

HA

Technopolymer Push-In Fittings

Push-In fittings allow a quick connection of the pneumatic system and facilitate maintenance or replacement of pneumatic components.



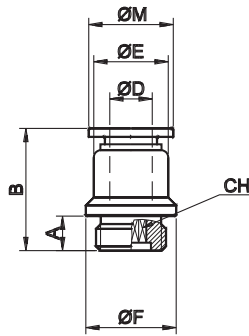
TECHNICAL CHARACTERISTICS

Temperature	-10 ÷ 80 °C
Fluid	compressed air, vacuum
Working pressure	-0,99 ÷ 10 bar
Application fields	pneumatic circuits
Recommended hoses	polyamide PA 10.12, polyurethane Sh.A98 co-polyurethane Sh.55D

CONSTRUCTIVE CHARACTERISTICS

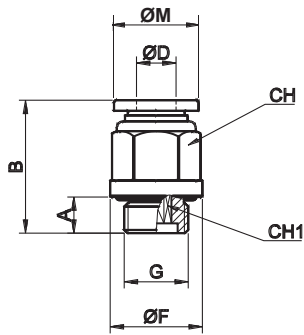
Body	technopolymer
Fixing elements	nickel-plated brass with O-ring in NBR for parallel thread version (standard) teflon coating for taper thread version (upon request)
Clamp	stainless steel
Release ring	technopolymer

HA02 Smooth body straight parallel male



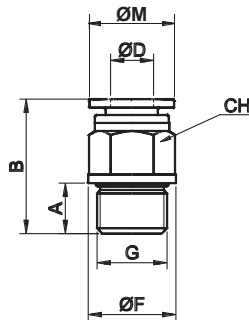
Part No.	A	B	CH	ØD	E	F	G	ØM
HA0204M5	4	20.8	2	4	10	-	M5	10
HA0206M5	4	22.4	2	6	12	-	M5	12
HA020418	5.5	19.3	3	4	10	14	G1/8	10
HA020618	5.5	20.2	4	6	12	14	G1/8	12
HA020818	5.5	27.1	5	8	14	14	G1/8	14
HA020414	6.5	17.4	3	4	10	17	G1/4	10
HA020614	6.5	20.9	4	6	12	17	G1/4	12
HA020814	6.5	23	5	8	9.9	17	G1/4	14
HA021014	6.5	29.9	6	10	18	17	G1/4	17
HA020838	7.5	22.1	6	8	14	20	G3/8	14
HA021038	7.5	25.9	8	10	17	20	G3/8	17
HA021238	7.5	28.6	8	12	21	21	G3/8	20
HA021012	9.5	35.3	8	10	17	24	G1/2	17
HA021212	9.5	31.1	8	12	21	24	G1/2	20

HA04 Straight parallel male



Part No.	A	B	ØD	CH	CH1	ØF	G	ØM
HA0404M5	4	20.8	4	10	2	8	M5	10
HA0406M5	4	22.5	6	12	2	8	M5	12
HA040418	5.5	19.3	4	10	3	14	G1/8	10
HA040618	5.5	20.2	6	12	4	14	G1/8	12
HA040818	5.5	27.1	8	14	5	-	G1/8	14
HA040414	6.5	17.4	4	10	3	17	G1/4	10
HA040614	6.5	20.9	6	12	4	17	G1/4	12
HA040814	6.5	23	8	14	5	17	G1/4	14
HA041014	6.5	29.9	10	17	6	17	G1/4	17
HA040838	7.5	22.1	8	14	6	20	G3/8	14
HA041038	7.5	25.9	10	17	8	20	G3/8	17
HA041238	7.5	28.6	12	21	8	21	G3/8	20
HA041012	9.5	24.5	10	17	8	24	G1/2	17
HA041212	9.5	31.1	12	21	8	24	G1/2	20

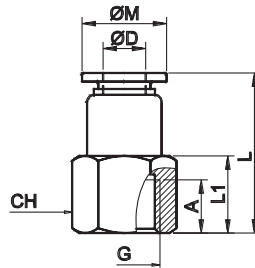
HA06 Plastic straight parallel male



Part No.	A	B	ØD	CH	ØF	G	ØM
HA060618	6.5	24.4	6	12	14.2	G1/8	12
HA060818	6.5	26.3	8	14	16.5	G1/8	14
HA060614	8.5	23.4	6	14	16.5	G1/4	12
HA060814	8.5	25.3	8	14	16.5	G1/4	14
HA061014	8.5	32.4	10	17	19.9	G1/4	17
HA060838	9.5	23.5	8	17	20.6	G3/8	14
HA061038	9.5	29.4	10	17	20.6	G3/8	17
HA061238	9.5	30.3	12	21	24.5	G3/8	20
HA061012	12	30.4	10	21	24.5	G1/2	17
HA061212	12	33.3	12	21	24.5	G1/2	20

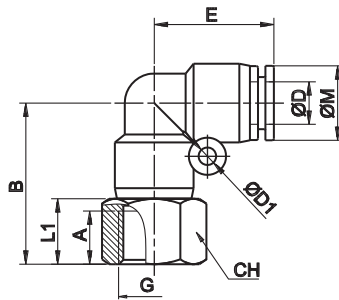
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HA07 Straight female



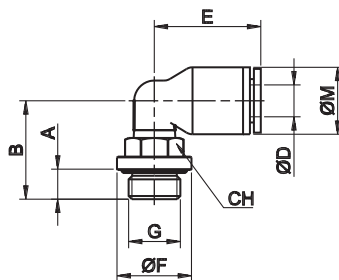
Part No.	A	CH	ØD	G	L	L1	ØM
HA070418	7	14	4	G1/8	23.8	10	10
HA070618	7	14	6	G1/8	25.2	11	12
HA070818	7	14	8	G1/8	27.1	11.5	14
HA070614	10	17	6	G1/4	28.2	14	12
HA070814	10	17	8	G1/4	30.1	14.5	14
HA071014	10	17	10	G1/4	22.3	14.5	17
HA070838	11	21	8	G3/8	31.1	15.5	14
HA071038	11	21	10	G3/8	33.3	15.5	17
HA071238	11	21	12	G3/8	35.6	14	20
HA071212	13	24	12	G1/2	37.6	17.5	20

HA08 Swivel elbow female



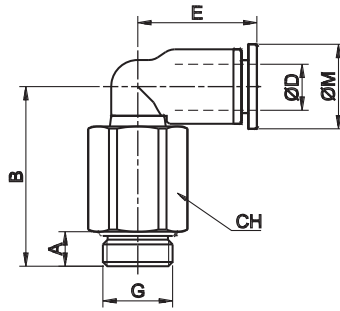
Part No.	A	B	CH	ØD	ØD1	E	G	L1	ØM
HA080418	7	23	14	4	NO	17.5	G1/8	9.5	10
HA080618	7	24.4	14	6	3.3	18.7	G1/8	9.7	12
HA080818	7	27.3	14	8	3.3	22.5	G1/8	9.3	14
HA080614	10	27.4	17	6	3.3	18.7	G1/4	12.7	12
HA080814	10	30.3	17	8	3.3	22.5	G1/4	12.3	14
HA081014	10	34.3	17	10	4.3	27.2	G1/4	12	17
HA080838	11	32	21	8	3.3	22.5	G3/8	14	14
HA081038	11	36.3	21	10	4.3	27.2	G3/8	14	17
HA081238	11	38	21	12	4.3	29.3	G3/8	14	20
HA081212	13	40.5	24	12	4.3	29.3	G1/2	16.5	20

HA10B Low elbow



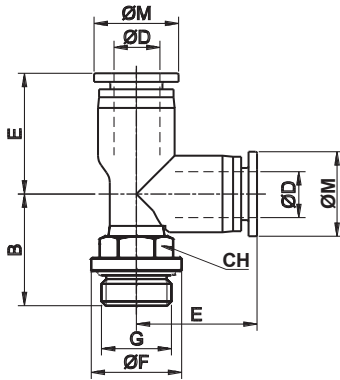
Part No.	A	B	CH	ØD	E	ØF	G	ØM
HA10B04M5	4	15.4	8	4	18.8	-	M5	10.5
HA10B06M5	4	16.5	8	6	20	-	M5	12.6
HA10B0418	5.5	17.5	10	4	18.8	14	G1/8	10.8
HA10B0618	5.5	18.5	10	6	20	14	G1/8	12.6
HA10B0818	5.5	22	14	8	22.5	14	G1/8	14.3
HA10B0414	6.5	19	10	4	18.8	17	G1/4	10.6
HA10B0614	6.5	20	10	6	20	17	G1/4	12.6
HA10B0814	6.5	20.5	12	8	22.5	17	G1/4	14
HA10B1014	6.5	24.3	17	10	26.9	17	G1/4	18
HA10B0838	7.5	21.6	12	8	22.5	20	G3/8	14.2
HA10B1038	7.5	22.8	20	10	26.9	20	G3/8	18
HA10B1238	7.5	24.3	20	12	28.5	20	G3/8	21
HA10B1012	9	25.7	17	10	26.9	24	G1/2	18.3
HA10B1212	9	27.2	17	12	28.5	24	G1/2	21

HA12B Extended swivel low elbow parallel male



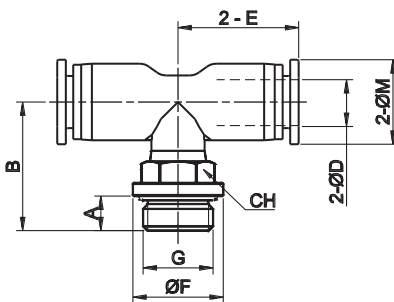
Part No.	A	B	CH	ØD	E	G	ØM
HA12B04M5	4	32.5	8	4	18.8	M5	11.9
HA12B06M5	4	33.5	8	6	20	M5	13.9
HA12B0418	5.5	30.5	14	4	18.8	G1/8	11.9
HA12B0618	5.5	31.5	14	6	20	G1/8	13.9
HA12B0818	5.5	37.8	14	8	22.5	G1/8	15.9
HA12B0414	6.5	30.5	17	4	18.8	G1/4	11.9
HA12B0614	6.5	31.5	17	6	20	G1/4	13.9
HA12B0814	6.5	33.8	17	8	22.5	G1/4	15.9
HA12B1014	6.5	46.4	17	10	26.9	G1/4	19.5
HA12B0638	7.5	32.6	20	6	20	G3/8	13.9
HA12B0838	7.5	34.9	20	8	22.5	G3/8	15.9
HA12B1038	7.5	43.4	20	10	26.9	G3/8	19.5
HA12B1238	7.5	44.9	20	12	28.5	G3/8	23
HA12B1012	9	45.3	24	10	26.9	G1/2	19.5
HA12B1212	9	46.8	24	12	28.5	G1/2	23

HA14B Low lateral Tee male



Part No.	A	B	ØD	E	ØF	G	H	ØM	CH
HA14B04M5	4	19.2	4	18	-	M5	8	11.9	8
HA14B06M5	4	20.2	6	20	-	M5	8	13.9	8
HA14B0418	5.5	18.1	4	18	14	G1/8	10	11.9	10
HA14B0618	5.5	19.1	6	20	14	G1/8	10	13.9	10
HA14B0818	5.5	22.5	8	22.7	14	G1/8	14	15.9	10
HA14B0614	6.5	20.6	6	20	17	G1/4	10	13.9	12
HA14B0814	6.5	21	8	22.7	12	G1/4	12	15.9	12
HA14B1014	6.5	25.4	10	26.9	17	G1/4	17	19.5	12
HA14B0838	7.5	22.1	8	22.7	20	G3/8	12	15.9	14
HA14B1038	7.5	23.9	10	26.9	20	G3/8	20	19.5	14
HA14B1238	7.5	25.1	12	29.3	20	G3/8	20	23	14
HA14B1012	9	26.8	10	26.9	24	G1/2	17	19.5	17
HA14B1212	9	28	12	29.3	24	G1/2	17	23	17

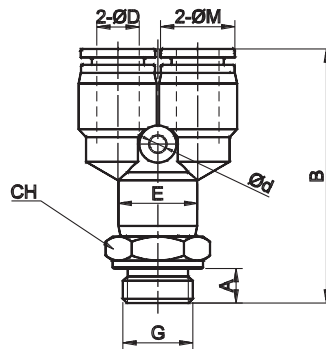
HA16B Low central Tee male



Part No.	A	B	CH	ØD	E	ØF	G	ØM
HA16B04M5	4	21.1	8	4	18	-	M5	11.9
HA16B06M5	4	22.2	8	6	20	-	M5	13.9
HA16B0418	5.5	20	10	4	18	14	G1/8	11.9
HA16B0618	5.5	21.1	10	6	20	14	G1/8	13.9
HA16B0818	5.5	25.7	14	8	22.7	14	G1/8	15.9
HA16B0614	6.5	22.6	10	6	20	17	G1/4	13.9
HA16B0814	6.5	24.2	12	8	22.7	17	G1/4	15.9
HA16B1014	6.5	27.6	17	10	26.9	17	G1/4	19.5
HA16B0838	7.5	25.3	12	8	22.7	20	G3/8	15.9
HA16B1038	7.5	26.1	20	10	26.9	20	G3/8	19.5
HA16B1238	7.5	27.4	20	12	29.3	20	G3/8	23
HA16B1012	9	29	17	10	26.9	24	G1/2	19.5
HA16B1212	9	30.3	17	12	29.3	24	G1/2	23

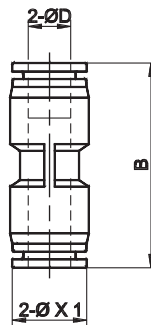
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HA18 Y parallel male



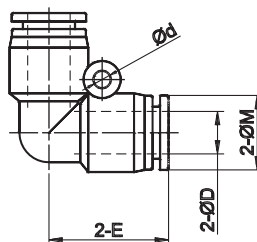
Part No.	A	B	CH	ØD	Ød	E	G	ØM
HA1804M5	4	39.5	10	4	3.3	11	M5	10
HA1806M5	4	40	12	6	3.3	11	M5	12
HA180418	5.5	42.5	12	4	3.3	11	G1/8	10
HA180618	5.5	43.5	14	6	3.3	13	G1/8	12
HA180818	5.5	46.3	14	8	3.3	15	G1/8	14
HA180614	6.5	45	14	6	3.3	13	G1/4	12
HA180814	6.5	47.8	17	8	3.3	15	G1/4	14
HA181014	6.5	56.5	17	10	4.3	18	G1/4	17
HA180838	7.5	49.3	17	8	3.3	15	G3/8	14
HA181038	7.5	58	20	10	4.3	18	G3/8	17
HA181238	7.5	60.4	21	12	4.3	21	G3/8	20
HA181012	9.5	61.5	19	10	4.3	18	G1/2	17
HA181212	9.5	63.9	24	12	4.3	21	G1/2	20

HA19 Intermediate straight



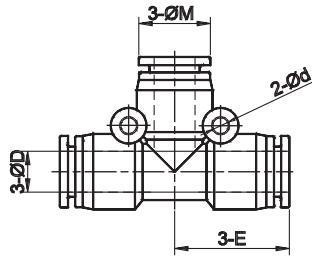
Part No.	B	ØD	ØM
HA190400	33	4	10
HA190600	34.6	6	12
HA190604	31	4	13.9
HA190800	38.5	8	14
HA190806	34.6	6	15.9
HA191000	47	10	17
HA191008	39.4	8	19.5
HA191200	48.6	12	20
HA191210	44.2	12	23

HA20 Intermediate elbow



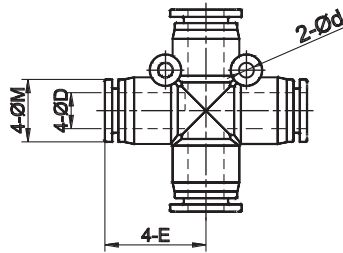
Part No.	ØD	Ød	E	ØM
HA200400	4	NO	17.5	10
HA200600	6	3.3	18.7	12
HA200800	8	3.3	22.5	14
HA201000	10	4.3	27.2	17
HA201200	12	4.3	28.9	20

HA21 Intermediate lateral Tee



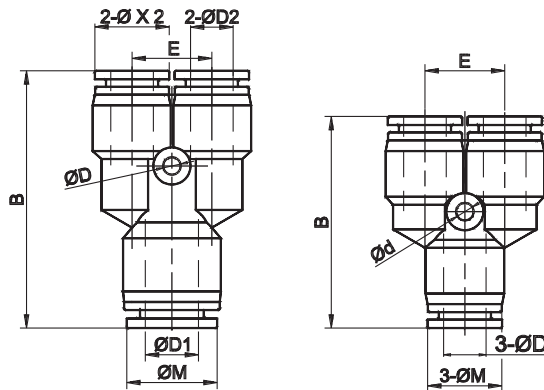
Part No.	ØD	Ød	E	ØM
HA210400	4	3.3	18.5	10
HA210600	6	3.3	19	12
HA210800	8	3.3	22.45	14
HA211000	10	4.3	27.9	17
HA211200	12	4.3	29.3	20

HA22 Intermediate cross



Part No.	ØD	Ød	E	ØM
HA220400	4	3.3	17.5	10
HA220600	6	3.3	19	12
HA220800	8	3.3	22.5	14
HA221000	10	4.3	27.9	17
HA221200	12	4.3	29.3	20

HA23 Intermediate Y connector

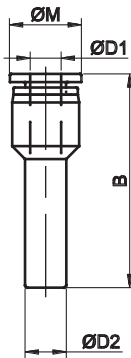


Part No.	B	ØD	Ød	E	ØM
HA230404	35.5	4	3.3	11	10
HA230606	36.5	6	3.3	13	12
HA230808	39.8	8	3.3	15	14
HA231010	48.9	10	4.3	18	17
HA231212	52.6	12	4.3	21	20

Part No.	B	ØD	ØD1	ØD2	E	ØM	X2
HA230604	36	3.3	6	4	11	12	10
HA230806	39.8	3.3	8	6	13	14	12
HA231008	48.4	3.3	10	8	15	17	14
HA231210	51.4	4.3	12	10	18	20	17

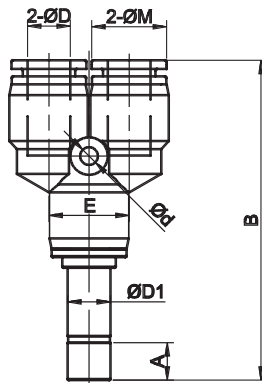
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HA24 Reducing stem



Part No.	B	ØD1	ØD2	ØM
HA240406	39.5	4	6	10
HA240408	41.5	4	8	10
HA240608	41.5	6	9	12
HA240610	46.5	6	10	12
HA240810	46.8	8	10	14
HA240812	46.8	8	12	14
HA241012	52.2	10	12	17

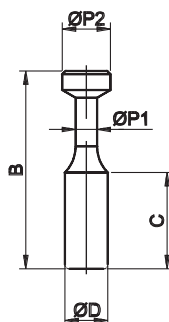
HA25 Y connector with male stem



Part No.	A	B	Ød	ØD	ØD1	E	ØM
HA250400	5.5	58	3.3	4	4	11	10
HA250600	6.5	61	3.3	6	6	13	12
HA250800	7	66.3	3.3	8	8	15	14
HA251000	7.5	79.1	4.3	10	10	18	17
HA251200	7.5	85.4	4.3	12	12	21	20

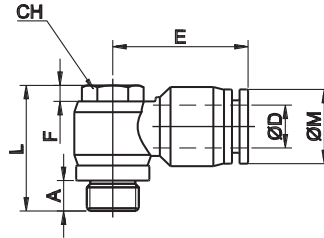
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HA26 Plug



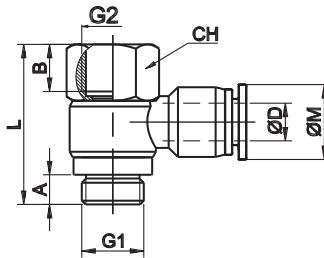
Part No.	B	C	ØD	ØP1	ØP2
HA260400	28	15	4	3	5
HA260600	33	17	6	3	7
HA260800	37	18	8	4	9
HA261000	42	20.5	10	5	11
HA261200	44	23	12	6	13

HA27 Swivel banjo connector (parallel male thread) with wrench head



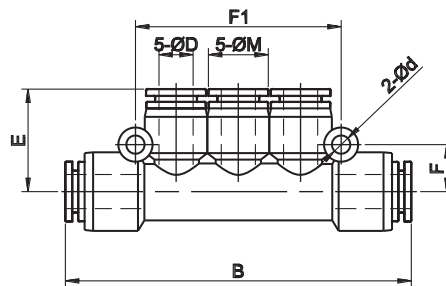
Part No.	A	ØD	E	F	G	CH	L	ØM
HA2704M5	3.5	4	20	10	M5	8	17.2	10
HA2706M5	3.5	6	21.7	12	M5	8	17.2	12
HA270418	5.7	4	22.3	3	G1/8	10	23.5	10
HA260618	5.7	6	22.9	3	G1/8	10	23.5	12
HA270818	5.7	8	25.3	3	G1/8	10	23.5	14
HA270614	6.3	6	24.9	4	G1/4	14	26	12
HA270814	6.3	8	28.4	4	G1/4	14	26	14
HA271014	6.3	10	30.2	4	G1/4	14	26	17
HA270838	7.5	8	29.3	4.5	G3/8	19	31.7	14
HA271038	7.5	10	32.5	4.5	G3/8	19	31.7	17
HA271238	7.5	12	35.3	4.5	G3/8	19	31.7	20
HA271012	9.5	10	35.5	5	G1/2	24	36.6	17
HA271212	9.5	12	36.3	5	G1/2	24	36.6	20

HA28 Swivel banjo connector parallel male-female



Part No.	A	B	CH	ØD	G1	G2	L	ØM
HA2804M5	3.5	5	8	4	M5	M5	19.7	10
HA2806M5	3.5	5	8	6	M5	M5	19.7	12
HA280418	5.7	7	14	4	G1/8	G1/8	29.5	10
HA280618	5.7	7	14	6	G1/8	G1/8	29.5	12
HA280818	5.7	7	14	8	G1/8	G1/8	29.5	14
HA280614	6.3	10	17	6	G1/4	G1/4	34	12
HA280814	6.3	10	17	8	G1/4	G1/4	34	14
HA281014	6.3	10	17	10	G1/4	G1/4	34	17
HA280838	7.5	11	21	8	G3/8	G3/8	40.2	14
HA281038	7.5	11	21	10	G3/8	G3/8	40.2	17
HA281238	7.5	11	21	12	G3/8	G3/8	40.2	20
HA281012	9.5	13	24	10	G1/2	G1/2	45.5	17
HA281212	9.5	13	24	12	G1/2	G1/2	45.5	20

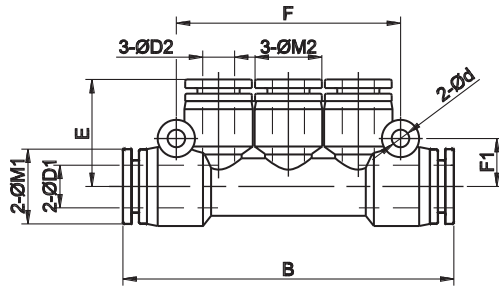
HA29 Triple branch lateral Tee



Part No.	B	ØD	Ød	E	F	F1	ØM
HA290400	57	4	3.3	19	8	36	10
HA290600	61	6	3.3	24	9	42	12
HA290800	81	8	4.3	24	11	48	14

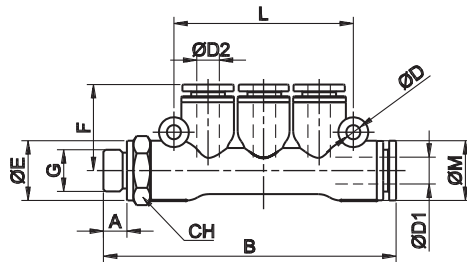
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HA30 Triple branch lateral Tee



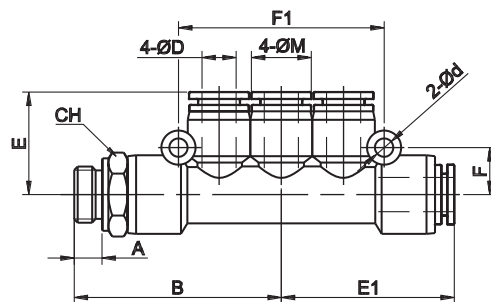
Part No.	B	Ød	ØD1	ØD2	E	F	F1	ØM1	ØM2
HA300604	57	3.3	6	4	19	36	8	12	10
HA300804	62	3.3	8	4	20	42	9	14	10
HA300806	62	3.3	8	6	20	42	9	14	12
HA301006	81.8	4.3	10	6	23.5	48	11	17	12
HA301008	81.8	4.3	10	8	23.5	48	11	17	14

HA31 Triple branch lateral Tee male thread



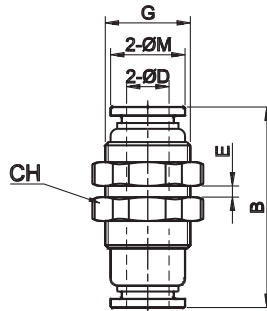
Part No.	A	B	CH	ØD	ØD1	ØD2	ØE	F	G	L	ØM
HA314618	5.5	64.1	14	3.3	6	4	14	19	G1/8	36	12
HA314814	6.5	70	17	3.3	8	4	17	20	G1/4	42	14
HA316814	7.5	71.4	17	3.3	8	6	17	20	G1/4	42	14
HA318138	7.5	91.1	20	3.3	10	8	20	24	G3/8	48	17
HA318112	9.5	95.1	24	3.3	10	8	24	24	G1/2	42	17

HA32 Triple branch lateral Tee male thread



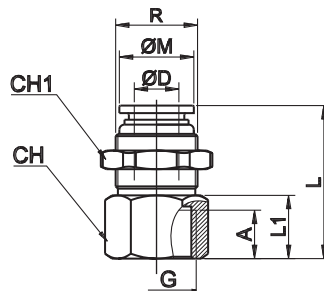
Part No.	A	B	CH	ØD	Ød	E	E1	F	F1	G	ØM
HA320418	5.5	35.5	12	4	3.3	19	28.5	8	36	G1/8	10
HA320618	5.5	37.5	14	6	3.3	24	30.5	9	42	G1/8	12
HA320818	5.5	47	14	8	4.3	24	40.5	11	48	G1/8	14
HA320414	6.5	37	12	4	3.3	19	28.5	8	36	G1/4	10
HA320614	6.5	39	14	6	3.3	24	30.5	9	42	G1/4	12
HA320814	6.5	48.5	17	8	4.3	24	40.5	11	48	G1/4	14
HA320638	7.5	50	17	6	4.3	24	40.5	11	48	G3/8	12
HA320838	7.5	50	17	8	4.3	24	40.5	11	48	G3/8	14

HA33 Bulkhead connector



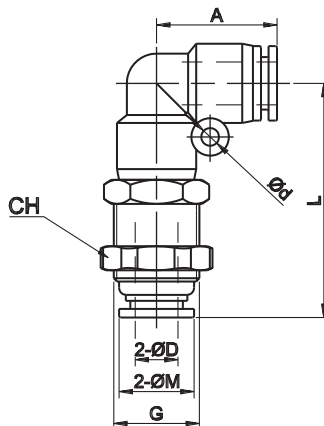
Part No.	B	CH	ØD	E	G	ØM
HA330004	31.1	14	4	11.9	M12	10
HA330006	33.4	17	6	10.7	M14	12
HA330008	37.7	19	8	11	M16	14
HA330010	41.8	24	10	13.1	M20	17
HA330012	46.7	27	12	16	M22	20

HA34 Threaded bulkhead connector



Part No.	A	CH	CH1	ØD	G	ØM	L	L1	R
HA340418	8	14	14	4	G1/8	10	23.8	11	M12
HA340618	8	17	17	6	G1/8	12	27	9	M14
HA340818	8	19	19	8	G1/8	14	32.1	10	M16
HA340414	11	17	14	4	G1/4	10	27.3	14	M12
HA340614	11	17	17	6	G1/4	12	30	13	M14
HA340814	11	19	19	8	G1/4	14	35.1	14	M16
HA341014	11	24	24	10	G1/4	17	36	14	M20
HA340838	12	21	19	8	G3/8	14	36.1	15	M16
HA341038	12	24	24	10	G3/8	17	37	15	M20
HA341238	12	24	27	12	G3/8	20	39.1	15	M22
HA341012	14	24	24	10	G1/2	17	38	19	M20
HA341212	14	24	27	12	G1/2	20	41.1	19	M22

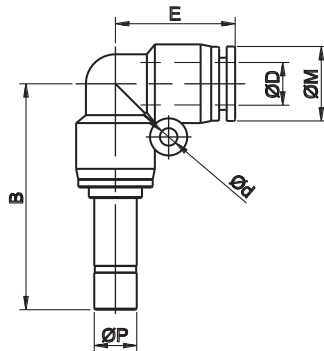
HA35 Elbow bulkhead connector



Part No.	A	CH	ØD	Ød	G	L	ØM
HA350004	17.5	14	4	3.3	M12	31.3	10
HA350006	18.7	17	6	3.3	M14	37.9	12
HA350008	22.5	19	8	3.3	M16	43.6	14
HA350010	27.2	24	10	4.3	M20	51.2	17
HA350012	29.3	27	12	4.3	M22	56.1	20

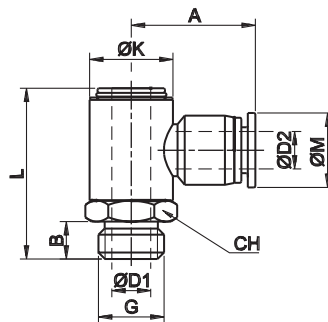
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HA38 Stem elbow



Part No.	B	ØD	Ød	E	ØM	P
HA380400	33	4	-	17.5	10	4
HA380600	36.2	6	3.3	18.7	12	6
HA380800	42.5	8	3.3	22.5	14	8
HA381000	50.8	10	4.3	27.2	17	10
HA381200	54.5	12	4.3	29.3	20	12

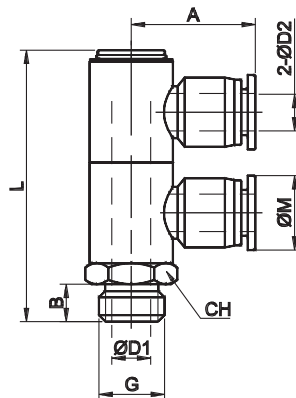
HA41 Swivel banjo connector (parallel thread) with allen head



Part No.	A	B	CH	ØD1	ØD2	G	ØK	L	ØM
HA410418	22.5	5.5	14	6	4.2	G1/8	14	28.5	11
HA410618	21.5	5.5	14	6	6.2	G1/8	14	28.5	13
HA410818	24.5	5.5	14	6	8.2	G1/8	14	28.5	14.8
HA410414	24.5	6.5	17	8.3	4.2	G1/4	17.8	36.5	11
HA410614	23.5	6.5	17	8.3	6.2	G1/4	17.8	36.5	13
HA410814	26.4	6.5	17	8.3	8.2	G1/4	17.8	36.5	14.8
HA411014	29.9	6.5	17	8.3	10.2	G1/4	17.8	36.5	18.4
HA411214	30.8	6.5	17	8.3	12.3	G1/4	17.8	36.5	21
HA410438	32	9	17	11.5	4.2	G3/8	21.9	39.2	11
HA410638	32	9	17	11.5	6.2	G3/8	21.9	39.2	13
HA410838	28.4	7.5	20	11.5	8.2	G3/8	21.9	39.2	14.8
HA411038	31.9	7.5	20	11.5	10.2	G3/8	21.9	39.2	18.4
HA411238	32.8	7.5	20	11.5	12.3	G3/8	21.9	39.2	21
HA410812	28.5	9.5	24	14	8.2	G1/2	27.1	42.7	14.8
HA411012	34.5	9.5	24	14	10.2	G1/2	27.1	42.7	18.4
HA411212	35.4	9.5	24	14	12.3	G1/2	27.1	42.7	21

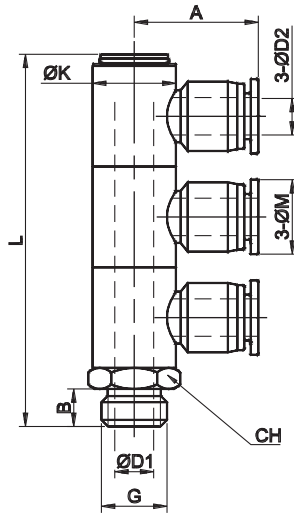
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HA42 Double banjo connector (parallel thread) with allen head



Part No.	A	B	CH	ØD1	ØD2	G	ØK	L	ØM
HA420418	22.5	5.5	14	6	4.2	G1/8	14	43.8	11
HA420618	21.5	5.5	14	6	6.2	G1/8	14	43.8	13
HA420818	24.5	5.5	14	6	8.2	G1/8	14	43.8	14.8
HA420414	24.5	6.5	17	8.3	4.2	G1/4	17.8	58	11
HA420614	23.5	6.5	17	8.3	6.2	G1/4	17.8	58	13
HA420814	26.4	6.5	17	8.3	8.2	G1/4	17.8	58	14.8
HA421014	29.9	6.5	17	8.3	10.2	G1/4	17.8	58	18.4
HA421214	30.8	6.5	17	8.3	12.3	G1/4	17.8	58	21
HA420438	24.5	7.5	20	11.5	4.2	G3/8	21.9	60.7	11
HA420638	26.4	7.5	20	11.5	6.2	G3/8	21.9	60.7	13
HA420838	28.4	7.5	20	11.5	8.2	G3/8	21.9	60.7	14.8
HA421038	31.9	7.5	20	11.5	10.2	G3/8	21.9	60.7	18.4
HA421238	32.8	7.5	20	11.5	12.3	G3/8	21.9	60.7	21
HA420812	28.5	9.5	24	14	8.2	G1/2	27.1	64.2	14.8
HA421012	34.5	9.5	24	14	10.2	G1/2	27.1	64.2	18.4
HA421212	35.4	9.5	24	14	12.3	G1/2	27.1	64.2	21

HA43 Triple banjo connector (parallel thread) with allen head



Part No.	A	B	CH	ØD1	ØD2	G	ØK	L	ØM
HA430418	22.5	5.5	14	6	4.2	G1/8	14	59.1	11
HA430618	21.5	5.5	14	6	6.2	G1/8	14	59.1	13
HA430818	24.5	5.5	14	6	8.2	G1/8	14	59.1	14.8
HA430414	24.5	6.5	17	8.3	4.2	G1/4	17.8	79.5	11
HA430614	23.5	6.5	17	8.3	6.2	G1/4	17.8	79.5	13
HA430814	26.4	6.5	17	8.3	8.2	G1/4	17.8	79.5	14.8
HA431014	29.9	6.5	17	8.3	10.2	G1/4	17.8	79.5	18.4
HA431214	30.8	6.5	17	8.3	12.3	G1/4	17.8	79.5	21
HA430438	24.5	7.5	20	11.5	4.2	G3/8	21.9	82.2	11
HA430638	26.4	7.5	20	11.5	6.2	G3/8	21.9	82.2	13
HA430838	28.4	7.5	20	11.5	8.2	G3/8	21.9	82.2	14.8
HA431038	31.9	7.5	20	11.5	10.2	G3/8	21.9	82.2	18.4
HA431238	32.8	7.5	20	11.5	12.3	G3/8	21.9	82.2	21
HA430812	28.5	9.5	24	14	8.2	G1/2	27.1	85.7	14.8
HA431012	34.5	9.5	24	14	10.2	G1/2	27.1	85.7	18.4
HA431212	36.4	9.5	24	14	12.3	G1/2	27.1	85.7	21

■ Teflon coated taper thread
(available upon request for all HA models)



HAR

Space-saving Fittings

Plug-in fittings allow a quick connection of the system by optimizing the space and they facilitate maintenance and replacement of installations.



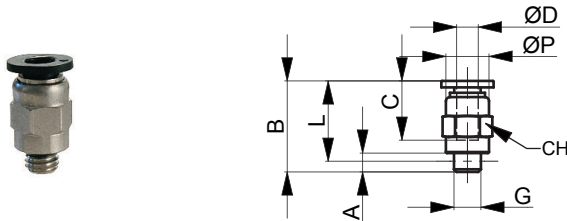
TECHNICAL CHARACTERISTICS

Temperature	0 ÷ 60 °C
Fluid	compressed air, vacuum
Working pressure	-0,99 ÷ 10 bar
Application fields	pneumatic circuits
Recommended hoses	polyamide PA 10.12, polyurethane Sh.A98 co-polyurethane Sh.55D

CONSTRUCTIVE CHARACTERISTICS

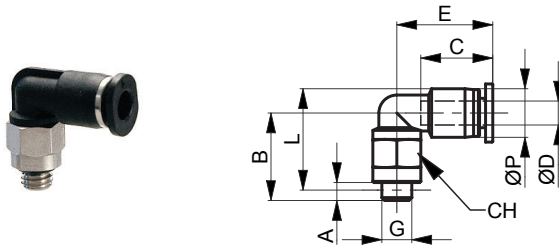
Body	technopolymer
Fixing elements	nickel-plated brass with O-ring in NBR
Clamp	stainless steel
Release ring	technopolymer

HAR04 T Miniature straight male



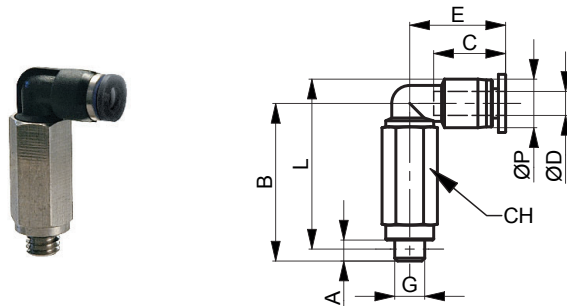
Part No.	ØD	G	A	B	L	ØP	C	CH
HAR0403M3	3	M3x0.5	3.0	14.6	13.5	5.5	10.6	5.5
HAR0404M3	4	M3x0.5	3.0	16.4	15.6	8.0	11	8.0
HAR0404M5	4	M5x0.8	3.5	16.9	15.6	8.0	11	8.0

HAR10B Miniature swivel elbow male



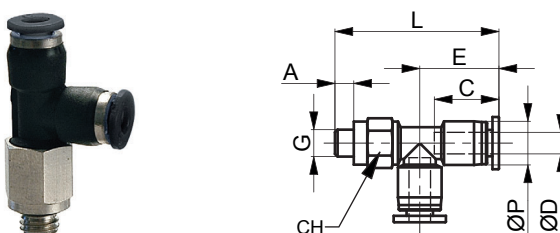
Part No.	ØD	G	A	B	L	ØP	C	E	CH
HAR10B03M3	3	M3x0.5	3.0	12.7	14.3	6.2	9.3	11.1	5.5
HAR10B04M3	4	M3x0.5	3.0	13.6	16.6	8.1	12	16	8.0
HAR10B04M5	4	M5x0.8	3.5	15.6	17.4	8.1	12	16	8.0

HAR12B Miniature extended swivel elbow male



Part No.	ØD	G	A	B	L	ØP	C	E	CH
HAR12B03M3	3	M3x0.5	3.0	12.8	14.7	6.2	9.3	11.4	5.5
HAR12B04M3	4	M3x0.5	3.0	15.3	17.8	8.1	12	14.7	8.0
HAR12B04M5	4	M5x0.8	3.5	15.8	18.3	8.1	12	14.7	8.0

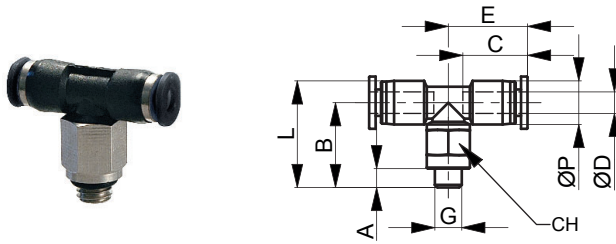
HAR14B Miniature low lateral Tee male



Part No.	ØD	G	A	ØP	E	C	L	CH
HAR14B03M3	3	M3x0.5	3.0	6.2	11.4	9.3	24.1	5.5
HAR14B04M3	4	M3x0.5	3.0	8.1	14.7	12	31	8
HAR14B04M5	4	M5x0.8	3.5	8.1	14.7	12	31.5	8

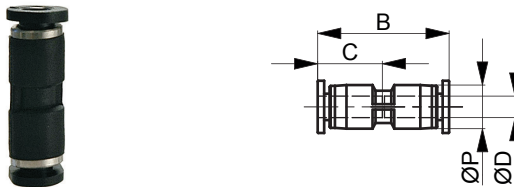
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HAR16B Miniature low central Tee male



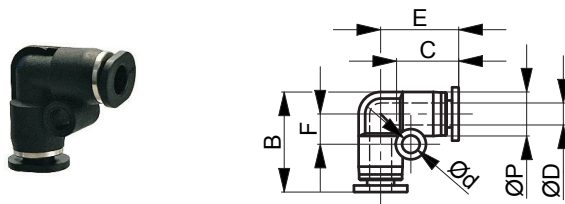
Part No.	ØD	G	A	ØP	E	C	L	B	CH
HAR16B03M3	3	M3x0.5	3.0	6.2	11.4	9.3	14.7	12.8	5.5
HAR16B04M3	4	M3x0.5	3.0	8.1	14.7	12	17.8	15.3	8.0
HAR16B04M5	4	M5x0.8	3.5	8.1	14.7	12	18.3	15.8	8.0

HAR19 Miniature intermediate straight



Part No.	ØD	B	ØP	C
HAR190300	3	19.8	6.2	9.3
HAR190400	4	25.2	8.1	12

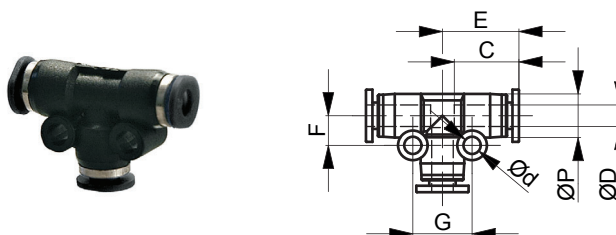
HAR20 Miniature intermediate elbow



Part No.	ØD	B	ØP	C	E	Ød	F
HAR200300	3	14.5	6.2	9.3	11.4	3.2	4.7
HAR200400	4	18.3	8.1	12	14.2	3.2	6.0

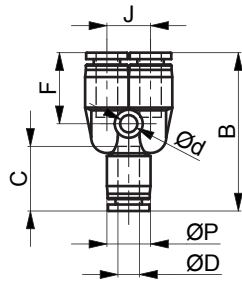
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HAR21 Miniature intermediate Tee



Part No.	ØD	ØP	C	E	Ød	F	G
HAR210300	3	6.2	9.3	11.4	3.2	4.2	11
HAR210400	4	8.1	12	14.2	3.2	6.0	11

HAR23 Miniature intermediate Y



Part No.	ØD	Ød	B	ØP	C	J	F
HAR230300	3	3.2	28.8	8.1	9.3	8.1	12.9
HAR230400	4	3.2	29.4	8.1	12	8.1	13.2

HC

Fittings and Accessories with pneumatic functions

- Flow regulators in technopolymer
- Flow regulators with metallic body
- Non-return valve
- Quick exhaust valves
- Blocking valve
- Miniature pressure regulator
- Line manual valve
- Silencers



TECHNICAL CHARACTERISTICS

FLOW REGULATORS IN TECHNOPOLYMER

Temperature	-20 ÷ 80 °C
Fluid	compressed air, vacuum
Max pressure	15 bar
Working pressure	9 bar
Application fields	pneumatic circuits
Recommended hoses	polyamide PA 10.12, polyurethane Sh.A98 co-polyurethane Sh.55D

FLOW REGULATORS WITH METALLIC BODY - NON-RETURN VALVE

QUICK EXHAUST VALVES - BLOCKING VALVE - MINIATURE PRESSURE REGULATOR

Temperature	0 ÷ 70 °C
Fluid	compressed air
Max pressure	10 bar
Working pressure	0,3 ÷ 10 bar

LINE MANUAL VALVE

Temperature	-10 ÷ 90 °C 0 ÷ 60 °C (technopolymer HC11-12)
Fluid	compressed air, vacuum
Max pressure	15 bar
Working pressure	-0,99 ÷ 10 bar

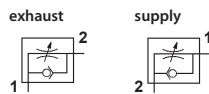
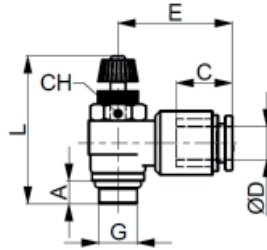
CONSTRUCTIVE CHARACTERISTICS

FLOW REGULATORS IN TECHNOPOLYMER

Body	technopolymer
Fixing elements	nickel-plated brass with O-ring in NBR for parallel thread version (standard) teflon coating for taper thread version (upon request)
Clamp	stainless steel
Release ring	technopolymer

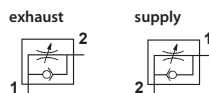
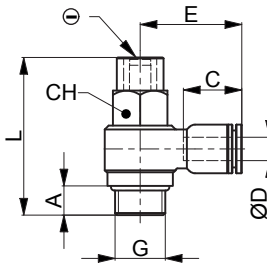
FLOW REGULATORS IN TECHNOPOLYMER

HC01/HC02 One-way banjo flow regulator



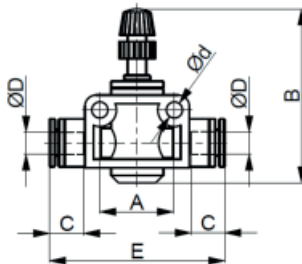
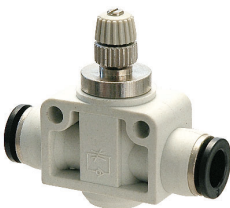
Part No.		ØD	G	A	E	C	L		CH
exhaust	supply						Min	Max	
HC0104M5	HC0204M5	4	M5	3,5	20	14,9	29	31,9	8
HC0106M5	HC0206M5	6	M5	3,5	21,7	15,4	29	31,9	8
HC010418	HC020418	4	G1/8	7,5	22,3	14,9	37,5	44,3	10
HC010618	HC020618	6	G1/8	7,5	22,9	15,4	37,5	44,3	10
HC010818	HC020818	8	G1/8	7,5	25,3	17,3	37,5	44,3	10
HC010414	HC020414	4	G1/4	11,2	24	14,9	43,7	51,3	14
HC010614	HC020614	6	G1/4	11,2	24,9	15,4	43,7	51,3	14
HC010814	HC020814	8	G1/4	11,2	28,4	18,3	43,7	51,3	14
HC011014	HC021014	10	G1/4	11,2	32	20,5	43,7	51,3	14
HC010838	HC020838	8	G3/8	12,3	29,3	18,3	48,4	55,3	19
HC011038	HC021038	10	G3/8	12,3	32,5	20,5	48,4	55,3	19
HC011238	HC021238	12	G3/8	12,3	35,3	21,8	48,4	55,3	19
HC011012	HC021012	10	G1/2	15	35,5	20,5	52,7	59,5	24
HC011212	HC021212	12	G1/2	15	36,3	22,3	52,7	59,5	24

HC01T/HC02T One-way swivel banjo flow regulator - screwdriver slot



Part No.		ØD	G	A	E	C	L	CH
exhaust	supply							
HC01T0418	HC02T0418	4	G1/8	7,5	22,3	14,9	37,5	10
HC01T0618	HC02T0618	6	G1/8	7,5	22,9	15,9	37,5	10
HC01T0818	HC02T0818	8	G1/8	7,5	25,3	17,3	37,5	10
HC01T1018	HC02T1018	10	G1/8	7,5	32	20,5	37,5	10
HC01T1218	HC02T1218	12	G1/8	7,5	35,3	21,8	37,5	10
HC01T0614	HC02T0614	6	G1/4	11,2	24,9	15,4	43,7	14
HC01T0814	HC02T0814	8	G1/4	11,2	28,4	18,3	43,7	14
HC01T1014	HC02T1014	10	G1/4	11,2	32	20,5	43,7	14
HC01T1214	HC02T1214	12	G1/4	11,2	35,3	21,8	43,7	14
HC01T0638	HC02T0638	6	G3/8	12,3	24,9	15,4	48,4	19
HC01T0838	HC02T0838	8	G3/8	12,3	29,3	18,3	48,4	19
HC01T1038	HC02T1038	10	G3/8	12,3	32,5	20,5	48,4	19
HC01T1238	HC02T1238	12	G3/8	12,3	35,3	21,8	48,4	19

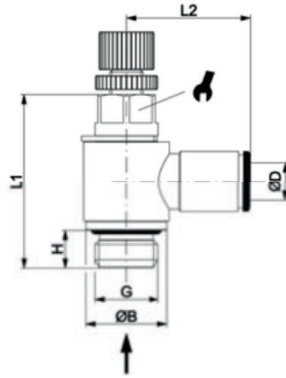
HC04 One-way in-line intermediate flow regulator



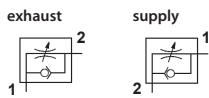
Part No.	ØD	Ød	A	B		E	C
				Min	Max		
HC040404	4	3,2	14	28	31	39,5	14,4
HC040606	6	4,3	20	40,7	47,5	47,1	15,5
HC040808	8	4,3	22	44,1	51,8	52	16,8
HC041010	10	4,3	26	47,7	55,3	62,3	19,5
HC041212	12	4,3	32	52	58	73,6	22,3

FLOW REGULATORS WITH METALLIC BODY

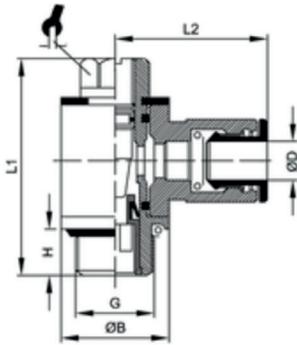
HC21/HC22 One-way banjo flow regulator



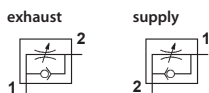
Part No.		ØD	G	H	ØB	L1	L2	SW	NI/mm*
exhaust	supply								
HC2104M5	HC2204M5	4	M5	4	9	27	20	6	45
HC210418	HC220418	4	G1/8	6,5	13	32	21	9	310
HC210618	HC220618	6	G1/8	6,5	13	32	23	9	390
HC210818	HC220818	8	G1/8	6,5	13	32	24,5	9	390
HC210614	HC220614	6	G1/4	8	17	37	24	12	710
HC210814	HC220814	8	G1/4	8	17	37	26	12	810
HC211014	HC221014	10	G1/4	8	17	37	27	12	810



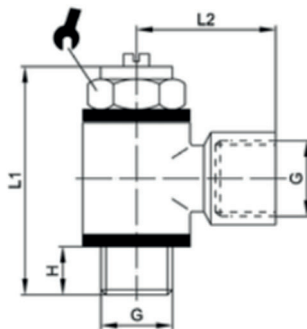
HC18/HC19 One-way banjo flow regulator - screwdriver slot



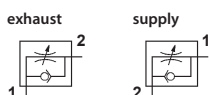
Part No.		ØD	G	H	ØB	L1	L2	SW	NI/mm*
exhaust	supply								
HC1804M5	HC1904M5	4	M5	4	9	27	20	6	45
HC180418	HC190418	4	G1/8	6,5	13	32	21	9	310
HC180618	HC190618	6	G1/8	6,5	13	32	23	9	390
HC180818	HC190818	8	G1/8	6,5	13	32	24,5	9	390
HC180614	HC190614	6	G1/4	8	17	37	24	12	710
HC180814	HC190814	8	G1/4	8	17	37	26	12	810
HC181014	HC191014	10	G1/4	8	17	37	27	12	810



HC27/HC28 One-way threaded flow regulator male/female

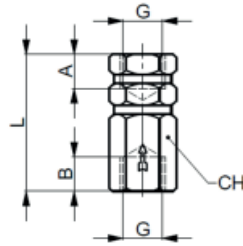


Part No.		G	H	L1	L2	SW	NI/mm*
exhaust	supply						
HC27M5M5	HC28M5M5	M5	4	25	11,5	8	45
HC271818	HC281818	G1/8	5	32	21	14	310
HC271414	HC281414	G1/4	6	18	25,5	14	450
HC273838	HC283838	G3/8	6	46	26	20	1040
HC271212	HC281212	G1/2	10	52,5	32	26	2200



NON-RETURN VALVE

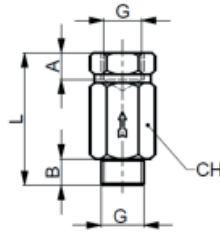
HC13 Non-return valve F-F



Part No.	G	A	B	L	CH
HC1300M5	M5	6	6	25	10
HC130018	G1/8	7	7	35	13
HC130014	G1/4	8	8	40	17
HC130038	G3/8	12	12	46	20
HC130012	G1/2	14	14	53	25

High temperature seals upon request

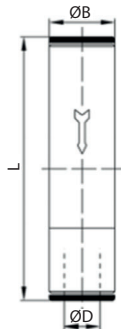
HC14 Non-return valve F-M



Part No.	G	A	B	L	CH
HC140018	G1/8	7	7	35	13
HC140014	G1/4	8	8	40	17

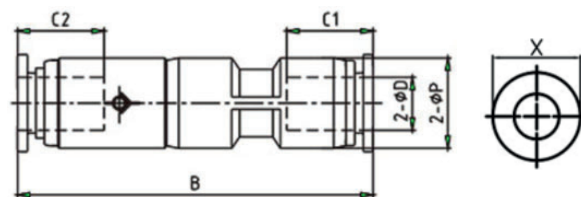
High temperature seals upon request

HC15 Non-return valve with push-in tube connections



Part No.	ØD	ØB	L
HC150004	4	9	47,5
HC150006	6	11	50
HC150008	8	13	53,5

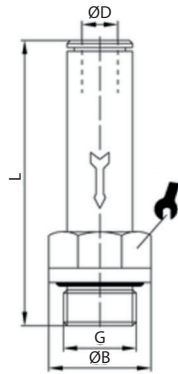
HC16 Non-return valve with push-in tube connections



Part No.	ØD	ØP	C1	C2	B	X
HC160404	4	11	15,4	14,9	50,8	10
HC160606	6	13	15,6	16	55,5	12
HC160808	8	14,8	18,3	18,2	58,5	14
HC161010	10	24,8	20,3	20,3	73,3	17
HC161212	12	24,8	22,7	22,7	78,7	20

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HC17 Non-return valve threaded connection

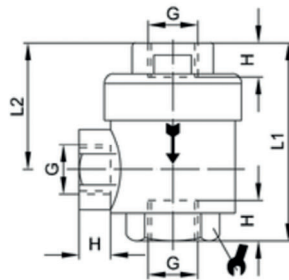


Part No.	ØD	G	ØB	L	SW
HC170418	4	G1/8	13	35	11
HC170618	6	G1/8	13	39,0	13
HC170818	8	G1/8	13	39,0	15
HC170614	6	G1/4	16	38	14
HC170814	8	G1/4	16	40	16
HC171038	10	G3/8	20	42,5	18
HC171238	12	G3/8	20	42,5	18
HC171012	10	G1/2	25	46	22
HC171212	12	G1/2	25	46	22

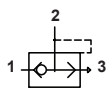


QUICK EXHAUST VALVES

HC06 Quick exhaust valve

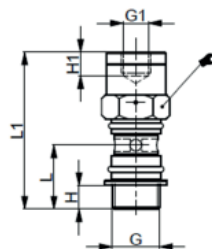


Part No.	G	H	L1	L2	SW	flow rate at 6 bar (NI/min)	
						1→2	2→3
HC0600M5	M5	4,5	25	16,5	10	220	300
HC060018	G1/8	8	42	2,8	14	680	1100
HC060014	G1/4	11	53	34,5	19	1200	2100
HC060038	G3/8	12	55	35,0	21	2300	4800
HC060012	G1/2	14	71	44	26	3400	6100
HC060034	G3/4	18	86	52	32	3200	8750
HC060001	G1	19	94	56	38	2900	10.750

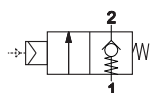


BLOCKING VALVE

HC34 Blocking valve



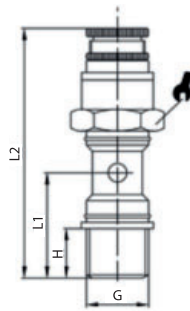
Part No.	G	G1	H	H1	L	L1	CH	flow rate at 6 bar (NI/min)
HC3418M5	G1/8	M5	6	6	15,5	42	15	400
HC3414M5	G1/4	M5	8	6	18,5	42	17	850
HC343818	G3/8	G1/8	8	8	22	53,5	20	1250



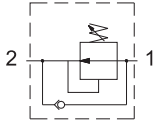
HB40 Single banjo (without bolt)

MINIATURE PRESSURE REGULATOR

HC35 Miniature pressure regulator



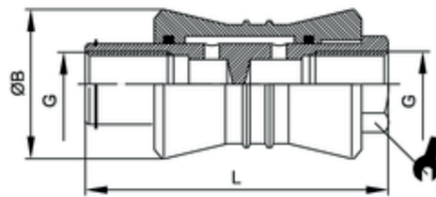
Part No.	G	H	L1	L2	CH	flow rate at 6 bar (NI/min)
HC350018	G1/8	6	15,5	56	15	340
HC350014	G1/4	8	18,5	63	17	580



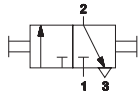
HB40 Single banjo (without bolt)

LINE MANUAL VALVE

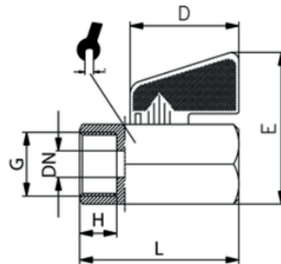
HC05 Slide valve



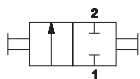
Part No.	G	ØB	L	CH	flow rate at 6 bar (NI/min)	
					1→2	2→3
HC0500M5	M5	15	33	10	350	690
HC050018	G1/8	25	48	14	700	1280
HC050014	G1/4	30	58	19	1500	2220
HC050038	G3/8	35	68	22	2200	3200
HC050012	G1/2	40	80	27	3400	7500
HC050034	G3/4	49	83	32	4500	8400



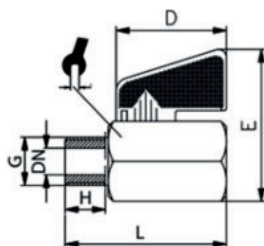
HC07 Ball valve F-F



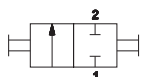
Part No.	G	H	L	D	E	DN	CH
HC070018	G1/8	10	40	30	38	7	21
HC070014	G1/4	10	40	30	38	8	21
HC070038	G3/8	10	40	30	38	8	21
HC070012	G1/2	10,5	46	30	42	10	25
HC070034	G3/4	12	54	30	47	12	30



HC08 Ball valve M-F

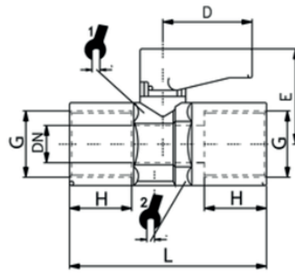


Part No.	G	H	L	D	E	DN	CH
HC080018	G1/8	9	39	30	37	6	20
HC080014	G1/4	9	39	30	37	8	20
HC080038	G3/4	10	40	30	37	10	20
HC080012	G1/2	12	45	30	41,5	15	25
HC080034	G3/4	14	51	30	47	20	30

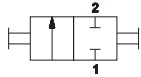


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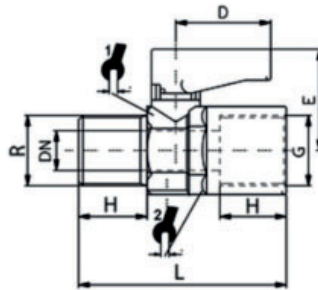
HC09 Miniature ball valve F-F with black handle



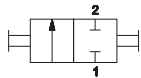
Part No.	G	H	L	D	E	DN	CH1	CH2
HC090018	G1/8	8	36,5	19,5	21,5	5,5	14	14
HC090014	G1/4	11	43	19,5	21,5	5,5	14	14



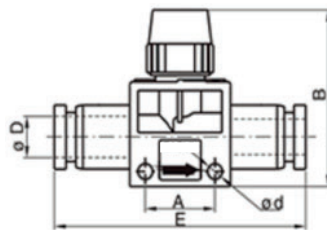
HC10 Miniature ball valve M-F with black handle



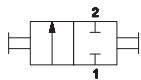
Part No.	R	G	H	L	D	E	DH	CH1	CH2
HC100018	G1/8	1/8	8	35,5	19,5	21,5	5,5	14	14
HC100014	G1/4	1/4	11	40,5	19,5	21,5	5,5	14	14
HC150038	G3/8	3/8	11,5	44,5	19,5	23	8	18	18



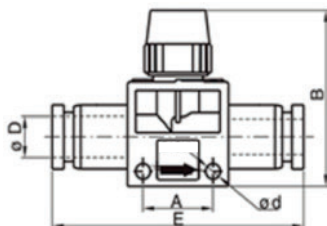
HC11 Manual 2/2 minivalve



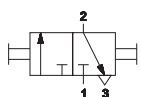
Part No.	ØD	Ød	A	B	E	C1	C2
HC110606	6	4,2	16,5	42,6	51,1	17,9	17,9
HC110808	8	4,2	16,5	42,6	52	18,8	18,8
HC111010	10	4,2	21,5	47	63,3	21	21
HC111212	12	4,2	21,5	47	64,1	22,6	22,6



HC12 Manual 3/2 minivalve

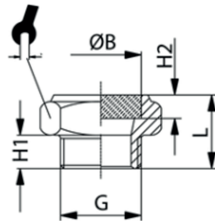


Part No.	ØD	Ød	A	B	E	C1	C2
HC120606	6	4,2	16,5	42,6	51,1	17,9	17,9
HC120808	8	4,2	16,5	42,6	52	18,8	18,8
HC121010	10	4,2	21,5	47	63,3	21	21
HC121212	12	4,2	21,5	47	64,1	22,6	22,6



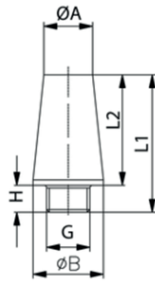
SILENCERS

HC51 Sintered bronze flat silencer



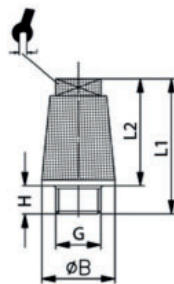
Part No.	G	ØB	H1	H2	L	CH
HC5100M5	M5	5	4	2,5	8	8
HC510018	G1/8	9	6	4	12	13
HC510014	G1/4	11	8	4	16	16
HC510038	G3/8	17	9	4	18	19
HC510012	G1/2	20,5	11	4	19	24
HC510034	G3/4	28	13	4	24	30
HC510001	G1	34	15	4	27	36
HC510112	G1 ^{1/2}	-	-	-	-	-

HC52 Sintered bronze cone silencer



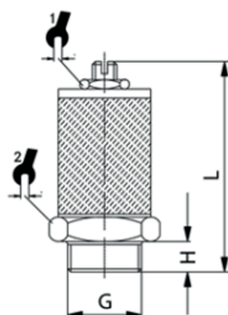
Part No.	G	ØB	H	L1	L2	ØA
HC5200M5	M5	6	4,5	13	8,5	5
HC520018	G1/8	12	6	21	15	8
HC520014	G1/4	15	6	25	19	11
HC520038	G3/8	19	8	36	28	15
HC520012	G1/2	23	10	43	33	18
HC520034	G3/4	30	13	53	40	23
HC520001	G1	38	15	63	48	28

HC53 Sintered bronze cone silencer (with square wrench head)



Part No.	G	ØB	H	L1	L2	CH
HC5300M5	M5	12	4	19,5	15,5	7
HC530018	G1/8	12	6	21	15	7
HC530014	G1/4	15	6	25	19	8
HC530038	G3/8	19	8	36	28	10
HC530012	G1/2	23	10	43	33	14
HC530034	G3/4	31	10	51	41	20
HC530001	G1	38	15	63	48	20

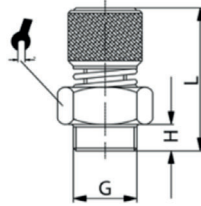
HC54 Silencer with exhaust flow regulator (narrow)



Part No.	G	H	L MIN	L MAX	CH1	CH2
HC5400M5	M5	3,5	16	21	6	8
HC540018	G1/8	8	38	44	9	16
HC540014	G1/4	9	39	45	10	16
HC540038	G3/8	10	47	60	10	22
HC540012	G1/2	11	48	61	10	22
HC540034	G3/4	12,5	68	83	13	30
HC540001	G1	11	68	92	13	36

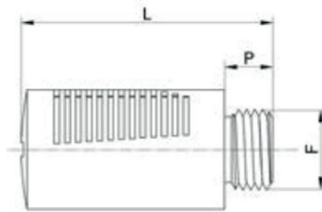
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HC55 Silencer with exhaust flow regulator



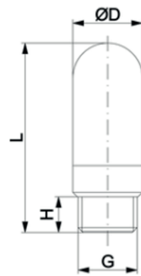
Part No.	G	H	L MIN	L MAX	CH
HC5500M5	-	-	-	-	-
HC550018	G1/8	6	26	28	13
HC550014	G1/4	8	30	32	15
HC550038	G3/8	10	35	38	22
HC550012	G1/2	11	36	39	22
HC550034	G3/4	12	45	50	30
HC550001	G1	12	45	50	36

HC56 Technopolymer dynamic silencer



Part No.	F	Ø	P	L
HC560018	G1/8	15	6	32,5
HC560014	G1/4	19,5	8	43
HC560038	G3/8	24,5	11	58
HC560012	G1/2	24,5	11	58
HC560034	G3/4	48	18	115
HC560001	G1	48	18	115

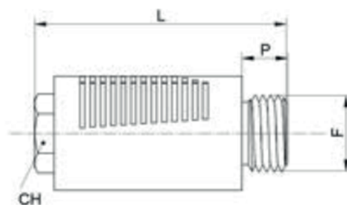
HC57 Polyethylene plastic silencer



Part No.	G	L	H	ØD	NI/min*
HC5700M5	M5	21,5	4	6,5	15
HC570018	G1/8	34	5,5	12,5	50
HC570014	G1/4	42,5	8	15,5	70
HC570038	G3/8	67,5	11,5	18,5	60
HC570012	G1/2	77,5	11	23,3	70
HC570034	G3/4	131,5	16	38,5	90
HC570001	G1	161	21	49	90

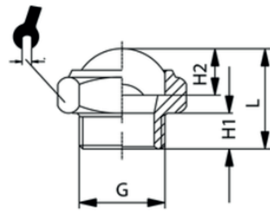
5

HC58 Technopolymer silencer



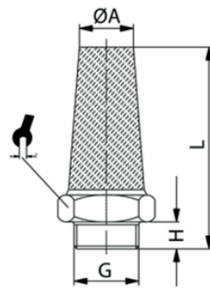
Part No.	F	P	L	CH
HC580018	G1/8	6,0	34	10
HC580014	G1/4	8,0	44	12
HC580038	G3/8	10,0	56	17
HC580012	G1/2	10,0	56	17
HC580034	G3/4	18,0	115	-
HC580001	G1	18,0	115	-

HC59 Silencer with dome-shaped steel head



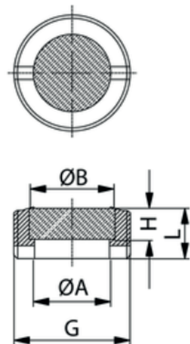
Part No.	G	H1	H2	L	CH
HC5900M5	M5	3,5	3	8	8
HC590018	G1/8	6	4	16	13
HC590014	G1/4	8	4	19	16
HC590038	G3/8	9	4	21	19
HC590012	G1/2	10	4	22	24
HC590034	G3/4	10	4	27	30
HC590001	G1	15	4	29	36

HC60 Cone silencer with hexagon nipple



Part No.	G	ØA	H	L	CH
HC6000M5	M5	3,5	4	17	8
HC600018	G1/8	7,5	6	26	13
HC600014	G1/4	8,5	8	34	16
HC600038	G3/8	12	8	41	19
HC600012	G1/2	16	9	45	24
HC600034	G3/4	20	10	50,5	30
HC600001	G1	26,5	10	66	36
HC600112	G1 ^{1/2}	36	20	98	55

HC61 Recessed silencer



Part No.	G	ØB	ØA	L	H
HC6100M5	M5	2,6	2,9	4	2
HC610018	G1/8	6	5	4	3
HC610014	G1/4	8	8	6,5	3
HC610038	G3/8	10	9,5	7	4
HC610012	G1/2	15	12	8	4
HC610034	G3/8	20	19	8	4
HC610001	G1	26	23	10	4

HD

Standard Fittings

Standard fittings are composed of all those items that connect components of various kind and complete the fittings series.
The table below shows maximum recommended pressures obtained from tests carried out using safety coefficient 4.



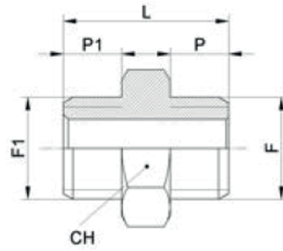
TECHNICAL CHARACTERISTICS

Temperature	-15 ÷ +80 °C
Max pressure	50 bar
Application fields	pneumatic circuits, low-pressure oleodynamic and hydraulic circuits, vacuum

CONSTRUCTIVE CHARACTERISTICS

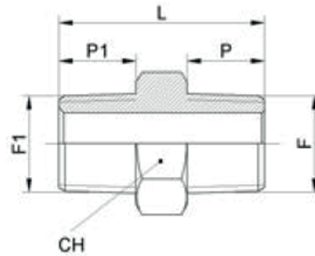
Body	nickel-plated brass, aluminium, zinc-plated steel
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HD01 Parallel nipple



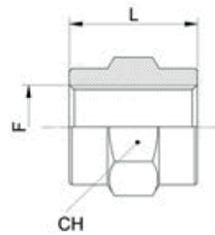
Part No.	F	F1	P	P1	L	CH
HD01M5M5	M5	M5	4,0	4,0	11,5	8
HD01M518	M5	G1/8	4,0	6,0	14,0	14
HD011818	G1/8	G1/8	6,0	6,0	16,5	14
HD011814	G1/8	G1/4	6,0	8,0	19,0	17
HD011838	G1/8	G3/8	6,0	9,0	20,0	19
HD011414	G1/4	G1/4	8,0	8,0	21,5	17
HD011438	G1/4	G3/8	8,0	9,0	22,0	19
HD011412	G1/4	G1/2	8,0	10,0	23,5	24
HD013838	G3/8	G3/8	9,0	9,0	23,0	19
HD013812	G3/8	G1/2	9,0	10,0	24,5	24
HD011212	G1/2	G1/2	10,0	10,0	25,5	24
HD011234	G1/2	G3/4	10,0	11,0	26,5	30
HD013434	G3/4	G3/4	11,0	11,0	27,5	30

HD02 Taper nipple



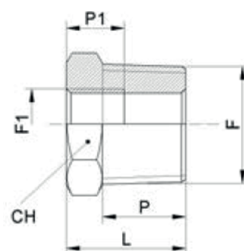
Part No.	F	F1	P	P1	L	CH
HD021818	R1/8	R1/8	7,5	7,5	19,0	12
HD021814	R1/8	R1/4	7,5	10,5	23,0	14
HD021838	R1/8	R3/8	7,5	11,5	24,0	17
HD021414	R1/4	R1/4	10,5	10,5	26,0	14
HD021438	R1/4	R3/8	10,5	11,5	27,5	17
HD021412	R1/4	R1/2	11,5	14,0	30,5	22
HD023838	R3/8	R3/8	11,5	11,5	27,0	17
HD023812	R3/8	R1/2	11,5	14,0	31,0	22
HD021212	R1/2	R1/2	14,0	14,0	33,5	22
HD021234	R1/2	R3/4	14,0	14,0	37,5	27
HD023434	R3/4	R3/4	14,0	14,0	39,5	27
HD023401	R3/4	R1	16,0	19,0	43,0	34
HD020101	R1	R1	19,0	19,0	46,0	34

HD03 Parallel female socket



Part No.	F	L	CH
HD0300M5	M5	11,0	8
HD030018	G1/8	15,0	14
HD030014	G1/4	22,0	17
HD030038	G3/8	23,0	22
HD030012	G1/2	28,0	26
HD030034	G3/4	29,0	32

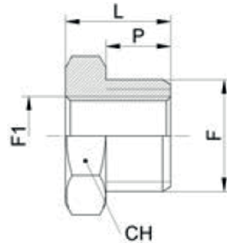
HD04 Reduction M-F taper/parallel thread



Part No.	F	F1	P	P1	L	CH
HD041814	R1/8	G1/4	11,0	8,0	15,0	14
HD041838	R1/8	G3/8	11,5	8,0	16,5	17
HD041812	R1/8	G1/2	14,0	8,0	19,5	22
HD041438	R1/4	G3/8	11,5	11,0	16,5	17
HD041412	R1/4	G1/2	14,0	11,0	19,5	22
HD043812	R3/8	G1/2	14,0	14,0	19,5	22
HD043834	R3/8	G3/4	14,0	16,0	20,0	27
HD041234	R1/2	G3/4	16,0	16,0	23,5	27

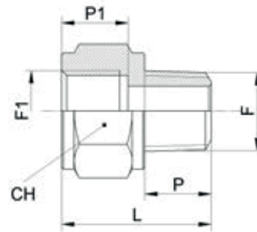
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HD05 Reduction M-F parallel thread



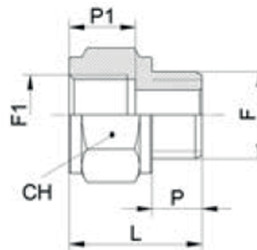
Part No.	F1	F	P	L	CH
HD05M518	G1/8	M5	6,0	10,5	14
HD051814	G1/4	G1/8	8,0	13,0	17
HD051838	G3/8	G1/8	9,0	14,0	19
HD051812	G1/2	G1/8	10,0	15,5	24
HD051438	G3/8	G1/4	9,0	14,0	19
HD051412	G1/2	G1/4	10,0	15,5	24
HD053812	G1/2	G3/8	10,0	15,5	24
HD053834	G3/4	G3/8	11,0	16,5	30
HD051234	G3/4	G1/2	11,0	16,5	30

HB06 Extension M-F taper/parallel thread



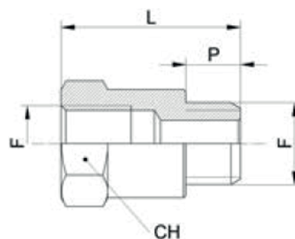
Part No.	F	F1	P	P1	L	CH
HD061818	R1/8	G1/8	8,0	8,0	18,0	14
HD061814	R1/8	G1/4	8,0	12,0	19,0	17
HD061838	R1/8	G3/8	8,0	12,0	21,5	22
HD061414	R1/4	G1/4	11,0	12,0	22,5	17
HD061438	R1/4	G3/8	11,0	12,0	25,0	22
HD061412	R1/4	G1/2	11,0	14,0	27,5	24
HD063838	R3/8	G3/8	12,0	12,0	25,0	22
HD063812	R3/8	G1/2	12,0	14,0	29,0	24
HD061212	R1/2	G1/2	14,0	14,0	30,5	26
HD061234	R1/2	G3/4	14,0	14,0	31,0	32

HB07 Extension M-F parallel thread



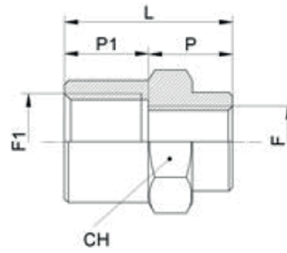
Part No.	F	F1	P	P1	L	CH
HD07M518	M5	G1/8	5,0	8,0	15,0	14
HD071818	G1/8	G1/8	6,0	8,0	16,0	14
HD071814	G1/8	G1/4	6,0	12,0	17,5	17
HD071838	G1/8	G3/8	6,0	12,0	20,0	22
HD071414	G1/4	G1/4	8,0	12,0	19,5	17
HD071438	G1/4	G3/8	8,0	12,0	22,0	22
HD071412	G1/4	G1/2	7,0	14,0	24,0	24
HD073838	G3/8	G3/8	9,0	12,0	23,0	22
HD073812	G3/8	G1/2	9,0	14,0	25,5	24
HD071212	G1/2	G1/2	10,0	14,0	26,0	26

HD08 Extension M-F parallel thread



Part No.	F	P	L	CH
HD081822	G1/8	7,0	22	14
HD081435	G1/4	8,0	35,0	17
HD081451	G1/4	8,0	51,0	17
HD081842	G1/8	7,0	42,0	14

HD09 Extension F-F



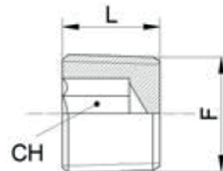
Part No.	F	F1	P	P1	L	CH
HD091814	G1/8	G1/4	12,0	7,0	19,5	17
HD091838	G1/8	G3/8	12,0	8,0	20,0	22
HD091812	G1/8	G1/2	13,5	10,0	23,5	24
HD091438	G1/4	G3/8	14,0	8,5	22,5	22
HD091412	G1/4	G1/2	16,0	10,0	26,0	24
HD093812	G3/8	G1/2	16,0	10,0	26,0	24
HD091234	G1/2	G3/4	20,0	10,0	30,0	32

HD10 Male plug with hexagon wrench head



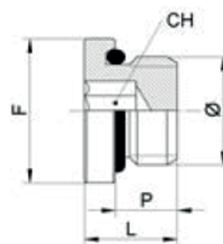
Part No.	F	P	L	CH
HD1000M5	M5	4,0	7,5	8
HD100018	G1/8	6,0	11,0	14
HD100014	G1/4	8,0	13,0	17
HD100038	G3/8	9,0	14,0	19
HD100012	G1/2	9,0	15,5	24
HD100034	G3/4	11,0	16,5	30
HD100001	G1	12,0	18,0	40

HD11 Male plug (taper thread) with allen head



Part No.	F	L	CH
HD110018	R1/8	8,0	5
HD110014	R1/4	10,0	6
HD110038	R3/8	11,0	8
HD110012	R1/2	13,0	10

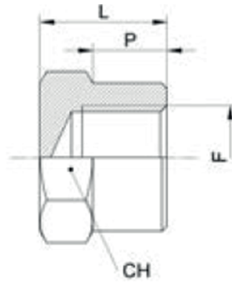
HD12 Male plug with O-ring (allen head)



Part No.	F	P	L	Ø	CH
HD1200M5	M5	4,0	6,0	8,0	2,5
HD120018	G1/8	6,0	9,0	14,0	5
HD120014	G1/4	8,0	11,5	18,0	6
HD120038	G3/8	9,0	12,5	22,0	8
HD120012	G1/2	10,0	14,5	26,0	10

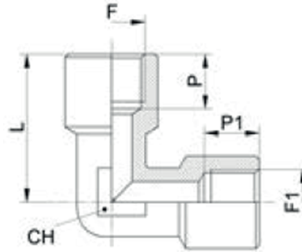
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HD13 Female plug



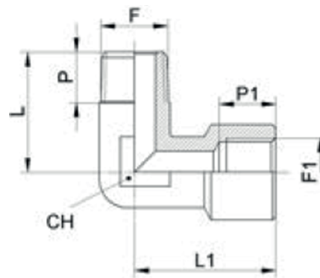
Part No.	F	P	L	Ø	CH
HD130018	G1/8	8,0	11,0	14,0	14
HD130014	G1/4	12,0	15,0	18,0	17
HD130038	G3/8	12,0	15,0	22,0	20
HD130012	G1/2	14,0	18,0	26,0	24

HD14 Elbow connector F-F



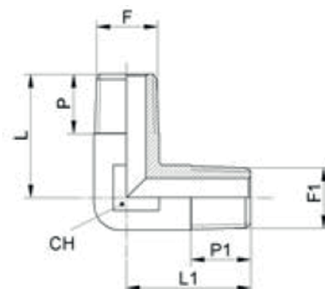
Part No.	F	P	L	CH
HD1400M5	M5	3,0	11,0	8
HD140018	G1/8	8,0	21,0	10
HD140014	G1/4	11,0	26,5	13
HD140038	G3/8	12,0	28,0	17
HD140012	G1/2	14,0	33,5	21
HD140034	G3/4	16,5	36,5	25
HD140001	G1	19,0	45,0	30

HD15 Elbow connector M-F taper/parallel thread



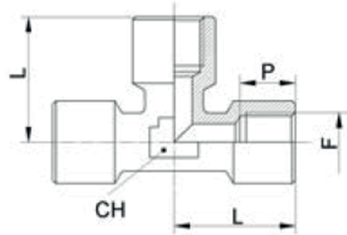
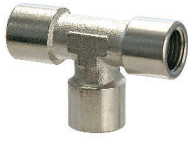
Part No.	F	F1	P	P1	L	L1	CH
HD1500M5	M5	M5	4,0	5,0	11,5	11,0	9
HD150018	R1/8	G1/8	8,0	8,0	17,0	20,0	10
HD151814	R1/8	G1/4	8,0	11,0	19,0	23,0	10
HD150014	R1/4	G1/4	11,0	11,0	25,0	26,5	13
HD150038	R3/8	G3/8	11,5	12,0	26,0	28,0	17
HD150012	R1/2	G1/2	14,0	14,0	31,0	33,5	21
HD150034	R3/4	G3/4	16,0	16,5	33,0	36,5	25
HD150001	R1	G1	17,5	19,0	45,0	39,0	30

HD16 Elbow connector M-M taper thread



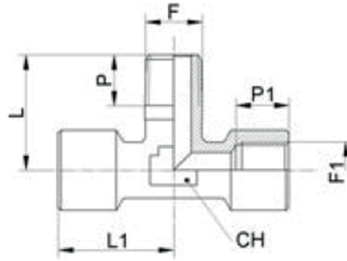
Part No.	F	F1	P	C	L	L1	CH
HD1600M5	M5	-	4,0	2,0	11,0	-	9
HD160018	R1/8	-	8,0	6,0	19,0	-	10
HD161814	R1/8	R1/4	8,0	6,0	19,0	21,0	10
HD160014	R1/4	-	11,0	8,0	24,0	-	13
HD160038	R3/8	-	11,5	8,0	25,0	-	17
HD160012	R1/2	-	14,0	12,0	28,5	-	21
HD160034	R3/4	-	16,0	19,0	33,0	-	25
HD160001	R1	-	17,5	24,0	39,0	-	30

HD17 Intermediate Tee F-F-F (parallel thread)



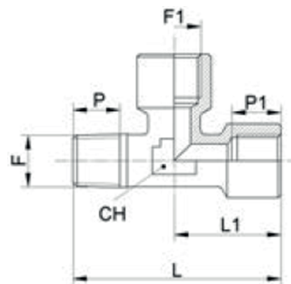
Part No.	F	P	L	CH
HD1700M5	M5	5,0	11,0	9
HD170018	G1/8	9,0	20,5	10
HD170014	G1/4	11,0	25,8	13
HD170038	G3/8	12,0	30,0	17
HD170012	G1/2	14,0	34,8	21
HD170034	G3/4	16,5	36,5	25
HD170001	G1	19,0	45,0	30

HD18 Central Tee M-F-F



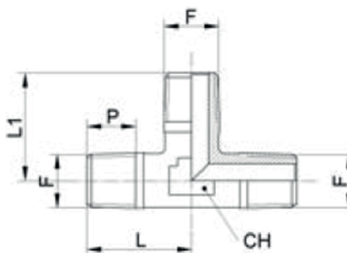
Part No.	F	F1	P	P1	L	L1	CH
HD1800M5	M5	M5	4,0	5,0	11,5	11,0	9
HD180018	R1/8	G1/8	8,0	9,0	19,5	19,5	10
HD180014	R1/4	G1/4	11,0	11,0	24,8	25,8	13
HD180038	R3/8	G3/8	11,5	13,0	28,5	30,0	18
HD180012	R1/2	G1/2	14,0	14,0	31,8	34,8	21
HD180034	R3/4	G3/4	16,0	16,5	33,0	36,5	25
HD180001	R1	G1	17,5	19,0	39,0	45,0	30

HD19 Lateral Tee M-F-F



Part No.	F	F1	P	P1	L	L1	CH
HD1900M5	M5	M5	4,0	5,0	22,5	11,3	9
HD190018	R1/8	G1/8	8,0	9,0	38,0	19,5	10
HD190014	R1/4	G1/4	11,0	11,0	50,5	25,8	13
HD190038	R3/8	G3/8	11,5	13,0	58,5	30,0	18
HD190012	R1/2	G1/2	14,0	14,0	66,5	24,8	21
HD190034	R3/4	G3/4	16,0	16,5	69,5	34,8	25
HD190001	R1	G1	17,5	19,0	84,0	42,0	30

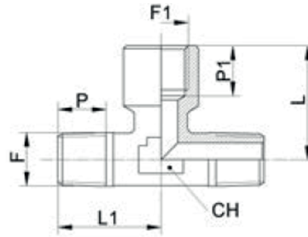
HD20 Intermediate Tee M-M-M (taper thread)



Part No.	F	P	A	L	L1	CH
HD200018	R1/8	8,0	6,0	18,5	19,0	10
HD200014	R1/4	11,0	8,5	24,7	24,7	13
HD200038	R3/8	11,5	11,0	28,5	28,5	17
HD200012	R1/2	14,0	15,0	31,7	31,7	21
HD200034	R3/4	16,2	19,0	33,2	33,0	25
HD200001	R1	17,5	24,0	39,0	39,0	30

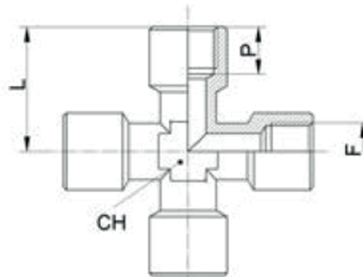
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HD21 Lateral Tee M-F-M



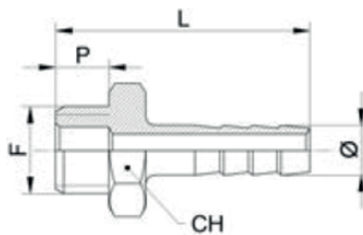
Part No.	F	F1	P	P1	L	L1	CH
HD210018	R1/8	G1/8	8,0	9,0	20,5	18,5	10
HD210014	R1/4	G1/4	11,0	11,0	25,8	24,8	13
HD210038	R3/8	G3/8	11,5	13,0	28,5	28,5	17
HD210012	R1/2	G1/2	14,0	14,0	34,8	31,8	21
HD210034	R3/4	G3/4	16,2	16,5	36,5	33,2	25
HD210001	R1	G1	17,5	19,0	45,0	36,5	30

HD22 Cross F-F-F-F



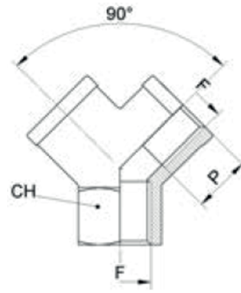
Part No.	F	P	L	CH
HD220018	G1/8	8,0	21,0	10
HD220014	G1/4	11,0	25,5	13
HD220038	G3/8	11,5	28,0	17
HD220012	G1/2	14,0	33,5	21

HD24 Tube adaptor (parallel thread)



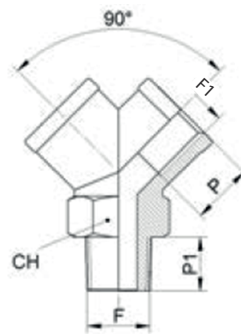
Part No.	F	Ø	P	L	CH
HD2404M5	M5	4	5,0	15,5	8
HD240618	G1/8	6	8,0	32,5	14
HD240718	G1/8	7	8,0	32,5	14
HD240818	G1/8	8	8,0	32,5	14
HD240918	G1/8	9	8,0	32,5	14
HD241018	G1/8	10	8,0	32,5	14
HD240614	G1/4	6	11,0	36,0	17
HD240714	G1/4	7	11,0	36,0	17
HD240814	G1/4	8	11,0	36,0	17
HD240914	G1/4	9	11,0	38,0	17
HD241014	G1/4	10	11,0	38,0	17
HD241214	G1/4	12	11,0	38,0	17
HD240938	G3/8	9	11,5	38,5	19
HD241038	G3/8	10	11,5	38,5	19
HD241238	G3/8	12	11,5	38,5	19
HD241438	G3/8	14	11,5	40,5	19
HD241738	G3/8	17	11,5	40,5	19
HD241212	G1/2	12	14,0	46,0	24
HD241412	G1/2	14	14,0	46,0	24
HD241712	G1/2	17	14,0	46,0	24
HD242012	G1/2	20	14,0	46,0	30
HD242034	G3/4	20	16,0	46,5	30

HD25 Y connector F-F-F



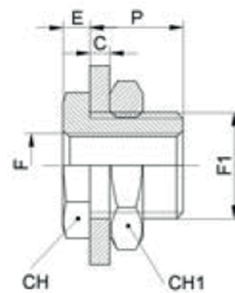
Part No.	F	P	CH
HD250018	G1/8	8,0	13
HD250014	G1/4	11,0	17
HD250038	G3/8	11,5	20
HD250012	G1/2	14,0	25

HD26 Y connector M-F-F



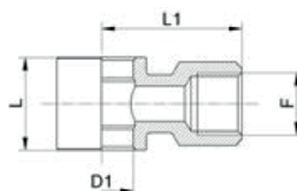
Part No.	F	F1	P	P1	CH
HD260018	R1/8	G1/8	8,0	8,0	13
HD260014	R1/4	G1/4	11,0	11,0	17
HD260038	R3/8	G3/8	11,5	11,5	20
HD260012	R1/2	G1/2	14,0	14,0	25

HD27 Threaded bulkhead connector



Part No.	F	F1	C MAX	P	E	CH	CH1
HD2700M5	M5	M10x1	6,5	10,5	3,5	14	14
HD270018	G1/8	M16x1,5	10,0	14,0	4,0	19	22
HD270014	G1/4	M20x1,5	16,0	21,0	4,0	24	27
HD270038	G3/8	M26x1,5	15,0	21,0	5,0	30	32
HD270012	G1/2	M28x1,5	21,0	27,0	6,0	32	36

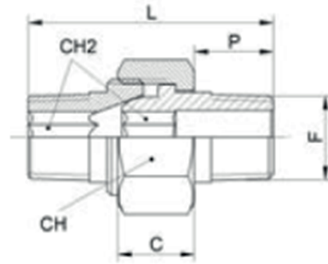
HD32 Female single banjo



Part No.	F	D1	L	L1
HD3200M5	M5	5,1	9,0	13,5
HD320018	1/8	9,9	14,5	22,0
HD320014	1/4	13,3	14,5	25,5

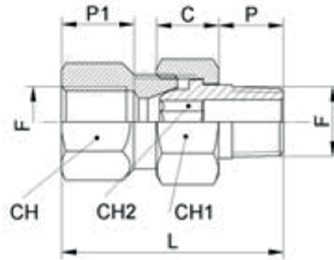
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HD33 Taper nipple - 3 pieces



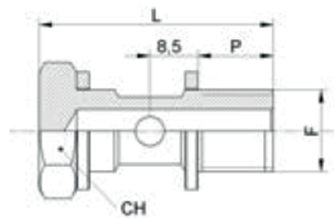
Part No.	F	P	L	C	CH	CH2
HD330018	R1/8	9,0	27,0	8,6	15	5
HD330014	R1/4	11,5	33,5	9,6	19	6
HD330038	R3/8	13,0	36,0	10,0	22	8
HD330012	R1/2	15,5	45,0	12,0	27	12
HD330034	R3/4	18,0	53,0	17,0	36	14
HD330001	R1	22,0	64,0	20,0	46	19

HD34 Female nipple - 3 pieces



Part No.	F	P	P1	L	C	CH	CH1	CH2
HD340018	G1/8	9,0	10,0	30,5	8,5	14	15	5
HD340014	G1/4	12,0	12,0	37,0	9,5	17	19	6
HD340038	G3/8	12,0	12,0	40,0	10,0	21	22	8
HD340012	G1/2	15,0	15,0	48,0	12,0	25	27	12

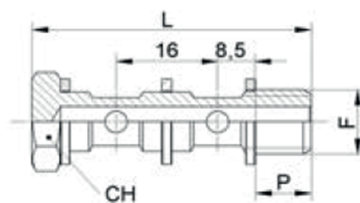
HD42 Single banjo bolt taper thread



Part No.	F	P	L	CH
HD4200M5	M5	4,0	18,0	8
HD420018	R1/8	6,0	28,0	14
HD420014	R1/4	8,0	30,0	17
HD420038	R3/8	8,5	30,5	19
HD420012	R1/2	10,0	32,0	24

Washer to be used: HD46 2 pcs

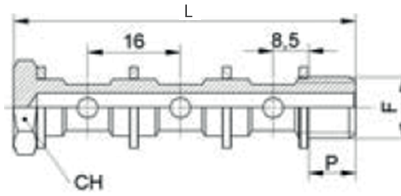
HD43 Double banjo bolt taper thread



Part No.	F	P	L	CH
HD430018	R1/8	6,0	44,0	14
HD430014	R1/4	8,0	46,0	17
HD430038	R3/8	8,5	47,0	19
HD430012	R1/2	10,0	48,0	24

Washer to be used: HD46 3 pcs

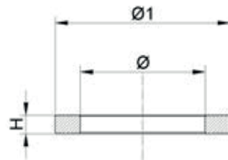
HD44 Triple banjo bolt taper thread



Part No.	F	P	L	CH
HD440018	R1/8	6,0	59,0	14
HD440014	R1/4	8,0	61,5	17

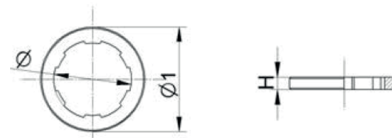
Washer to be used: HD46 4 pcs

HD45 Aluminium washer



Part No.	Ø	Ø1	H
HD4500M5	5	9,0	1,0
HD450018	10	14,0	1,5
HD450014	13,5	18,0	1,5
HD450038	17	22,0	1,5
HD450012	21,5	27,0	1,5

HD46 Indented nylon washer

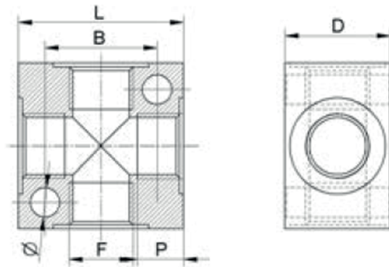


Part No.	Ø	Ø1	H
HD4600M5	5	8,0	1,0
HD460018	10	14,0	2,0
HD460014	13	17,5	2,0
HD460038	17	21,5	2,0
HD460012	21	26,5	2,0

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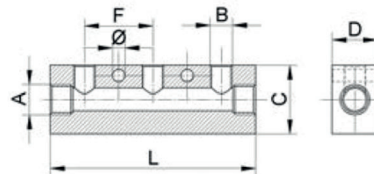
ACCESSORIES

HD23 Cross block F-F-F-F



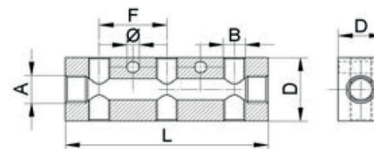
Part No.	F	Ø	P	L	D	B
HD230018	G1/8	4,5	7,0	25,0	15,0	17,0
HD230014	G1/4	5,5	11,0	40,0	20,0	26,0
HD230038	G3/8	5,5	12,0	50,0	25,0	34,0
HD230012	G1/2	5,5	12,0	50,0	30,0	34,0

HD30 Distribution manifold (single outlets)



Part No.	A	B	C	D	L	F	N°	Ø
HD301803	G1/4	G1/8	30	20,0	90	30,0	3	4,5
HD301804	G1/4	G1/8	30	20,0	120	30,0	4	4,5
HD301805	G1/4	G1/8	30	20,0	150	30,0	5	4,5
HD301806	G1/4	G1/8	30	20,0	180	30,0	6	4,5
HD301403	G3/8	G1/4	30	25,0	108	36,0	3	6,0
HD301404	G3/8	G1/4	30	25,0	144	36,0	4	6,0
HD301405	G3/8	G1/4	30	25,0	180	36,0	5	6,0
HD301406	G3/8	G1/4	30	25,0	216	36,0	6	6,0
HD303803	G1/2	G3/8	35	28,0	130	40,0	3	6,0
HD303804	G1/2	G3/8	35	28,0	170	40,0	4	6,0
HD303805	G1/2	G3/8	35	28,0	220	40,0	5	6,0
HD303806	G1/2	G3/8	35	28,0	250	40,0	6	6,0

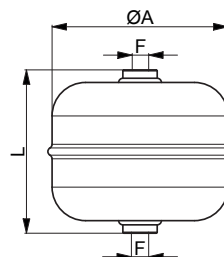
HD31 Distributors manifold (double outlets)



Part No.	A	B	C	D	L	F	N°	Ø
HD311803	G1/4	G1/8	30	20,0	90	30,0	3+3	4,5
HD311804	G1/4	G1/8	30	20,0	120	30,0	4+4	4,5
HD311805	G1/4	G1/8	30	20,0	150	30,0	5+5	4,5
HD311403	G3/8	G1/4	40	25,0	108	36,0	3+3	6,0
HD311404	G3/8	G1/4	40	25,0	144	36,0	4+4	6,0
HD311405	G3/8	G1/4	40	25,0	180	36,0	5+5	6,0

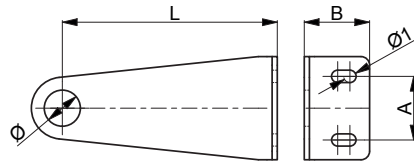
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HD40 Reservoir (Max pressure 10 bar)



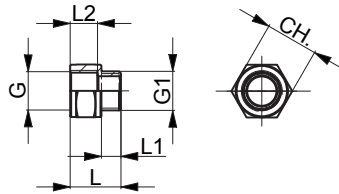
Part No.	lt	ØA	F	L
HD400100	1	86	1/2	230
HD400250	2,5	160	1/2	175
HD400500	5	210	1/2	195
HD400700	7	210	1/2	260
HD401200	12	229	1/2	365

HD410000A Stainless steel AISI 301 bracket



Part No.	Ø	Ø1	A	B	L
HD410000A	21	7	37	38	125

HD410000B Reservoir extension



Part No.	G	G1	L	L1	L2	CH
HD410000B	G1/2	G1/2	26	10	14	27

HGC

Push-on Fittings

Push-on fittings are particularly suitable for plastic pipes assembly in pneumatic installations, especially where there may be vibrations or extreme climatic conditions (which lead over time to changes in the characteristics of tubes). The connection of the pipe to the fittings is done by tightening a ring nut that makes it safe and reliable over time.



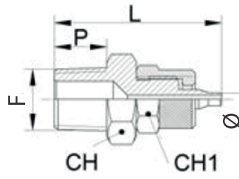
TECHNICAL CHARACTERISTICS

Temperature	-15 ÷ 80 °C
Fluid	compressed air, vacuum, liquid
Max pressure	16 bar
Working pressure	-0,99 ÷ 10 bar
Application fields	pneumatic circuits
Recommended hoses	polyamide PA 10.12, polyurethane Sh.A98 co-polyurethane Sh.55D

CONSTRUCTIVE CHARACTERISTICS

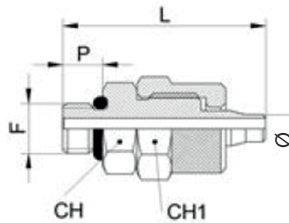
Body	nickel-plated brass
Nut	nickel-plated brass
Seal	NBR

HGC03 Male straight taper thread



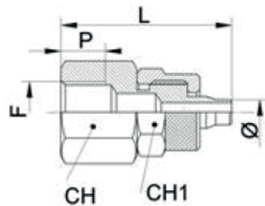
Part No.	Ø	F	P	L	CH	CH1
HGC030418	4/2	R1/8	8,0	25,5	12	9
HGC030518	5/3	R1/8	8,0	26,0	12	9
HGC030618	6/4	R1/8	8,0	27,0	12	12
HGC030818	3/6	R1/8	8,0	28,0	12	14
HGC031018	10/8	R1/8	8,0	30,0	14	16
HGC030614	6/4	R1/4	11,0	31,0	14	12
HGC030814	8/6	R1/4	11,0	32,0	14	14
HGC031014	10/8	R1/4	11,0	33,0	14	16
HGC030638	6/4	R3/8	11,0	32,0	17	12
HGC030838	8/6	R3/8	11,0	33,0	17	14
HGC031038	10/8	R3/8	11,0	34,0	17	16
HGC031238	12/10	R3/8	11,0	36,5	17	19
HGC030812	8/6	R1/2	14,0	38,0	22	14
HGC031012	10/8	R1/2	14,0	38,0	22	16
HGC031212	12/10	R1/2	14,0	38,0	22	19
HGC031512	15/12,5	R1/2	14,0	41,0	22	24

HGC04 Male straight parallel thread with O-Ring



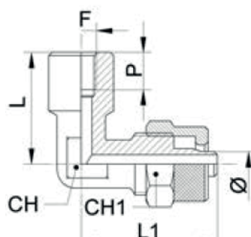
Part No.	Ø	F	P	L	CH	CH1
HGC0404M5	4/2,7	M5	4,0	20,0	8	9
HGC0405M5	5/3	M5	4,0	20,5	8	9
HGC0406M5	6/4	M5	4,0	21,5	8	9
HGC040418	4/2,7	G1/8	6,0	23,5	14	9
HGC040618	6/4	G1/8	6,0	25,0	14	12
HGC040818	8/6	G1/8	6,0	26,0	14	14
HGC041018	10/8	G1/8	6,0	27,5	14	16
HGC040614	6/4	G1/4	8,0	28,0	17	12
HGC040814	8/6	G1/4	8,0	29,0	17	14
HGC041014	10/8	G1/4	8,0	30,5	17	16
HGC040838	8/6	G3/8	9,0	30,5	19	14
HGC041038	10/8	G3/8	9,0	32,0	19	16
HGC041238	12/10	G3/8	9,0	32,5	19	19
HGC041012	10/8	G1/2	10,0	33,5	24	16
HGC041212	12/10	G1/2	10,0	34,5	24	19

HGC07 Female straight



Part No.	Ø	F	P	L	CH	CH1
HGC070618	6/4	G1/8	8,0	27,0	14	12
HGC070818	8/6	G1/8	8,0	28,0	14	14
HGC070614	6/4	G1/4	10,0	30,0	17	12
HGC070814	8/6	G1/4	10,0	31,0	17	14
HGC071014	10/8	G1/4	10,0	32,5	17	16
HGC070838	8/6	G3/8	11,5	32,5	20	14
HGC071038	10/8	G3/8	11,5	34,0	20	16
HGC071238	12/10	G3/8	11,5	35,0	20	19

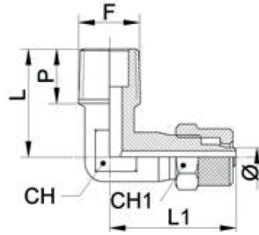
HGC08 Female elbow



Part No.	Ø	F	P	L	L1	CH	CH1
HGC080618	6/4	G1/8	8,0	21,0	23,0	10	12
HGC080614	6/4	G1/4	10,0	24,0	24,0	11	12
HGC080818	8/6	G1/8	8,0	21,0	23,0	10	14
HGC080814	8/6	G1/4	10,0	24,0	26,0	11	14
HGC080838	8/6	G3/8	11,5	29,0	29,0	17	14
HGC081014	10/8	G1/4	10,0	24,0	25,0	11	16
HGC081038	10/8	G3/8	11,0	28,5	29,5	17	16
HGC081238	12/10	G3/8	11,0	29,5	29,5	17	19

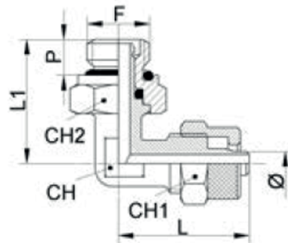
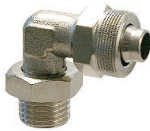
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HGC09 Taper elbow connection male



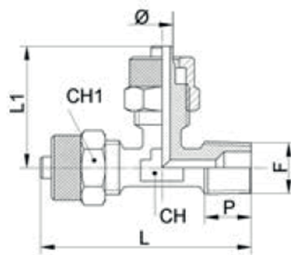
Part No.	Ø	F	P	L	L1	CH	CH1
HGC090418	4/2	R1/8	8,0	17,0	20,0	9	9
HGC090518	5/3	R1/8	8,0	17,0	20,0	9	9
HGC090618	6/4	R1/8	8,0	17,0	22,0	9	12
HGC090818	8/6	R1/8	8,0	19,5	24,0	10	14
HGC091018	10/8	R1/8	8,0	20,5	25,5	11	16
HGC090614	6/4	R1/4	11,0	21,0	23,5	10	12
HGC090814	8/6	R1/4	11,0	21,0	24,0	10	14
HGC091014	10/8	R1/4	11,0	22,0	26,0	11	16
HGC090638	6/4	R3/8	11,0	22,0	25,5	11	12
HGC090838	8/6	R3/8	11,0	22,0	25,5	11	14
HGC091038	10/8	R3/8	11,0	22,0	26,0	11	16
HGC091238	12/10	R3/8	11,0	24,0	28,5	13	19
HGC090812	8/6	R1/2	8,0	19,5	24,0	10	14
HGC091012	10/8	R1/2	14,0	29,0	30,0	17	14
HGC091212	12/10	R1/2	18,0	29,0	30,0	17	19
HGC091512	15/12,5	R1/2	14,0	29,0	36,0	17	24

HGC10 Swivel elbow with OR



Part No.	Ø	F	P	L	L1	CH	CH1	CH2
HGC100618	6/4	G1/8	6,0	22,0	23,0	9	12	14
HGC100818	8/6	G1/8	6,0	24,0	30,0	10	14	14
HGC100614	6/4	G1/4	8,0	24,0	27,0	10	12	17
HGC100814	8/6	G1/4	8,0	24,0	30,0	10	14	17
HGC101014	10/8	G1/4	8,0	26,0	31,0	11	16	17
HGC100838	8/6	G3/8	9,0	24,0	31,0	10	14	19
HGC101038	10/8	G3/8	9,0	26,0	31,0	11	16	19
HGC101238	12/10	G3/8	9,0	28,5	31,0	13	19	19

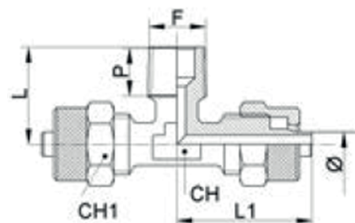
HGC14 Male lateral Tee taper thread



Part No.	Ø	F	P	L	L1	CH	CH1
HGC140618	6/4	R1/8	8,0	33,0	22,5	8	12
HGC140614	6/4	R1/4	11,0	43,0	22,5	10	12
HGC140818	8/6	R1/8	8,0	32,0	25,0	10	14
HGC140814	8/6	R1/4	11,0	43,0	25,0	10	14
HGC140838	8/6	R3/8	11,0	48,0	25,0	11	14
HGC141014	10/8	R1/4	11,0	48,0	25,0	11	16
HGC141038	10/8	R3/8	11,0	23,5	22,0	11	12
HGC141012	10/8	R1/2	14,0	56,0	28,0	17	16
HGC141238	12/10	R3/8	11,0	50,5	28,5	11	19
HGC141212	12/10	R1/2	14,0	64,0	32,0	17	19
HGC141512	15/12,5	R1/2	14,0	54,0	35,0	17	24

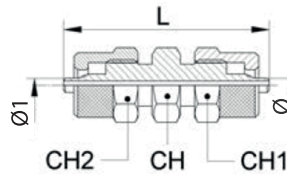
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HGC16 Male central Tee taper thread



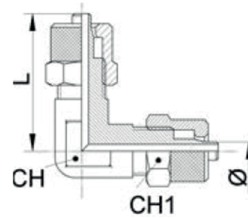
Part No.	Ø	F	P	L	L1	CH	CH1
HGC160618	6/4	R1/8	8,0	16,0	22,5	8	12
HGC160614	6/4	R1/4	11,0	21,0	22,5	10	12
HGC160818	8/6	R1/8	8,0	19,5	23,0	10	14
HGC160814	8/6	R1/4	11,0	21,0	23,0	10	14
HGC160838	8/6	R3/8	11,0	11,0	23,5	11	14
HGC161014	10/8	R1/4	11,0	23,0	26,0	11	16
HGC161038	10/8	R3/8	11,0	23,0	26,5	11	16
HGC161012	10/8	R1/2	14,0	30,0	29,0	17	16
HGC161238	12/10	R3/8	11,0	23,0	26,5	11	19
HGC161212	12/10	R1/2	14,0	30,0	30,0	17	19
HGC161512	15/12,5	R1/2	14,0	28,0	36,0	17	24

HGC19 Intermediate straight



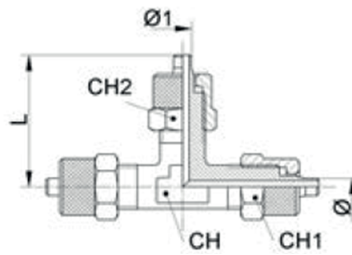
Part No.	Ø	Ø1	L	CH	CH1	CH2
HGC190600	6/4	6/4	35,0	12	12	12
HGC190800	8/6	8/6	37,0	12	14	14
HGC191000	10/8	10/8	40,0	14	16	16
HGC191200	12/10	12/10	38,0	17	19	19
HGC191500	15/12,5	15/12,5	48,0	22	24	24

HGC20 Intermediate elbow



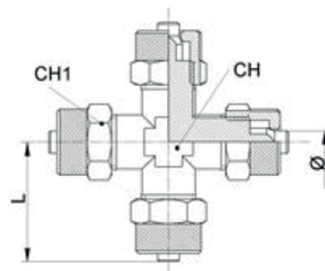
Part No.	Ø	L	CH	CH1
HGC200400	4/27	20	9	9
HGC200600	6/4	18,5	9	12
HGC200800	8/6	22,5	10	14
HGC201000	10/8	24	11	16
HGC201200	12/10	27,5	13	19
HGC201500	15/12,5	35	17	24

HGC21 Intermediate Tee



Part No.	Ø	L	CH	CH1
HGC210400	4/2	22,0	8	9
HGC210600	6/4	25,5	8	12
HGC210800	8/6	23,0	10	14
HGC211000	10/8	25,5	11	16
HGC211200	12/10	28,5	11	19
HGC211500	15/12,5	35,0	17	24

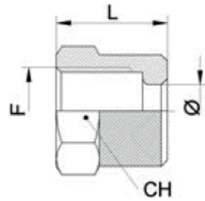
HGC22 Intermediate cross



Part No.	Ø	L	CH	CH1
HGC220600	6/4	22,5	10	12
HGC220800	8/6	22,5	10	14
HGC221000	10/8	25,5	10	16

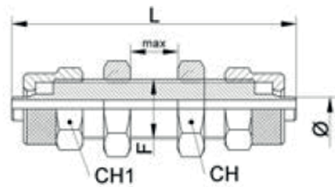
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HGC30 Nut



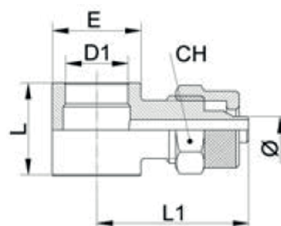
Part No.	Ø	F	L	CH
HGC300400	4/2	M7x0,75	9,0	9
HGC300600	6/4	M10x1	9,0	9
HGC300800	8/6	M12x1	11,0	14
HGC301000	10/8	M14x1	11,5	16
HGC301200	12/10	M16x1	13,5	19
HGC301500	15/12,5	M20x1	15,5	24

HGC33 Intermediate straight bulkhead connector



Part No.	Ø	F	L	CH	CH1	MAX
HGC330610	6/4	M10x1	48,0	14	12	12,0
HGC330812	8/6	M12x1	50,0	17	14	12,0
HGC331014	10/8	M14x1	51,0	17	16	10,0
HGC331216	12/10	M16x1	52,0	19	19	10,0
HGC331520	15/12,5	M20x1	56,0	24	24	10,0

HGC40 Single banjo



Part No.	Ø	F	L	L1	CH	D1	E
HGC4004M5	4/2	M5	9,0	19,5	9	5,1	9,0
HGC4005M5	5/3	M5	9,0	19,5	9	5,1	9,0
HGC4006M5	6/4	M5	9,0	19,5	9	5,1	9,0
HGC400618	6/4	G1/8	14,5	24,0	12	9,9	14,0
HGC400818	8/6	G1/8	14,5	24,0	14	9,9	14,0
HGC400614	6/4	G1/4	14,5	26,0	12	13,3	18,0
HGC400814	8/4	G1/4	14,5	27,0	14	13,3	18,0
HGC401014	10/8	G1/4	14,5	28,0	16	13,3	18,0
HGC400838	8/6	G3/8	14,5	27,5	14	16,6	18,0
HGC401038	10/8	G3/8	14,5	29,0	14	16,6	21,0

Bolt to be used: HD42 - HD43 - HD44

HGO

Olive Compression Fittings

Olive compression fittings are thus defined as embraces tube is tightened on the fitting by compression of a sharp ogive that embrace the tube. Olive compression fittings are suitable for stiff tubes assembly (made of copper, brass, etc.); in case of use of plastic tubes it is necessary a specific reinforcement (part number HGO32), which must be inserted inside the tube until it reaches the support.



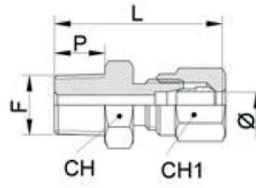
TECHNICAL CHARACTERISTICS

Temperature	-15 ÷ 80 °C
Fluid	compressed air, water, oil
Working pressure	130 bar (Ø4), 180 bar (Ø6), 150 bar (Ø8), 110 bar (Ø10) 75 bar (Ø12), 70 bar (Ø15)
Application fields	pneumatic circuits
Recommended hoses	copper alloy, brass, stainless steel, aluminium, plastic (reinforcing core)

CONSTRUCTIVE CHARACTERISTICS

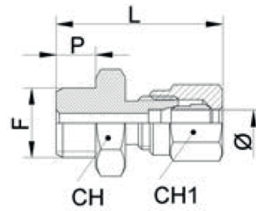
Body	nickel-plated brass
Nut	nickel-plated brass
Seal	NBR

HGO03 Male straight taper thread



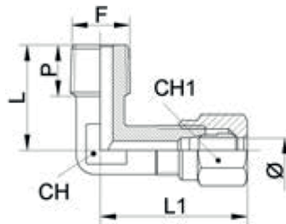
Part No.	Ø	F	P	L	CH	CH1
HGO030418	4	R1/8	8,0	27,5	12	10
HGO030618	6	R1/8	8,0	27,5	12	12
HGO030818	8	R1/8	8,0	31,0	12	14
HGO030614	6	R1/4	11,0	31,5	14	12
HGO030814	8	R1/4	11,0	33,0	14	14
HGO031014	10	R1/4	11,0	33,0	14	17
HGO030838	8	R3/8	11,0	34,0	17	14
HGO031038	10	R3/8	11,0	33,5	17	17
HGO031238	12	R3/8	11,0	33,5	17	19
HGO031212	12	R1/2	14,0	36,5	22	19
HGO031512	15	R1/2	14,0	41,0	22	24

HGO04 Male straight parallel thread



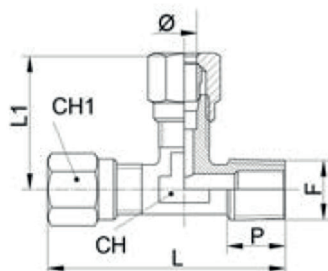
Part No.	Ø	F	P	L	CH	CH1
HGO040418	4	G1/8	6,0	25,5	14	10
HGO040618	6	G1/8	6,0	25,5	14	12
HGO040818	8	G1/8	6,0	29,0	14	14
HGO040614	6	G1/4	8,0	28,5	17	12
HGO040814	8	G1/4	8,0	30,0	17	14
HGO041014	10	G1/4	8,0	30,0	17	17
HGO040838	8	G3/8	9,0	31,0	19	14
HGO041038	10	G3/8	9,0	31,5	19	17

HGO09 Male elbow taper thread



Part No.	Ø	F	P	L	L1	CH	CH1
HGO090418	4	R1/8	8,0	18,0	24,0	9	10
HGO090618	6	R1/8	8,5	17,0	24,5	9	13
HGO090818	8	R1/8	8,0	18,0	25,5	10	14
HGO090614	6	R1/4	11,0	20,0	24,0	10	12
HGO090814	8	R1/4	11,0	21,0	29,0	10	14
HGO091014	10	R1/4	11,0	25,0	29,5	14	17
HGO090838	8	R3/8	11,0	26,5	32,5	14	14
HGO091038	10	R3/8	11,0	26,5	32,5	14	17
HGO091238	12	R3/8	11,0	26,5	33,0	14	19
HGO091212	12	R1/2	14,0	30,0	33,0	17	19
HGO091512	15	R1/2	14,0	30,0	37,0	17	24

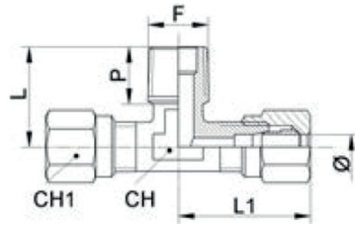
HGO14 T Male lateral taper thread



Part No.	Ø	F	P	L	L1	CH	CH1
HGO140418	4	R1/8	8,0	38,5	22,5	9	10
HGO140618	6	R1/8	8,0	39,5	23,5	9	12
HGO140818	8	R1/8	8,0	46,5	26,5	12	14
HGO140614	6	R1/4	11,0	45,0	25,0	10	12
HGO140814	8	R1/4	11,0	47,5	28,0	10	14
HGO141014	10	R1/4	11,0	53,0	30,0	12	17
HGO141038	10	R3/8	11,0	60,0	34,0	13	17
HGO141238	12	R3/8	11,0	60,0	34,0	13	19
HGO141212	12	R1/2	14,0	64,0	36,0	17	19

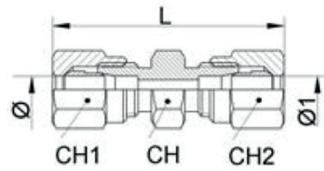
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HGO16 T Male central taper thread



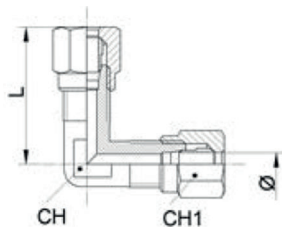
Part No.	Ø	F	P	L	L1	CH	CH1
HGO160418	4	R1/8	8,0	16,0	21,5	9	10
HGO160618	6	R1/8	8,0	16,0	23,0	9	12
HGO160818	8	R1/8	8,0	20,5	26,5	12	14
HGO160614	6	R1/4	11,0	20,0	25,0	10	12
HGO160814	8	R1/4	11,0	20,5	27,0	10	14
HGO161014	10	R1/4	11,0	23,0	30,0	12	17
HGO161038	10	R3/8	11,0	26,0	34,0	13	17
HGO161238	12	R3/8	11,0	26,0	34,0	13	19
HGO161212	12	R1/2	14,0	28,0	36,0	17	19
HGO161512	15	R1/2	14,0	28,0	38,0	17	24

HGO19 Intermediate straight



Part No.	Ø	Ø1	L	CH	CH1	CH2
HGO190400	4	4	35,0	10	10	10
HGO190600	6	6	37,0	12	12	12
HGO190800	8	8	40,0	14	14	14
HGO191000	10	10	42,0	17	17	17
HGO191200	12	12	42,0	19	19	19
HGO191500	15	15	47,0	22	22	22

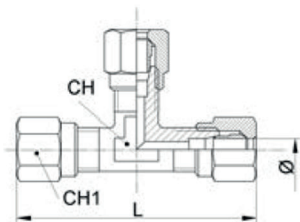
HGO20 Intermediate elbow



Part No.	Ø	L	CH	CH1
HGO200400	4	27,0	9	10
HGO200600	6	24,5	9	13
HGO200800	8	28,5	10	14
HGO201000	10	32,0	14	17
HGO201200	12	35,0	13	19

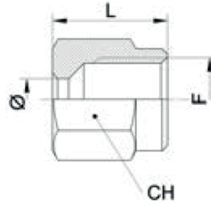
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HGO21 Intermediate Tee



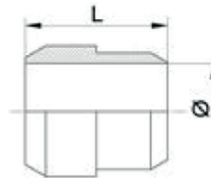
Part No.	Ø	L	CH	CH1
HGO210400	4	42,0	9	10
HGO210600	6	46,0	9	12
HGO210800	8	54,0	12	14
HGO211000	10	60,0	12	17
HGO211200	12	68,0	13	19
HGO211500	15	74,5	17	24

HGO30 Nut



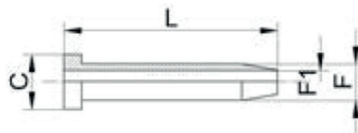
Part No.	Ø	F	L	CH
HGO300400	4	M8x1	11,0	10
HGO300600	6	M10x1	12,0	12
HGO300800	8	M12x1	13,0	14
HGO301000	10	M14x1	13,0	17
HGO301200	12	M16x1	13,0	19
HGO301500	15	M20x1	15,0	24

HGO31 Olive



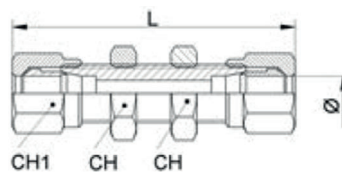
Part No.	Ø	L
HGO310400	4	6,0
HGO310600	6	7,5
HGO310800	8	7,0
HGO311000	10	7,0
HGO311200	12	7,0
HGO311500	15	8,0

HGO32 Reinforcing core



Part No.	F	F1	C	L
HGO320600	4	3,3	5	12,0
HGO320800	6	5,0	7	15,0
HGO321000	8	7,0	9	15,0
HGO321200	10	9,0	11	15,0
HGO321500	12,5	11,5	14	17,0

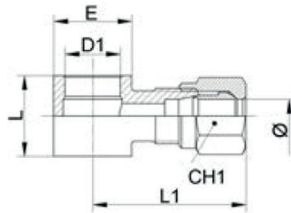
HGO33 Bulkhead connector



Part No.	Ø	L	CH	CH1
HGO330600	6	48,0	14	12
HGO330800	8	53,0	17	14
HGO331000	10	62,5	19	19
HGO331200	12	64,5	22	22

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HGO40 Single banjo



Part No.	Ø	D1	E	L	L1	CH1
HGO400618	6	9,9	14,0	14,5	27,0	12
HGO400818	8	9,9	14,0	14,5	28,0	14
HGO400614	6	13,3	18,0	14,5	30,0	12
HGO400814	8	13,3	18,0	14,5	31,0	14

Bolt to be used: HD42 - HD43 - HD44

HGU

Quick Couplings for Compressed Air

The fittings belonging to this series enable to disconnect in a quick and easy way the pipeline of the main installation without interrupting the compressed air flow coming from the origin source.

The range of quick couplings is composed of the Universal series - male and female model - and the mini series to be used in case reduced dimensions and flow rate are required. Each model is produced according to the international standards in order to be interchangeable in any moment.



TECHNICAL CHARACTERISTICS

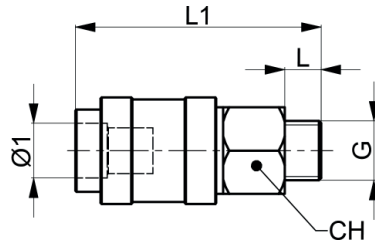
Temperature	-10 ÷ 80 °C
Fluid	compressed air
Working pressure	12 bar

CONSTRUCTIVE CHARACTERISTICS

Body	nickel-plated brass, zinc-plated steel
Ferrule	nickel-plated brass, zinc-plated steel
Seals	NBR
Spring	nickel-plated brass, zinc-plated steel

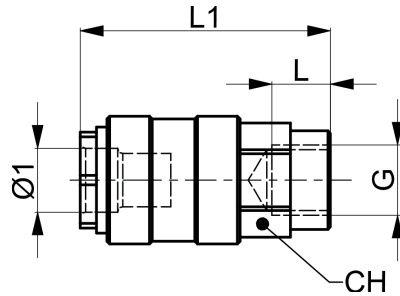
For further technical information contact our Sales Office

HGU2001M Universal male socket



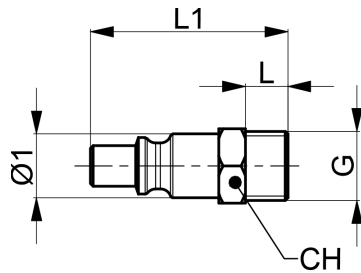
Part No.	G	Ø1	L	L1	CH
HGU2001M14	G 1/4	12	8	54	19
HGU2001M38	G 3/8	12	8	54	19
HGU2001M12	G 1/2	12	12	54	21

HGU2001F Universal female socket



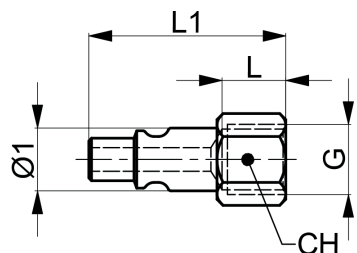
Part No.	G	Ø1	L	L1	CH
HGU2001F14	G 1/4	12	12	47	19
HGU2001F38	G 3/8	12	12	49	21
HGU2001F12	G 1/2	12	15,5	51	24

HGU2002M Universal male plug



Part No.	G	Ø1	L	L1	CH
HGU2002M14	G 1/4	12	8	8	37
HGU2002M38	G 3/8	12	9	39	18

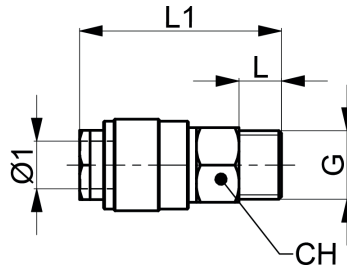
HGU2002F Universal female plug



Part No.	G	Ø1	L	L1	CH
HGU2002F14	G 1/4	12	12	37	15
HGU2002F38	G 3/8	12	12	38,5	19

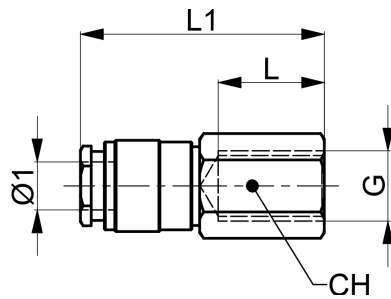
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HGU1001M Male mini socket



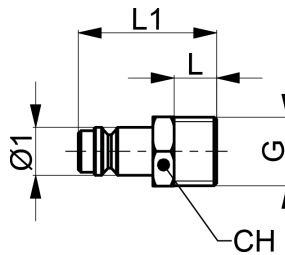
Part No.	G	Ø1	L	L1	CH
HGU1001M18	G 1/8	9	8	38	14
HGU1001M14	G 1/4	9	8	38	14

HGU1001F Female mini socket



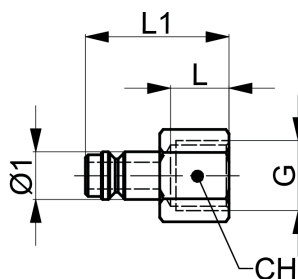
Part No.	G	Ø1	L	L1	CH
HGU1001F18	G 1/8	9	15	38	15
HGU1001F14	G 1/4	9	15	46	17

HGU1002M Male mini plug



Part No.	G	Ø1	L	L1	CH
HGU1002M18	G 1/8	9	8	26	13
HGU1002M14	G 1/4	9	8	26	13

HGU1002F Female mini plug



Part No.	G	Ø1	L	L1	CH
HGU1002F18	G 1/8	9	10	24	12
HGU1002F14	G 1/4	9	11	26	15

HE

Tubes

HEA

Polyamide tubes PA10.12

HEC

Polyurethane tubes Sh. A98

HED

Co-polyurethane tubes Sh. 55D



TECHNICAL CHARACTERISTICS

HEA

Material: Polyamide tubes PA10.12

HEA tubes are produced with an innovative polymer (PA10.12), this material offers similar features as the PA11 and PA12.

Very good dimensional stability.

Very good chemical and mechanical resistances.

Large working temperature (from -60 °C to 130 °C).

Excellent hydrolysis resistance.

Good flexibility.

According to ISO 7628/2010.

HEC

Material: Polyurethane tubes Sh. A98

Excellent abrasion resistance.

Extreme flexibility even at low temperature (-40°C).

Good tear, cutting and perforation resistance.

Fair mechanical properties.

Excellent kinking behaviour leading to small bending radius.

Very good transparency.

Resistant to oil and grease.

HED

Material: Co-polyurethane tubes Sh. 55D

HED tubes are produced with an exclusive recipe of co-polyurethane which combines in one product the best properties of polyurethane and the ones of the Polyamide.

High flexibility.

Excellent bending radius.

Tighter tolerances.

Good hydrolysis resistance.

Good chemical resistance.

Excellent temperature resistance.

TECHNICAL CHARACTERISTICS

> HEA

Part No.	Ø ext.	Ø int.	Bending radius	Working pressure	Burst pressure	Temperature range	Tolerance Ø ext.	ISO7628
	mm	mm	mm	bar	bar	°C	mm	
HEA0420...	4	2	15	47	141	-60 ÷ 130	± 0,10	o
HEA0425...	4	2,5	20	32	96	-60 ÷ 130	± 0,10	
HEA0604...	6	4	35	28	84	-60 ÷ 130	± 0,10	o
HEA0806...	8	6	40	20	60	-60 ÷ 130	± 0,10	o
HEA1008...	10	8	60	16	48	-60 ÷ 130	± 0,10	o
HEA1210...	12	10	85	13	39	-60 ÷ 130	± 0,15	
HEA1412...	14	12	95	11	33	-60 ÷ 130	± 0,15	o

Colors: neutral, black, blue, sky-blue

> HEC

Part No.	Ø ext.	Ø int.	Bending radius	Working pressure	Burst pressure	Temperature range	Tolerance Ø ext.
	mm	mm	mm	bar	bar	°C	mm
HEC0420...	4	2	15	22	67	-40 ÷ 60	± 0,10
HEC0604...	6	4	20	13	40	-40 ÷ 60	± 0,10
HEC0806...	8	6	25	10	29	-40 ÷ 60	± 0,10
HEC1008...	10	8	35	7	22	-40 ÷ 60	± 0,15
HEC1209...	12	9	45	10	29	-40 ÷ 60	± 0,15

Colors: neutral, black, sky-blue

> HED

Part No.	Ø ext.	Ø int.	Bending radius	Working pressure	Burst pressure	Temperature range	Tolerance Ø ext.
	mm	mm	mm	bar	bar	°C	mm
HED0420...	4	2,5	10	22	65	-40 ÷ 100	± 0,10
HED0604...	6	4	15	19	57	-40 ÷ 100	± 0,10
HED0806...	8	6	25	16	47	-40 ÷ 100	± 0,10
HED1008...	10	8	35	12	36	-40 ÷ 100	± 0,10
HED1209...	12	9	45	13	40	-40 ÷ 100	± 0,15

Colors: neutral, black, blue, sky-blue

For color options, add the following suffixes to part no.:

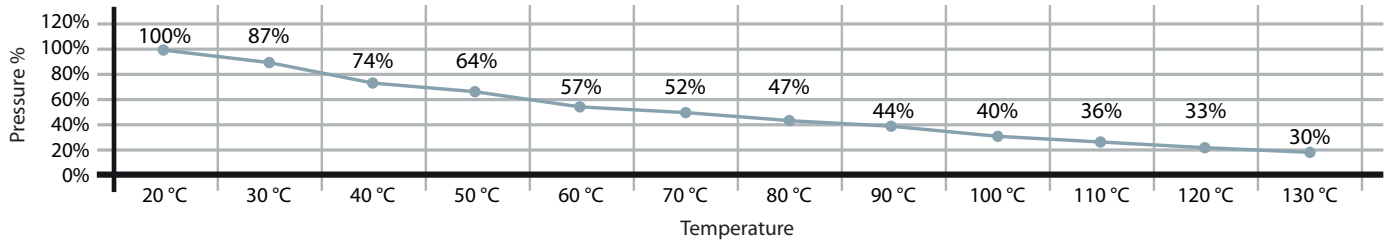
NEU = Neutral **NER** = Black **BLU** = Blue **AZZ** = Sky-blue (example HEA0420NEU)

5

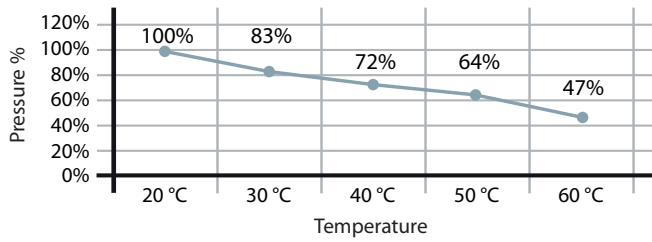
Min. package: 100 m coil

Pressure variation based on temperature

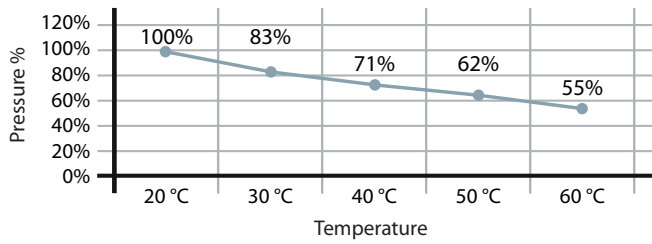
> HEA



> HEC



> HED



HF

Tubes

HFA Rilsan® Spiral tubes
Polyamide Spiral Tubes PA10.12

HFC Elastollan® Spiral tubes with straight ends
Polyurethane Spiral Tubes (Sh.A98) with ends parallelling the spiral axis



TECHNICAL CHARACTERISTICS

> HFA

Part No.	Tube			Spiral		
	Ø external	Ø internal	Linear	Rest	Max lenght	Ø internal
	mm	mm	mt	mm	mt	mm
HFA042010...	4	2	10	360	6	30
HFA042015...	4	2	15	550	9	30
HFA060415...	6	4	15	430	9	60
HFA060430...	6	4	30	870	17	60
HFA080615...	8	6	15	455	9	80
HFA080630...	8	6	30	910	17	80
HFA100815...	10	8	15	490	9	90
HFA100830...	10	8	30	990	17	90
HFA121015...*	12	10	15	430	9	120
HFA121030...*	12	10	30	870	17	120

Colors: neutral, blue, sky-blue, orange * = available only blue and orange

> HFC

Part No.	Tube			Spiral		
	Ø external	Ø internal	Linear	Rest	Max lenght	Ø internal
	mm	mm	mt	mm	mt	mm
HFC64C06...	6	4	6	380	4	25
HFC64C12...	6	4	12	760	8	25
HFC855C06...	8	5,5	6	310	4	40
HFC855C12...	8	5,5	12	640	8	40
HFC107C06...	10	7	6	330	4	50
HFC107C12...	10	7	12	680	8	50
HFC128C06...	12	8	6	320	4	60
HFC128C12...	12	8	12	660	8	60

Colors: neutral, sky-blue End length 150 mm

For color options, add the following suffixes to part no.:

NEU = Neutral **BLU** = Blue **AZZ** = Sky-blue **ARA** = Orange (example HFA042010NEU)



AM4

Air/Oil reservoir

The air/oil reservoir allows the speed control of pneumatic cylinders.

- Double in/out connection on both caps
- Device to avoid turbulent air flow standard supplied
- Standard front level detector (on the side upon request)



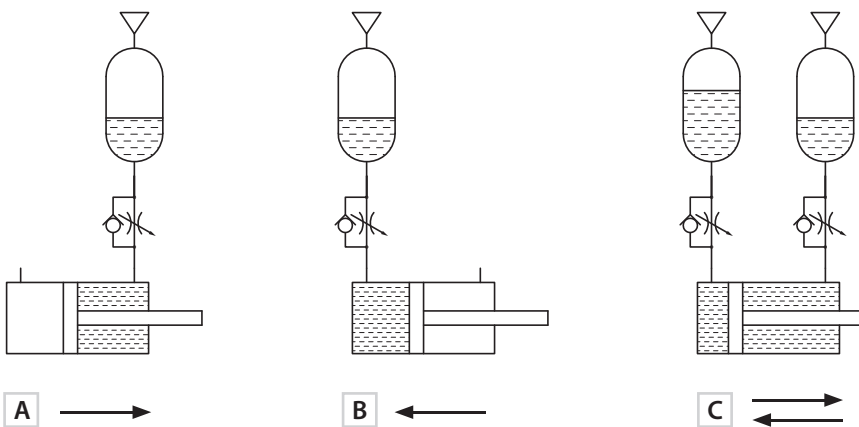
TECHNICAL CHARACTERISTICS

Ambient temperature	-20 ÷ 80 °C
Fluid	filtered air without lubrication hydraulic oil
Working pressure	0 ÷ 8 bar
Size	100 mm

CONSTRUCTIVE CHARACTERISTICS

End caps	technopolymer
Barrel	profiled and anodized aluminium
Piston	NBR

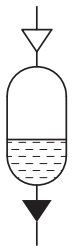
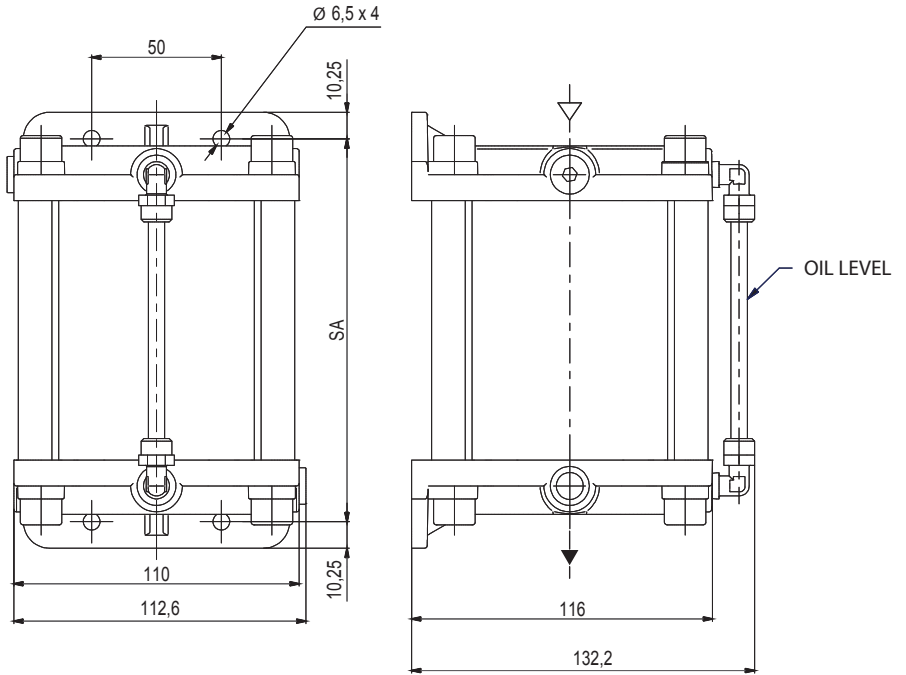
OPERATING DIAGRAM



A **B** **C** = Regulation direction of piston rod's speed

- Fix the reservoir at a higher level than cylinder
- Reservoir's volume must be 20% bigger than cylinder's volume

Air/oil reservoir



5

SA = Overall dimensions of the fixing element

Part No.	Volume (dm ³)	SA	Weight (Kg)
AM41000060	0,6	125	1,1
AM41000080	0,8	147,5	1,3
AM41000120	1,2	197,5	1,7
AM41000160	1,6	247,5	2,2
AM41000200	2,0	297,5	2,6
AM41000240	2,4	347,5	3
AM41000280	2,8	397,5	3,4
AM41000320	3,2	447,5	3,9
AM41000360	3,6	497,5	4,3
AM41000400	4,0	547,5	4,7
AM41000440	4,4	597,5	5,1

YDA-YDR

Shock absorbers

YDA series self-compensating and YDR series progressive adjustable shock absorbers are used to provide a linear deceleration and to let the impacting object stop smoothly. Two lock nuts and impact cap are standard supplied (version without cap upon request).

Advantages:

- Production rate increase
- Machine life extension
- Reduction of vibrations and noise levels
- Reduction of maintenance costs



TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ 85 °C
Stroke	6 - 7 - 10 - 12 - 15 - 25 - 40 - 50 mm
Energy absorption per cycle	3 ÷ 300 Nm
Energy absorption per hour	7000 ÷ 100000 Nm
Effective mass	6 ÷ 1400 Kg
Impact speed	0,3 ÷ 5 m/s

CONSTRUCTIVE CHARACTERISTICS

Body	steel
Piston rod	chromium-plated carbon steel
Piston	carbon steel
Sealings	nitrile rubber (NBR)

CODIFICATION KEY

Y	D	A	0	8	1	0
1	2	3				

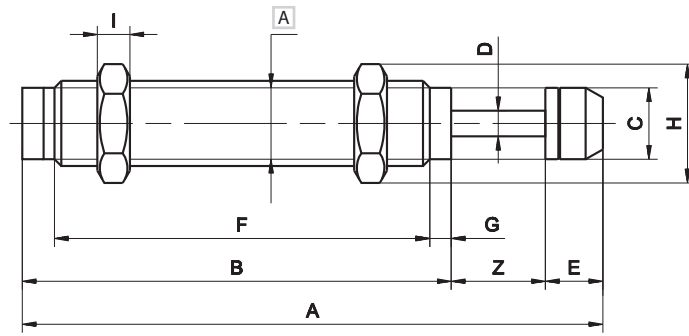
1 Series	2 Thread	3 Stroke
YDA = Self-Compensating	08 = M8 x 1 20 = M20 x 1,5	06 = 6 mm 15 = 15 mm
YDR = Adjustable	10 = M10 x 1 25 = M25 x 1,5	07 = 7 mm 25 = 25 mm
	12 = M12 x 1 27 = M27 x 1,5	10 = 10 mm 40 = 40 mm
	14 = M14 x 1,5 36 = M36 x 1,5	12 = 12 mm 50 = 50 mm

> THREAD SIZE/STROKE

Stroke (mm)	YDA							YDR			
	M8	M10	M12	M14	M20	M25	M27	M14	M20	M25	M36
6	■										
7		■									
10			■								
12				■							
15					■			■			
25						■	■		■	■	■
40										■	
50											■

Special strokes upon request

YDA Dimensions



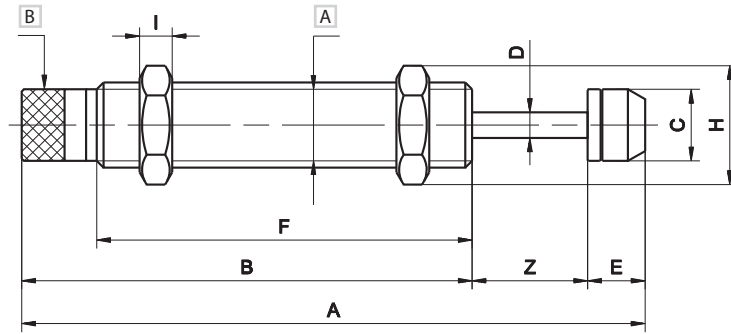
A Thread

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	G	H	I	Part no.
6	M8x1	51,6	40,6	6,6	2,9	8,6	33,6	2	11	3	YDA0806
7	M10x1	62,6	47	8,6	3	8,6	39	3	12,7	3	YDA1007
10	M12x1	71,1	52,5	10,3	3	8,6	44	3	14	4	YDA1210
12	M14X1,5	90	67	12	4	11	58	4	19	5	YDA1412
15	M20X1,5	103	73	18	6	15	62	4	26	7	YDA2015
25	M25X1,5	140,5	99	18	8	16	82	—	32	9	YDA2525
25	M27x1,5	143	99	22	8	19	89	5	32	6	YDA2725

Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
3	7000	6	0,3-2,5	-10 ÷ 85	0,017	YDA0806
6	12400	12	0,3-3,5	-10 ÷ 85	0,028	YDA1007
12	22500	22	0,3-4	-10 ÷ 85	0,032	YDA1210
20	33000	40	0,3-5	-10 ÷ 85	0,070	YDA1412
59	38000	120	0,3-5	-10 ÷ 85	0,16	YDA2015
80	60000	180	0,3-5	-10 ÷ 85	0,295	YDA2525
147	72000	270	0,3-5	-10 ÷ 85	0,375	YDA2725

YDR Dimensions



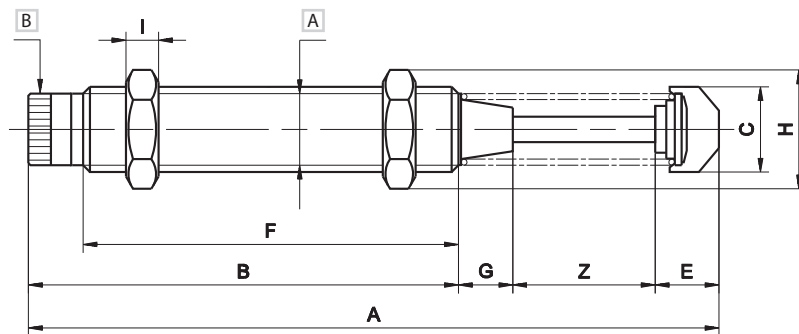
A Thread
B Adjustment screw

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	H	I	Part no.
15	M14x1,5	127,5	102	12	4	10,5	86	19	5	YDR1415
25	M20X1,5	157	117	18	6	15	101	26	7	YDR2025
25	M25X1,5	162,5	118,5	22	8	19	101	32	9	YDR2525

Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
22	26400	80	3	-10 ÷ 85	0,095	YDR1415
39	39000	312	3,5	-10 ÷ 85	0,24	YDR2025
85	51000	400	3,5	-10 ÷ 85	0,35	YDR2525

YDR Dimensions



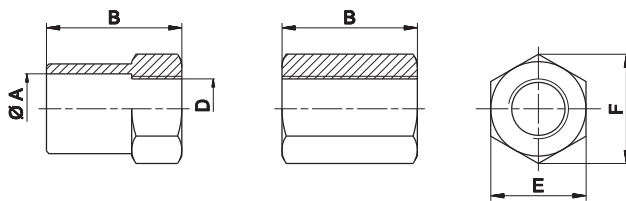
A Thread
B Adjustment screw

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	G	H	I	Part no.
40	M25X1,5	221,5	144,5	22	8	37	117	10	32	9	YDR2540
25	M36X1,5	183,8	133	35,5	10	25,8	103	10	46	15	YDR3625
50	M36X1,5	246,8	171	35,5	10	25,8	134	17	46	15	YDR3650

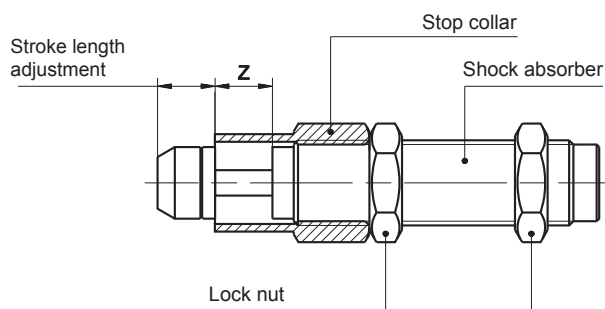
Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
100	84000	700	3,5	-10 ÷ 85	0,455	YDR2540
150	90000	1400	3,2	-10 ÷ 85	0,955	YDR3625
300	108000	1400	3,2	-10 ÷ 85	1,1	YDR3650

Stop collar dimensions

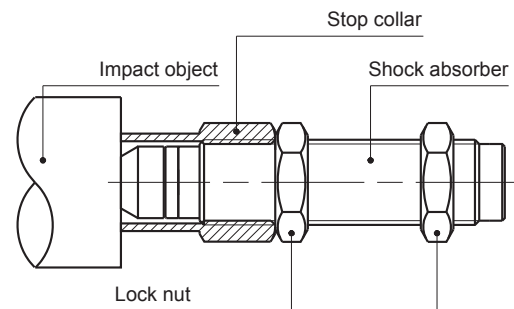


Use of stop nut

> Setting position



> Stroke end



Z = Stroke

Ø A	B	D	E	F	Stop collars	Shock absorbers
-	14	M8 x 1	11	12,5	YDG08	YDA0806
-	16	M10 x 1	13	14,5	YDG10	YDA1007
-	20	M12 x 1	14	16	YDG12	YDA1210
18	27	M14 x 1	19	21,5	YDG14	YDA1412/YDR1415
25	35	M20 x 1,5	26	28,7	YDG20	YDA2015/YDR2025
31,5	45	M25 x 1,5	32	36,7	YDG25	YDA2525/YDR2525
31,5	65	M25 x 1,5	32	36,7	YDG25L	YDR2540
31,5	45	M27 x 1,5	32	36,7	YDG27	YDA2725
45	80	M36 x 1,5	46	53	YDG36	YDA3625/YDR3650

> Assembly instruction

1. The installation must be designed so that the impact body is perpendicular to the shock absorber's axial center
2. Install the stop collar so that the load stops at about 1 mm before the stroke end, and use it to adjust the stroke
3. Do not disassemble it. Do not paint threaded body and rod
4. Do not expose shock absorbers to cutting oil, water, dust, solvent, etc.
5. When installing more than 2 pieces of shock absorbers, please be sure that they have the same stroke
6. YDA self-compensating type does not need adjustment
7. YDR adjustable type is equipped with a stop collar with graduated scale to adjust the absorption rate. The maximum absorption is achieved when the highest number on the scale is reached. In order to adjust the shock absorber, set the adjustment screw to a medium level. If the absorption is too soft, increase the adjustment by turning the adjustment screws.

HZ9

Pressure gauges



TECHNICAL CHARACTERISTICS

Accuracy	EN 837 class 1,6 – 2,5. ASME B10.1 grade B
Protection	IP 43

CONSTRUCTIVE CHARACTERISTICS

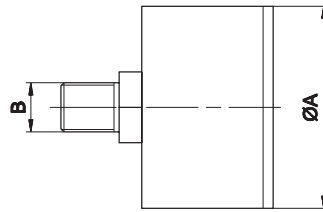
Thread	brass, copper alloy
Movement	brass
Indicator	aluminium, black painted
Dial	acrylic pressure mounted

CODIFICATION KEY

H	Z	9	P	B	S	4	0	0	3	1	8
1	2	3	4	5							

1 Series	2 Type	3 Dial diameter	4 Scale	5 Thread
HZ9 = Pressure gauge	P = Round pressure gauge PB = Pressure gauge with flange for panel mounting PBS = Pressure gauge with bracket for panel mounting	40 = Ø 40 mm 50 = Ø 50 mm 63 = Ø 63 mm	03 = 0 - 2,5 bar 0 - 0,25 MPa 06 = 0 - 6 bar 0 - 0,6 MPa 10 = 0 - 10 bar 0 - 1 MPa	14 = R14 18 = R18

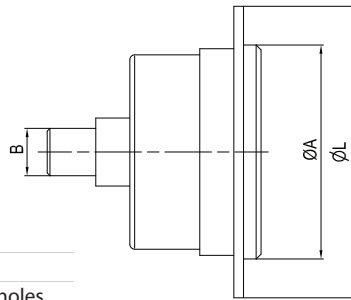
HZ9P Round pressure gauge



Part No.	Ø A	Scale		Thread - B
		bar	MPa	
HZ9P400318	40	0 - 2,5	0 - 0,25	R1/8
HZ9P400618	40	0 - 6	0 - 0,6	R1/8
HZ9P401018	40	0 - 10	0 - 1	R1/8
HZ9P500314	50	0 - 2,5	0 - 0,25	R1/4
HZ9P500614	50	0 - 6	0 - 0,6	R1/4
HZ9P501014	50	0 - 10	0 - 1	R1/4
HZ9P630314	63	0 - 2,5	0 - 0,25	R1/4
HZ9P630614	63	0 - 6	0 - 0,6	R1/4
HZ9P631014	63	0 - 10	0 - 1	R1/4

Body: technopolymer
 Assembly: threaded connection

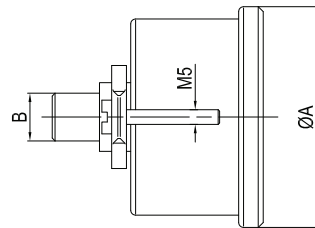
HZ9PB Pressure gauge with flange for panel mounting



Part No.	Ø A	Scale		Thread - B	Ø L
		bar	MPa		
HZ9PB400318	40	0 - 2,5	0 - 0,25	R1/8	60,5
HZ9PB400618	40	0 - 6	0 - 0,6	R1/8	
HZ9PB401018	40	0 - 10	0 - 1	R1/8	
HZ9PB500314	50	0 - 2,5	0 - 0,25	R1/4	64
HZ9PB500614	50	0 - 6	0 - 0,6	R1/4	
HZ9PB501014	50	0 - 10	0 - 1	R1/4	
HZ9PB630314	63	0 - 2,5	0 - 0,25	R1/4	74
HZ9PB630614	63	0 - 6	0 - 0,6	R1/4	
HZ9PB631014	63	0 - 10	0 - 1	R1/4	

Body: metal, black painted
 Assembly: chromium plated front flange with 3 holes

HZ9PBS Pressure gauge with bracket for panel mounting

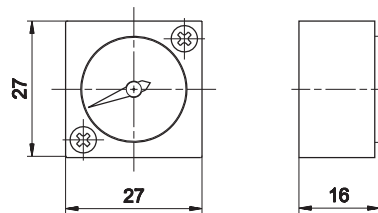


Part No.	Ø A	Scale		Thread - B
		bar	MPa	
HZ9PBS400318	40	0 - 2,5	0 - 0,25	R1/8
HZ9PBS400618	40	0 - 6	0 - 0,6	R1/8
HZ9PBS401018	40	0 - 10	0 - 1	R1/8
HZ9PBS500314	50	0 - 2,5	0 - 0,25	R1/4
HZ9PBS500614	50	0 - 6	0 - 0,6	R1/4
HZ9PBS501014	50	0 - 10	0 - 1	R1/4
HZ9PBS630314	63	0 - 2,5	0 - 0,25	R1/4
HZ9PBS630614	63	0 - 6	0 - 0,6	R1/4
HZ9PBS631014	63	0 - 10	0 - 1	R1/4

Body: metal, black painted
 Montaggio: border with rear bracket

5

HZ9464G Recessed pressure gauge



Body: tecnopolymer
 Assembly: HZE series regulator and filter regulator size 0-1-2
 Scale: 0 ÷ 12 bar
 Dial: polycarbonate
 Accuracy: ± 3% full scale
 Screw torque: Max 0,6 Nm

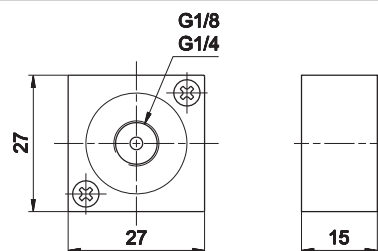
HZE7Z Threaded adaptor for pressure gauge



G1/8
 HZE7Z480



G1/4
 HZE7Z490



Screw torque: Max 0,6 Nm

HZ9N

Digital Pressure switch/Vacuum switch

- Port G1/8 - M5
- Available adaptor for panel mounting, protection cover and supports



TECHNICAL CHARACTERISTICS

		HZ9NC Vacuum switch	HZ9NP Pressure switch
Ambient temperature		0 ÷ 50 °C	
Fluid		filtered air, inert gases non-corrosive non-flammable	
Working pressure		-1 ÷ 1 bar	0 ÷ 10 bar
Pressure range		-1 ÷ 1 bar	-1 ÷ 10 bar
Max. pressure		3 bar	15 bar
Set pressure resolution	kPa	0,1	-
	MPa	-	0,001
	kgf/cm ²	0,001	0,01
	bar	0,001	0,01
	psi	0,01	0,1
	InHg	0,1	-
Connections		R 1/8 - M5F	

CODIFICATION KEY

H	Z	9	N	P	4	0	0	4			
1		2		3		4					

1 Series	2 Pressure range	3 Output signal
HZ9N = Digital Pressure switch/Vacuum switch	C = Compound (-1 ÷ 1 bar) P = Positive (0 ÷ 10 bar) P40 = Positive (0 ÷ 10 bar) for HZE regulator and filter-regulator assembly	010 = 1 NPN output + 1 analog output (1-5V) 011 = 1 NPN output + 1 analog output (4-20mA) 02 = 2 NPN outputs 030 = 1 PNP output + 1 analog output (1-5V) 031 = 1 PNP output + 1 analog output (4-20mA) 04 = 2 PNP outputs
4 Options		
M08 = M8 4 Pin male (Standard) M12 = M12 4 Pin male (upon request)		

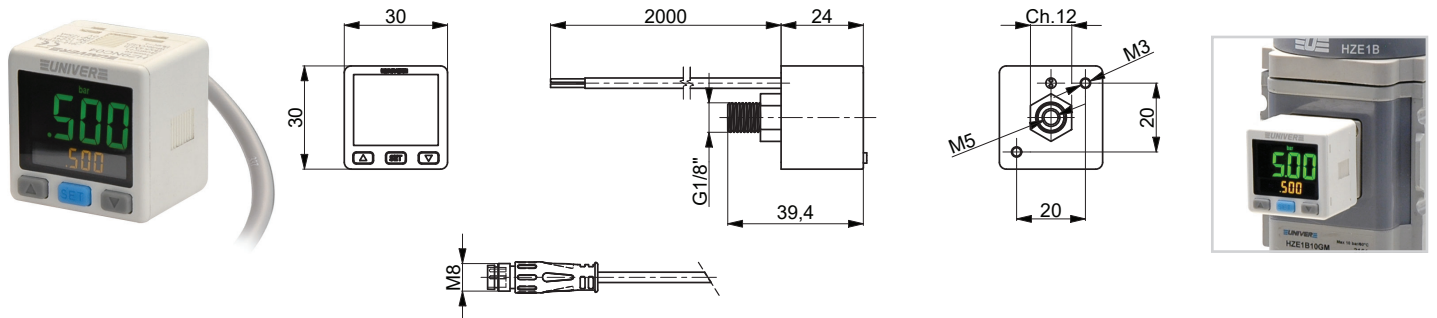
Standard version 2 meters cable

ELECTRICAL CHARACTERISTICS

Power supply voltage		12 ÷ 24V DC ± 10%, ripple max ≤ 10%
Current consumption		≤ 40mA (with no load)
Switch output	PNP/NPN	open collector 2 outputs
	Max. load current	125 mA
	Max. supply voltage	24 V DC
	Residual voltage	≤ 1,5 V
Repeatability (switch output)		≤ ± 0,2% F.S. ± 1 digit
Hysteresis		adjustable ^(A) (one point set mode, hysteresis mode, window comparator mode)
Response time		≤ 2,5 ms (chattering-proof function: 25ms, 100 ms, 250 ms, 500 ms, 1000 ms, 1500 ms selectable)
Output short circuit protection		yes
Analog output (voltage output)	Voltage	1-5 V ± ± 2,5% F.S.
	Linearity	≤ ± 1% F.S.
	Output impedance	about 1k Ω
Analog output (current output)	Current	4 ÷ 20 mA ± ± 2,5% F.S.
	Linearity	≤ ± 1% F.S.
	Max. load impedance	300 Ω a 12 V DC, 600 Ω a 24 V DC
	Min. load impedance	50 Ω
7 segment LCD display		main display digit 3 ^{1/2} two colors (red/green) secondary display digit 3 ^{1/2} orange (sampling rate: 5 volte/sec.)
Indicator accuracy		≤ ± 2% F.S. ± 1 digit (ambient temperature: 25 ± 3°C)
Switch ON indicator		orange output 1 and 2
Environment	Enclosure	IP40
	Storage temperature	-10 ÷ 60°C (no condensation or freezing)
	Humidity	35 ÷ 85% relative humidity (no condensation)
	Withstand voltage	1000 V AC in 1-min between case and lead wire
	Insulation resistance	min. 50 MΩ (a 500 V DC, between case and lead wire)
	Vibration	total amplitude 1,5 mm o 10G, 10Hz ÷ 150Hz, 10Hz for 1 minute, 2 hours direction X,Y and Z
	Shock	100m/s ² (10G), 3 times direction X,Y and Z
Temperature characteristic		≤ ± 2% F.S. of detected pressure (25°C) at temperature range of 0-50°C
Lead wire		Oil-resistance cable (0,15 mm ²)
Weight		about 80g (with 2 meters lead wire), about 45g (with M8 connector)

(A) = Hysteresis value is adjustable within 1 ÷ 8 digits for one point set mode and window comparator mode

5



HZ9N1F

HZ9N2F

HZ9NM08-0200

DHF...M12



Adapter for panel assembly + protection cap



Supports (2 pcs)



M8 Extension 2m Cable



In-line M12 connection 3m cable
DHF-033M12
In-line M12 connection 5m cable
DHF-053M12

HZ9N_50

Digital Pressure switch/Vacuum switch IP65

- IP65 PROTECTION
Against water and dust from all directions
- 316L STAINLESS STEEL SENSOR AND FITTING
Suitable for aggressive fluids and gases
- 2-COLOUR DIGITAL LCD DISPLAY
Free configuration according to the applications
- QUICK CONNECTION
Connector with quick installation cable standard supplied
- COPY FUNCTION
The setting of master HZ9N_50 can be copied onto slave pressure switches



TECHNICAL CHARACTERISTICS

	HZ9NC50 Vacuum switch	HZ9NP50 Pressure switch
Ambient temperature	0 ÷ 50 °C	
Fluid	filtered air, inert gases non-corrosive non-flammable	
Working pressure	-1 ÷ 1 bar	0 ÷ 10 bar
Pressure range	-1 ÷ 1 bar	-1 ÷ 10 bar
Max. pressure	3 bar	15 bar
Set pressure resolution	kPa	0,1
	MPa	-
	kgf/cm ²	0,001
	bar	0,001
	psi	0,01
InHg	0,1	-
Connections	R 1/8 - M5F	

CODIFICATION KEY

H	Z	9	N	P	5	0	0	1	0			
1		2		3		4		5				

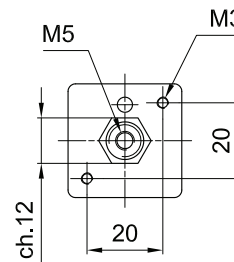
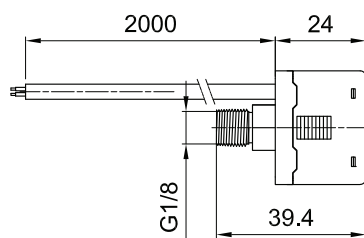
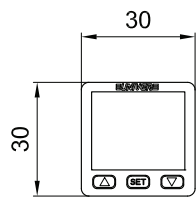
1 Series HZ9N = Digital Pressure switch/Vacuum switch	2 Pressure range C = Compound (-1 ÷ 1 bar) P = Positive (0 ÷ 10 bar)	3 Type 50 = IP65
4 Output signal 010 = 2 NPN outputs + 1 analog output (1-5V) 011 = 2 NPN outputs + 1 analog output (4-20mA) 02 = 2 NPN outputs + copy function 030 = 2 PNP outputs + 1 analog output (1-5V) 031 = 2 PNP outputs + 1 analog output (4-20mA) 04 = 2 PNP outputs + copy function	5 Options L05 = Cable 5 m Standard version 2 m cable	

ELECTRICAL CHARACTERISTICS

Power supply voltage		12 ÷ 24V DC ± 10%, ripple max ≤ 10%
Current consumption		≤ 40mA (with no load)
Switch output	PNP/NPN	open collector 2 outputs
	Max. load current	125 mA
	Max. supply voltage	24 V DC
	Residual voltage	≤ 1,5 V
Repeatability (switch output)		≤ ± 0,2% F.S. ± 1 digit
Hysteresis		adjustable ^(A) (one point set mode, hysteresis mode, window comparator mode)
Response time		≤ 2,5 ms (chattering-proof function: 25ms, 100 ms, 250 ms, 500 ms, 1000 ms, 1500 ms selectable)
Output short circuit protection		yes
Analog output (voltage output)	Voltage	1-5 V ≤ ± 2,5% F.S.
	Linearity	≤ ± 1% F.S.
	Output impedance	about 1k Ω
Analog output (current output)	Current	4 ÷ 20 mA ≤ ± 2,5% F.S.
	Linearity	≤ ± 1% F.S.
	Max. load impedance	250 Ω a 12 V DC, 600 Ω a 24 V DC
	Min. load impedance	50 Ω
7 segment LCD display		main display digit 3 ^{1/2} two colors (red/green)
Indicator accuracy		≤ ± 2% F.S. ± 1 digit (ambient temperature: 25 ± 3°C)
Switch ON indicator		orange output 1 and 2
Environment	Enclosure	IP65
	Storage temperature	-10 ÷ 60°C (no condensation or freezing)
	Humidity	35 ÷ 85% relative humidity (no condensation)
	Withstand voltage	1000 V AC in 1-min between case and lead wire
	Insulation resistance	min. 50 MΩ (a 500 V DC, between case and lead wire)
	Vibration	total amplitude 1,5 mm o 10G, 10Hz ÷ 150Hz, 10Hz for 1 minute, 2 hours direction X,Y, Z
	Shock	100m/s ² (10G), 3 times direction X,Y, and Z
Temperature characteristic		≤ ± 2,5% F.S. of detected pressure (25°C) at temperature range of 0-50°C
Lead wire		Oil-resistance cable (0,15 mm ²)
Weight		about 86g (with 2 m lead wire)

(A) = Hysteresis value is adjustable within 1 ÷ 8 digits for one point set mode and window comparator mode

5



HZ9N1F-50

HZ9N2F-51

HZ9N2F-52



Adapter for panel assembly + protection cap



Support



Support

HZ9N12

Adjustable diaphragm pressure switch



ATEX version available
For further information please contact our Sales Office

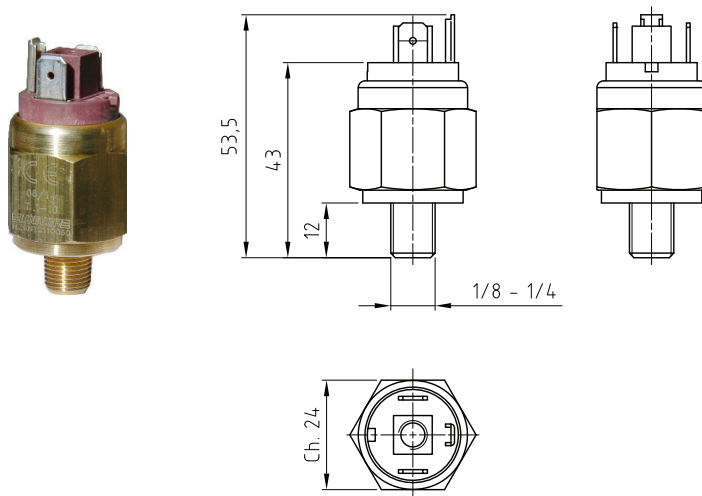
TECHNICAL CHARACTERISTICS

Max pressure	80 bar
Max temperature	-10 ÷ 120 °C
Max voltage	250 V AC
Max current	0,5 A
Body	brass

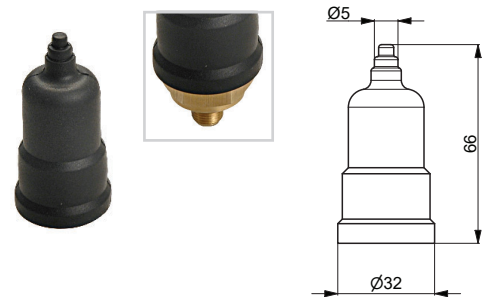
Version with NC - NC/NO contact upon request

Part No.	Adjustable range (bar)	Tolerance 20° C (bar)	Contact	Thread
HZ9N12110060	1 - 10	± 0,5	NO	R1/8
HZ9N12110080	1 - 10	± 0,5	NO	R1/4
HZ9N12111060	0,1 - 1	± 0,1	NO	R1/8
HZ9N12111080	0,1 - 1	± 0,1	NO	R1/4

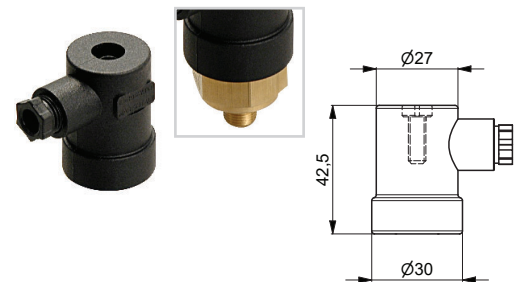
ATEX version available
For further information please contact our Sales Office



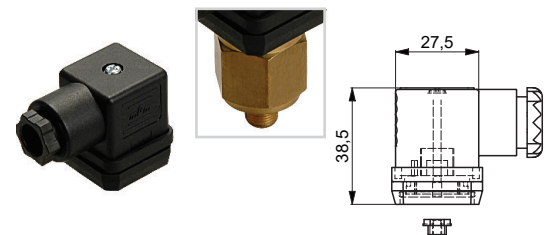
HZ9N12A Rubber protection cap IP54



HZ9N12B Plastic protection cap IP65



HZ9N12C Protective connector IP65 DIN



DF

Magnetic and Electronic proximity sensor

Sensors assembled on cylinders detect the position of the piston by switching an electric signal when the magnetic field, produced by the magnet in the piston, is approaching. Available in two different types: electromechanical with Reed bulb and electronic with magnetoresistive effect both in NO version with PNP output and NC version with NPN output.

The Reed bulb type normally works in both direct and alternating current while the electronic type works in direct current only (max 30V DC).

Available ATEX version upon request

CE Ex II 3 GD c nA II T5 -10°C ≤ Ta ≤ 45°C

For types and versions, see ATEX catalogue



TECNICAL CHARACTERISTICS

Type	ELECTROMECHANICAL REED			ELECTRONIC PNP
	DF-220	DF-330	DF-440	DF-770
Part no.				
Working voltage (V AC/DC)	5÷30 V AC/DC	5÷30 V AC/DC	5÷30 V AC/DC	5÷30 V DC
Max switching current (mA)	100	100	100	100
Max switching power (W/VA)	3	3	3	3
Max voltage drop (V AC/DC)	<3,5	0,1	0,1	0,7
Minimum magnetic field (gauss)	60	60	60	30
Opening response time (ms)	< 0,5	< 0,5	< 0,5	0,08
Closing response time (ms)	< 1	< 1	< 1	0,03
Electric life with resistive load (cycles)	>10 ⁷	>10 ⁷	>10 ⁷	>10 ⁹
State indicator (LED)	red	red	red	red
Cable number and section (mmq)	2x0,14	3x0,14	3x0,14	3x0,14
Cable length (mm)	3000	3000	3000	3000
Electric circuit	A	C	D	C
Protection degree (EN60529)	IP67			
Working temperature (°C)	-20 ÷ +80			

OTHER VERSIONS AVAILABLE

With NPN 3m cable	DF-330NPN (ref. electrical circuit E)			
With 5m cable	DF-220L5		DF-330L5	
With 10m cable	DF-220L10		DF-330L10	
With 0,2m cable with M08 connector	DF-220M08	DF-330M08	DF-440M08	DF-770M08
With 0,2m cable with M12 connector	DF-220M12	DF-330M12	DF-440M12	DF-770M12
3m ext. cable with M08 3-poles connect.	DHF-033M08			
5m ext. cable with M08 3-poles connect.	DHF-053M08			
3m ext. cable with M12 3-poles connect.	DHF-033M12			
5m ext. cable with M12 3-poles connect.	DHF-053M12			
Cable clamping	DF-001			

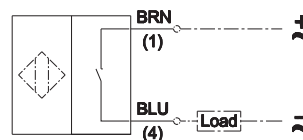
When using the M08 and M12 3-poles extension cable with DF-220 magnetic sensors, exclude the blue wire before connection.

Make sure to correct the polarity connection while using direct current; avoid magnetic fields influencing the electronic sensor; install the KM-008200 protection filter in case of use of extension cables longer than 10m; install dedicated filters in case of inductive loads.

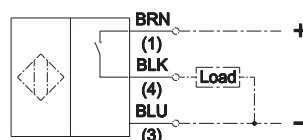
Subject to change

ELECTRICAL CIRCUITS

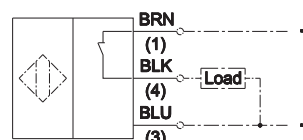
A AC/DC 2 wires NO



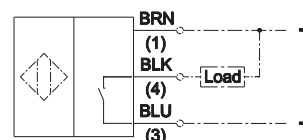
C DC 3 wires PNP NO



D DC 3 wires PNP NC



E DC 3 wires NPN NO

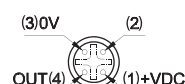


BRN = Brown BLK = Black BLU = Blue

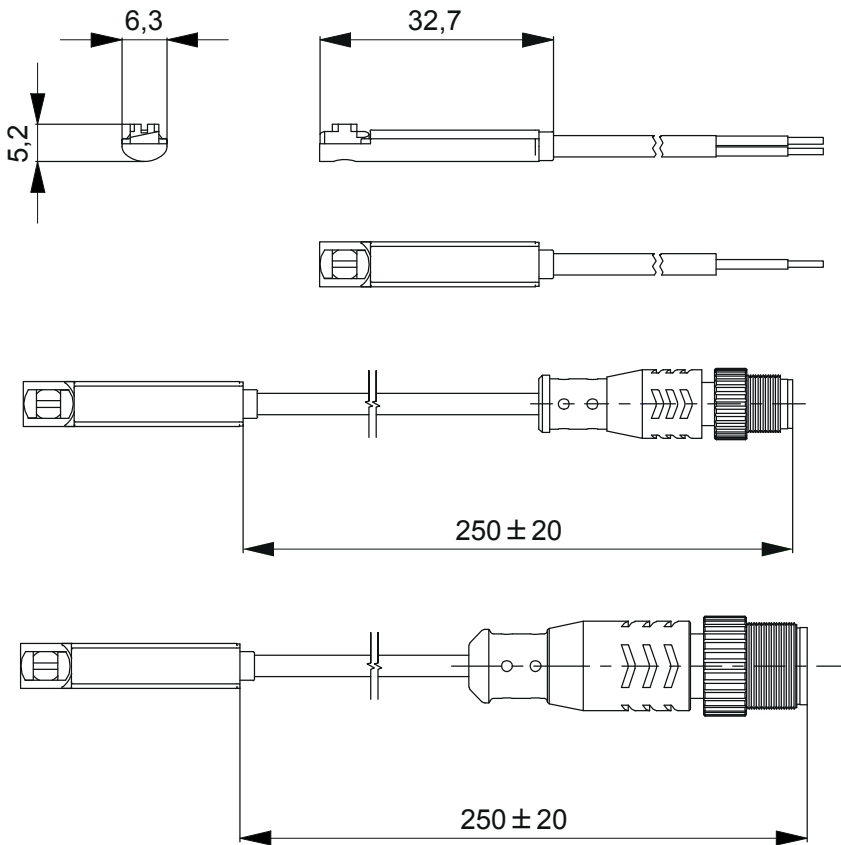
M08



M12

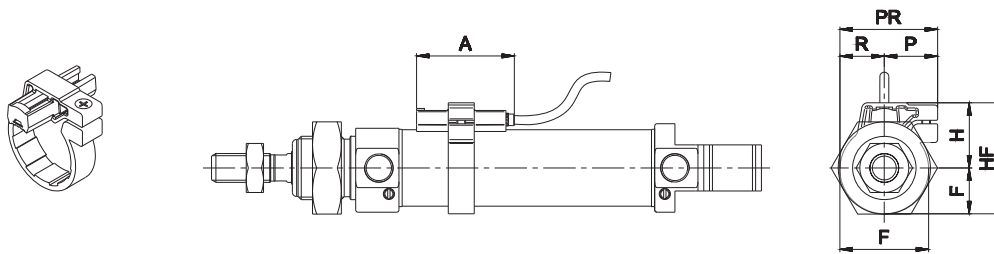


Dimensions



Fixing bracket for M series cylinders

5

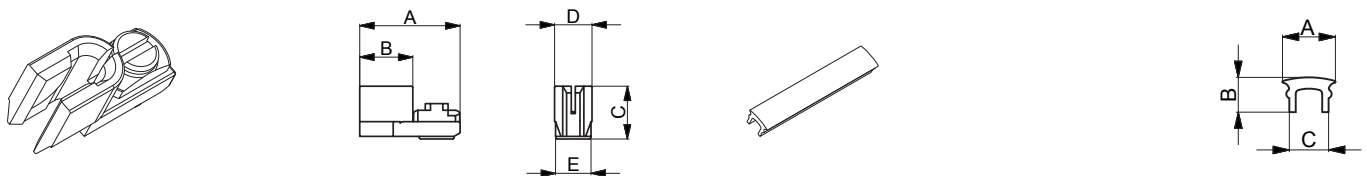


Material: body: polycarbonate
screw: chromium-plated steel

Ø	A	F	H	HF	P	R	PR	Part no.
10	34	8	17	25	15	8	23	DH-M10DF
12	34	8	17	25	15	8	23	DH-M12DF
16	34	11	18	29	17	11	28	DH-M16DF
20	34	12	20	32	17	12	29	DH-M20DF
25	34	16	23	39	19	16	35	DH-M25DF

DF sensor cable clamping

DF sensor covering strip



Material: body: polycarbonate
screw: chromium-plated steel

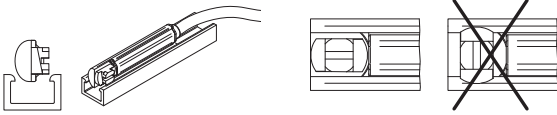
A	B	C	D	E	Part no.
15	7,8	7,9	5,8	5,5	DF-001

Material: pvc

A	B	C	Part no.
7	4,6	5,2	DHF-002010

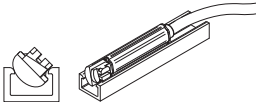
Assembly scheme

1



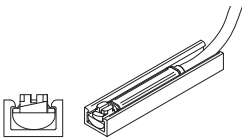
Put the sensor in the proper groove and make sure that the fastening plate has the slot for screwdriver along the sensor axis.

2



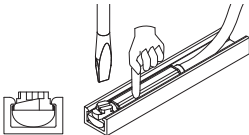
Put the sensor inside its groove and make sure that the fastening plate is on the open part of the groove.

3



Check the correct position of the sensor in the groove.
Turn it to the wished position for detection.

4



Keep the sensor in its position and screw the fastening plate to fix the sensor in the groove.
Max torque: 0,5 ÷ 1 Nm

DH

Magnetic and Electronic proximity sensor

Sensors assembled on cylinders detect the position of the piston by switching an electric signal when the magnetic field, produced by the magnet in the piston, is approaching. Available in two different types: electromechanical with Reed bulb and electronic with magnetoresistive effect both in NO version with PNP output and NC version with NPN output.

The Reed bulb type normally works both in direct and in alternating current while the electronic type works in direct current only (max 30V DC).

Available ATEX version upon request

CE Ex II 3 GD c nA II T5 -10°C ≤ Ta ≤ 45°C

For types and versions, see ATEX catalogue



TECNICAL CHARACTERISTICS

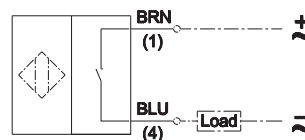
Type	ELECTROMECHANICAL REED			ELECTRONIC PNP
	KM-032000	DH-200	DH-500	DH-700
Part no.				
Working voltage (V AC/DC)	5÷250 V AC/DC	5÷250 V AC/DC	5÷250 V AC/DC	10÷30 V DC
Max switching current (mA)	1000	200	200	200
Max switching power (W/VA)	30	10	10	5
Max voltage drop (V AC/DC)	< 3,5	< 3,5	< 3,5	0,7
Minimum magnetic field (gauss)	85	85	60	30
Opening response time (ms)	< 0,5	< 0,5	< 0,5	0,08
Closing response time (ms)	< 1	< 1	< 1	0,03
Electric life with resistive load (cycles)	>10 ⁷	>10 ⁷	>10 ⁷	>10 ⁹
State indicator (LED)	red	red	red	red
Cable number and section (mmq)	2x0,25	2x0,25	2x0,25	3x0,25
Cable length (mm)	3000	3000	3000	3000
Electric circuit	A	A	A	C
Protection degree (EN60529)	IP65			
Working temperature (°C)	-20 ÷ +80			

OTHER VERSIONS AVAILABLE

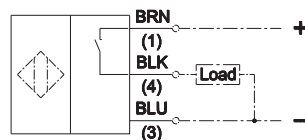
With 5m cable	-	DH-200L5	DH-500L5	DH-700L5
With 10m cable	-	DH-200L10	DH-500L10	DH-700L10
With 0,2m cable with M08 connector 60 V	-	DH-200M08	DH-500M08	DH-700M08
With 0,2m cable with M12 connector	-	DH-200M12	DH-500M12	DH-700M12
3m ext. cable with M08 3-poles connect. 60 V		DHF-033M08		
5m ext. cable with M08 3-poles connect. 60 V		DHF-053M08		
3m ext. cable with M12 3-poles connect.		DHF-033M12		
5m ext. cable with M12 3-poles connect.		DHF-053M12		

ELECTRICAL CIRCUITS

A AC/DC 2 wires NO



C DC 3 wires PNP NO

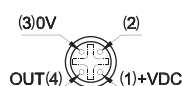


BRN = Brown BLK = Black BLU = Blue

M08

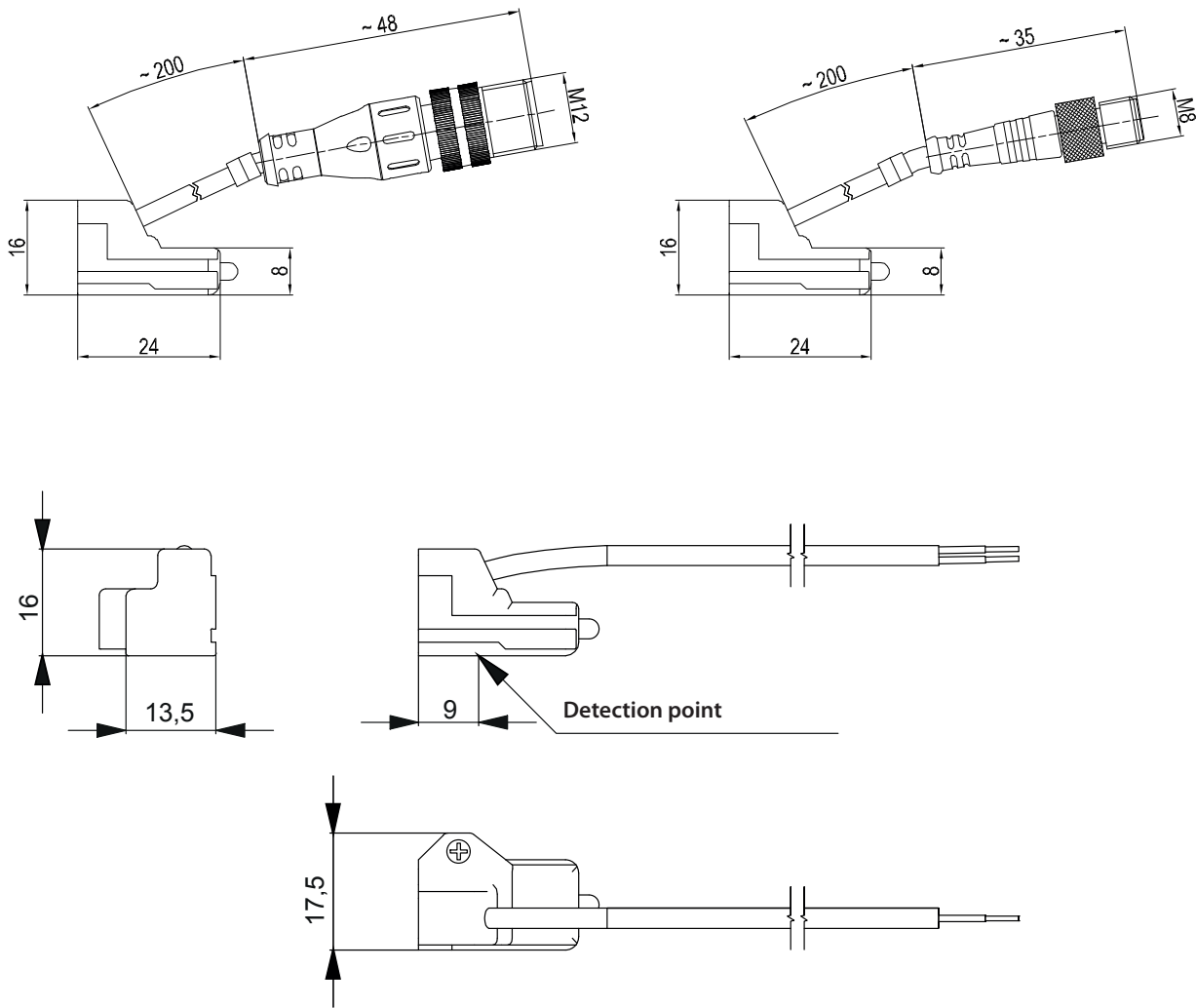


M12



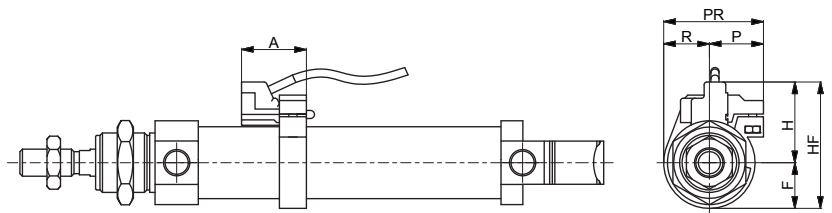
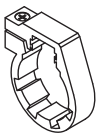
When using the M08 and M12 3-poles extensions cable with DH-200 and DH-500 magnetic sensors, exclude the blue wire before connection. Make sure to correct polarity connection while using direct current; avoid magnetic fields influencing the electronic sensor; install the KM-008200 protection filter in case of extension cables longer than 10m; install dedicated filters in case of inductive loads. The extension cable may be supplied at the requested length. For the version without LED indicator, please add suffix "E".

Dimensions



5

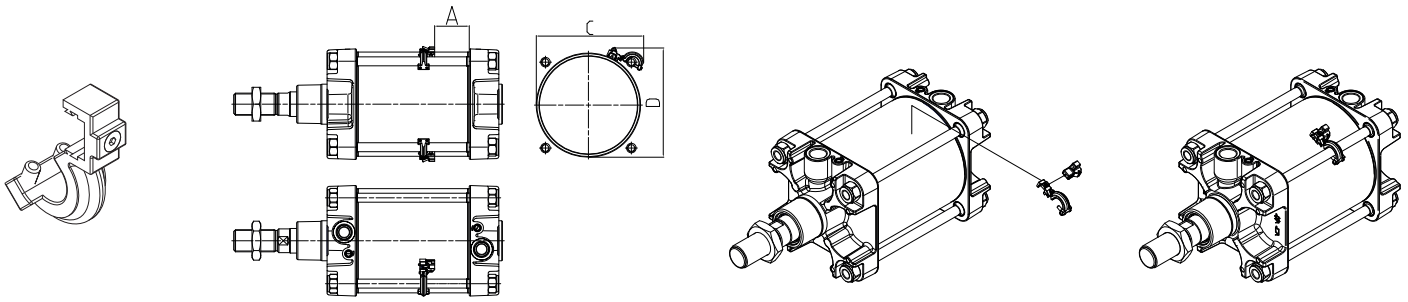
Fixing bracket for M series cylinders



Material: body: polycarbonate
screw: chromium-plated steel

Ø	A	F	H	HF	P	R	PR	Part no.
10	24	12,5	22,5	35	17	10	27	DH-M10
12	24	12,5	23,5	35	17	10	27	DH-M12
16	24	12,5	25	40	18	13	31	DH-M16
20	24	12,5	27	46	18	17	35	DH-M20
25	24	12,5	30	48	20	17	37	DH-M25

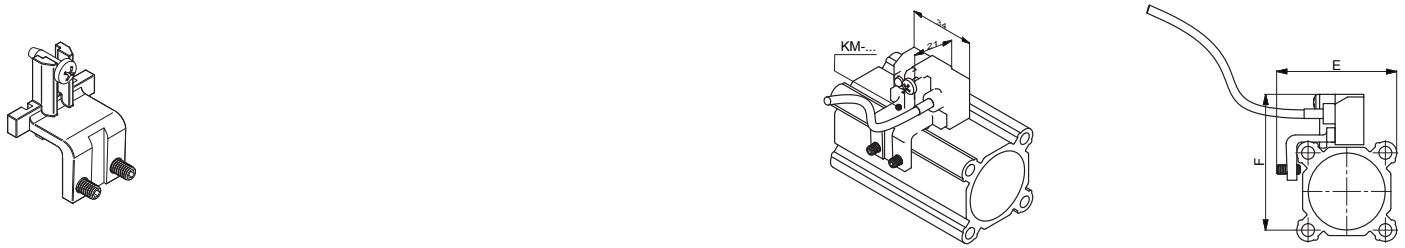
Fixing bracket for K series cylinders (Ø160-200)



Material: Anodized aluminium

Ø	A - B	C	D	Part no.
160	25 - 27	180	180	DH-K160200
200	24 - 26	200	220	

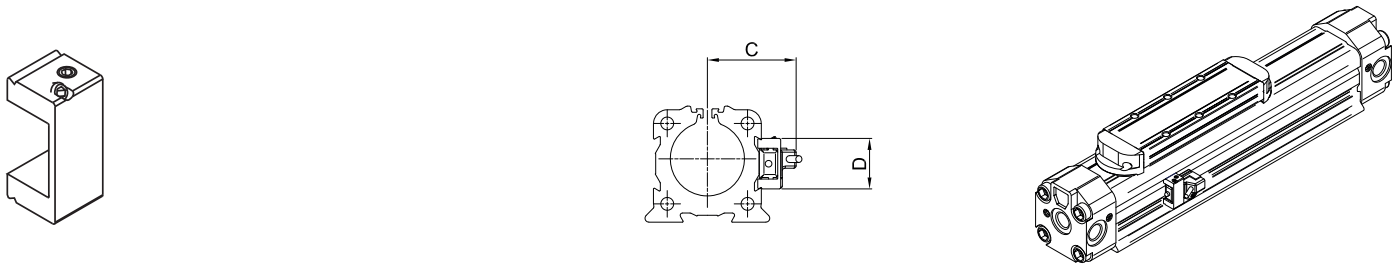
Fixing bracket for ISO cylinders (Ø 32-125)



Material: Anodized aluminium

Bracket part no.	E	F	Sensor plus bracket part no.
DH-K032050	50	62	KM-032050
	55	67	
	65	77	
DH-K063125	80	82	KM-063100
	97	109	
	114	126	
	137	149	

Fixing bracket for S1 series rodless cylinders



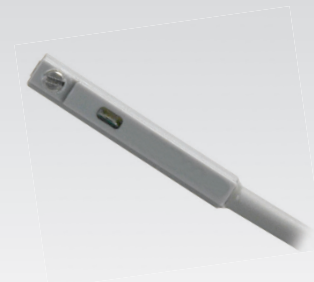
Material: Anodized aluminium

Ø	A - B	C	D	Mass g	Part no.
25	25 - 35	34	21	4	DH-S25
32	35 - 35	39	22	6	DH-S32
40	50 - 50	46	29	8	DH-S40
50	60 - 60	54	35	12	DH-S50

DF-T

Magnetic and Electronic proximity sensor

Sensors assembled on the cylinders detect the position of the piston by switching an electric signal as the magnetic field, produced by the magnet in the piston, approaches. Available in two different types: electromechanical with Reed bulb and electronic with magnetoresistive effect both in NO version with PNP output. The Reed bulb type normally works in both direct and alternating current while the electronic type works in direct current only (max 30V DC). In both types, the operative condition is indicated by a light diode.



TECNICAL CHARACTERISTICS

Type	ELECTROMECHANICAL REED			ELECTRONIC PNP
	DF-T200L03	DF-T200M08	DF-T700L03	DF-T700M08
Part no.	DF-T200L03	DF-T200M08	DF-T700L03	DF-T700M08
Working voltage (V AC/DC)	5÷120 V AC/DC	5÷120 V AC/DC	5÷30 V DC	5÷30 V DC
Max switching current (mA)	100	100	200	200
Max switching power (W/V)	10	10	6	6
Temperature (°C)	-10 ÷ +70			
Max voltage drop (V AC/DC)	2,5	2,5	1	1
Cable number and section (mmq)	2 x 2,8 (PUR)	2 x 2,8 (PUR)	3x2,8 (PUR)	3x2,8 (PUR)
Cable lenght (mm)	3000	300	3000	300
Contact	NO	NO	NO	NO
Max response time (ms)	1	1	1	1
State indicator (LED)	red	red	green	green
Electric circuit	A	-	C	-
Protection degree (NEMA 6)	IP67			
Shock resistance (G)	30	30	50	50

EXTENSION CABLES

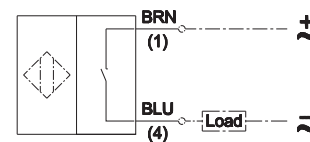
3m ext. cable with M08 3-poles connect. max 60 V	DHF-033M08
5m ext. cable with M08 3-poles connect. max 60 V	DHF-053M08

When using the M08 3-poles extensions cable with DF-T200 magnetic sensors, exclude the blue wire before to connect.

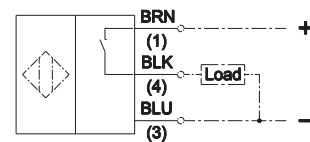
Pay attention to correct polarity with using direct current; avoid magnetic fields to influence the electronic sensor; provide the KM-008200 filter in case of use of extension cables longer than 10m; provide dedicated filters in case of use of inductive loads.

ELECTRICAL CIRCUITS

A AC/DC 2 wires NO



C DC 3 wires PNP NO



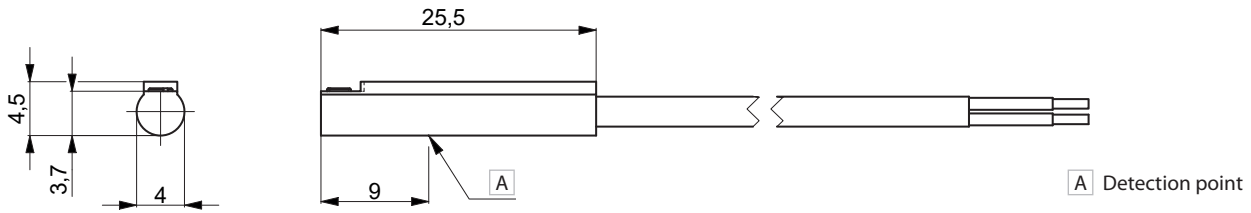
BRN = Brown BLK = Black BLU = Blue

M08

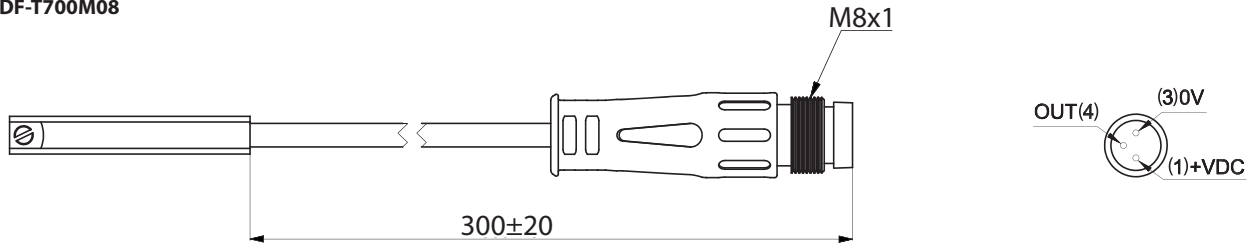


Dimensions

- DF-T200L03
- DF-T700L03



- DF-T200M08
- DF-T700M08

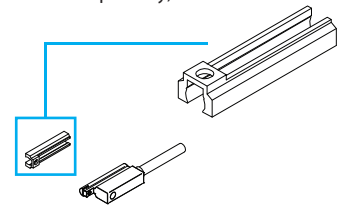


Sensor/Cylinder matching table

	DF-T	DF-T + DF-R002	DF-T + DF-R003
Cylinder series	JX1	JTES	JLES (Ø16÷63)
	JX2	JTEV	JLEV (Ø16÷63)
	YMA20	YMA11	
	YMP20	YMP40	
	YMP30	YMP50 (Ø32÷63)	
	YMP50 (Ø16÷25)		
	JLES (Ø12)		
	JLEV (Ø12)		
	YR3		

DF-R002/DF-R003 adaptor

Adaptor for sensor assembly on T-type groove (to be ordered separately)



DF-RW

External magnetic-fields immune electronic sensor

Sensors assembled on the cylinders detect the position of the piston by switching an electric signal as the magnetic-field produced, by the magnet in the piston, approaches.

Typically used in applications where strong magnetic fields may influence the sensor conditions.

Particularly suitable in the Automotive applications and in the nearby of welding-machines.

2 colors (red and green) LED indicator for an optimal position detection.



TECNICAL CHARACTERISTICS

Type	ELECTRONIC	
	DF-RW700L03	DF-RW700M12
Part no.	DF-RW700L03	DF-RW700M12
Working voltage (V DC)	10÷28 V DC	10÷28 V DC
Max switching current (mA)	5÷50	5÷50
Max switching power (W)	1,5	1,5
Temperature (°C)	-10 ÷ +60	
Max voltage drop (V AC/DC)	5	5
Cable number and section (mmq)	2x4,8 (PUC)	2x4,8 (PUC)
Cable lenght (mm)	3000	500
Contact	NO	NO
Max response time (ms)	50	50
State indicator (LED)	red (detection position) green (optimal detection position)	
Protection degree (IEC 60529)	IP67	
Shock resistance (G)	50	50

EXTENSION CABLES

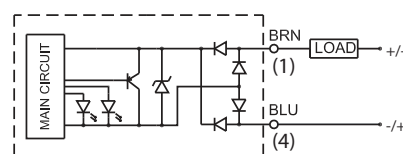
3m ext. cable with M12 3-poles connect. max 60 V	DHF-033M12
5m ext. cable with M12 3-poles connect. max 60 V	DHF-053M12

When using the M12 3-poles extensions cable with DF-RW, DF-RX magnetic sensors, exclude the blue wire before to connect.

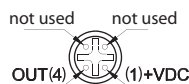
Pay attention to correct polarity connection while using direct current; avoid magnetic fields to influence the electronic sensor; provide the KM-008200 filter in case of use of extension cables longer than 10m; provide dedicated filters in case of use of inductive loads.

Subject to change

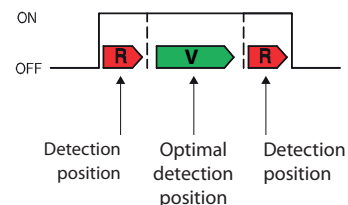
ELECTRICAL CIRCUIT



M12



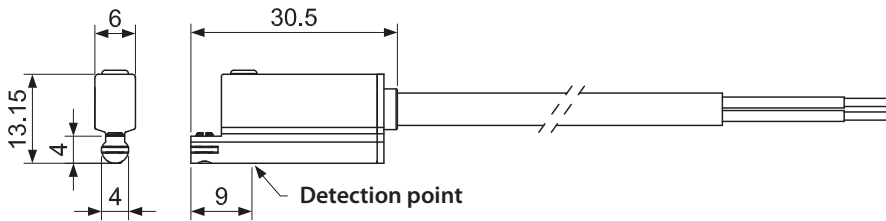
2 colors LED indicator



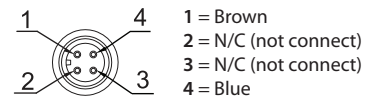
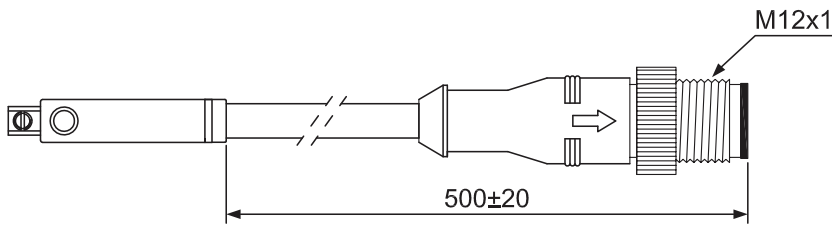
Detection position: red LED on.
Optimal detection position: green LED on.

Dimensions

DF-RW700L03



DF-RW700M12

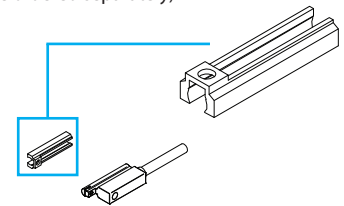


Sensor/Cylinder matching table

	DF-RW	DF-RW + DF-R002	DF-RW + DF-R003
Cylinder series	JX1	M	JLES (Ø16÷63)
	JX2	KE/KD/KL	JLEV (Ø16÷63)
	YMA20	RP/RO	
	YMP20	RM/RN	
	YMP30	RS/RQ	
	YMP50 (Ø16÷25)	OV	
	JLES (Ø12)	R	
	JLEV (Ø12)	W	
	YR3	JTES	
		JTEV	
		YMA11	
		YMP40	
		YMP50 (Ø32÷63)	

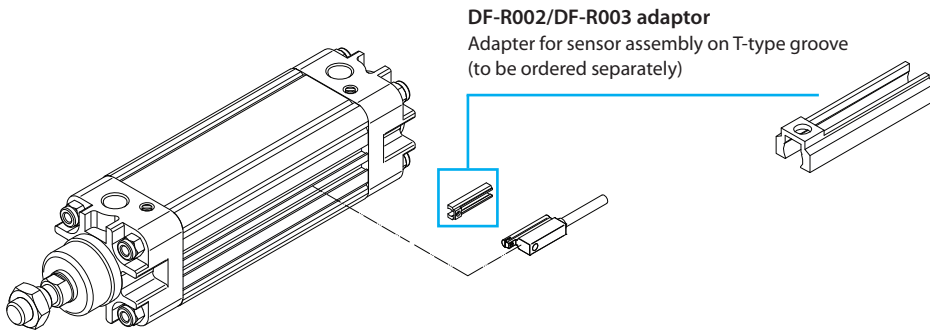
DF-R002/DF-R003 adaptor

Adapter for sensor assembly on T-type groove (to be ordered separately)

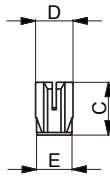
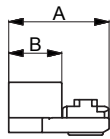
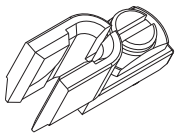


5

Assembly scheme with adaptor



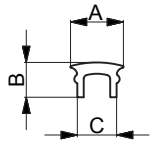
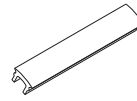
DF sensor cable clamping



Material: body: polycarbonate
screw: chrome-plated steel

A	B	C	D	E	Part no.
15	7,8	7,9	5,8	5,5	DF-001

DF sensor covering strip



Material: pvc

A	B	C	Part no.
7	4,6	5,2	DHF-002010