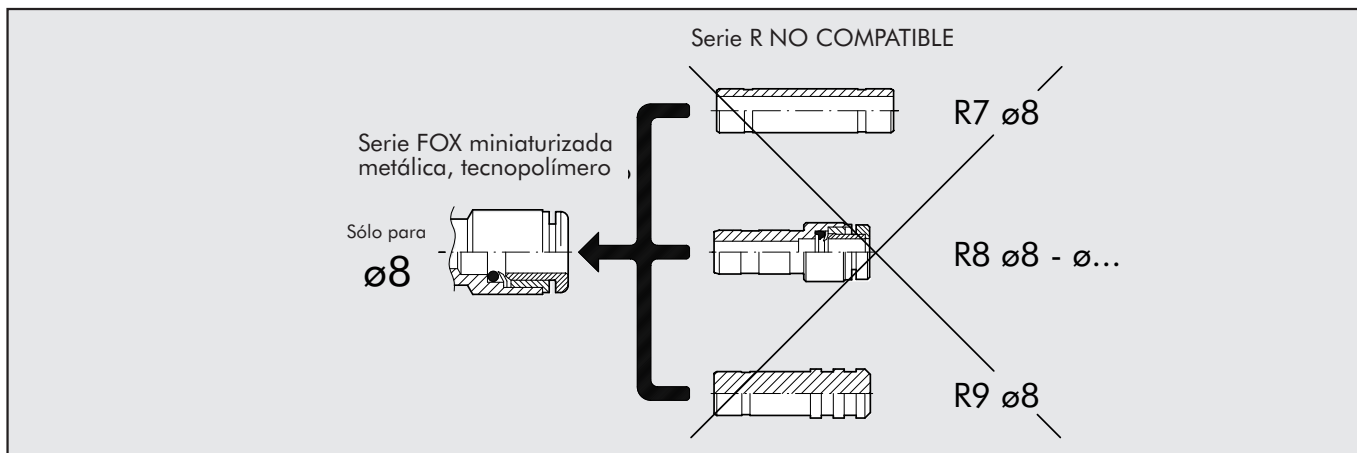
COMPONENTES

- ① Anillo o casquillo de acoplamiento: tecnopolímero
- ② Casquillo de bloqueo: tecnopolímero
- ③ Cuerpo: latón o tecnopolímero
- ④ Muelle de sujeción: acero inox (para tubos Ø 3 y Ø 3,17 y R31 Ø5 y R32 Ø5: pinza en latón)
- ⑤ Anillo soporte del muelle: tecnopolímero.
- ⑥ Juntas de retención: NBR





SOLO PARA LOS RACORES AUTOMÁTICOS Ø 8

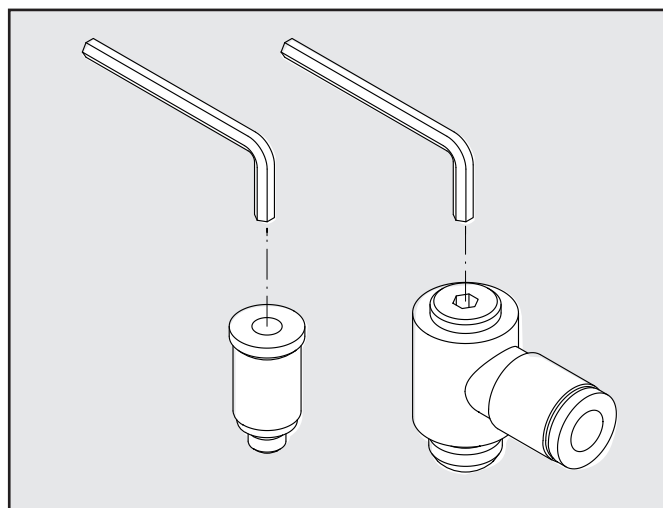
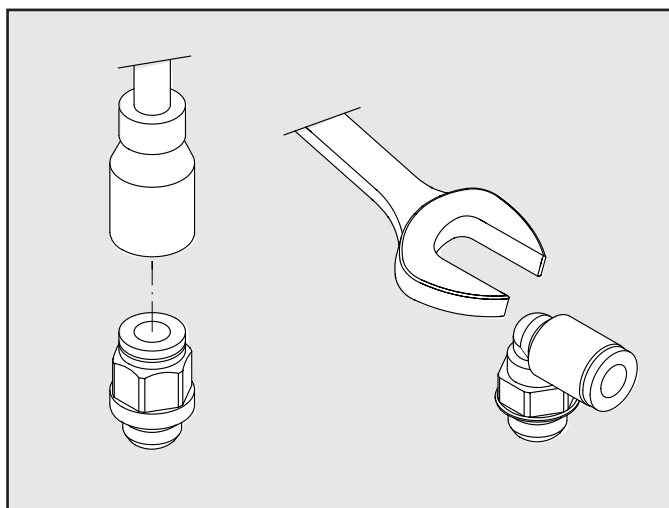


La nueva serie de racores automáticos miniaturizados del diámetro 8 identificables por la letra L en el código del artículo y distinguible también por las ranuras en el anillo para destornillador, no son compatibles con los racores R7, R8 y R9 diámetro 8 de la serie R.

JUNTAS O-RING BASE DEL RACOR

Rosca	Referencia	Medidas O-ring	Rosca	Referencia	Medidas O-ring
M3	2.6x1	1/8	2031	7.66x1.78
M5 (para Ø 3 - Ø 3.17)	3x1.2	1/4	2043	10.82x1.78
M5	3.5x1.2	3/8	2056	14x1.78
M7	5x1.5	1/2	3068	17.13x2.62
M12x1,5	9.75x1.78			

TIPO DI AVVITATURA

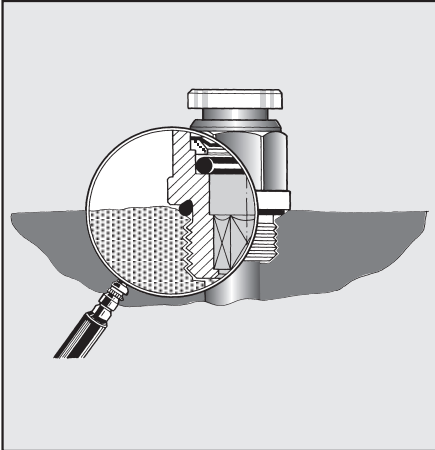


Roscas	Apriete MAX [Nm]
M3	0.4
M5	1.8
M7	2.5
M12x1,5	8
G 1/8"	6
G 1/4"	8
G 3/8"	10
G 1/2"	15

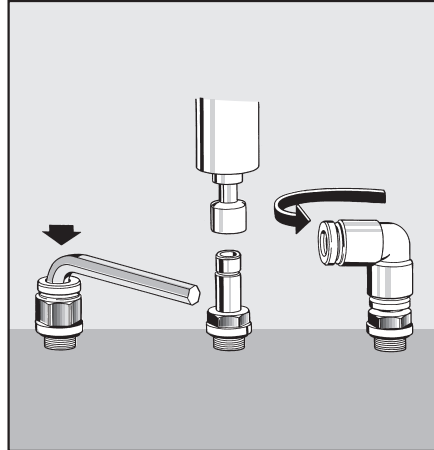
CH [mm]	Apriete MAX [Nm]
1.5	0.4
2	0.7
2.5	1.2
3	2.5
4	5
5	8
oltre 5	ver valori relativi a roscas

NB: Para el montaje tramite llave o vaso-llave, el valor de la fuerza de apriete no debe superar los indicados en las roscas. (ejemplo el record RL1 6 M7, con una llave interna de 4 mm va con fuerza de apriete max. 2,5 Nm)

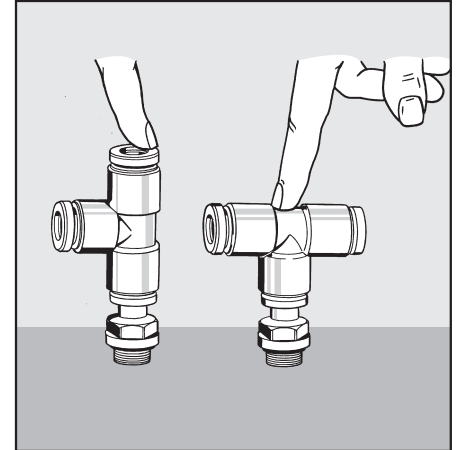
CARACTERISTICAS GENERALES



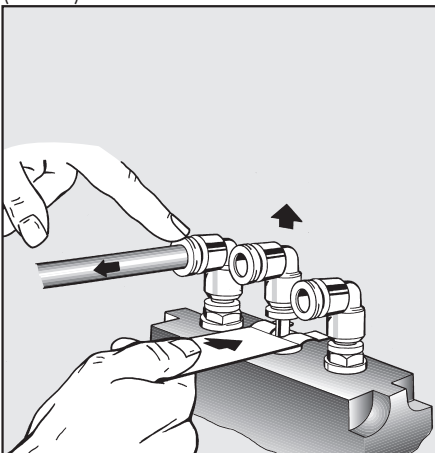
Todos los rcores con rosca cilndrica y junta de estanqueidad incorporada (patente METAL WORK). El uso del OR mejora claramente la estanqueidad en las superficies inclinadas, brutas, ligeramente convexas, etc. Eliminacin del uso del Teflon (PT.FE.).



Montaje de los rcores con llaves Allen o con til neumtico. Todas las L y T son giratorias. Drstica reduccin del tiempo de montaje.

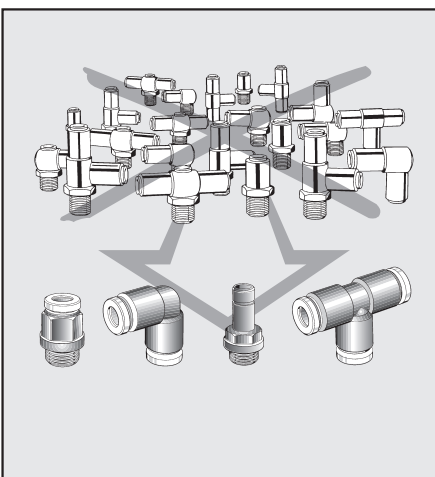


Con una sola T se realizan las T centrales y las T laterales.



Facilidad de desmontaje del tubo mediante una ligera presin sobre el anillo de empuje. Prctico desmontaje del rcor con una simple presin radial sobre la llave de desmontaje.

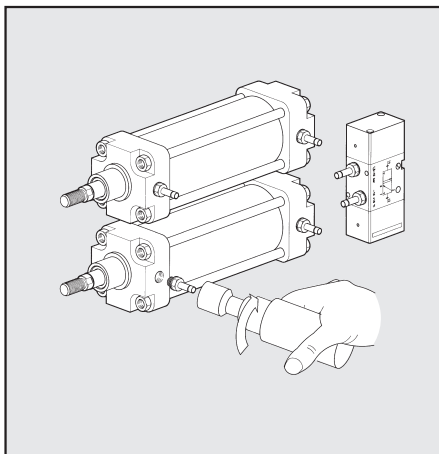
DE UNA IDEA UN SISTEMA



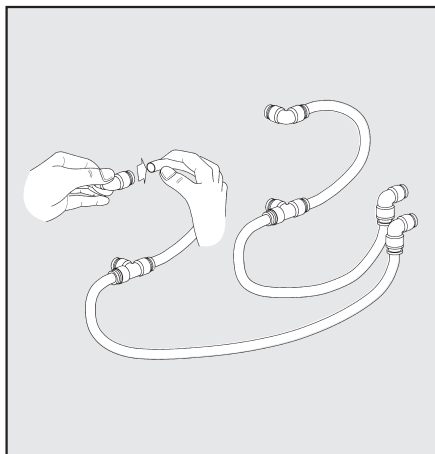
- Con cuatro rcores base se realizan todas las conexiones de un circuito neumtico.
- Drstica disminucin de los rcores a mantener en el almacn y de los correspondientes costes de gestin.



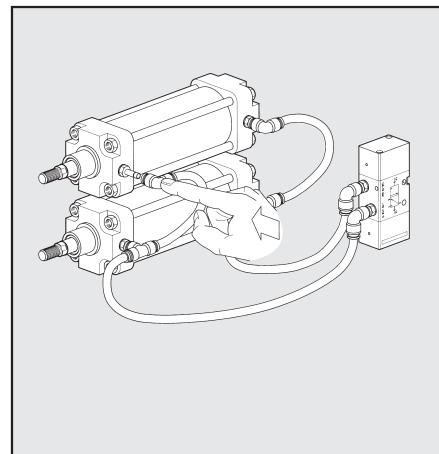
ESQUEMA DE MONTAJE



Premontaje de los r cores con  tiles neum ticos tambi n con entreejes muy pr ximos.

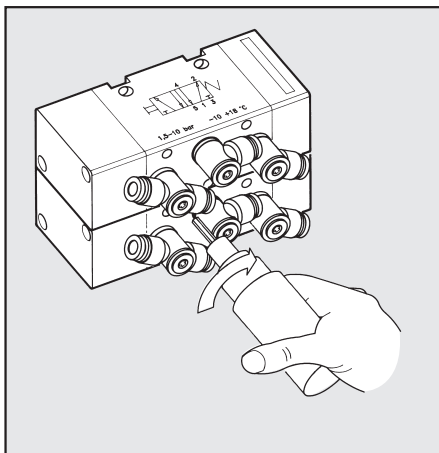


Premontaje de los r cores con los segmentos de tubo. Posibilidad de almacenar configuraciones premontadas para montaje en serie.

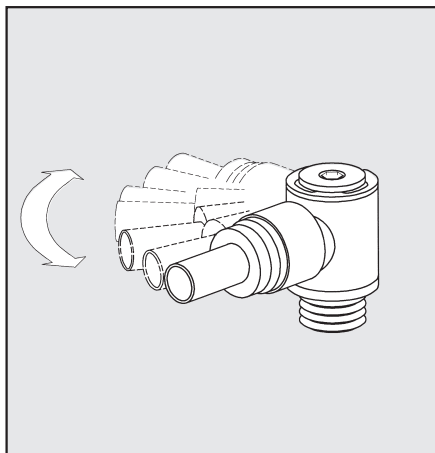


R pida conexi n y finalizaci n del circuito neum tico.

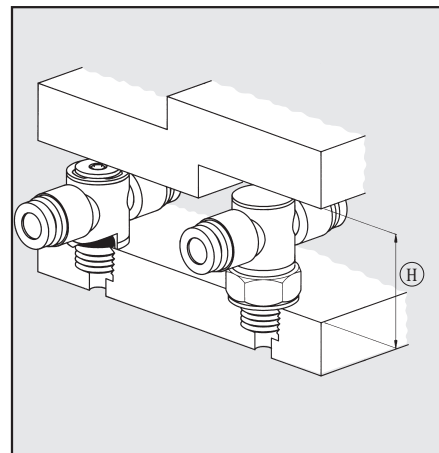
DA UN SISTEMA UN INNOVAZIONE



La llave Allen permite montar los r cores giratorios incluso con los interees muy pr ximos.



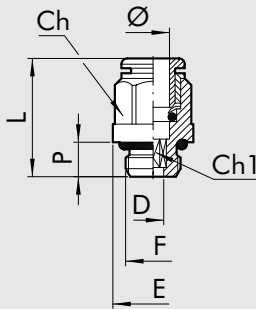
La especial soluci n constructiva con doble "OR" de estanqueidad, permite aprovechar la orientabilidad tambi n para seguir el movimiento del tubo en el contexto de la automatizaci n espec fica.



R cores con junta incorporada y altura (H) reducida con paridad a la conexi n roscada y 0 tubo.

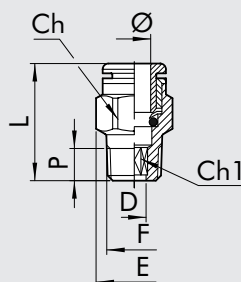
RACORES AUTOMÁTICOS

RECTO CILÍNDRICO MACHO (R1)



Cód.	Ref.	Ø	F	Ch	Ch1	P	L	D	E
2001B01	R1	3	M3	Ø 5.8	1.5	3	12.6	1.5	5.8
2001B02	R1	3	M5	Ø 5.8	2	3.5	13	2	5.8
2001A01	R1	3.17	M3	Ø 5.8	1.5	3	12.6	1.5	5.8
2001A02	R1	3.17	M5	Ø 5.8	2	3.5	13	2	5.8
2L01001	RL1	4	M5	Ø 9	2.5	4	20.3	2.6	9
2L01020	RL1	4	M7	Ø 9	3	5	18.9	3.1	9.8
2L01002	RL1	4	1/8	10	3	6	18	3.1	14
2L01003	RL1	4	1/4	10	3	8	19.8	3.1	18
2001004	R1	5	M5	Ø 12	2.5	4	22.5	2.6	12
2001005	R1	5	1/8	13	3	6	22	3.1	15
2001006	R1	5	1/4	12	3	8	24	3.1	18
2L01000	RL1	6	M5	Ø 11	2.5	4	21.9	2.6	11
2L01021	RL1	6	M7	Ø 11	4	5	23	4.1	11
2L01101	RL1	6	M12x1.5	12	4	8	23.2	4.1	17
2L01007	RL1	6	1/8	12	4	6	21.6	4.1	14
2L01008	RL1	6	1/4	12	4	8	20.3	4.1	18
2L01102	RL1	8	M12x1.5	14	6	8	24.5	6.2	17
2L01009	RL1	8	1/8	13	5	6	25.4	5.2	14
2L01010	RL1	8	1/4	14	6	8	24.4	6.2	18
2L01011	RL1	8	3/8	14	6	9	22.8	6.2	22
2L01012	RL1	10	1/4	16	7	8	29.2	7.2	18
2L01013	RL1	10	3/8	16	8	9	26.5	8.2	22
2L01018	RL1	10	1/2	16	8	11	29.8	8.2	26
2001019	RL1	12	1/4	19	7	8	30.5	7.2	21
2001014	RL1	12	3/8	19	10	9	28.1	10.2	22
2001015	RL1	12	1/2	19	10	11	29.3	10.2	26
2001016	RL1	14	3/8	22	10	9	33.8	10.2	24.6
2001017	RL1	14	1/2	22	12	11	31.5	12.2	26

RECTO CÓNICO MACHO (R1C)

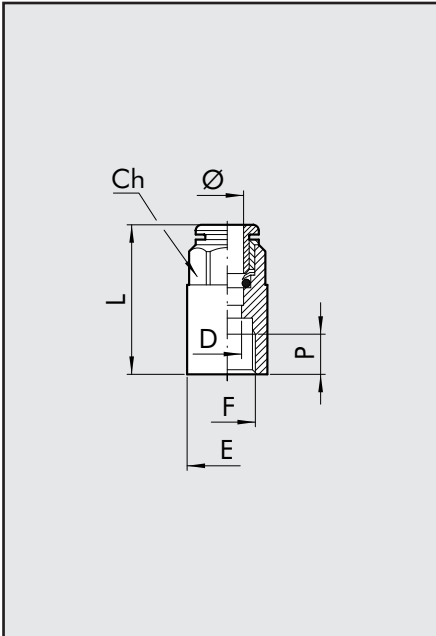


Cód.	Ref.	Ø	F	Ch	Ch1	D	E	L	P
2L01C02	RL1C	4	1/8	10	3	3.1	11.3	18.5	6.2
2L01C07	RL1C	6	1/8	12	4	4.1	13.5	22.5	6.2
2L01C08	RL1C	6	1/4	12	4	4.1	13.2	22.3	8.5
2001Z07	RL1Z	6	12x1 con.	12	4	4.1	13.2	23.5	9
2001Z08	RL1Z	6	12x1.25 con.	12	4	4.1	13.2	23.5	9
2L01C09	RL1C	8	1/8	13	6	6.2	14.3	26	6.2
2L01C10	RL1C	8	1/4	14	6	6.2	15.8	25.5	8.5
2L01C11	RL1C	8	3/8	14	6	6.2	16.6	24.9	9
2L01C13	RL1C	10	1/4	16	7	7.2	17.7	28.9	8.5
2L01C14	RL1C	10	3/8	16	8	8.2	17.7	26	9
2001C15	RL1C	12	3/8	19	10	10.2	21	28.5	9
2001C16	RL1C	12	1/2	19	10	10.2	21.3	26.6	11



RECTO HEMBRA (R2)

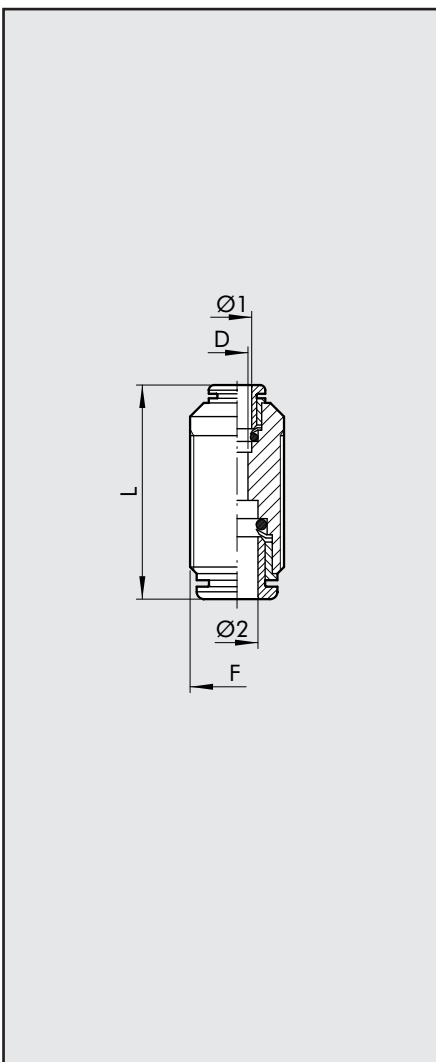
Cód. Ref. Ø F Ch P L D E



2002B02	R2	3	M5	7	4.5	15.7	2.5	7.8
2002A02	R2	3.17	M5	7	4.5	15.7	2.5	7.8
2L02001	RL2	4	1/8	10	7	26.2	3	14
2L02002	RL2	4	1/4	10	8	28.6	3	17
2002003	R2	5	1/8	12	7	27	4	14
2002004	R2	5	1/4	12	8	29.5	4	17
2L02005	RL2	6	1/8	12	7	27.1	5	14
2L02006	RL2	6	1/4	12	8	29.3	5	17
2L02007	RL2	8	1/8	13	7	28.1	7	14
2L02008	RL2	8	1/4	14	8	30	7	17
2L02009	RL2	10	1/4	16	8	31.8	8	17.7
2L02010	RL2	10	3/8	16	10	36.8	8	20.8
2L02011	RL2	12	3/8	19	10	37	10	20.8
2L02012	RL2	12	1/2	19	11	40.5	10	23.8

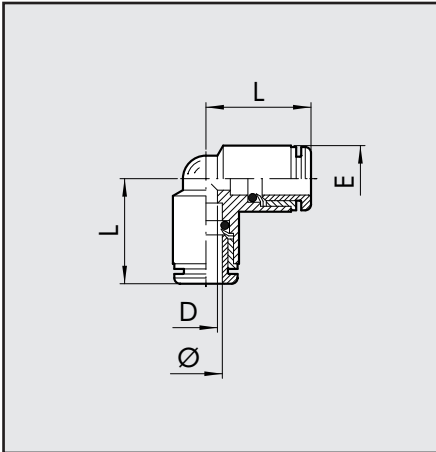
RECTO INTERMEDIO (R3)

Cód. Ref. Ø1 Ø2 F L D



2003A02	R3	3	3	M8x0.75	18.4	2
2003A01	R3	3.17	3.17	M8x0.75	18.4	2
2L03001	RL3	4	4	M11x1	30.6	2.5
2003002	R3	5	5	M14x1	33.5	4
2L03003	RL3	6	6	M13x1	33	4.5
2L03004	RL3	8	8	M15x1	35.7	6.5
2L03005	RL3	10	10	M17x1	39.2	8
2003006	RL3	12	12	M20x1	40.7	10
2003007	RL3	14	14	M24x1	45.9	12
2L03301	RL3	4	6	M13x1	32.7	2.5
2L03302	RL3	4	8	M15x1	34.4	2.5
2L03303	RL3	6	8	M15x1	35	4.5
2L03304	RL3	6	10	M17x1	37.5	4.5
2L03306	RL3	6	12	M20x1	39	4.5
2L03305	RL3	8	10	M17x1	37.8	6.5
2L03307	RL3	8	12	M20x1	40.1	6
2L03308	RL3	10	12	M20x1	40.8	8

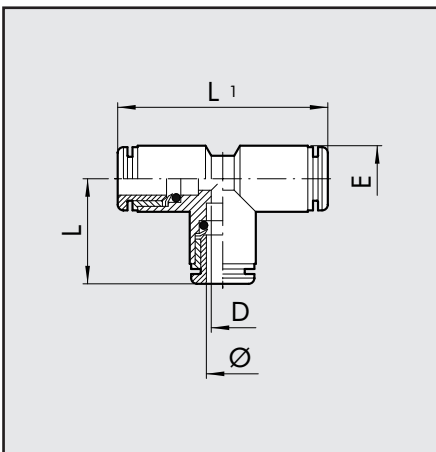
L INTERMEDIO (R4)



Cód.	Ref.	Ø	L	D	E
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2004A02	R4	3	10.4	2	6.3
2004A01	R4	3.17	10.4	2	6.3
2L04001	RL4	4	16.7	2.5	9.5
2004002	R4	5	19.2	3	13.5
2L04003	RL4	6	19	4.5	11.5
2L04004	RL4	8	21.3	6.5	13.5
2L04005	RL4	10	23.3	8	16
2004006	RL4	12	26	10	20.5
2004007	RL4	14	29.3	12	22

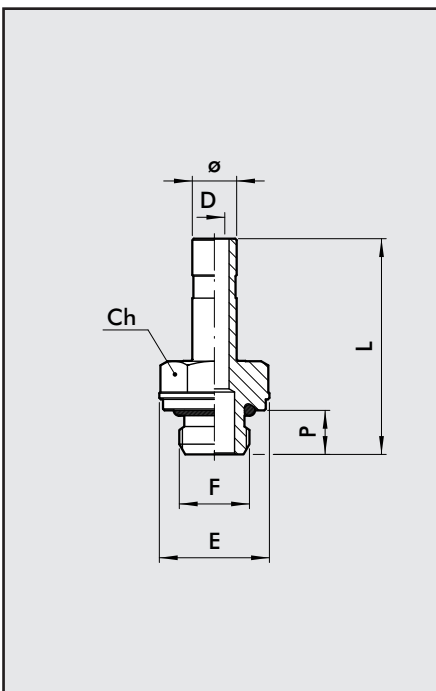
T INTERMEDIO (R5)



Cód.	Ref.	Ø	L	L1	D	E
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2005A02	R5	3	10.4	20.8	2	6.3
2005A01	R5	3.17	10.4	20.8	2	6.3
2L05001	RL5	4	16.7	33.4	2.5	9.5
2005002	R5	5	19.2	38.4	3	13.5
2L05003	RL5	6	19	38	4.5	11.5
2L05004	RL5	8	21.3	42.6	6.5	13.5
2L05005	RL5	10	23.3	46.6	8	16
2005006	RL5	12	26	52	10	20.5
2005007	RL5	14	29.3	58.6	12	22

ADAPTADOR ROSCADO (R6)

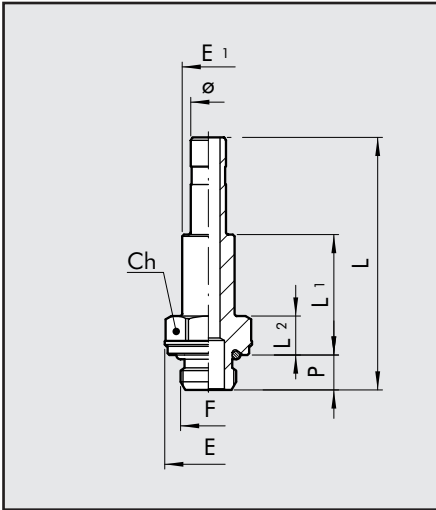


Cód.	Ref.	Ø	F	Ch	P	L	D	E
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2006A02	R6	3	M5	5	3.5	17.1	2	5.8
2006A01	R6	3.17	M5	5	3.5	17.1	2	5.8
2006001	R6	4	M5	8	4	25.2	2.5	9
2006020	R6	4	M7	8	5	26.5	2.5	9.8
2006002	R6	4	1/8	13	6	28.9	2.5	15
2006003	R6	4	1/4	14	8	32.4	2.2	18
2006004	R6	5	M5	8	4	25.2	2.7	9
2006005	R6	5	1/8	13	6	28.9	3	15
2006006	R6	5	1/4	14	8	32.4	3	18
2006000	R6	6	M5	9	4	25.7	2.7	10
2006021	R6	6	M7	8	5	27	4	9.8
2006007	R6	6	1/8	13	6	29.4	4	15
2006008	R6	6	1/4	14	8	32.9	4	18
2006009	R6	8	1/8	13	6	30.6	5.5	15
2006010	R6	8	1/4	14	8	34	6	18
2006011	R6	8	3/8	17	9	35.4	6	22
2006012	R6	10	1/4	14	8	38.2	7.8	18
2006013	R6	10	3/8	17	9	38.7	8	22
2006022	R6	10	1/2	19	11	41	8	26
2006019	R6	12	1/4	14	8	40.7	7.8	18
2006014	R6	12	3/8	17	9	42.2	10	22
2006015	R6	12	1/2	22	11	44.2	10	26
2006016	R6	14	3/8	17	9	46.2	10	22
2006017	R6	14	1/2	22	11	48.2	12	26
2006101	R6	6	M12X1.5	13	8	33	4	17
2006102	R6	8	M12X1.5	13	8	33.7	6	17

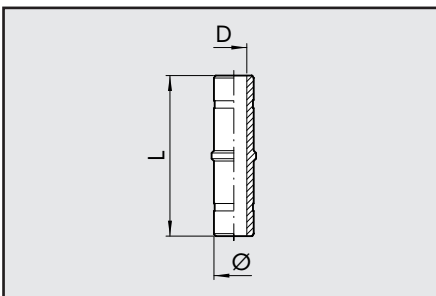


ADAPTADOR ROSCADO PROLONGADO (R18)



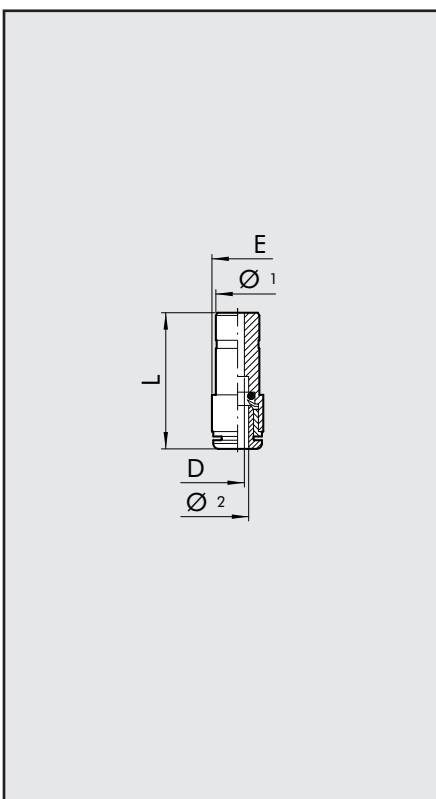
Cód.	Ref.	Ø	F	Ch	P	L	L1	L2	E	E1
2018002	R18	4	1/8	13	6	40.4	18.2	6.7	15	7
2018007	R18	6	1/8	13	6	43.4	20.7	6.7	15	9
2018008	R18	6	1/4	14	8	46.9	22.2	8.2	18	9
2018009	R18	8	1/8	13	6	46.5	22.7	6.7	15	11
2018010	R18	8	1/4	14	8	50	24.2	8.2	18	11
2018011	R18	8	3/8	17	9	51.4	24.7	8.7	22	13
2018012	R18	10	1/4	14	8	57.2	27.2	8.2	18	12
2018013	R18	10	3/8	17	9	58.7	27.7	8.7	22	12

PROLONGACIÓN (R7)



Cód.	Ref.	Ø	L	D
2007001	R7	4	34	2
2007002	R7	5	34	3
2007003	R7	6	37.5	4
2L07004	RL7	8	37.5	6
2007005	R7	10	45	8
2007006	R7	12	48	10
2007007	R7	14	58	12

REDUCCIÓN (R8)

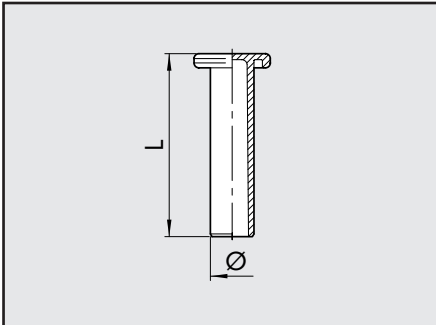


Cód.	Ref.	Ø1	Ø2	L	D	E
2008A01	R8	4	3	26	2	6.3
2008A02	R8	4	3.17	26	2	6.3
2008001	RL8	5	4	32.2	3	9.5
2L08002	RL8	6	4	29.9	2.8	9.5
2008003	R8	6	5	36	4	12
2L08004	RL8	8	4	28.7	2.8	9.5
2008005	R8	8	5	34.5	4	12
2L08006	RL8	8	6	31.9	4.5	11.5
2L08007	RL8	10	6	36.2	5	11.5
2L08008	RL8	10	8	40.8	7	14
2008009	RL8	12	4	36.7	3	13
2008010	RL8	12	6	42	5	13
2008011	RL8	12	8	40.1	7	14
2008015	RL8	12	10	44.3	8.2	16
2008014	RL8	14	8	44.1	7	15.5
2008017	RL8	14	10	44.3	8.2	16
2008018	RL8	14	12	50	10	19.5

AUMENTO

2009001	RL8/M	4	6	34.5	2.5	11.5
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TAPÓN (R9)

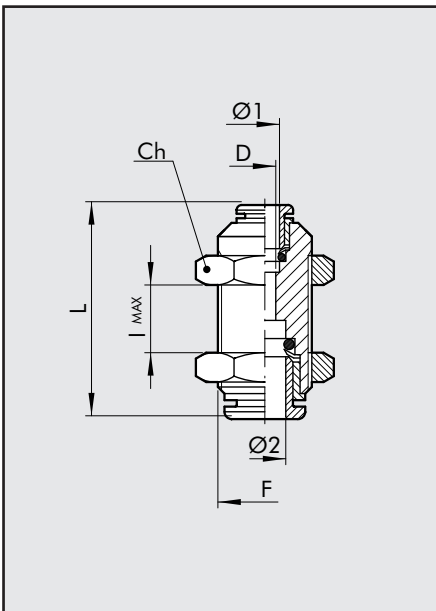


Cód. Ref. Ø L

2010A02	R9	3	20
2L10A01*	RL9T	3.17	19.6
2L10001*	RL9T	4	27
2010002	R9	5	27
2L10003*	RL9T	6	29.8
2L10004*	RL9T	8	33.6
2L10005*	RL9T	10	36.8
2L10006*	RL9T	12	39
2010007	R9	14	39.5

* FABRICADO EN TECNOPOLIMERO

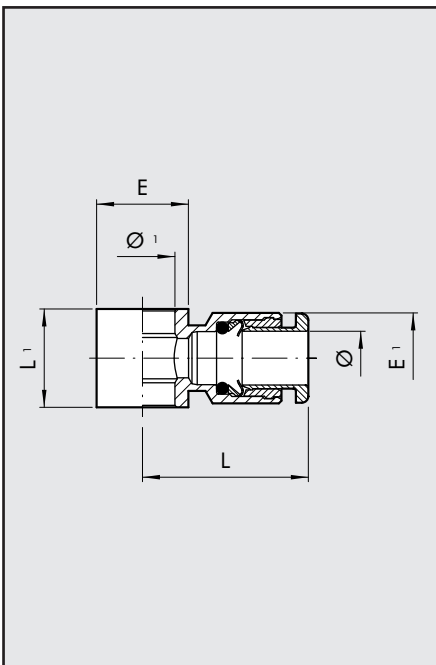
RECTO INTERMEDIO PASATABIQUES (R10)



Cód. Ref. Ø1 Ø2 F Ch L D I max

2011A02	R10	3	3	M8x0.75	10	18.4	2	5
2011A01	R10	3.17	3.17	M8x0.75	10	18.4	2	5
2L11001	RL10	4	4	M11x1	13	30.6	2.5	11
2011002	R10	5	5	M14x1	17	33.5	4	8
2L11003	RL10	6	6	M13x1	16	33	4.5	12
2L11004	RL10	8	8	M15x1	17	35.7	6.5	13.5
2L11005	RL10	10	10	M17x1	20	39.2	8	17
2011006	RL10	12	12	M20x1	24	40.7	10	20.3
2011007	RL10	14	14	M24x1	27	45.9	12	21.9
2L11301	RL10	4	6	M13x1	16	32.7	2.5	11
2L11302	RL10	4	8	M15x1	17	34.4	2.5	12
2L11303	RL10	6	8	M15x1	17	35	4.5	13
2L11304	RL10	6	10	M17x1	20	37.5	4.5	14.5
2L11306	RL10	6	12	M20x1	24	39	4.5	16
2L11305	RL10	8	10	M17x1	20	37.8	6.5	15
2L11307	RL10	8	12	M20x1	24	40.1	6	17.5
2L11308	RL10	10	12	M20x1	24	40.8	8	19

BANJO SIMPLE (R13)



Cód. Ref. Ø Ø1 L L1 E E1

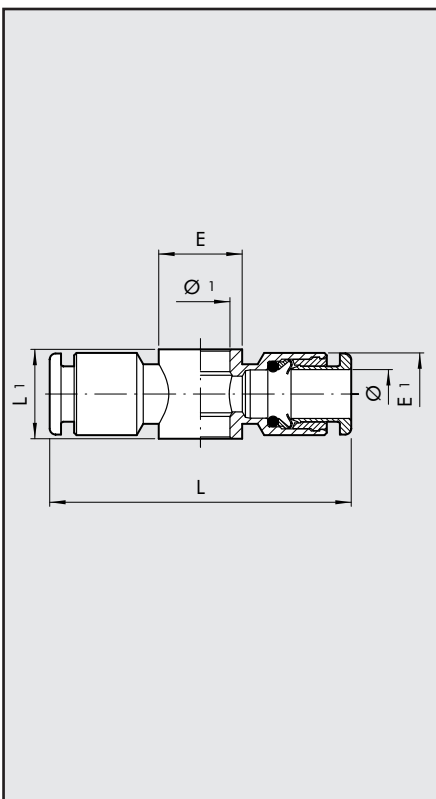
2012A02	R13	3	M5	12.9	9	9	7
2012A01	R13	3.17	M5	12.9	9	9	7
2012001	RL13	4	M5	20.2	9	9.5	9.5
2012002	RL13	4	1/8	21.3	15	14	9.5
2012003	R13	5	M5	23.8	9	9.5	12
2012004	R13	5	1/8	24.8	15	14	12
2012005	RL13	6	1/8	23	15	14	11.5
2012006	RL13	6	1/4	24.5	17	18	11.5
2012007	RL13	8	1/8	24.8	15	14	13.8
2012008	RL13	8	1/4	26.5	17	18	13.8
2012009	RL13	8	3/8	28.5	20	21	13.8
2012010	RL13	10	1/4	31.4	17	18	16.5
2012011	RL13	10	3/8	32.8	20	21	16
2012013	RL13	12	1/4	33	17	18	19.5
2012012	RL13	12	3/8	35.3	20	21	19.5
2012014	RL13	12	1/2	37	24	26	19.5

Para los tornillo Serie D ver pag. 4.1/43



BANJO DOBLE (R14)

Cód.	Ref.	Ø	Ø 1	L	L1	E	E1
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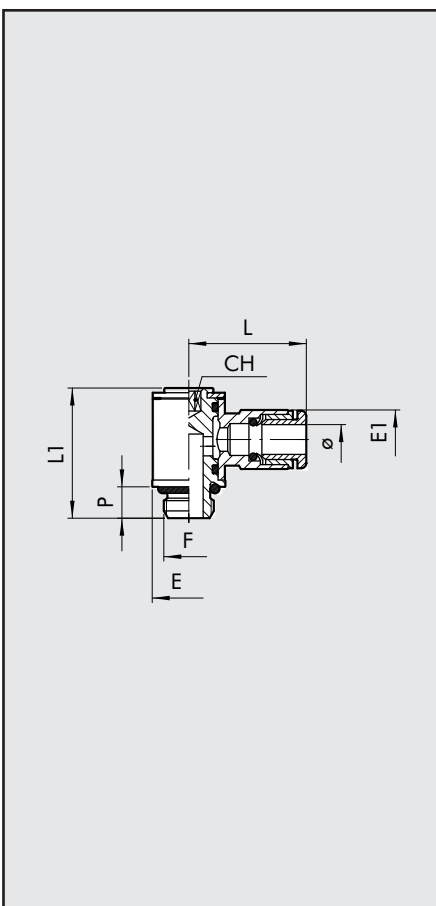


2013001	RL14	4	M5	40.4	9	9.5	9.5
2013002	RL14	4	1/8	42.6	15	14	9.5
2013003	R14	5	M5	48	9	9.5	12
2013004	R14	5	1/8	49.5	15	14	13.5
2013005	RL14	6	1/8	46	15	14	11.5
2013006	RL14	6	1/4	49	17	18	11.5
2013007	RL14	8	1/8	49.6	15	14	13.8
2013008	RL14	8	1/4	53	17	18	13.8
2013009	RL14	8	3/8	57	20	21	13.8
2013010	RL14	10	1/4	62.8	17	18	16.5
2013011	RL14	10	3/8	65.6	20	21	16

For the rods series D, see page 4.1/43

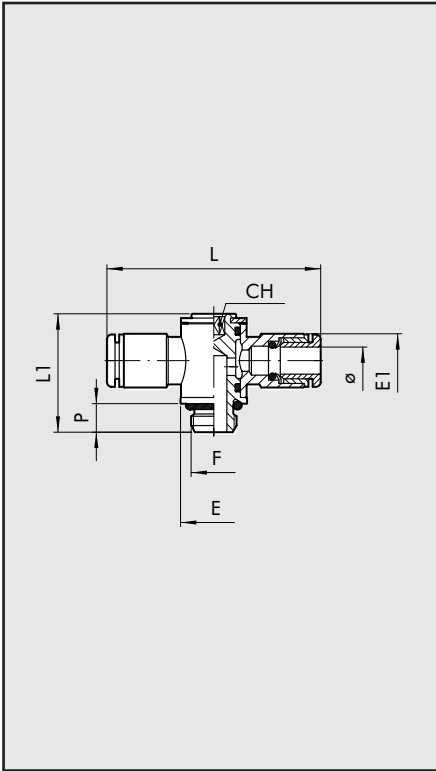
TORNILLO MACHO BANJO SIMPLE GIRATORIO (R15)

Cód.	Ref.	Ø	F	CH	P	L	L1	E	E1
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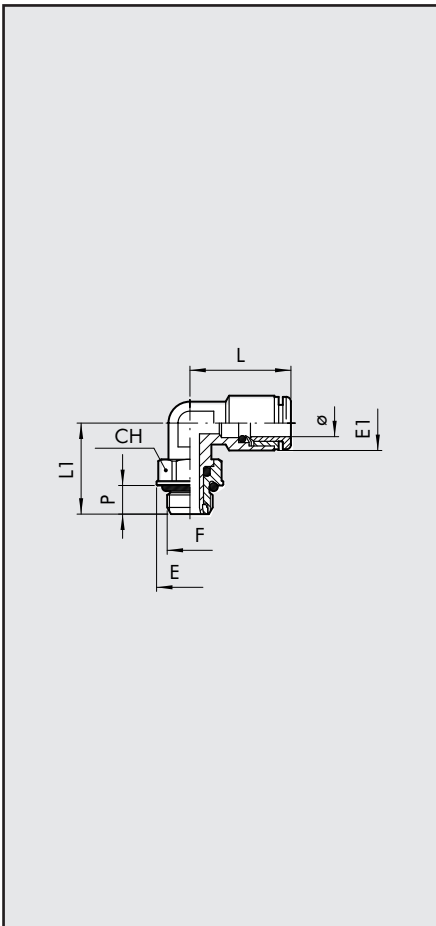
2014101	R15	3	M3	1.5	3	12.2	13.2	5.8	5.8
2014102	R15	3.17	M3	1.5	3	12.2	13.2	5.8	5.8
2014103	R15	3	M5	2	3.5	12.7	13.7	5.8	7
2014104	R15	3.17	M5	2	3.5	12.7	13.7	5.8	7
2L14001	RL15	4	M5	2	4	20.2	18.4	9.5	9.5
2L14020	RL15	4	M7	3	5	20.2	18.5	9.8	9.5
2L14002	RL15	4	1/8	3	6	21.3	24.9	14	9.5
2014003	R15	5	M5	2	4	24	19	9.9	12
2014004	R15	5	1/8	3	6	25	27	14	12
2L14106	RL15	6	M5	2	4	23.5	18.4	9.5	11.3
2L14021	RL15	6	M7	3	5	23.5	18.5	9.8	11.3
2L14005	RL15	6	1/8	3	6	23	24.9	14	11.5
2L14007	RL15	6	1/4	4	8	24.5	29.4	18	11.5
2L14006	RL15	8	1/8	3	6	24.8	24.9	14	13.8
2L14008	RL15	8	1/4	4	8	26.5	29.4	18	13.8
2L14013	RL15	8	3/8	5	9	28.5	35.6	22	13.8
2L14009	RL15	10	1/4	4	8	31.4	29.4	18	16.5
2L14014	RL15	10	3/8	5	9	32.8	35.6	22	16
2014010	RL15	12	1/4	4	8	33	29.4	18	19.5
2014011	RL15	12	3/8	5	9	35.3	35.6	22	19.5
2014012	RL15	12	1/2	8	11	37	40.8	26	19.5

**TORNILLO MACHO
BANJO DOBLE GIRATORIO (R16)**



Cód.	Ref.	Ø	F	CH	P	L	L1	E	E1
2L15001	RL16	4	M5	2	4	40.4	18.4	9.5	9.5
2L15020	RL16	4	M7	3	5	40.4	18.5	9.8	9.5
2L15002	RL16	4	1/8	3	6	42.6	24.9	14	9.5
2015003	R16	5	M5	2	4	47.6	18.8	9.9	12
2015004	R16	5	1/8	3	6	49.5	27	14	13.5
2L15106	RL16	6	M5	2	4	47	18.4	9.5	11.3
2L15021	RL16	6	M7	3	5	47	18.5	9.8	11.3
2L15005	RL16	6	1/8	3	6	46	24.9	14	11.5
2L15007	RL16	6	1/4	4	8	49	29.4	18	11.5
2L15006	RL16	8	1/8	3	6	49.6	24.9	14	13.8
2L15008	RL16	8	1/4	4	8	53	29.4	18	13.8
2L15013	RL16	8	3/8	5	9	57	35.6	18	13.8
2L15009	RL16	10	1/4	4	8	62.8	29.4	22	16.5
2L15014	RL16	10	3/8	5	9	65.6	35.6	22	16
2015010	RL16	12	1/4	4	8	66	29.4	18	19.5
2015011	RL16	12	3/8	5	9	70.6	35.6	22	19.5
2015012	RL16	12	1/2	8	11	74	40.8	26	19.5

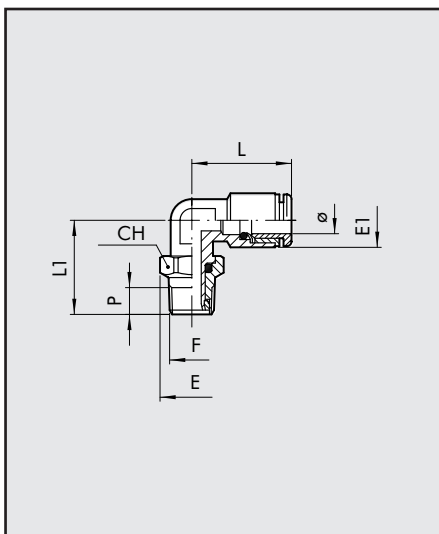
**L MACHO CILINDRICO
GIRATORIO (R31)**



Cód.	Ref.	Ø	F	CH	E	E1	L	L1	P
2L31001	RL31	4	M5	9	9.9	9.5	18.6	15.3	4
2L31002	RL31	4	1/8	12	14	9.5	18.6	19.1	6
2L31003	RL31	4	1/4	14	18	9.5	18.6	21.1	8
2031004	R31	5	M5	9	9.9	13.5	22.8	15.3	4
2031005	R31	5	1/8	12	14	13.5	22.8	19.1	6
2031006	R31	5	1/4	14	18	13.5	22.8	21.8	8
2L31007	RL31	6	M5	9	9.9	11.8	23	15.3	4
2L31008	RL31	6	1/8	12	14	11.8	21.9	19.1	6
2L31009	RL31	6	1/4	14	18	11.8	21.9	21.1	8
2L31010	RL31	8	1/8	12	14	13.5	21.9	19.1	6
2L31011	RL31	8	1/4	14	18	13.5	25.4	21.1	8
2L31012	RL31	8	3/8	17	22	13.8	25.4	27.1	9
2L31013	RL31	10	1/4	14	18	16	23.6	24.8	8
2L31014	RL31	10	3/8	17	22	16	27.2	27.1	9
2031015	RL31	10	1/2	22	26	16	27.2	30.7	11
2031016	RL31	12	1/4	14	18	20	27.2	25.6	8
2031017	RL31	12	3/8	17	22	20	30	27.1	9
2031018	RL31	12	1/2	22	26	20	30	30.7	11
2031019	RL31	14	1/2	22	26	21.3	30	32.3	11

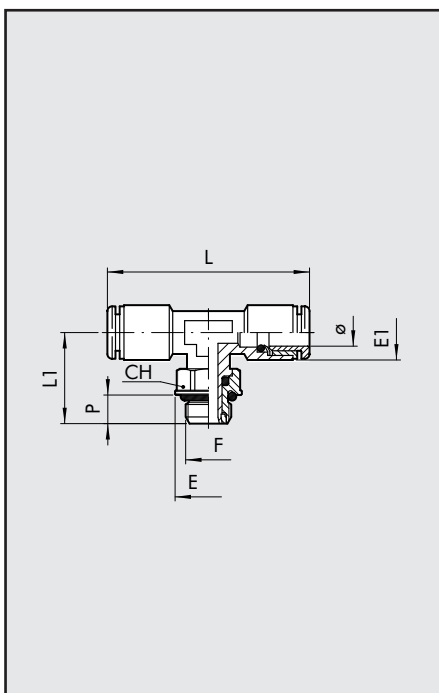


L MACHO CÓNICO GIRATORIO (R31C)



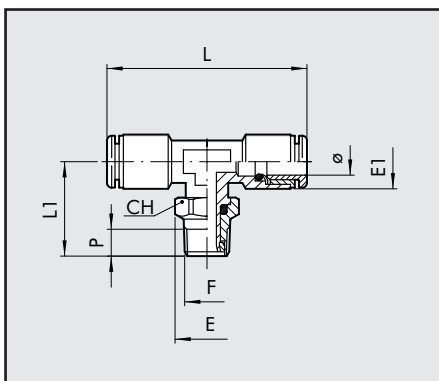
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	P
2L31C02	RL31/C	4	1/8	12	13.3	9.5	18.6	19.8	6.2
2L31C03	RL31/C	4	1/4	14	15.4	9.5	18.6	22.6	8.5
2L31C08	RL31/C	6	1/8	12	13.3	11.8	21.9	19.8	6.2
2L31C09	RL31/C	6	1/4	14	15.4	11.8	21.9	22.6	8.5
2L31C10	RL31/C	8	1/8	12	13.3	13.5	25.4	19.8	6.2
2L31C11	RL31/C	8	1/4	14	15.4	13.5	25.4	23.6	8.5
2L31C12	RL31/C	8	3/8	17	19.2	13.8	23.6	27.1	9
2L31C13	RL31/C	10	1/4	14	15.4	16	27.2	26.3	8.5
2L31C14	RL31/C	10	3/8	17	19.2	16	27.2	27.1	9
2031C15	RL31/C	12	3/8	17	19.2	20	30	27.1	9
2031C16	RL31/C	12	1/2	22	24.6	20	30	31.9	11

T CENTRAL MACHO CILINDRICO GIRATORIO (R32)



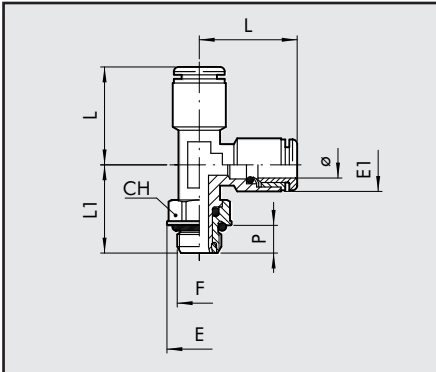
Cód.	Ref.	Ø	F	CH	E	E1	L	L1	P
2L32001	RL32	4	M5	9	9.9	9.5	37.2	15.3	4
2L32002	RL32	4	1/8	12	14	9.5	37.2	19.1	6
2L32003	RL32	4	1/4	14	18	9.5	37.2	21.1	8
20s32005	R32	5	1/8	12	14	13.5	45.6	19.1	6
2L32004	RL32	6	M5	9	9.9	11.8	43.8	15.3	4
2L32008	RL32	6	1/8	12	14	11.8	43.8	19.1	6
2L32009	RL32	6	1/4	14	18	11.8	43.8	21.1	8
2L32010	RL32	8	1/8	12	14	13.5	50.8	19.1	6
2L32011	RL32	8	1/4	14	18	13.5	50.8	21.1	8
2L32012	RL32	8	3/8	17	22	13.8	47.2	27.1	9
2L32013	RL32	10	1/4	14	18	16	44.4	21.8	8
2L32014	RL32	10	3/8	17	22	16	44.4	27.1	9
2032017	RL32	12	3/8	17	22	20	60	27.1	9
2032018	RL32	12	1/2	22	26	20	60	30.7	11
2032019	RL32	14	1/2	22	26	21.3	66	32.3	11

T CENTRAL MACHO CÓNICO GIRATORIO (R32C)



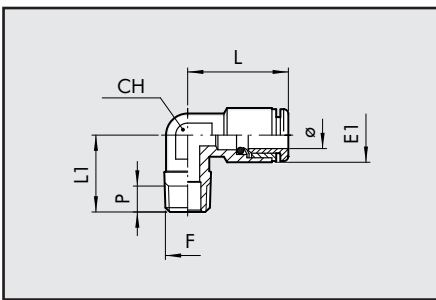
Cód.	Ref.	Ø	F	CH	E	E1	L	L1	P
2L32C02	RL32/C	4	1/8	12	13.3	9.5	37.2	19.8	6.2
2L32C03	RL32/C	4	1/4	14	15.4	9.5	37.2	22.6	8.5
2L32C08	RL32/C	6	1/8	12	13.3	11.8	43.8	19.8	6.2
2L32C09	RL32/C	6	1/4	14	15.4	11.8	43.8	22.6	8.5
2L32C10	RL32/C	8	1/8	12	13.3	13.5	50.8	19.8	6.2
2L32C11	RL32/C	8	1/4	14	15.4	13.5	50.8	23.6	8.5
2L32C12	RL32/C	8	3/8	17	19.2	13.8	47.2	27.1	9
2L32C13	RL32/C	10	1/4	14	15.4	16	44.4	26.3	8.5
2L32C14	RL32/C	10	3/8	17	19.2	16	44.4	27.1	9

T LATERAL MACHO CILÍNDRICO GIRATORIO (R38)



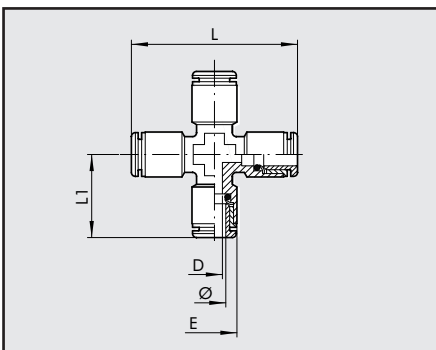
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	P
2L38002	RL38	4	1/8	12	14	9.5	18.6	19.1	6
2038005	R38	5	1/8	12	14	13.5	22.8	19.1	6
2L38008	RL38	6	1/8	12	14	11.5	21.9	19.1	6
2L38009	RL38	6	1/4	14	18	11.5	21.9	21.1	8
2L38010	RL38	8	1/8	12	14	13.5	25.4	19.1	6
2L38011	RL38	8	1/4	14	18	13.5	25.4	22.1	8
2L38013	RL38	10	1/4	14	18	16	27.2	21.8	8
2L38014	RL38	10	3/8	17	22	16	27.2	27.1	9
2038015	RL38	12	3/8	17	22	20	30	27.1	9
2038016	RL38	12	1/2	22	26	20	30	30.7	11

L MACHO CÓNICO (R39C)



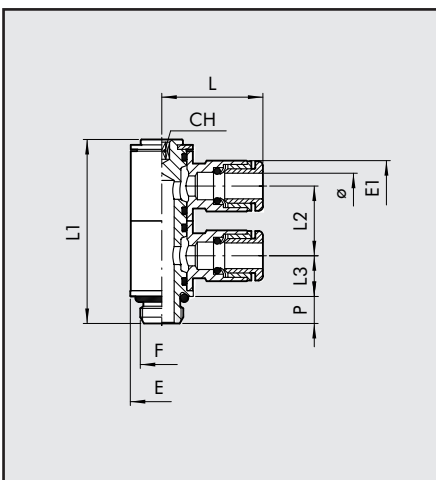
Cód.	Ref.	Ø	F	CH	E1	L	L1	P
2L39C02	RL39/C	4	1/8	10	9.5	18.6	16	6.2
2L39C08	RL39/C	6	1/8	10	11.8	21.9	16	6.2
2L39C09	RL39/C	6	1/4	10	11.8	21.9	18.5	8.5
2039Z07	RL39/Z	6	12x1 con.	10	11.8	21.9	17.5	7
2039Z08	RL39/Z	6	12x1.25 con.	10	11.8	21.9	17.5	7
2L39C10	RL39/C	8	1/8	10	13.5	25.4	16	6.2
2L39C11	RL39/C	8	1/4	10	13.5	25.4	18.5	8.5
2L39C13	RL39/C	10	1/4	14	16	27.2	22	8.5

CRUZ (RL40)



Cód.	Ref.	Ø	D	E	L	L1
2L40001	RL40	4	3	9.5	37.2	18.6
2L40003	RL40	6	4.5	11.3	43.8	21.9
2L40004	RL40	8	6.5	14	50.8	25.4

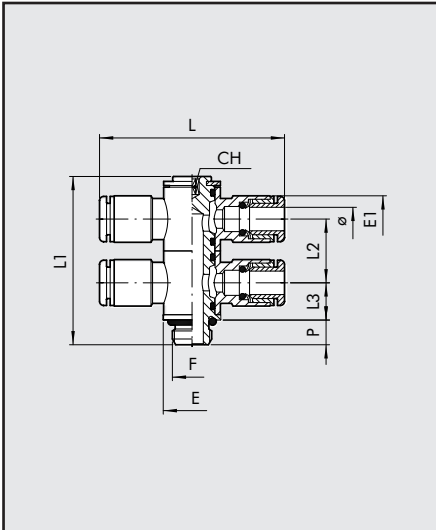
TORNILLO DOBLE BANJO SIMPLE GIRATORIO (R50)



Cód.	Ref.	Ø	F	CH	E	E1	L	L1	L2	L3	P
2L50001	RL50	4	M5	2	9.5	9.5	20.2	30.3	11.5	6.8	4
2L50002	RL50	4	1/8	3	14	9.5	20.2	40.9	15.5	9.1	6
2033002	R33	5	1/8	5	14	12	25	42	15	10.5	6
2L50007	RL50	6	M5	2	9.5	11.3	23.5	30.3	11.5	6.8	4
2L50008	RL50	6	1/8	3	14	11.3	23.5	40.9	15.5	9.1	6
2L50009	RL50	6	1/4	4	18	11.5	23	47	17.2	10.2	8
2L50010	RL50	8	1/8	3	14	13.8	24.8	40.9	15.5	9.1	6
2L50011	RL50	8	1/4	4	18	13.8	26.5	47	17.2	10.2	8
2L50013	RL50	10	1/4	4	18	16.5	31.4	47	17.2	10.2	8

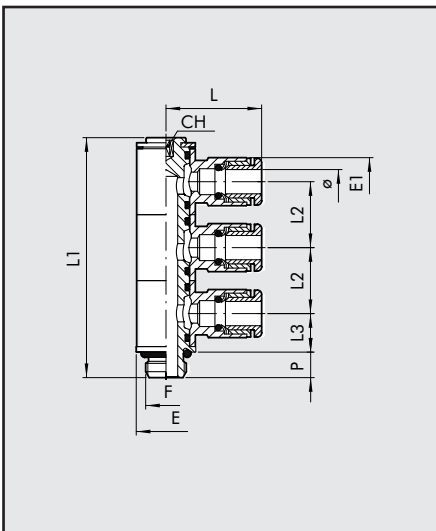


TORNILLO DOBLE BANJO DOBLE GIRATORIO (RL51)



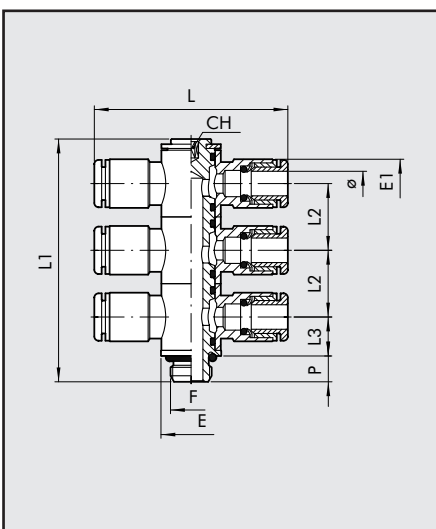
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	L2	L3	P
2L51001	RL51	4	M5	2	9.5	9.5	40.4	30.3	11.5	6.8	4
2L51002	RL51	4	1/8	3	14	9.5	40.4	40.9	15.5	9.1	6
2L51007	RL51	6	M5	2	9.5	11.3	47	30.3	11.5	6.8	4
2L51008	RL51	6	1/8	3	14	11.3	47	40.9	15.5	9.1	6
2L51009	RL51	6	1/4	4	18	11.5	46	47	17.2	10.2	8
2L51010	RL51	8	1/8	3	14	13.8	49.6	40.9	15.5	9.1	6
2L51011	RL51	8	1/4	4	18	13.8	53	47	17.2	10.2	8
2L51013	RL51	10	1/4	4	18	16.5	62.8	47	17.2	10.2	8

TORNILLO TRIPLE BANJO SIMPLE GIRATORIO (RL52)



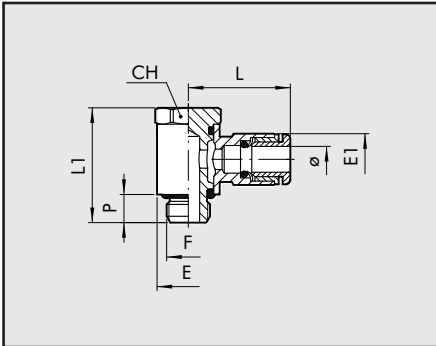
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	L2	L3	P
2L52002	RL52	4	1/8	3	14	9.5	20.2	56.7	15.5	9.1	6
2L52008	RL52	6	1/8	3	14	11.3	23.5	56.7	15.5	9.1	6
2L52009	RL52	6	1/4	4	18	11.5	23	64.3	17.2	10.2	8
2L52010	RL52	8	1/8	3	14	13.8	24.8	56.7	15.5	9.1	6
2L52011	RL52	8	1/4	4	18	13.8	26.5	64.3	17.2	10.2	8
2L52013	RL52	10	1/4	4	18	16.5	31.4	64.3	17.2	10.2	8

TORNILLO TRIPLE BANJO DOBLE GIRATORIO (RL53)



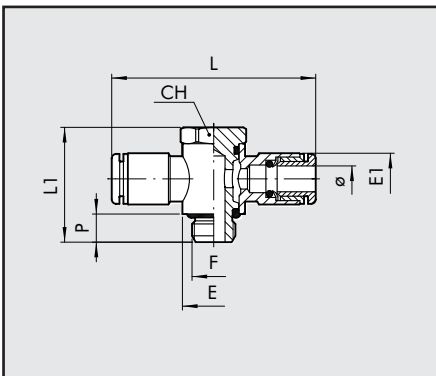
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	L2	L3	P
2L53002	RL53	4	1/8	3	14	9.5	40.2	56.7	15.5	9.1	6
2L53008	RL53	6	1/8	3	14	11.3	47	56.7	15.5	9.1	6
2L53009	RL53	6	1/4	4	18	11.5	46	64.3	17.2	10.2	8
2L53010	RL53	8	1/8	3	14	13.8	49.6	56.7	15.5	9.1	6
2L53011	RL53	8	1/4	4	18	13.8	53	64.3	17.2	10.2	8
2L53013	RL53	10	1/4	4	18	16.5	62.8	64.3	17.2	10.2	8

TORNILLO MACHO BANJO SIMPLE ORIENTABLE (RL54)



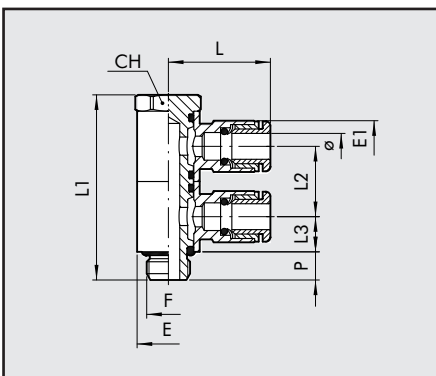
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	P
2L54001	RL54	4	M5	9	9.5	9.5	20.2	18.7	4.5
2L54002	RL54	4	1/8	13	14	9.5	21.3	25.3	6.2
2L54007	RL54	6	M5	9	9.5	11.3	23.5	18.7	4.5
2L54008	RL54	6	1/8	13	14	11.5	23	25.3	6.2
2L54009	RL54	6	1/4	16	18	11.5	24.5	29.2	8
2L54010	RL54	8	1/8	13	14	13.8	24.8	25.3	6.2
2L54011	RL54	8	1/4	16	18	13.8	26.5	29.2	8
2L54012	RL54	8	3/8	20	21	13.8	28.5	35.4	9
2L54013	RL54	10	1/4	16	18	16.5	31.4	29.2	8
2L54014	RL54	10	3/8	20	21	16	32.8	35.4	9
2L54018	RL54	12	1/4	16	18	19.5	33	29.2	8
2L54016	RL54	12	3/8	20	21	19.5	35.3	35.4	9
2L54017	RL54	12	1/2	25	26	19.5	37	40	11

TORNILLO MACHO BANJO DOBLE ORIENTABLE (RL55)



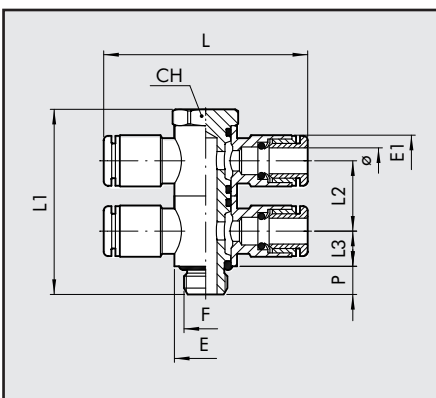
Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	P
2L55001	RL55	4	M5	9	9.5	9.5	40.4	18.7	4.5
2L55002	RL55	4	1/8	13	14	9.5	42.6	25.3	6
2L55007	RL55	6	M5	9	9.5	11.3	47	18.7	4.5
2L55008	RL55	6	1/8	13	14	11.5	46	25.3	6
2L55009	RL55	6	1/4	16	18	11.5	49	29.2	8
2L55010	RL55	8	1/8	13	14	13.8	49.6	25.3	6
2L55011	RL55	8	1/4	16	18	13.8	53	29.2	8
2L55012	RL55	8	3/8	20	21	13.8	57	35.4	9
2L55013	RL55	10	1/4	16	18	16.5	62.8	29.2	8
2L55014	RL55	10	3/8	20	21	16	65.6	35.4	9
2L55018	RL55	12	1/4	16	18	19.5	66	29.2	8
2L55016	RL55	12	3/8	20	21	19.5	70.6	35.4	9
2L55017	RL55	12	1/2	25	26	19.5	74	40	11

TORNILLO DOBLE MACHO BANJO SIMPLE ORIENTABLE (RL56)



Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	L2	L3	P
2L56001	RL56	4	M5	9	9.5	9.5	20.2	30.2	11.5	5.8	4.5
2L56002	RL56	4	1/8	13	14	9.5	21.3	41	15.5	7.8	6
2L56007	RL56	6	M5	9	9.5	11.3	23.5	30.2	11.5	5.8	4.5
2L56008	RL56	6	1/8	13	14	11.5	23	41	15.5	7.8	6
2L56009	RL56	6	1/4	16	18	11.5	24.5	46.4	17.2	8.6	8
2L56010	RL56	8	1/8	13	14	13.8	24.8	41	15.5	7.8	6
2L56011	RL56	8	1/4	16	18	13.8	26.5	46.4	17.2	8.6	8
2L56012	RL56	8	3/8	20	21	13.8	28.5	56.8	21.4	10.7	9
2L56013	RL56	10	1/4	16	18	16.5	31.4	46.4	17.2	8.6	8
2L56014	RL56	10	3/8	20	21	16	32.8	56.8	21.4	10.7	9
2L56016	RL56	12	3/8	20	21	19.5	35.3	56.8	21.4	10.7	9
2L56017	RL56	12	1/2	25	26	19.5	37	64	24	12	11

TORNILLO DOBLE MACHO BANJO DOBLE ORIENTABLE (RL57)

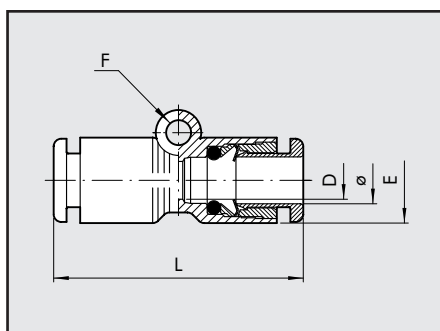


Cód.	Ref.	Ø	F	Ch	E	E1	L	L1	L2	L3	P
2L57001	RL57	4	M5	9	9.5	9.5	40.4	30.2	11.5	5.8	4.5
2L57002	RL57	4	1/8	13	14	9.5	42.6	41	15.5	7.8	6
2L57007	RL57	6	M5	9	9.5	11.3	47	30.2	11.5	5.8	4.5
2L57008	RL57	6	1/8	13	14	11.5	46	41	15.5	7.8	6
2L57009	RL57	6	1/4	16	18	11.5	49	46.4	17.2	8.6	8
2L57010	RL57	8	1/8	13	14	13.8	49.6	41	15.5	7.8	6
2L57011	RL57	8	1/4	16	18	13.8	53	46.4	17.2	8.6	8
2L57012	RL57	8	3/8	20	21	13.8	57	56.8	21.4	10.7	9
2L57013	RL57	10	1/4	16	18	16.5	62.8	46.4	17.2	8.6	8
2L57014	RL57	10	3/8	20	21	16	65.6	56.8	21.4	10.7	9
2L57016	RL57	12	3/8	20	21	19.5	70.6	56.8	21.4	10.7	9
2L57017	RL57	12	1/2	25	26	19.5	74	64	24	12	11



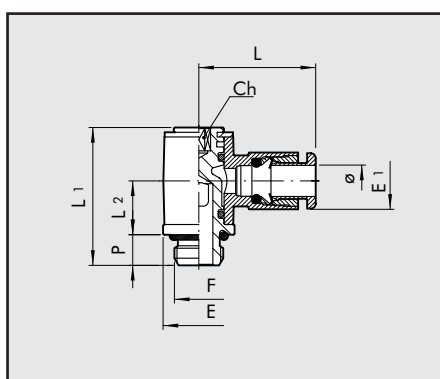
RACORES EN TECNOPOLIMERO

RECTO INTERMEDIO TECNOPOLIMERO (R19)



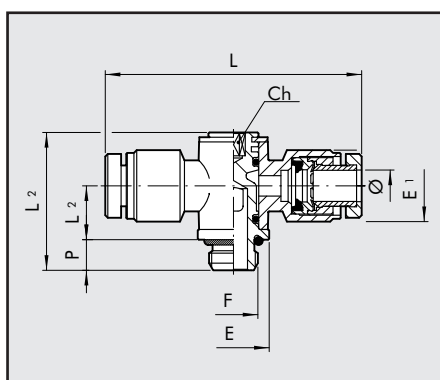
Cód.	Ref.	Ø	E	L	D	F
2019001	RL19	4	9.2	30.4	3	3.3
2019002	R19	5	14	33.5	4	-
2019003	RL19	6	11.3	33	5	3.3
2019004	RL19	8	13.8	36.2	6.5	3.3
2019005	RL19	10	16	38	8.5	3.3
2019006	RL19	12	19.5	40	10.5	3.3

TORNILLO MACHO BANJO SIMPLE GIRATORIO TECNOPOLIMERO (R20)



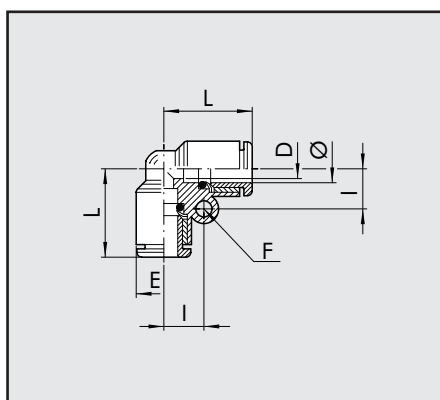
Cód.	Ref.	Ø	F	Ch	P	L	L1	L2	E	E1
2020001	RL20	4	M5	2	4	18.7	18.4	9.1	8	9.2
2020002	RL20	4	1/8	3	6	21	24.9	12.3	14	9.2
2020003	R20	5	M5	2	4	21.5	18.8	8.5	9.9	13.5
2020004	R20	5	1/8	3	6	23	27	10.5	14	13.5
2020016	RL20	6	M5	2	4	20.8	18.4	9.1	8	11.3
2020005	RL20	6	1/8	3	6	22.3	24.9	12.3	14	11.3
2020007	RL20	6	1/4	4	8	24.3	29.4	14.3	18	11.3
2020006	RL20	8	1/8	3	6	25.6	24.9	12.3	14	13.8
2020008	RL20	8	1/4	4	8	27.2	29.4	14.3	18	13.8
2020009	RL20	10	1/4	4	8	28.6	29.4	14.3	18	16
2L20017	RL20	10	3/8	5	9	30.5	35.6	15.3	22	16
2020010	RL20	12	1/4	4	8	31	29.4	14.3	18	19.5
2020011	RL20	12	3/8	5	9	32.4	35.6	17.5	22	19.5
2020012	RL20	12	1/2	8	11	34	40.8	19.2	26	19.5

TORNILLO MACHO BANJO DOBLE GIRATORIO TECNOPOLIMERO (R20/A)



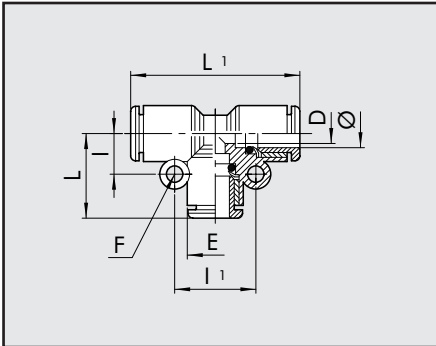
Cód.	Ref.	Ø	F	Ch	P	L	L1	L2	E	E1
2020A01	R20/A	4	M5	2	4	40	16.8	6.5	9.9	10.9
2020A02	R20/A	4	1/8	3	6	45	27	10.5	14	12.5
2020A03	R20/A	5	M5	2	4	43	18.8	8.5	9.9	13.5
2020A04	R20/A	5	1/8	3	6	46	27	10.5	14	13.5
2020A05	R20/A	6	1/8	3	6	45	27	10.5	14	15
2020A07	R20/A	6	1/4	4	8	48	31.5	11.5	18	15
2020A06	R20/A	8	1/8	3	6	51	27	10.5	14	16.3
2020A08	R20/A	8	1/4	4	8	54	31.5	11.5	18	16.3
2020A09	R20/A	10	1/4	4	8	64	31.5	11.5	18	18.5
2020A10	R20/A	12	1/4	4	8	64	31.5	11.5	18	21
2020A11	R20/A	12	3/8	5	9	68	36	13.5	22	21
2020A12	R20/A	12	1/2	8	11	72	42	16.2	26	21

L INTERMEDIO TECNOPOLIMERO (R21)



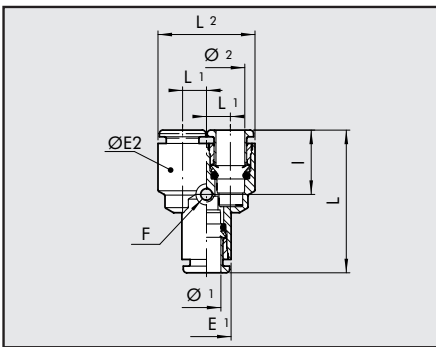
Cód.	Ref.	Ø	L	D	E	I	F
2L21001	RL21	4	16.7	2.5	9.2	7.2	3.3
2021002	R21	5	20	3.5	13.5	-	-
2L21003	RL21	6	19	4.2	11.3	8.2	3.3
2L21004	RL21	8	21.4	6.2	13.8	9.6	3.3
2021005	RL21	10	24	8.5	16	10.9	3.3
2021006	RL21	12	25.8	10.5	19.5	12.5	3.3

T INTERMEDIO TECNOPOLIMERO (R22)



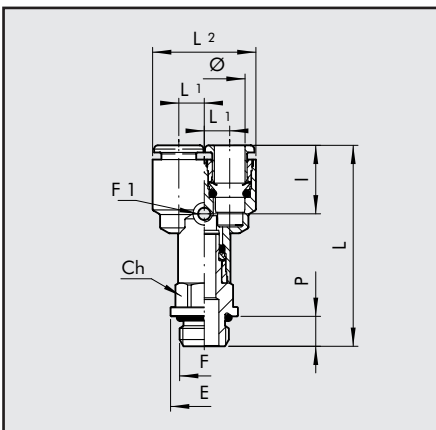
Cód.	Ref.	Ø	L	L1	D	E	I	I1	F
2L22001	RL22	4	16.7	33.4	2.5	9.2	7.2	14.4	3.3
2022002	RL22	5	20	40	3.5	13.5	-	-	-
2L22003	RL22	6	19	38	4.2	11.3	8.2	16.4	3.3
2L22004	RL22	8	21.4	42.8	6.2	13.8	9.6	19.2	3.3
2022005	RL22	10	24	48	8.5	16	10.9	21.8	3.3
2022006	RL22	12	25.8	51.6	10.5	19.5	12.5	25	3.3

Y TECNOPOLIMERO (R23)



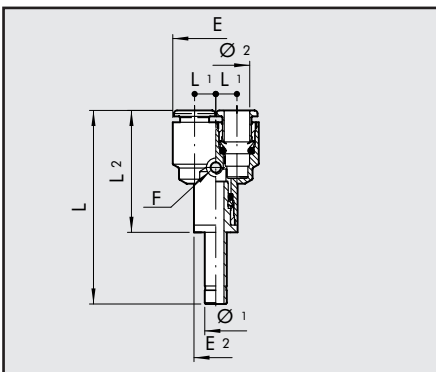
Cód.	Ref.	Ø1	Ø2	L	L1	L2	E1	ØE2	I	F
2023001	RL23	4	4	32.9	5	19.2	9.2	9.2	14.8	3.3
2023002	R23	5	5	35.5	6.5	26.5	13.5	13.5	-	-
2023003	RL23	6	6	35.5	5.8	22.8	11.3	11.3	15	3.3
2023004	RL23	8	8	39.5	7.2	28.2	13.8	13.8	15.8	3.3
2L23005	RL23	10	10	43.1	8.3	32.6	16	16	17.4	3.3
2L23006	RL23	12	12	48	10	39.5	19.5	19.5	18	3.3
2L23301	RL23	6	4	34.2	5	19.2	11.3	9.2	14.8	3.3
2L23303	RL23	8	6	37.8	5.8	22.8	13.8	11.3	15	3.3
2L23306	RL23	10	8	40.4	7.2	28.2	16	13.8	15.8	3.3
2L23309	RL23	12	10	44.2	8.3	32.6	19.5	16	17.4	3.3

Y TECNOPOLIMERO (RL23/M)



Cód.	Ref.	Ø	F	L	L1	L2	I	Ch	P	E	F1
2L23401	RL23/M	4	M5	38.7	5	19.2	14.8	9	4	9.9	3.3
2L23402	RL23/M	4	1/8	42.6	5	19.2	14.8	12	6	14	3.3
2L23403	RL23/M	4	1/4	46.6	5	19.2	14.8	14	8	18	3.3
2L23406	RL23/M	6	1/8	44.9	5.75	22.8	15	12	6	14	3.3
2L23407	RL23/M	6	1/4	47.9	5.75	22.8	15	14	8	18	3.3
2L23409	RL23/M	8	1/8	48.4	7.2	28.2	15.8	14	6	15	3.3
2L23410	RL23/M	8	1/4	52.8	7.2	28.2	15.8	14	8	18	3.3
2L23412	RL23/M	8	3/8	54.4	7.2	28.2	15.8	17	9	22	3.3
2L23413	RL23/M	10	1/4	53.8	8.3	32.6	17.4	16	8	18	3.3
2L23415	RL23/M	10	3/8	56	8.3	32.6	17.4	17	9	20	3.3
2L23419	RL23/M	12	3/8	62	10	39.5	18	19	9	22	3.3
2L23420	RL23/M	12	1/2	62.3	10	39.5	18	22	11	26	3.3

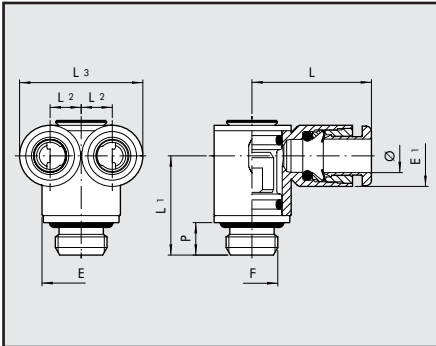
Y CON ADAPTADOR TECNOPOLIMERO (R24)



Cód.	Ref.	Ø1	Ø2	L	L1	L2	E1	E2	I	F
2024001	RL24	4	4	46.9	5	29.7	9.2	9.2	14.8	3.3
2024003	RL24	6	6	49.7	5.75	32	11.3	11.3	15	3.3
2L24004	RL24	8	8	55.1	7.2	35.9	13.8	13.8	15.8	3.3
2L24005	RL24	10	10	63.1	8.3	39.2	16	16	17.4	3.3
2L24006	RL24	12	12	70.5	10	44	19.5	19.5	18	3.3
2L24301	RL24	6	4	48.4	5	30.7	9.2	11.3	14.8	3.3
2L24303	RL24	8	6	53.4	5.75	34.2	11.3	13.8	15	3.3
2L24306	RL24	10	8	60.4	7.2	36.6	13.8	16	15.8	3.3
2L24309	RL24	12	10	66.7	8.3	40.2	16	19.5	17.4	3.3

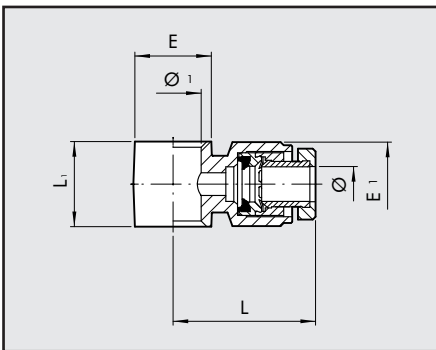


BANJO GIRATORIO TECNOPOLIMERO DOBLE PARALELO (RL25)



Cód.	Ref.	Ø	F	L	L1	L2	L3	E	E1	Ch	P
2L25001	RL25	4	M5	17.7	13.1	5	19.2	8	9.2	2	4
2L25002	RL25	4	M7	17.7	14.6	5	19.2	9.8	9.2	3	5
2L25003	RL25	4	1/8	17.7	16.5	5	19.2	13	9.2	3	6
2L25004	RL25	6	1/8	23	18.3	5.75	22.8	14	11.3	3	6
2L25005	RL25	6	1/4	23	21.2	5.75	22.8	16.4	11.3	4	8
2L25008	RL25	8	1/4	25.8	22.2	7.2	28.2	18	13.8	4	8
2L25009	RL25	8	3/8	25.8	23.8	7.2	28.2	20	13.8	5	9

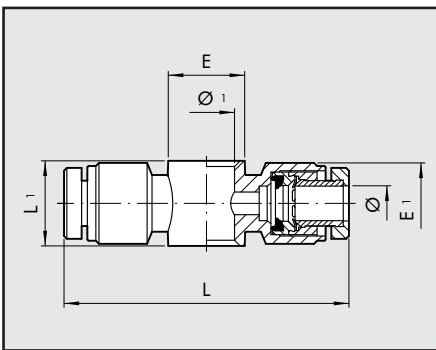
BANJO SIMPLE TECNOPOLIMERO (R28)



Cód.	Ref.	Ø	Ø1	L	L1	E	E1
2012102	R28	4	1/8	22.5	17	15	12.5
2012104	R28	5	1/8	23	17	15	13.5
2012106	R28	6	1/8	22.5	17	15	15
2012107	R28	6	1/4	24	19	18	15
2012108	R28	8	1/8	25.5	17	15	16.5
2012109	R28	8	1/4	27	19	18	16.5
2012110	R28	8	3/8	29	22	21.5	16.5
2012111	R28	10	1/4	32	19	18	18.5
2012112	R28	10	3/8	32	22	21.5	18.5
2012113	R28	12	1/4	32	19	18	21
2012114	R28	12	3/8	34	22	21.5	21
2012115	R28	12	1/2	36	24	26	21

Para los tornillos Serie D ver pag. 4.1/43

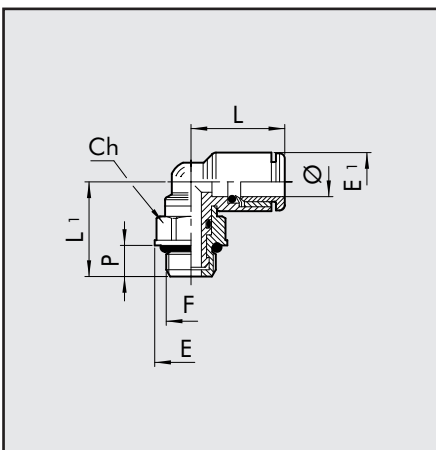
BANJO DOBLE TECNOPOLIMERO (R29)



Cód.	Ref.	Ø	Ø1	L	L1	E	E1
2013102	R29	4	1/8	45	17	15	12.5
2013104	R29	5	1/8	46	17	15	13.5
2013106	R29	6	1/8	45	17	15	15
2013107	R29	6	1/4	48	19	18	15
2013108	R29	8	1/8	51	17	15	16.5
2013109	R29	8	1/4	54	19	18	16.5
2013110	R29	8	3/8	58	22	21.5	16.5
2013111	R29	10	1/4	64	19	18	18.5
2013112	R29	10	3/8	64	22	21.5	18.5
2013113	R29	12	1/4	64	19	18	21
2013114	R29	12	3/8	68	22	21.5	21
2013115	R29	12	1/2	72	24	26	21

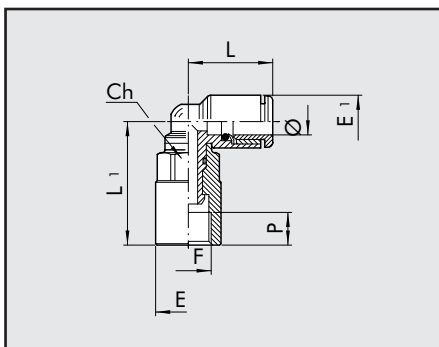
Para los tornillos Serie D ver pag. 4.1/43

L MACHO GIRATORIA TECNOPOLIMERO (RL34)



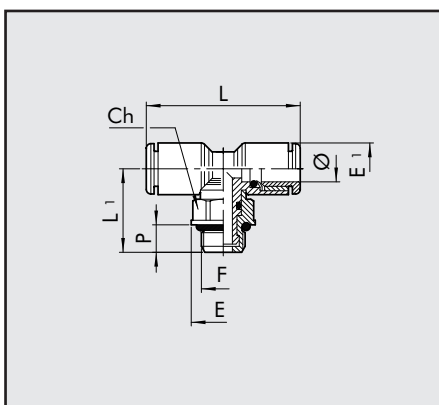
Cód.	Ref.	Ø	F	Ch	P	L	L1	E	E1
2L34001	RL34	4	M5	8	4	16.4	15.2	9	9.2
2L34020	RL34	4	M7	8	5	16.4	16.2	9.8	9.2
2L34002	RL34	4	1/8	12	6	16.4	17.2	14	9.2
2L34003	RL34	4	1/4	14	8	16.4	20.1	18	9.2
2L34006	RL34	6	M5	8	4	18	16.3	9	11.3
2L34021	RL34	6	M7	9	5	19	17.5	9.9	11.3
2L34007	RL34	6	1/8	12	6	19	18.3	14	11.3
2L34008	RL34	6	1/4	14	8	19	21.2	18	11.3
2L34009	RL34	8	1/8	12	6	20.2	19.5	14	13.8
2L34010	RL34	8	1/4	14	8	20.2	22.4	18	13.8
2L34011	RL34	8	3/8	17	9	20.2	24.4	22	13.8
2L34013	RL34	10	1/4	14	8	23.3	23.5	18	16
2L34014	RL34	10	3/8	17	9	23.3	25.6	22	16
2L34016	RL34	12	3/8	17	9	25.2	27.3	22	19.5
2L34017	RL34	12	1/2	19	11	25.2	30.3	26	19.5

L HEMBRA GIRATORIA TECNOPLIMERO (RL34/F)



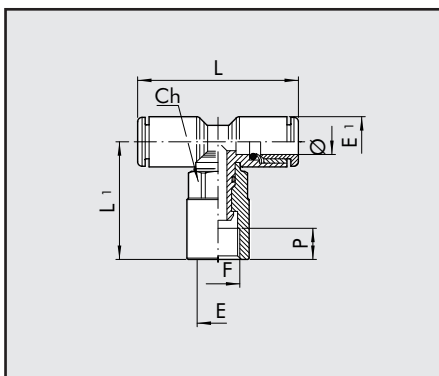
Cod.	Ref.	Ø	F	CH	E	E1	L	L1	P
2L34F01	RL34/F	4	M5	8	9	9.2	16.4	15.3	4
2L34F05	RL34/F	4	1/8	12	14	9.2	16.4	20.9	7
2L34F06	RL34/F	6	M5	8	9	11.3	18	16.4	4
2L34F07	RL34/F	6	1/8	12	14	11.3	19	26.5	7
2L34F08	RL34/F	6	1/4	14	17	11.3	19	28.2	8
2L34F09	RL34/F	8	1/8	12	14	13.8	20.2	27.7	7
2L34F10	RL34/F	8	1/4	14	17	13.8	20.2	29.4	8
2L34F13	RL34/F	10	1/4	14	17	16	23.3	33	8
2L34F14	RL34/F	10	3/8	17	21	16	23.3	38	10
2L34F16	RL34/F	12	3/8	17	21	19.5	25.2	40.3	10
2L34F17	RL34/F	12	1/2	19	23.8	19.5	25.2	42.8	11

T CENTRAL MACHO TECNOPLIMERO (RL35)



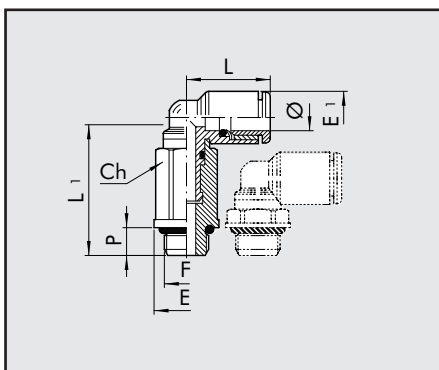
Cod.	Ref.	Ø	F	Ch	P	L	L1	E	E1
2L35001	RL35	4	M5	8	4	31	32.8	9	9.2
2L35020	RL35	4	M7	8	5	31	32.8	9.8	9.2
2L35002	RL35	4	1/8	12	6	31	32.8	14	9.2
2L35003	RL35	4	1/4	14	8	31	32.8	18	9.2
2L35006	RL35	6	M5	8	4	34.2	36	9	11.3
2L35007	RL35	6	1/8	12	6	36.2	38	14	11.3
2L35008	RL35	6	1/4	14	8	36.2	38	18	11.3
2L35009	RL35	8	1/8	12	6	38.6	40.4	14	13.8
2L35010	RL35	8	1/4	14	8	38.6	40.4	18	13.8
2L35011	RL35	8	3/8	17	9	38.6	40.4	22	13.8
2L35013	RL35	10	1/4	14	8	46.6	23.5	18	16
2L35014	RL35	10	3/8	17	9	46.6	25.6	22	16
2L35016	RL35	12	3/8	17	9	50.4	27.3	22	19.5
2L35017	RL35	12	1/2	19	11	50.4	30.3	26	19.5

T CENTRAL HEMBRA GIRATORIA TECNOPLIMERO (RL35/F)



Cod.	Ref.	Ø	F	CH	E	E1	L	L1	P
2L35F01	RL35/F	4	M5	8	9	9.2	32.8	15.3	4
2L35F06	RL35/F	6	M5	8	9	11.3	36	16.4	4
2L35F07	RL35/F	6	1/8	12	14	11.3	38	26.5	7
2L35F08	RL35/F	6	1/4	14	17	11.3	38	28.2	8
2L35F09	RL35/F	8	1/8	12	14	13.8	40.4	27.7	7
2L35F10	RL35/F	8	1/4	14	17	13.8	40.4	29.4	8
2L35F13	RL35/F	10	1/4	14	17	16	46.6	33	8
2L35F14	RL35/F	10	3/8	17	21	16	46.6	38	10
2L35F16	RL35/F	12	3/8	17	21	19.5	50.4	40.3	10
2L35F17	RL35/F	12	1/2	19	23.8	19.5	50.4	42.8	11

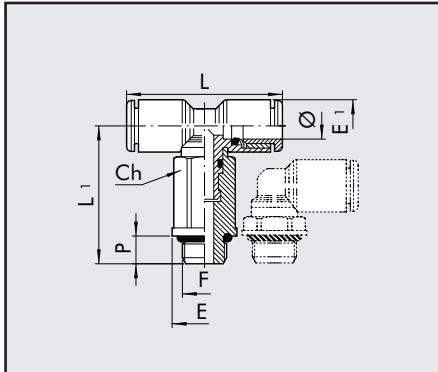
L MACHO GIRATORIA PROLONGADA TECNOPLIMERO (RL36)



Cod.	Ref.	Ø	F	Ch	P	L	L1	E	E1
2L36001	RL36	4	M5	8	4	16.4	26.7	9	9.2
2L36020	RL36	4	M7	8	5	16.4	27.7	9.8	9.2
2L36002	RL36	4	1/8	12	6	16.4	25.3	14	9.2
2L36006	RL36	6	M5	8	4	18	27.8	9	11.3
2L36021	RL36	6	M7	9	5	18	29.3	9.9	11.3
2L36007	RL36	6	1/8	12	6	19	30.9	14	11.3
2L36008	RL36	6	1/4	14	8	19	33.2	18	11.3
2L36009	RL36	8	1/8	12	6	20.2	32.1	14	13.8
2L36010	RL36	8	1/4	14	8	20.2	34.4	18	13.8
2L36012	RL36	10	1/4	14	8	23.3	38	18	16

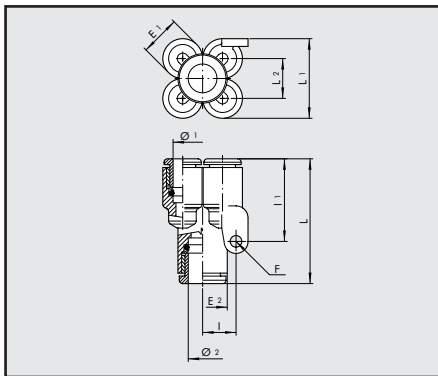


T CENTRAL MACHO GIRATORIA TECNOPLIMERO (RL37)



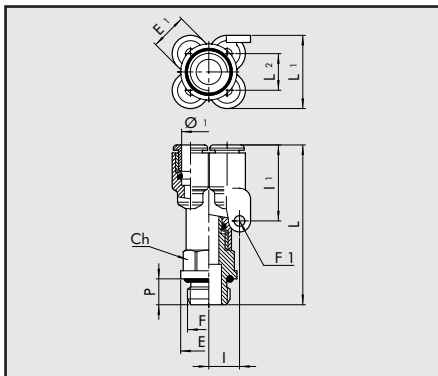
Cod.	Ref.	Ø	F	Ch	P	L	L1	E	E1
2L37001	RL37	4	M5	8	4	32.8	26.7	9	9.2
2L37020	RL37	4	M7	8	5	32.8	27.5	9.8	9.2
2L37002	RL37	4	1/8	12	6	32.8	25.3	14	9.2
2L37006	RL37	6	M5	8	4	36	27.8	9	11.3
2L37007	RL37	6	1/8	12	6	38	30.9	14	11.3
2L37008	RL37	6	1/4	14	8	38	33.2	18	11.3
2L37009	RL37	8	1/8	12	6	40.4	32.1	14	13.8
2L37010	RL37	8	1/4	14	8	40.4	34.4	18	13.8
2L37012	RL37	10	1/4	14	8	46.6	38	18	16

Y DOBLE TECNOPLIMERO (RL42)



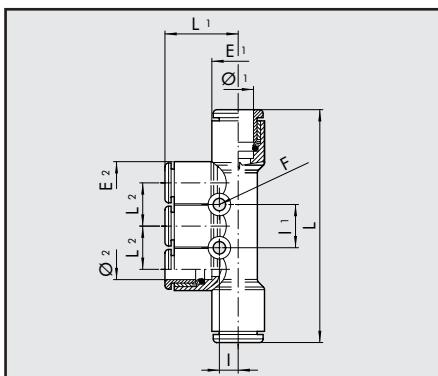
Cod.	Ref.	Ø ₁	Ø ₂	E1	E2	L	L1	L2	I	I1	F
2L42001	RL42	4	4	9.2	9.2	28.8	17.9	8.7	8	21.3	3.3
2L42002	RL42	4	6	9.2	11.3	31.3	17.9	8.7	8	21.3	3.3
2L42004	RL42	6	6	11.3	11.3	33.4	22.6	11.3	9.5	25.6	3.3
2L42005	RL42	6	8	11.3	14	34.8	22.6	11.3	9.5	25.6	3.3

Y DOBLE TECNOPLIMERO INGRESO ROSCADO (RL43)



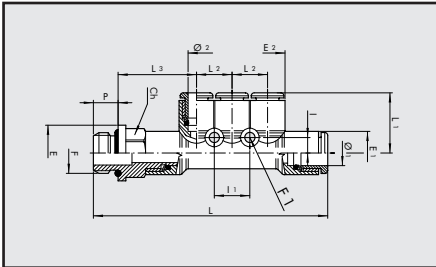
Cod.	Ref.	Ø ₁	F	E1	E	Ch	P	L	L1	L2	I	I1	F1
2L43001	RL43	4	M5	9.2	8	9	4	35.5	17.9	8.7	8	21.3	3.3
2L43002	RL43	4	1/8	9.2	14	12	6	41.6	17.9	8.7	8	21.3	3.3
2L43003	RL43	4	1/4	9.2	18	14	8	44.6	17.9	8.7	8	21.3	3.3
2L43008	RL43	6	1/8	11.3	14	12	6	43.7	22.6	11.3	9.5	25.6	3.3
2L43009	RL43	6	1/4	11.3	18	14	8	46.7	22.6	11.3	9.5	25.6	3.3

COLECTOR MÚLTIPLE TECNOPLIMERO (RL44)



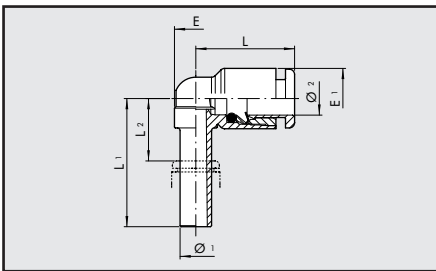
Cod.	Ref.	Ø1	Ø2	E1	E2	L	L1	L2	I	I1	F
2L44001	RL44	6	4	11.3	9.2	53.2	17.2	9.4	4.3	9.4	3.3
2L44003	RL44	8	6	14	11.3	61.4	19.6	11.5	5	11.5	3.3

COLECTOR MÚLTIPLE ENTRADA ROSCADA CUERPO EN TECNOPOLIMERO (RL45)



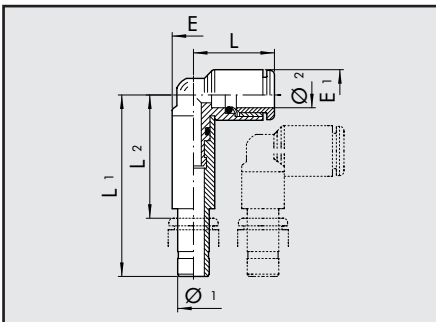
Cód.	Ref.	F	Ø1	Ø2	E1	E2	E	Ch	P	L	L1	L2	L3	I	I1	F1
2L45001	RL45	1/8	6	4	11.3	9.2	14	12	6	63.5	17.2	9.4	21.5	4.3	9.4	3.3
2L45002	RL45	1/4	6	4	11.3	9.2	18	14	8	66.5	17.2	9.4	22.5	4.3	9.4	3.3
2L45007	RL45	1/8	8	6	14	11.3	15	14	6	71.2	19.6	11.5	23	5	11.5	3.3
2L45008	RL45	1/4	8	6	14	11.3	18	14	8	75.6	19.6	11.5	25.4	5	11.5	3.3
2L45009	RL45	3/8	8	6	14	11.3	22	17	9	77.2	19.6	11.5	26	5	11.5	3.3

CURVA DE UNIÓN (RL46)



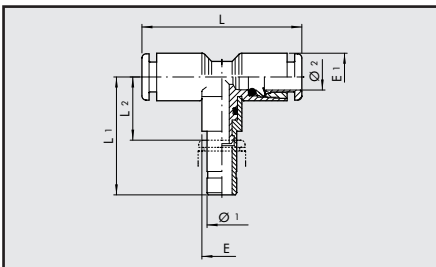
Cód.	Ref.	Ø1	Ø2	L	L1	L2	E	E1
2L46001	RL46	4	4	16	22.5	8.1	6.8	9.2
2L46002	RL46	6	6	18.5	24	8.4	8	11.3
2L46003	RL46	8	8	21.2	28.5	11.3	10	13.8
2L46004	RL46	10	10	23.3	32	13.3	12.5	16

CURVA DE UNIÓN PROLONGADA (RL47)



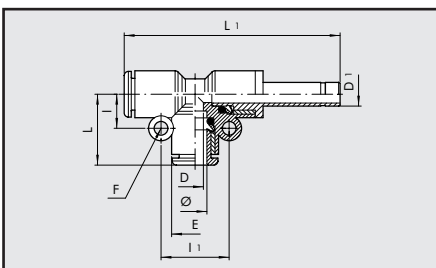
Cód.	Ref.	Ø1	Ø2	L	L1	L2	E	E1
2L47001	RL47	4	4	15.5	36.9	23.4	7.7	9.2
2L47002	RL47	6	6	18.1	40.6	25.9	9.3	11.3
2L47003	RL47	8	8	19.3	44.9	28.8	9.7	13.8

TE UNION INFERIOR (RL48)



Cód.	Ref.	Ø1	Ø2	L	L1	L2	E	E1
2L48001	RL48	4	4	32	22.5	8.1	6.8	9.2
2L48002	RL48	6	6	37	37.5	16.4	9.7	11.3
2L48003	RL48	8	8	42.4	28.5	11.3	10	13.8
2L48004	RL48	10	10	46.6	46	27.7	14	16

TE UNION LATERAL (RL49)



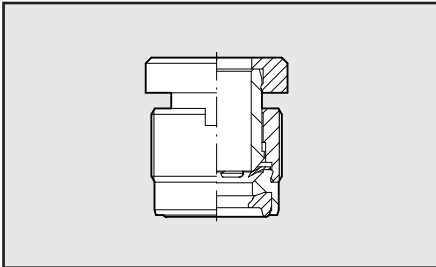
Cód.	Ref.	Ø	L	L1	I	I1	E	D	D1	F
2L49001	RL49	4	16.7	47.4	7.2	14.4	9.2	2.5	4	3.3
2L49003	RL49	6	19	52.5	8.2	16.4	11.3	4.2	6	3.3
2L49004	RL49	8	21.4	58.4	9.6	19.2	13.8	6.2	8	3.3
2L49005	RL49	10	24.1	68.2	10.9	21.8	16	8.5	10	3.3
2L49006	RL49	12	25.8	74.1	12.5	25	19.5	10.5	12	3.3



CARTUCHOS Y ACCESORIOS

CARTUCHO EN LATÓN CON ROSCA (R26)

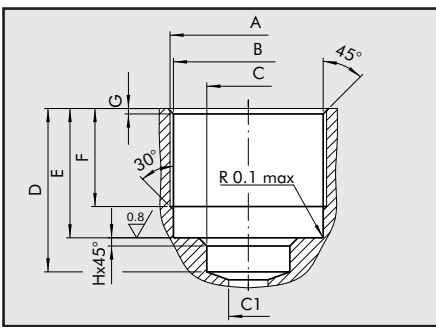
Cód.	Ref.	∅	Par de apriete Sobre sede en mat.plástico (Nm)	Par de apriete sobre sede metálica (Nm)
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SERIE R				
2026A02	R26	3	0.6	0.8
2026A01	R26	3.17	0.6	0.8
2026001	R26	4	0.8	1
2026002	R26	5	0.8	1.5
2026003	R26	6	0.8	1.2
2026004	R26	8	1	1.8
2026005	R26	10	0.8	2
2026006	R26	12	0.8	2

SEDE CARTUCHO R26 ∅ 3-3.17-4-6-8

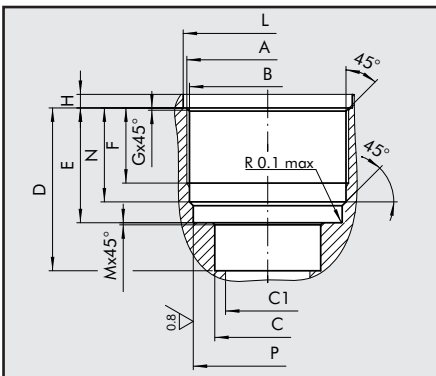
Ref.	∅	A	B	C	C1	D	E	F	G	H
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SE.CA. R26	3-3.17	M7x0,75	∅6.5 ^{+0,1}	∅4.5 ^{+0,12}	∅4 max	10.5 ^{+0,3}	9.5 ^{+0,1}	7 ^{+0,20}	0,5	-
SE.CA. R26	4	M9,5x0,75	∅9 ^{+0,10}	∅4,1 ^{+0,10}	∅3 max	12 ^{+0,20}	9,5 ^{+0,15}	7,5 ^{+0,20}	0,4	0,6
SE.CA. R26	6	M11,5x0,75	∅11 ^{+0,10}	∅6,1 ^{+0,10}	∅5 max	12 ^{+0,1}	9,5 ^{+0,1}	7,5 ^{+0,20}	0,4	0,6
SE.CA. R26	8	M13,5x0,75	∅13 ^{+0,10}	∅8,1 ^{+0,10}	∅7 max	15 ^{+0,20}	10,5 ^{+0,15}	8,5 ^{+0,20}	0,4	0,6

SEDE CARTUCHO R26 ∅ 5-10-12

Ref.	∅	A	B	C	C1	D	E	F	G	H
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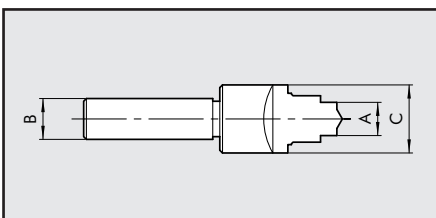


SE.CA. R26	5	M10,5x0,75	∅10 ^{+0,1}	∅5,1 ^{+0,15}	∅4 max	11,8 ^{+0,1}	8,9 ^{+0,10}	5,8 ^{+0,3}	0,3	0,9 ⁺⁰
SE.CA. R26	10	M15,5x0,75	∅15 ^{+0,1}	∅10,1 ^{+0,15}	∅9 max	15,6 ^{+0,1}	11 ^{+0,05}	7,5 ^{+0,3}	0,3	1,3 ⁺⁰
SE.CA. R26	12	M18x1	∅17,5 ^{+0,05}	∅12,1 ^{+0,05}	∅11 max	18 ^{+0,1}	12 ^{+0,05}	6,8 ^{+0,3}	0,6	1,3 ⁺⁰

L	M	N	P
∅11,2 ^{+0,12}	0,1	7,8 ^{+0,05}	∅9,7 ^{+0,05}
∅16,2 ^{+0,1}	0,2	9 ^{+0,05}	∅14,9 ^{+0,10}
∅18,8 ^{+0,1}	0,2	9,75 ^{+0,15}	∅17 ^{+0,1}

UTIL DE PREPARACIÓN SEDE R26

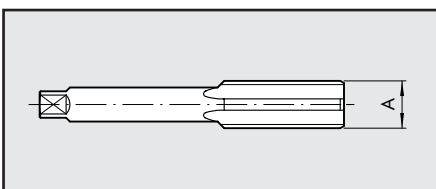
Cód.	Ref.	A	B	C
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2025010	UT.SE. R26 3-3.17	4,5	∅ 10	∅ 10
2025011	UT.SE. R26 4	4,1	∅ 12	∅ 15
2025012	UT.SE. R26 5	5,1	∅ 15	∅ 19
2025013	UT.SE. R26 6	6,1	∅ 16	∅ 19
2025014	UT.SE. R26 8	8,1	∅ 16	∅ 21
2025015	UT.SE. R26 10	10,1	∅ 18	∅ 25
2025016	UT.SE. R26 12	12,1	∅ 15	∅ 25

MACHO PARA SEDE CARTUCHO R26

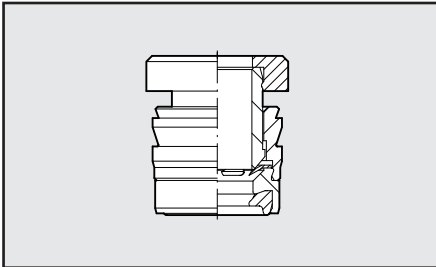
Cód.	Ref.	∅	A
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2025020	MA R26 3-3.17	3-3.17	M7x0,75
2025021	MA R26 4	4	M9,5x0,75
2025022	MA R26 5	5	M10,5x0,75
2025023	MA R26 6	6	M11,5x0,75
2025024	MA R26 8	8	M13,5x0,75
2025025	MA R26 10	10	M15,5x0,75
2025026	MA R26 12	12	M18x1

CARTUCHO DE LATÓN A COMPRESION (R27)

Cód. Ref. Ø

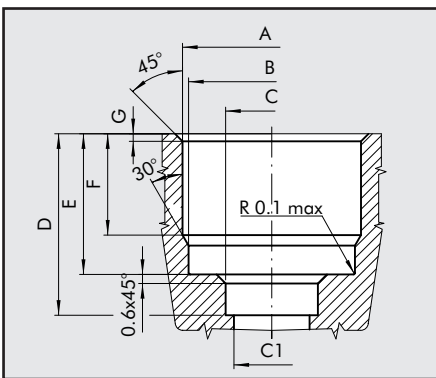


SERIE R

2027001	R27	4
2027002	R27	5
2027003	R27	6
2027004	R27	8
2027005	R27	10
2027006	R27	12

SEDE CARTUCHO R27 Ø 4-6-8

Ref. Ø A B C C1 D E F G



Para aluminio

SE.CA. R27 4	4	Ø9,2 ⁺⁰ _{-0,10}	Ø9 ^{+0,10} ₋₀	Ø4,1 ^{+0,10} ₋₀	Ø3 max	12 ⁺⁰ _{-0,20}	9,3 ⁺⁰ _{-0,10}	6,7 ^{+0,10} ₋₀	0,5
SE.CA. R27 6	6	Ø11,3 ⁺⁰ _{-0,08}	Ø11 ^{+0,10} ₋₀	Ø6,1 ^{+0,10} ₋₀	Ø5 max	12 ⁺⁰ _{-0,20}	9,3 ⁺⁰ _{-0,10}	6,7 ^{+0,10} ₋₀	0,5
SE.CA. R27 8	8	Ø13,3 ⁺⁰ _{-0,08}	Ø13 ^{+0,10} ₋₀	Ø8,1 ^{+0,10} ₋₀	Ø7 max	15 ⁺⁰ _{-0,20}	10,3 ⁺⁰ _{-0,10}	7,7 ^{+0,10} ₋₀	0,5

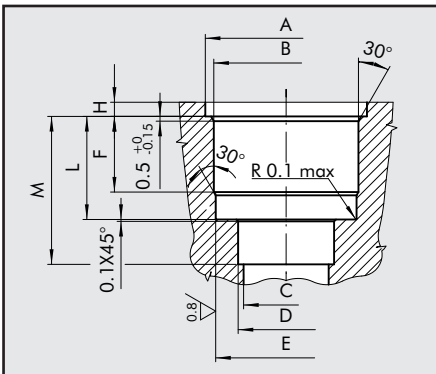
Para material plástico

SE.CA. R27 4	4	*Ø9,2 ⁺⁰ _{-0,10}	Ø9 ^{+0,10} ₋₀	Ø4,1 ^{+0,10} ₋₀	Ø3 max	12 ⁺⁰ _{-0,20}	9,3 ⁺⁰ _{-0,10}	6,7 ^{+0,10} ₋₀	0,5
SE.CA. R27 6	6	*Ø11,2 ⁺⁰ _{-0,10}	Ø11 ^{+0,10} ₋₀	Ø6,1 ^{+0,10} ₋₀	Ø5 max	12 ⁺⁰ _{-0,20}	9,3 ⁺⁰ _{-0,10}	6,7 ^{+0,10} ₋₀	0,5
SE.CA. R27 8	8	*Ø13,2 ⁺⁰ _{-0,10}	Ø13 ^{+0,10} ₋₀	Ø8,1 ^{+0,10} ₋₀	Ø7 max	15 ⁺⁰ _{-0,20}	10,3 ⁺⁰ _{-0,10}	7,7 ^{+0,10} ₋₀	0,5

* N.B.: el diametro de interferencia es puramente indicativo ,dependiendo del tipo de material plastico utilizado y del espesor. Se recomienda realizar pruebas practicas de montaje

SEDE CARTUCHO R27 Ø 5-10-12

Ref. Ø A B C D E F H L M



Para material plástico

SE.CA. R27	5	*Ø12,1 ^{+0,15} ₋₀	Ø10,2 ⁺⁰ _{-0,10}	Ø4 ^{MAX}	Ø5,1 ^{+0,15} ₋₀	Ø9,7 ^{+0,05} ₋₀	6 ^{+0,2} ₋₀	1,2 ⁻⁰ _{-0,2}	8,75 ⁻⁰ _{-0,1}	11,8 ^{+0,10} ₋₀
SE.CA. R27	10	*Ø17,1 ^{+0,15} ₋₀	Ø15,15 ⁺⁰ _{-0,08}	Ø9 ^{MAX}	Ø10,15 ^{+0,1} ₋₀	Ø14,9 ^{+0,05} ₋₀	8 ^{+0,2} ₋₀	1,5 ⁻⁰ _{-0,2}	10,9 ⁻⁰ _{-0,1}	15,6 ^{+0,10} ₋₀
SE.CA. R27	12	*Ø19,7 ^{+0,15} ₋₀	Ø17,55 ⁺⁰ _{-0,08}	Ø11 ^{MAX}	Ø12,15 ^{+0,1} ₋₀	Ø17,1 ^{+0,05} ₋₀	9 ^{+0,2} ₋₀	1,5 ⁻⁰ _{-0,2}	11,85 ⁻⁰ _{-0,1}	18 ^{+0,10} ₋₀

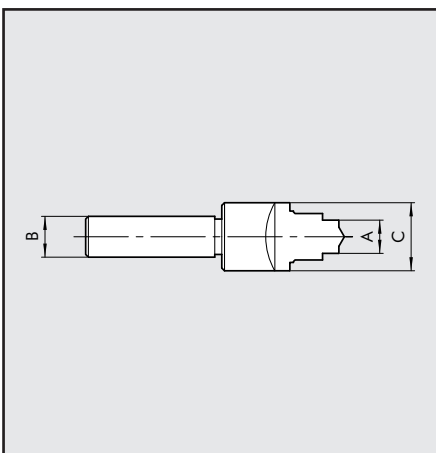
Aluminio

SE.CA. R27	5	Ø12,1 ^{+0,15} ₋₀	Ø10,3 ⁺⁰ _{-0,08}	Ø4 ^{MAX}	Ø5,1 ^{+0,15} ₋₀	Ø9,7 ^{+0,05} ₋₀	6 ^{+0,2} ₋₀	1,2 ⁻⁰ _{-0,2}	8,75 ⁻⁰ _{-0,1}	11,8 ^{+0,10} ₋₀
SE.CA. R27	10	Ø17,1 ^{+0,15} ₋₀	Ø15,4 ⁺⁰ _{-0,08}	Ø9 ^{MAX}	Ø10,15 ^{+0,1} ₋₀	Ø14,9 ^{+0,05} ₋₀	8 ^{+0,2} ₋₀	1,5 ⁻⁰ _{-0,2}	10,9 ⁻⁰ _{-0,1}	15,6 ^{+0,10} ₋₀
SE.CA. R27	12	Ø19,7 ^{+0,15} ₋₀	Ø17,8 ⁺⁰ _{-0,08}	Ø11 ^{MAX}	Ø12,15 ^{+0,1} ₋₀	Ø17,1 ^{+0,05} ₋₀	9 ^{+0,2} ₋₀	1,5 ⁻⁰ _{-0,2}	11,85 ⁻⁰ _{-0,1}	18 ^{+0,10} ₋₀

* N.B.: el diametro de interferencia es puramente indicativo ,dependiendo del tipo de material plastico utilizado y del espesor. Se recomienda realizar pruebas practicas de montaje

UTIL DE PREPARACIÓN SEDE R27

Cód. Ref. A B C



Aluminio

2027021	UT.SE. R27 AL. 4	4,1	Ø 10	11.5
2027022	UT.SE. R27 AL. 5	5,1	Ø 12	16
2027023	UT.SE. R27 AL. 6	6,1	Ø 12	13.5
2027024	UT.SE. R27 AL. 8	8,1	Ø 12	15.5
2027025	UT.SE. R27 AL. 10	10,1	Ø 16	20
2027026	UT.SE. R27 AL. 12	12,1	Ø 16	22

Material plástico

2027011	UT.SE. R27 P. 4	4,1	Ø 10	11.5
2027012	UT.SE. R27 P. 5	5,1	Ø 12	16
2027013	UT.SE. R27 P. 6	6,1	Ø 12	13.5
2027014	UT.SE. R27 P. 8	8,1	Ø 12	15.5
2027015	UT.SE. R27 P. 10	10,1	Ø 16	20
2027016	UT.SE. R27 P. 12	12,1	Ø 16	22

