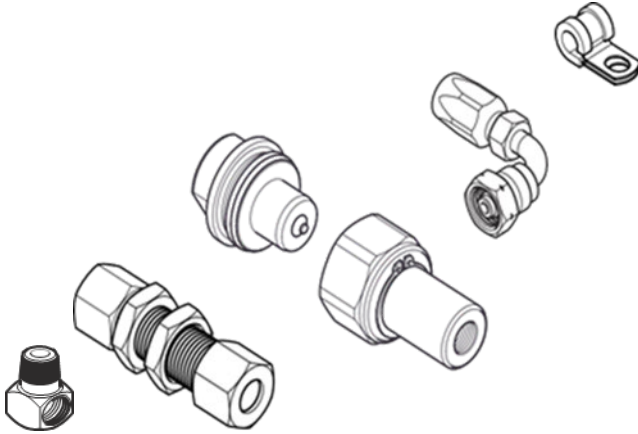


General Parts Manual



Automatic Greasing Systems



**Lubrication
Solutions**

South Island Groeneveld-BEKA Dealer

lubricationsolutions.co.nz

NZ Tollfree 0800 500 440

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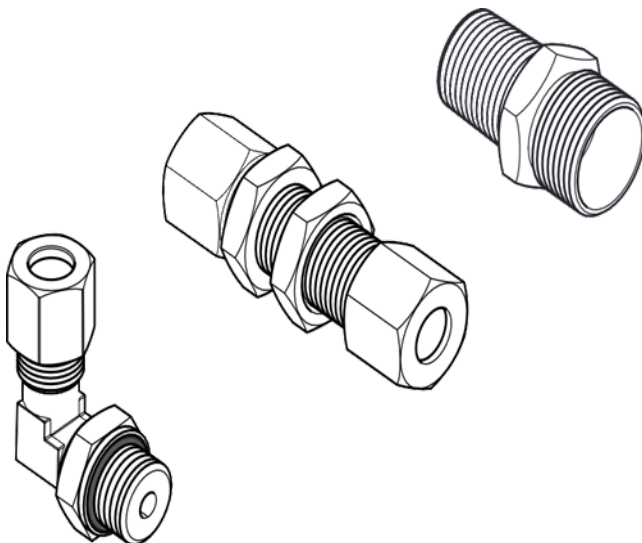
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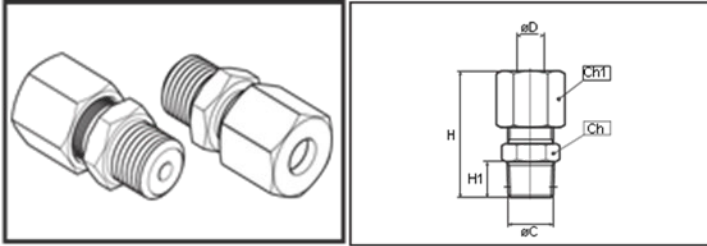
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1 FITTINGS

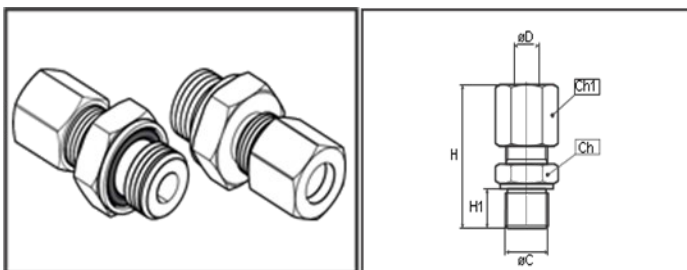


1.1 Male stud couplings



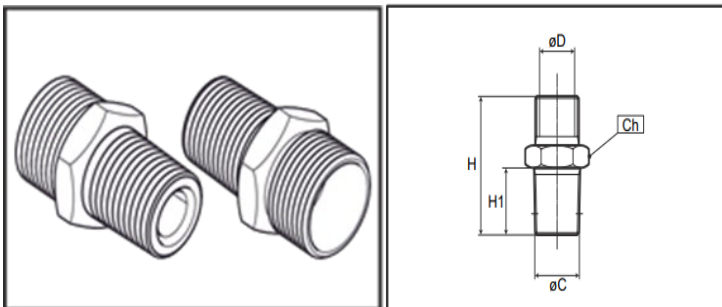
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
3/16"	M6x1	F103440	21201	10	12	25	5.5	-	steel
3/16"	M8x1	F000436	21901	11	12	27.5	9	-	brass
3/16"	R1/8"	F000604	10401	11	12	25	7.5	-	brass
3/16"	1/8"NPT	F104096	42101	11	12	25	7.5	-	brass
3/16"	M10x1	F000221	13801	11	12	27.5	7.7	-	brass
6mm	M6x1	F110518	43202	11	12	28	8	-	steel
6mm	M8x1	F113777	13617	11	13	29	9	-	brass
6mm	M8x1	F110610	43302	11	12	28	8	-	steel
6mm	R1/8"	F113779	07908	11	13	28	8	-	brass
6mm	R1/8"	F104513	43402	11	12	28	8	-	steel
6mm	1/8"NPTF	F112162	98101	13	13	25	8	-	brass
6mm	1/8"NPTF	F604324	-	11	12	28	8	-	steel
6mm	M10x1	F113773	13417	11	13	28	8	-	brass
6mm	M10x1	F114874	43502	11	12	28	8	-	steel
6mm	R1/4"	F116543	08108	14	13	30	10	-	brass
5/16"	R1/8"	F000598	11401	13	14	28	7.5	-	brass
8mm	M12x1.5	F104522	09708	19	17	35	10	-	steel
8mm	R1/4"	F110294	45502	17	17	35	10	-	steel
10mm	R1/4"	F110240	47202	17	19	38	12	-	steel
12mm	G1/4"	F117729	49202	19	22	41	9	-	steel

1.2 Male stud couplings with O-ring



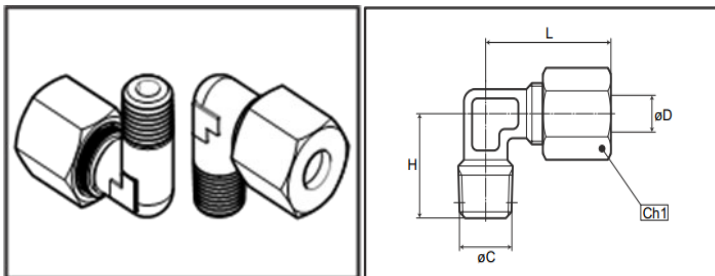
$\varnothing d$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
5/16"	G1/4"	F104441	43901	17	14	36	8	-	brass

1.3 Body male stud couplings



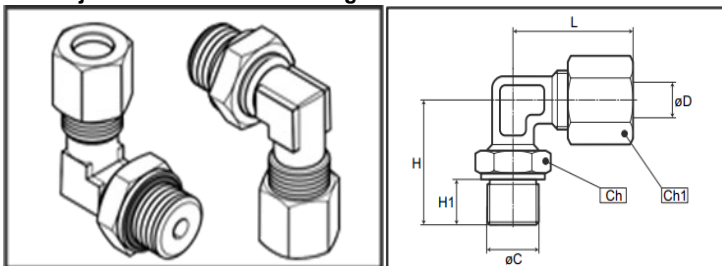
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8mm	R1/4"	F115487	72022	17	-	28	12	-	steel
10mm	R1/4"	F170854	72122	17	-	30	12	-	steel
12mm	G1/4"	F170785	-	19	-	31	12	-	steel
12mm	R1/4"	F125432	-	19	-	21	12	-	steel

1.4 Male stud elbows



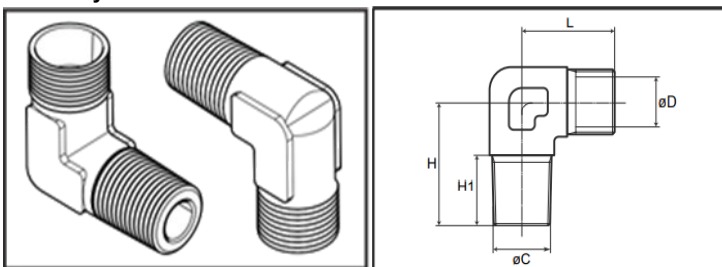
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
3/16"	M8x1	F101370	12101	-	12	18	-	22	brass
3/16"	R1/8"	F101410	10201	-	12	18	-	22	brass
3/16"	M10x1	F101363	13701	-	12	18	-	22	brass
6mm	M6x1	F114875	43602	-	12	17	-	24	steel
6mm	M8x1	F114876	43702	-	12	18	-	24	steel
6mm	R1/8"	F101065	08008	-	13	17	-	23	brass
6mm	R1/8"	F111941	43802	-	12	18	-	24	steel
6mm	M10x1	F113769	13217	-	13	17	-	23	brass
6mm	M10x1	F114877	43902	-	12	18	-	24	steel
6mm	R1/4"	F177175	08208	-	13	21.5	-	22	brass
8mm	R1/4"	F104567	45602	-	17	25	-	33	steel
10mm	R1/4"	F110244	47402	-	19	25	-	33	steel
12mm	R1/4"	F121960	49302	-	22	28	-	33	steel

1.5 Adjustable elbows with O-ring



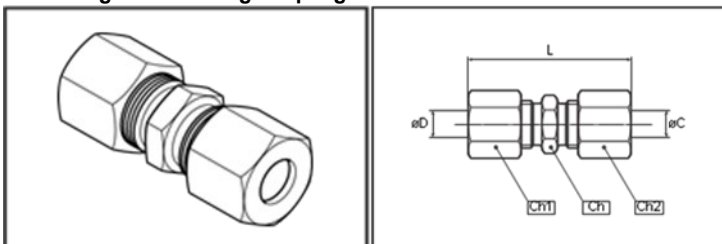
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5/16"	G1/4"	F104440	43801	17	14	25	8	30	brass

1.6 Body male stud elbows



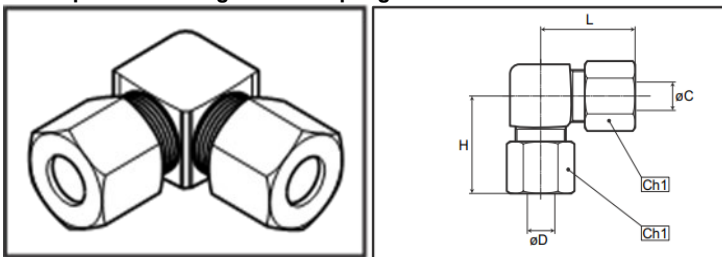
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	R1/4"	F115464	72222	-	-	28	12	17	steel
10mm	R1/4"	F104988	72322	-	-	30	12	17	steel

1.7 Straight connecting couplings



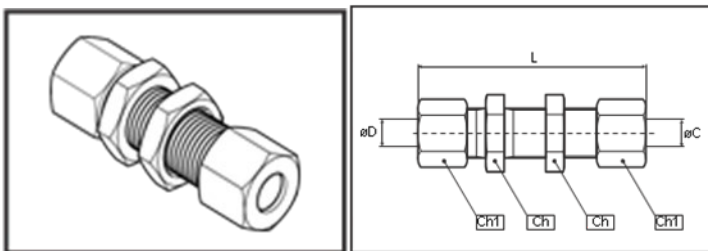
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	Ch2	H	L	Material
3/16"	3/16"	F000222	10601	11	12	12	-	33	brass
6mm	6mm	F113781	08308	12	13	13	-	35.5	brass
6mm	6mm	F120757	29901	12	14	14	-	39	steel
5/16"	5/16"	F000223	11501	13	14	14	-	40	brass
8mm	8mm	F104564	45702	14	17	17	-	40	steel
10mm	10mm	F110239	47602	17	19	19	-	42	steel
12mm	12mm	F117730	49402	19	22	22	-	43	Steel

1.8 Equal connecting elbow couplings



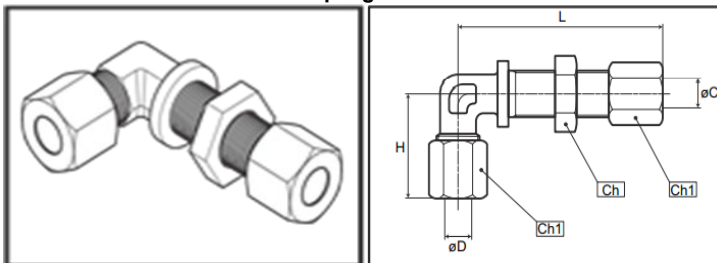
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	8mm	F104548	45802	-	17	29	-	29	steel
10mm	10mm	F173797	47702	-	19	30	-	30	steel
12mm	12mm	F126790	92002	-	22	32	-	32	steel

1.9 Straight screw bulkhead couplings



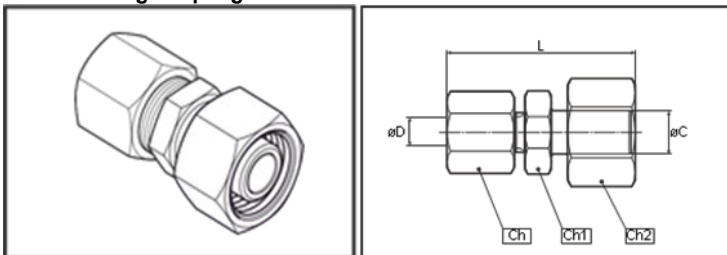
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	8mm	F116404	46202	17	17	-	-	65	steel
10mm	10mm	F170861	48102	22	19	-	-	74	steel

1.10 Elbow screw bulkhead couplings



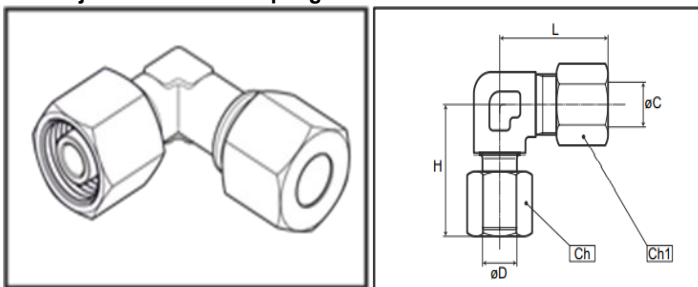
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
10mm	10mm	F110305	48002	22	19	30	-	61	steel

1.11 Reducing couplings



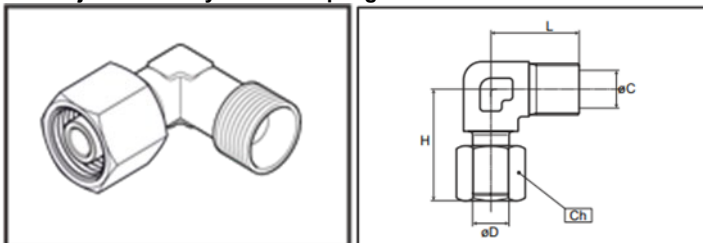
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>Ch2</i>	<i>H</i>	<i>L</i>	<i>Material</i>
6mm	10mm	F121484	12716	14	12	19	-	30	steel
8mm	10mm	F122333	48202	17	17	19	-	45	steel
10mm	12mm	F121959	50402	19	17	22	-	47	steel

1.12 Adjustable elbow couplings



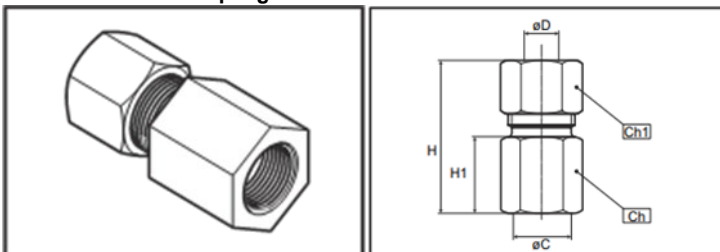
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
6mm	6mm	F117949	09416	14	14	27	-	30	steel
8mm	8mm	F114023	80701	17	17	25	-	31	steel
10mm	10mm	F113448	80801	19	19	32	-	32	steel
12mm	12mm	F118904	49502	22	22	30	-	35	steel

1.13 Adjustable body elbow couplings



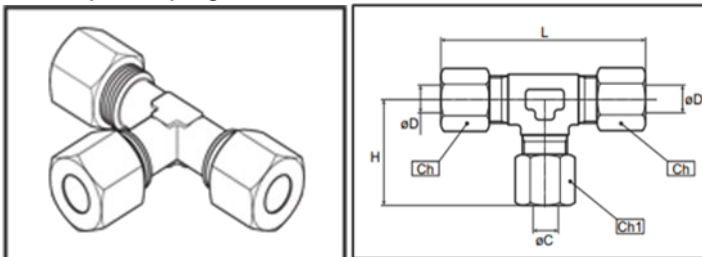
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
10mm	10mm	F120522	-	19	-	32	-	22.5	steel
12mm	12mm	F601490	-	22	-	30	-	35	steel

1.14 Female stud couplings



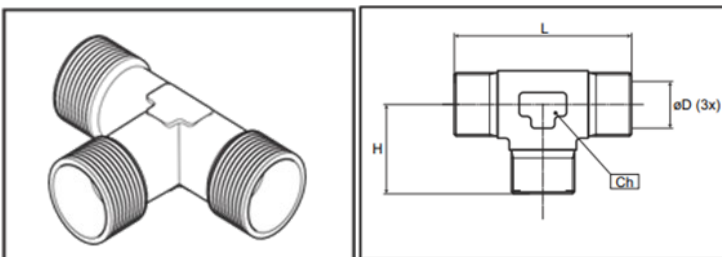
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
6mm	M10x1	F116775	28912	14	14	37	16	-	steel
8mm	G1/4"	F122338	46602	19	17	40	21	-	steel
10mm	G1/4"	F116544	48502	19	19	40	21	-	steel

1.15 T-equal couplings



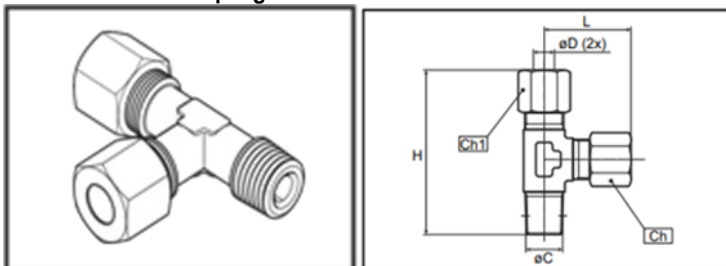
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
6mm	6mm	F115433	07408	13	-	22	-	44	steel
5/16"	5/16"	F101412	11801	14	-	28	-	58	brass
8mm	8mm	F104551	45902	17	-	32	-	68	steel
10mm	10mm	F110241	47802	19	-	32	-	68	steel
12mm	12mm	F122361	49602	22	-	35	-	68	steel
15mm	12mm	F203887	-	27	22	36	-	72	steel

1.16 Body T-equal couplings



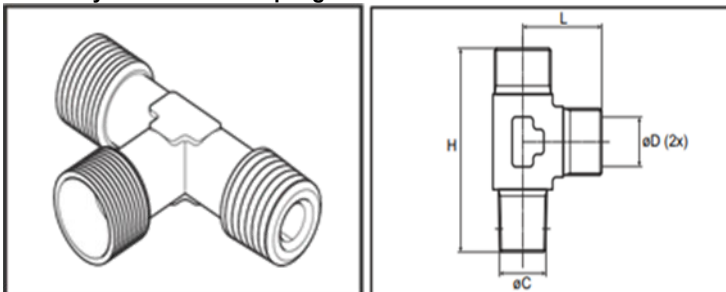
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10mm	-	F601488	-	14	-	48	-	22	steel

1.17 L-male stud couplings



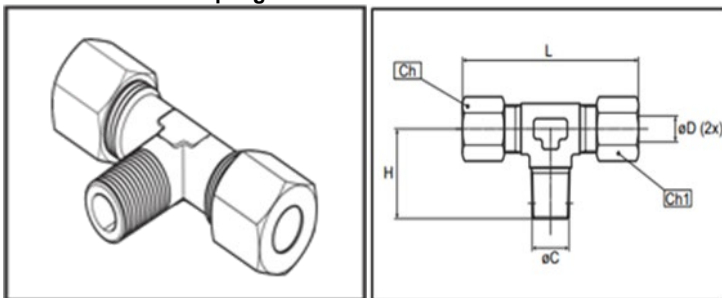
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	R1/4"	F112831	44002	17	17	57	-	30	steel
10mm	R1/4"	F110242	44102	19	19	60	-	32	steel

1.18 Body L-male stud couplings



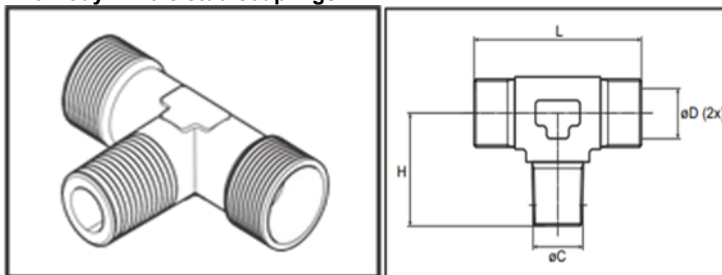
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	R1/4"	F116595	72422	-	-	47	-	20	steel
10mm	R1/4"	F116679	72522	-	-	50	-	22	steel

1.19 T-male stud couplings



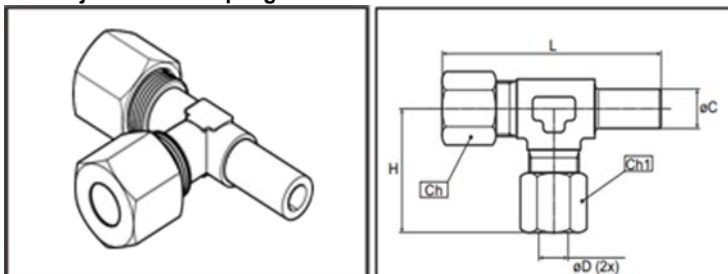
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	R1/4"	F110245	50702	17	17	28	-	68	steel
10mm	R1/4"	F110243	50802	19	19	28	-	70	steel
12mm	R1/4"	F122894	14612	22	22	28	-	70	steel

1.20 Body T-male stud couplings



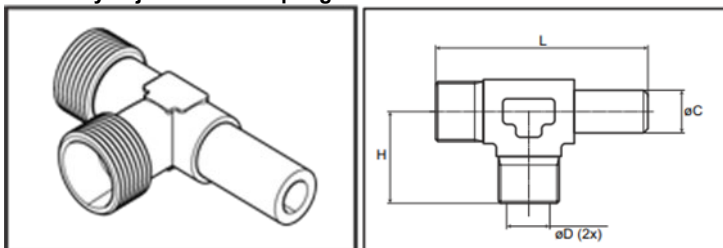
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	R1/4"	F117215	72622	-	-	27	-	47	steel
10mm	R1/4"	F116701	72722	-	-	27	-	48	steel

1.21 Adjustable L-couplings



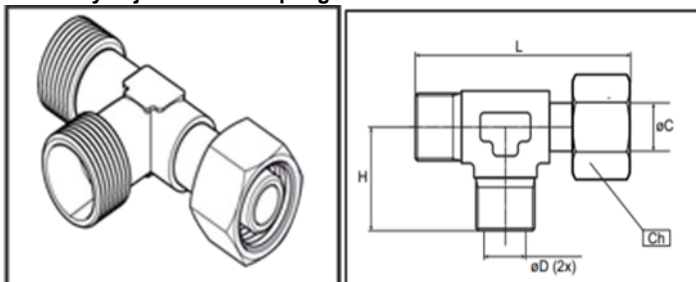
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	8mm	F115434	46402	17	17	30	-	57	steel
10mm	10mm	F112832	48302	19	19	32	-	60	steel
12mm	12mm	F122343	48402	22	22	35	-	65	steel

1.22 Body adjustable L-couplings



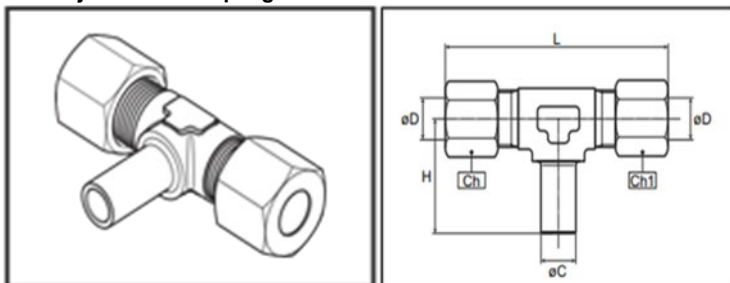
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	8mm	F119003	74022	-	-	20	-	47	steel

1.23 Body adjustable L-couplings with nut



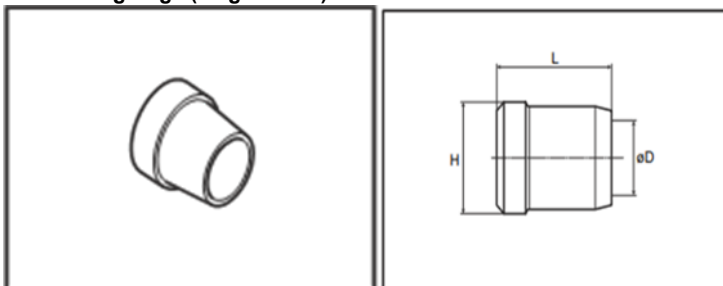
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
10mm	10mm	F121101	-	19	-	-	-	-	steel
12mm	12mm	F601491	-	22	-	-	-	-	steel

1.24 Adjustable T-couplings



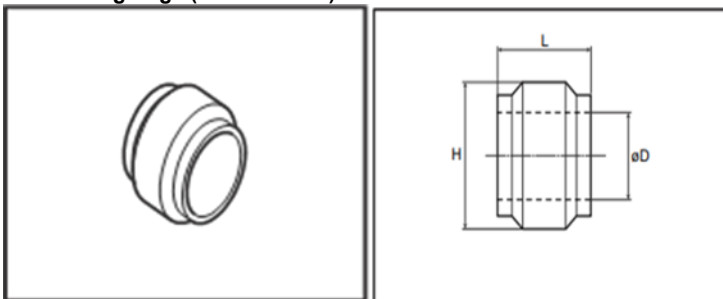
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
8mm	8mm	F122125	46302	17	17	28	-	68	steel
10mm	10mm	F170150	80901	19	19	28	-	70	steel
12mm	10mm	F172951	-	22	22	28	-	70	steel
12mm	12mm	F117777	16622	22	22	30	-	70	steel

1.25 Cutting rings (single sided)



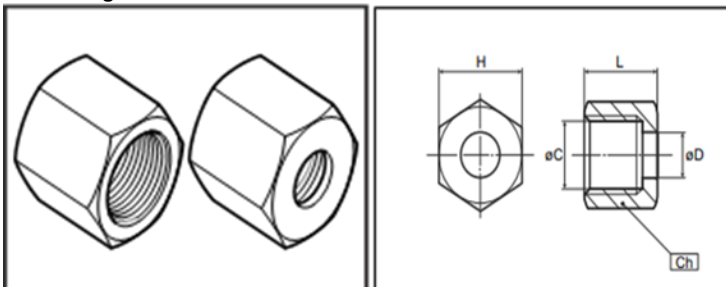
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
6mm	-	F114891	17102	-	-	8	-	7	steel
8mm	-	F112160	46902	-	-	11	-	9.5	steel
10mm	-	F112161	48902	-	-	13	-	10	steel
12mm	-	F122959	50602	-	-	15	-	10	steel

1.26 Cutting rings (double sided)



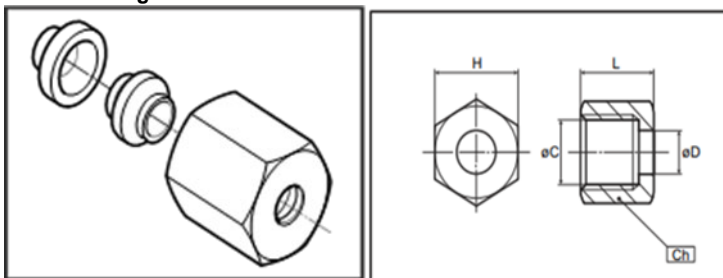
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
3/16"	-	F000585	10801	-	-	8.5	-	6	brass
6mm	-	F000658	09808	-	-	8.5	-	6.5	brass
5/16"	-	F000580	11901	-	-	10.5	-	7	brass

1.27 Hexagonal nuts



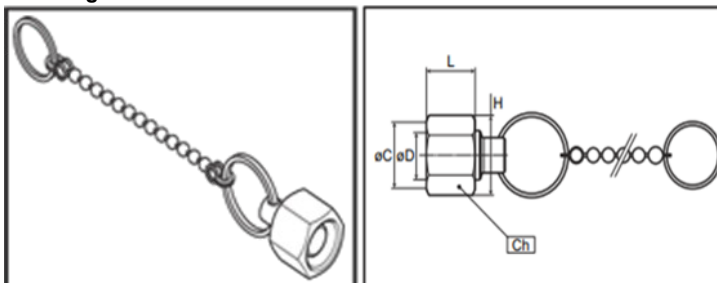
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
3/16"	M10x1	F000584	10701	12	-	12	-	11	brass
6mm	M10x1	F101063	08908	13	-	13	-	12.5	brass
6mm	M10x1	F114892	17002	12	-	12	-	12	steel
6mm	M12x1.5	F113675	04716	14	-	14	-	14.5	steel
5/16"	M12x1	F000579	16101	14	-	14	-	13	brass
8mm	M14x1.5	F112157	46802	17	-	17	-	15	steel
10mm	M16x1.5	F115316	48802	19	-	19	-	16	steel
12mm	M18x1.5	F122960	50502	22	-	22	-	15.5	steel

1.28 Reducing kits



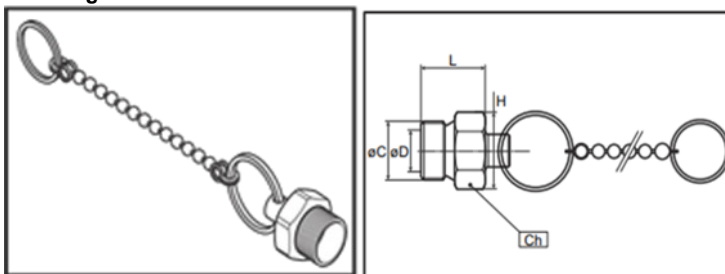
$\varnothing D$	$\varnothing C$	$\varnothing B$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>L</i>	<i>Material</i>
1/8"	M10x1	3/16"	F104080	23601	12	11	brass
1/8"	M10x1	6mm	F112656	89901	12	11	brass
4mm	M10x1	3/16"	F104920	42701	12	13.5	brass

1.29 Plugs female



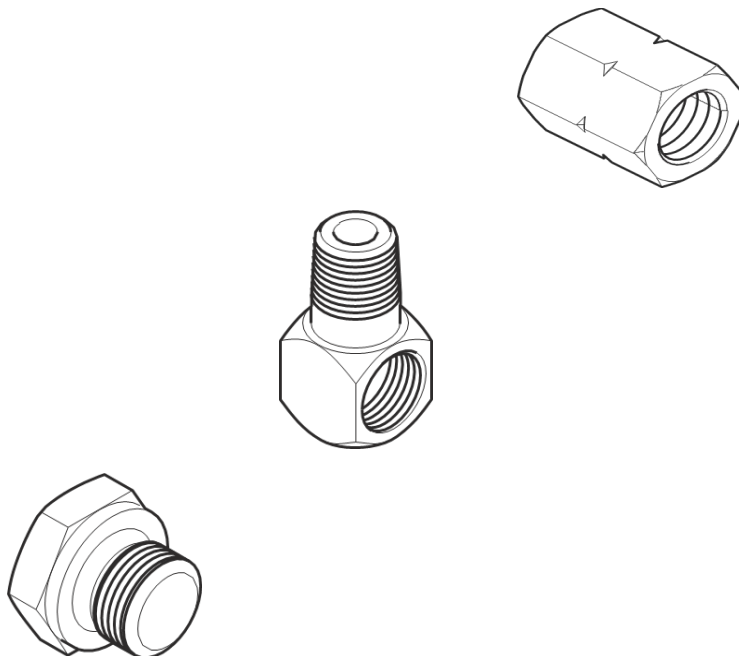
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
10mm	M16x1.5	F113621	50701	19	-	19	-	16	steel

1.30 Plugs male

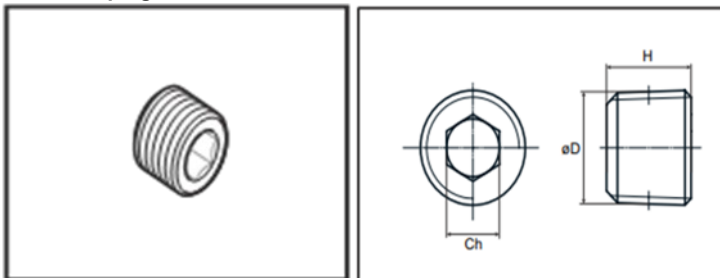


ϕD	ϕC	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
10mm	M16x1.5	F113622	50601	19	-	19	-	21	steel

2 ADAPTERS & PLUGS

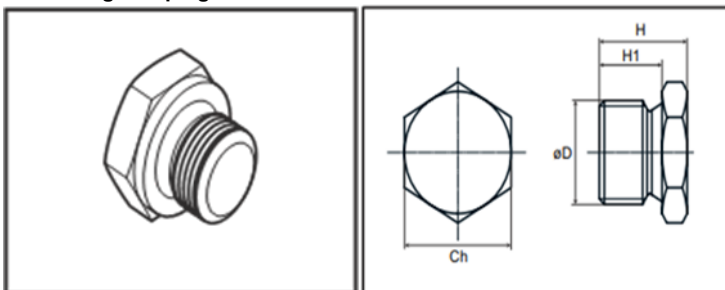


2.1 Allen plugs



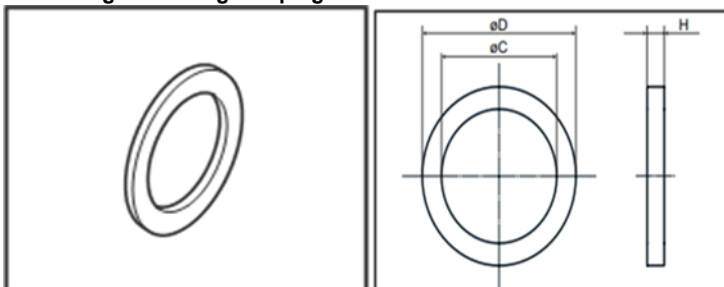
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
R1/8"	-	F117858	16301	5	-	8	-	-	brass
1/8"NPT	-	F111788	50301	5	-	8	-	-	brass

2.2 Hexagonal plugs



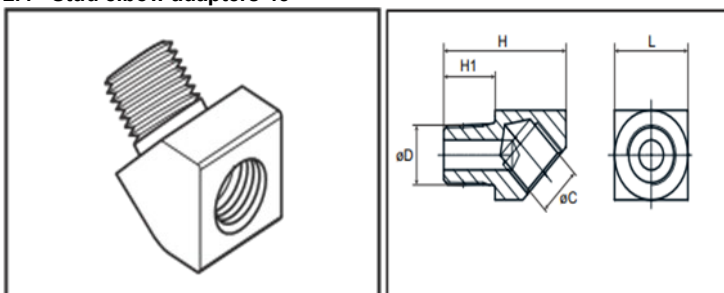
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
G1/8"	-	F001081	12601	14	-	12.5	7	-	brass
G1/4"	-	F000686	32901	17	-	14	10	-	brass

2.3 O-rings for hexagonal plugs



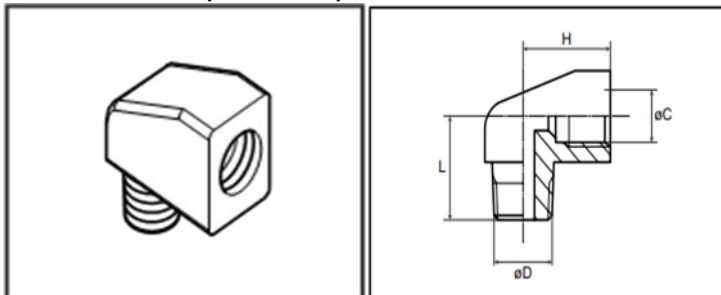
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
13mm	10mm	F001085	57622	-	-	1mm	-	-	brass
18mm	13.5mm	F104436	83901	-	-	2mm	-	-	brass

2.4 Stud elbow adapters 45°



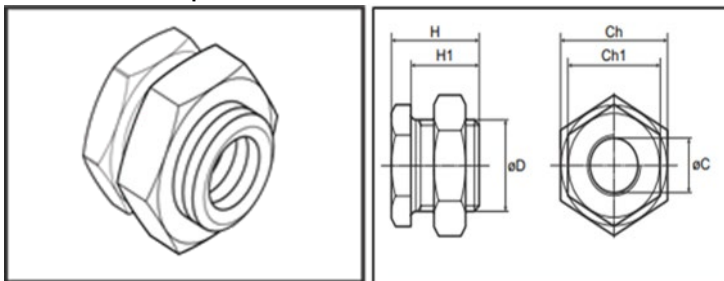
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
M8x1	M8x1	F214783	-	-	-	25	10.5	15	brass
1/8"NPT	1/8"NPT	F104521	13901	-	-	25	10.5	15	brass

2.5 Stud elbow adapter 90° compact



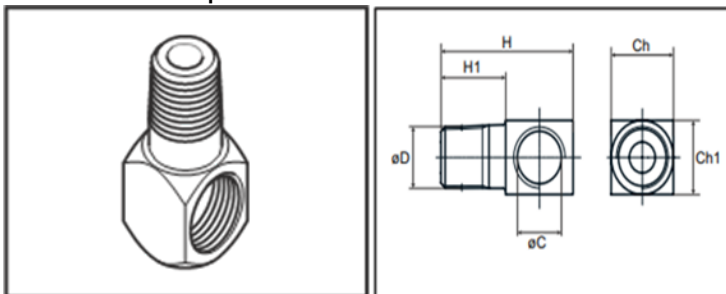
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
R1/8	M8x1	F601154				13.6		13.5	brass
M10x1	M8x1	F605734				13.6		13.5	brass

2.6 Bulkhead adapters



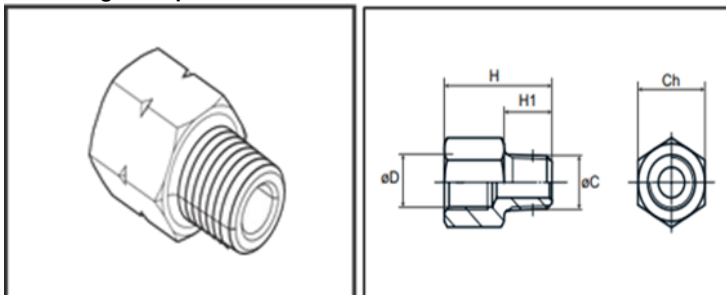
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
M16"	G1/8	F110517	20902	22	19	18	14	-	brass

2.7 Stud elbow adapters 90°



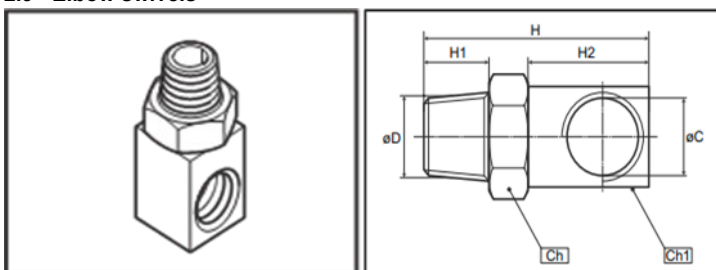
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
M6x1	M8x1	F102457	21301	13	13	22	8	-	steel
1/4-28UNF	G1/8"	F000543	02101	12	12	21	8	-	steel
1/4-28UNF	G1/8"	F100726	08501	12	12	33	20	-	steel
M8x1	M8x1	F000400	14801	12	12	25.5	12.5	-	brass
R1/8"	G1/8"	F000542	15001	12	12	25.5	12.5	-	steel
M10x1	M8x1	F605482		12	12	16	5		steel
R1/4"	G1/4"	F112103	82701	16	16	30	14	-	steel

2.8 Straight adapters



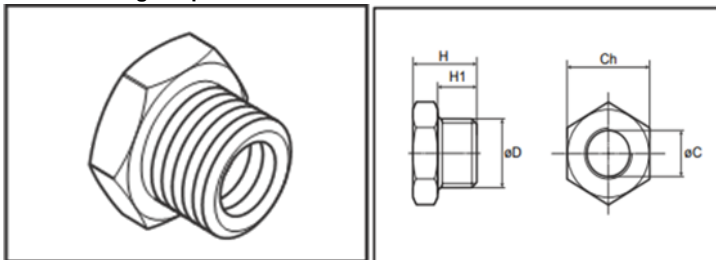
$\varnothing C$	$\varnothing D$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
1/4-28UNF	G1/8"	F104570	15201	14	-	24	8	-	brass
M8x1	M8x1	F103423	15601	11	-	18	9	-	steel
R1/8"	G1/8"	F000541	08508	14	-	22.5	10	-	brass
G3/8"	G1/4"	F119629	10508	22	-	36	12	-	steel

2.9 Elbow swivels



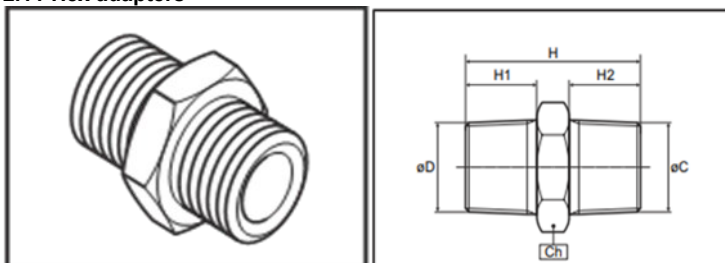
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>H2</i>	<i>Material</i>
M8x1	M8x1	F102453	21401	14	13	31.5	7	19	brass
R1/8"	G1/8"	F100476	14901	14	13	32	7.5	19	brass
1/8"NPT	G1/8"	F110339	63502	14	13	43	10	15	steel

2.10 Reducing adapters



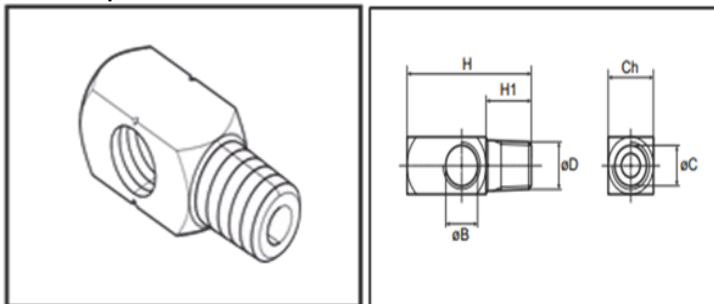
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
G1/4"	G1/8"	F000527	08608	17	-	13	8	-	brass
G1/2"	G1/4"	F119473	10308	27	-	24	14	-	steel

2.11 Hex adapters



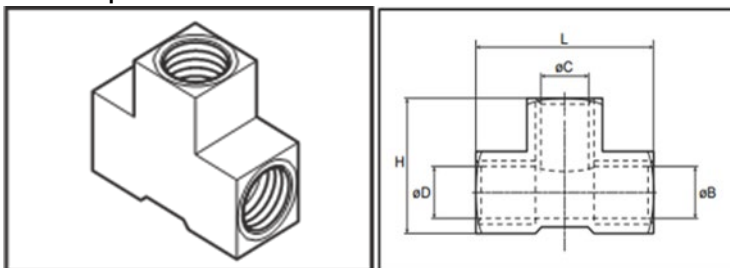
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	H2	Material
R1/8"	R1/8"	F104557	15101	11	-	23	9	9	brass
R1/4"	R1/4"	F104546	62502	14	-	27	11	11	steel

2.12 L-adapters



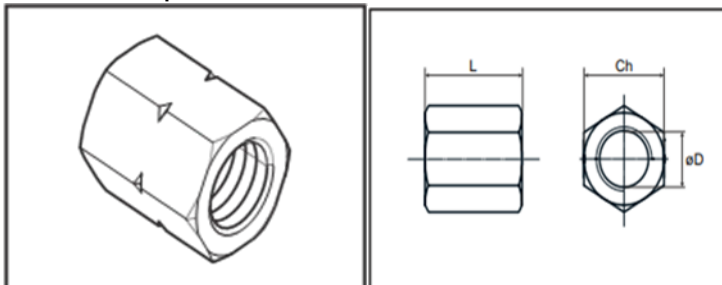
$\varnothing D$	$\varnothing C$	$\varnothing B$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>H</i>	<i>H1</i>	<i>Material</i>
M10x1	M10x1	M10x1	F103243	23901	12	33	12	brass

2.13 T-adapters



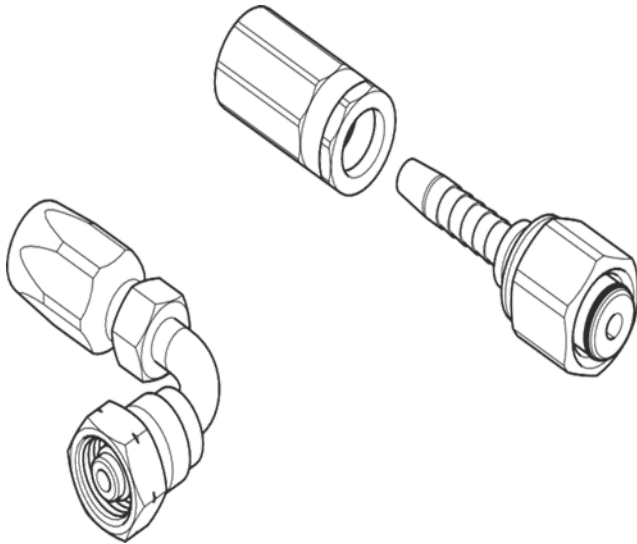
$\varnothing D$	$\varnothing C$	$\varnothing B$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>H</i>	<i>L</i>	<i>Material</i>
1/8"NPT	1/8"NPT	1/8"NPT	F104538	08708	-	21	28	brass
1/4"NPT	1/4"NPT	1/4"NPT	F104537	08808	-	28	40	brass

2.14 Socket adapters

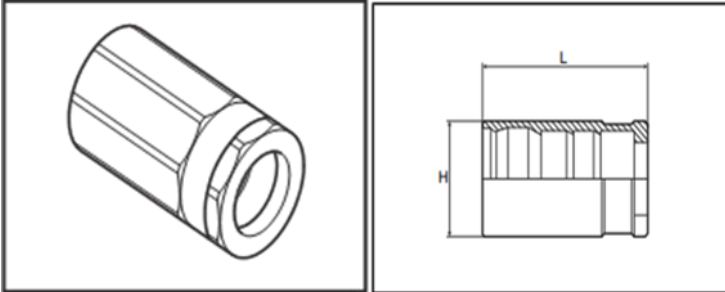


$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
G1/8"	-	F111493	19201	14	-	-	-	17	brass
M10x1	-	F113761	10812	14	-	-	-	17	brass
G1/4"	-	F118905	65202	19	-	-	-	25.5	steel

3 HOSE END FITTINGS

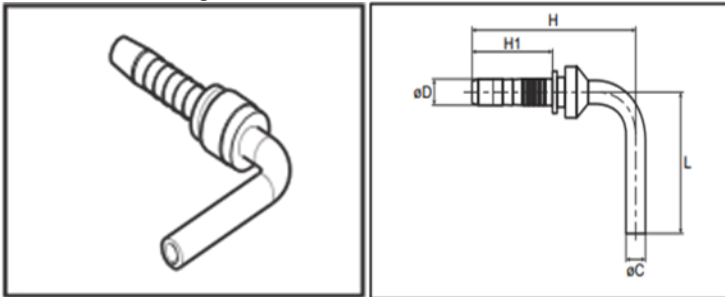


3.1 Crimp sockets



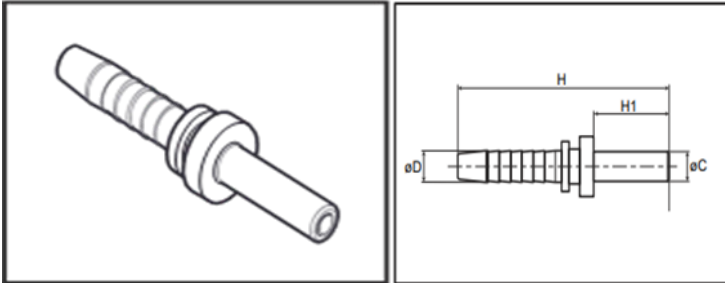
<i>HPH</i>	<i>p/n new</i>	<i>p/n old</i>	<i>H</i>	<i>L</i>	<i>Crimping diameter</i>	<i>Material</i>
5/32"	F115311	11916	ø13	20	ø11.1mm 0/-0.2	steel
1/4"	F113941	00917	ø18	30.5	ø14.5mm 0/-0.2	steel
3/8"	F121037	32822	ø25	32	ø20.4mm 0/-0.2	steel

3.2 Hose end fittings elbow



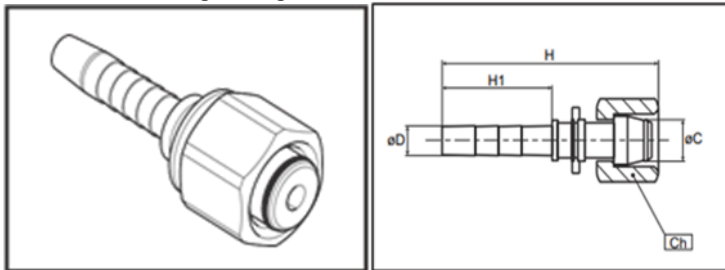
<i>øD</i>	<i>øC</i>	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
5/32"	6mm	F178067	11816	-	-	41	16.5	31	steel
1/4"	6mm	F116607	83022	-	-	50	24.7	36	steel

3.3 Hose end fittings straight



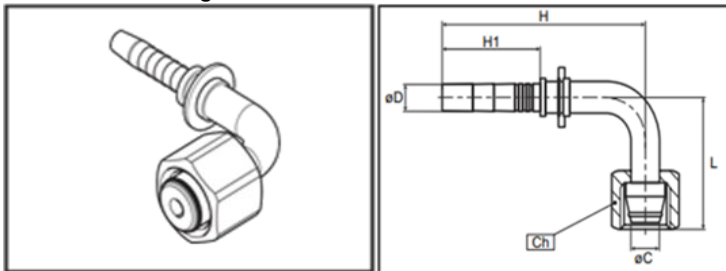
ϕD	ϕC	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
5/32"	6mm	F115309	11716	-	-	44.5	21	-	steel
5/32"	5mm	F124259				41	21		steel
1/4"	5mm	F121895	05117	-	-	56	22.2	-	steel
1/4"	6mm	F113940	05217	-	-	56	22.2	-	steel

3.4 Hose end fittings straight with nut



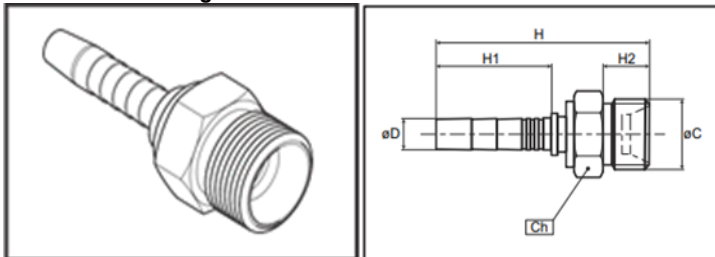
ϕD	ϕC	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
1/4"	8mm	F115457	05417	17	-	52.5	27.5	-	steel
1/4"	10mm	F115458	05517	19	-	53.5	27.5	-	steel
3/8"	10mm	F170784	-	19	-	55.1	29	-	steel
3/8"	12mm	F170782	-	22	-	56.5	29	-	steel

3.5 Hose end fittings elbow with nut



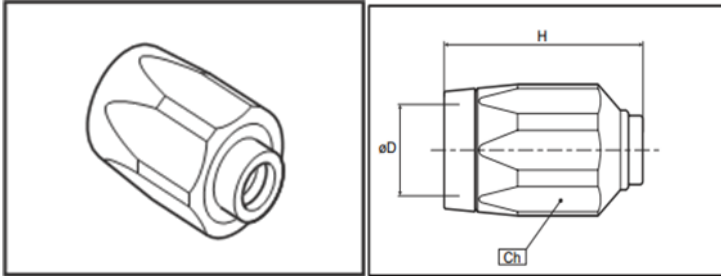
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
1/4"	8mm	F112145	55302	17	-	57	27.5	31.5	steel
1/4"	10mm	F112440	55402	19	-	57	27.5	34	steel
3/8"	10mm	F170859	64802	19	-	64.5	29	43	steel
3/8"	12mm	F170783	-	22	-	68	30	35	steel

3.6 Hose end fittings male thread metric



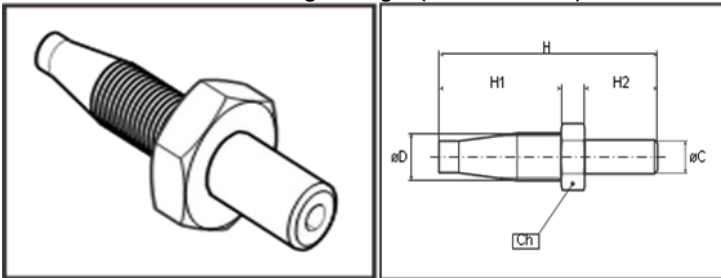
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	H2	Material
1/4"	M16X1.5	F177648	-	17	-	51	27.5	11	steel

3.7 Re-usable sockets



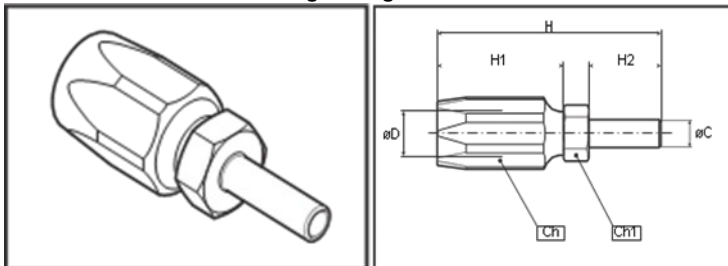
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
3/8"	-	F119475	35902	24	-	42	-	-	steel

3.8 Re-usable hose end fittings straight (without socket)



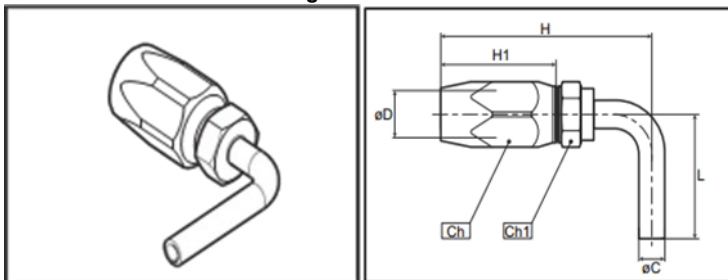
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	H2	Material
3/8"	10mm	F178063	35802	17	-	75	42	25	steel

3.9 Re-usable hose end fittings straight



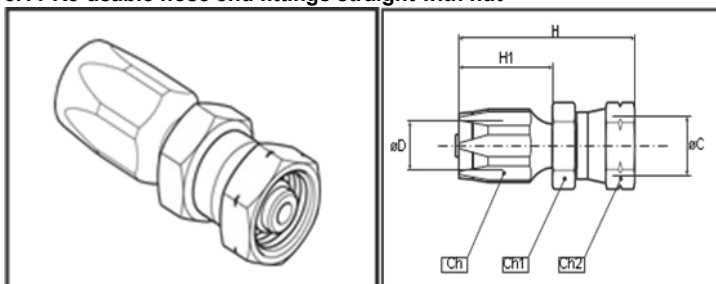
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	H2	Material
5/32"	5mm	F177970	06216	14	10	59	28	25	steel
5/32"	6mm	F113973	05816	14	10	60	28	25	steel
5/32"	8mm	F178072	06316	14	10	56	28	22	steel
1/4"	5mm	F178065	05717	17	14	62	34	20	steel
1/4"	6mm	F177968	05817	17	12	62	34	21	steel
1/4"	8mm	F177969	05917	17	12	63	34	22	steel
1/4"	10mm	F177973	06017	17	12	63	34	22	steel
1/4"	12mm	F121896	06117	17	14	65	34	24	steel

3.10 Re-usable hose end fittings elbow



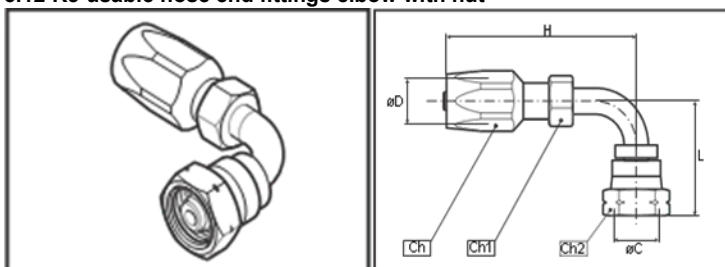
$\varnothing D$	$\varnothing C$	p/n new	p/n old	Ch	Ch1	H	H1	L	Material
5/32"	6mm	F115310	09516	14	12	49	28	37	steel
1/4"	6mm	F212070	-	17	14	55	34	33	steel

3.11 Re-usable hose end fittings straight with nut



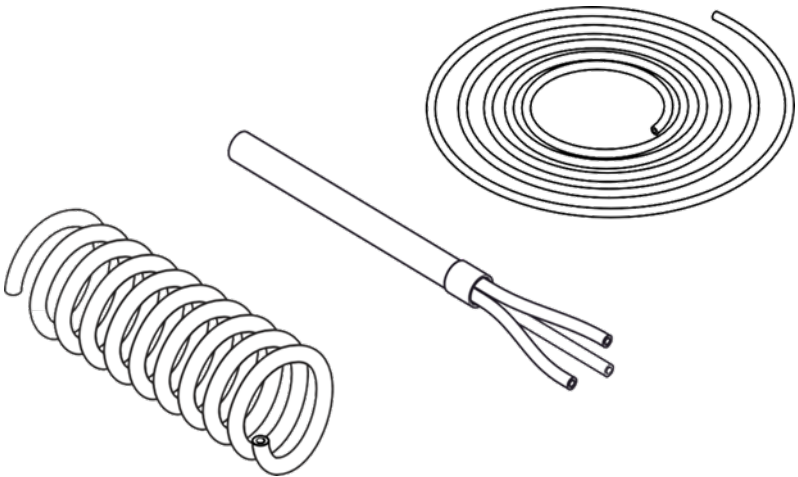
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>Ch2</i>	<i>H</i>	<i>H1</i>	<i>Material</i>
1/4"	8mm	F178064	06217	17	19	19	52	29	steel
1/4"	10mm	F177972	06417	17	19	19	53	29	steel
3/8"	10mm	F210382	-	22	17	19	66	40	steel

3.12 Re-usable hose end fittings elbow with nut

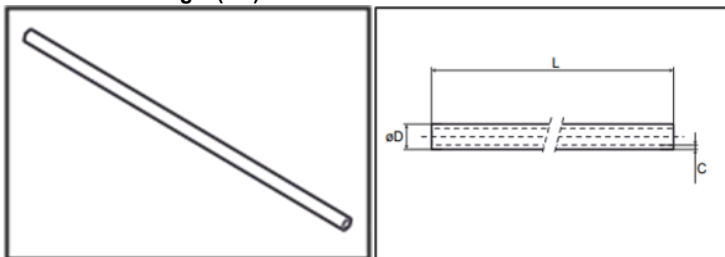


$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Ch1</i>	<i>Ch2</i>	<i>H</i>	<i>L</i>	<i>Material</i>
1/4"	8mm	F121894	06317	17	14	19	64	34	steel
1/4"	10mm	F178066	06517	17	14	22	56	40	steel

4 HOSES, PIPES & TUBES



4.1 PA tubes single (1/1)



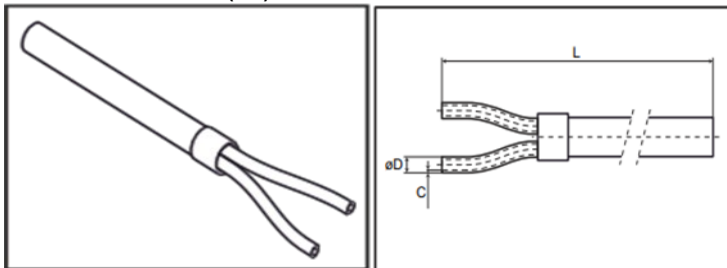
ϕD	ϕC	p/n new	p/n old	L	Material
3/16"	1.2mm	F118246 ¹⁾	02201	per 1 meter ³⁾	PA 12 H/W
6mm	1.5mm	F110661 ¹⁾	77301	per 1 meter ³⁾	PA 12 H/W
5/16" (black)	1.59mm	F116141	-	6 meter	PA 12 H
5/16" (black)	1.59mm	F115951	-	12 meter	PA 12 H
5/16" (black)	1.59mm	F115990	-	15 meter	PA 12 H
5/16" (red)	1.5mm	F104597 ²⁾	-	4 meter	PA 12 W
5/16" (red)	1.5mm	F115950 ²⁾	-	6 meter	PA 12 W
5/16" (yellow)	1.5mm	F114821 ²⁾	-	4 meter	PA 12 W
5/16" (yellow)	1.5mm	F175265 ²⁾	-	6 meter	PA 12 W

¹⁾ Pre-filled with grease.

²⁾ Air tubes, these tubes can NOT been used as grease tubes!

³⁾ These tubes are available in rolls of 25 metres.

4.2 PA tubes double (2/1)

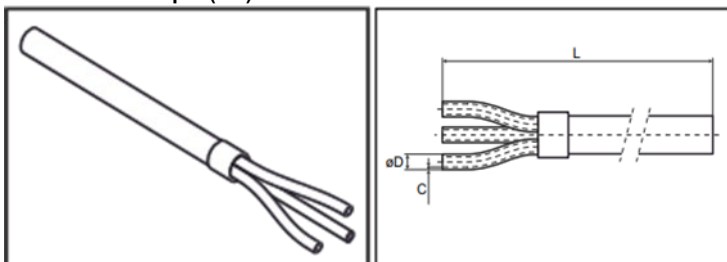


$\varnothing D$	C	p/n new	p/n old	L	Material
3/16"	1.2mm	F118247 ¹⁾	02301	per 1 meter ²⁾	PA 12 H/W
6mm	1.5mm	F110662 ¹⁾	77401	per 1 meter ²⁾	PA 12 H/W

¹⁾ Pre-filled with grease.

²⁾ These tubes are available in rolls of 25 metres.

4.3 PA tubes triple (3/1)

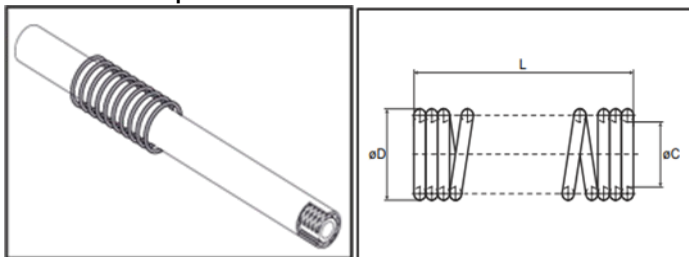


$\varnothing D$	$\varnothing C$	p/n new	p/n old	L	Material
3/16"	1.2mm	F118248 ¹⁾	02401	per 1 meter ²⁾	PA 12 H/W
6mm	1.5mm	F110663 ¹⁾	77501	per 1 meter ²⁾	PA 12 H/W

¹⁾ Pre-filled with grease.

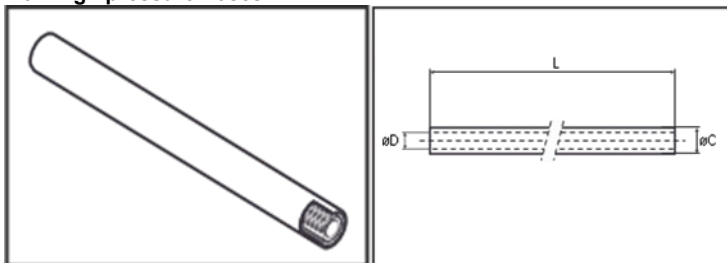
²⁾ These tubes are available in rolls of 25 metres.

4.4 Protection spirals



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>L</i>	<i>Material</i>
23mm	19mm	F173798	36902	per 1 meter	steel
23mm	19mm	F175878	-	2.35 meter	steel

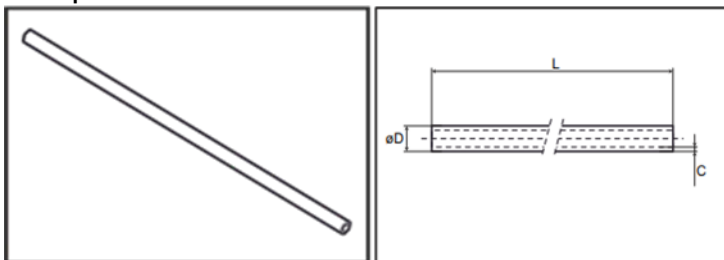
4.5 High pressure hoses



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>L</i>	<i>Max. working pressure</i>	<i>Material</i>
5/32"	8.6mm	F123414 ¹⁾	-	per 1 meter	350 bar	thermoplastic
1/4"	12.2mm	F113422	00817	per 1 meter	225 bar	synthetic rubber
3/8"	17.1mm	F121011	35702	per 1 meter	180 bar	synthetic rubber

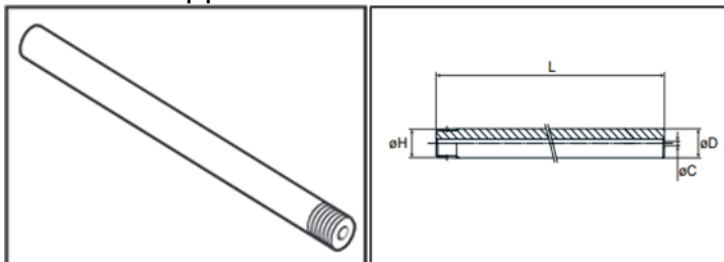
¹⁾ Pre-filled with grease.

4.6 Pipes



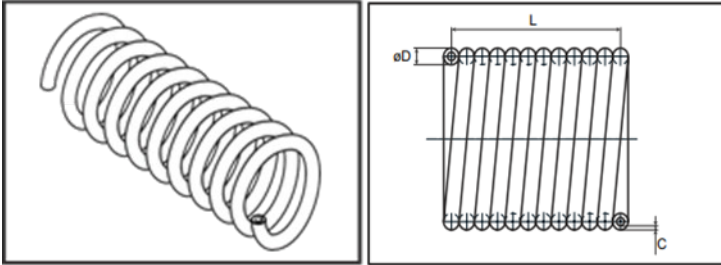
$\varnothing D$	C	<i>p/n new</i>	<i>p/n old</i>	L	<i>Material</i>
6mm	1mm	F120758	31902	per 2 meter	steel
8mm	1mm	F118184	32002	per 2 meter	steel
10mm	1mm	F178283	32102	per 2 meter	steel
12mm	1mm	F173348	32202	per 2 meter	steel

4.7 Thick-walled pipes



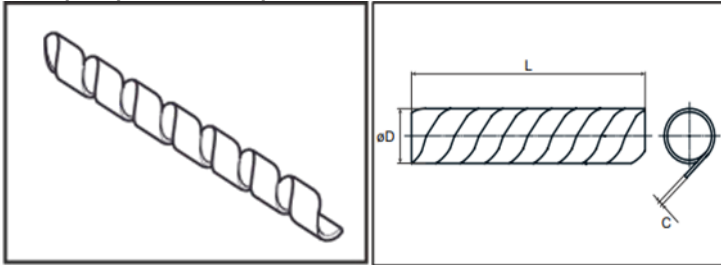
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	$\varnothing H$	L	<i>Material</i>
10mm	3mm	F106743	24622	R1/8"	800mm	steel
10mm	3mm	F108293	10312	R1/8"	1750mm	steel
10mm	3mm	F109356	25422	R1/8"	1900mm	steel

4.8 Spiral tubes



$\varnothing D$	$\varnothing C$	p/n new	p/n old	L	Material
5/16"	1.59mm	F177552	02801	per 1 meter	PA 12 H

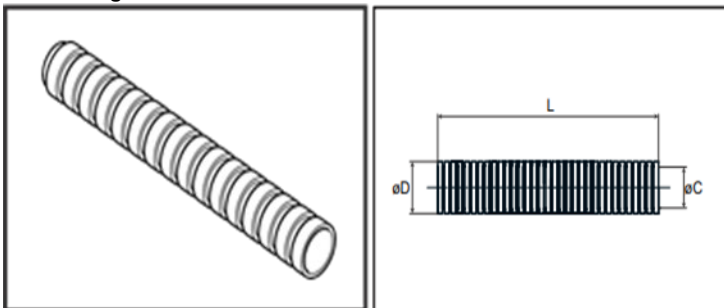
4.9 Spiral protective wrap



$\varnothing D$	C	Capacity	p/n new	p/n old	L	Material
6mm	1mm	5-20mm	F104550	01908	per 1 meter 1)	Polyethylene
12mm	1.5mm	10-40mm	F117540	02008	per 1 meter 1)	Polyethylene

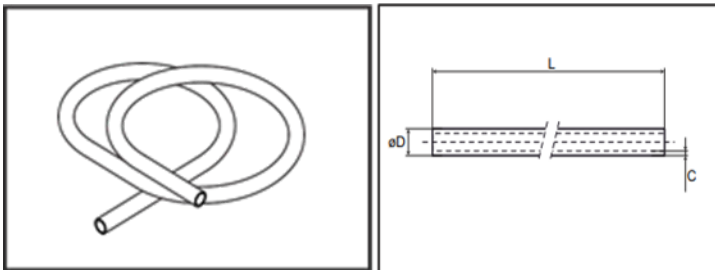
1) These spiral protective wraps are available in rolls of 25 metres.

4.10 Corrugated tubes



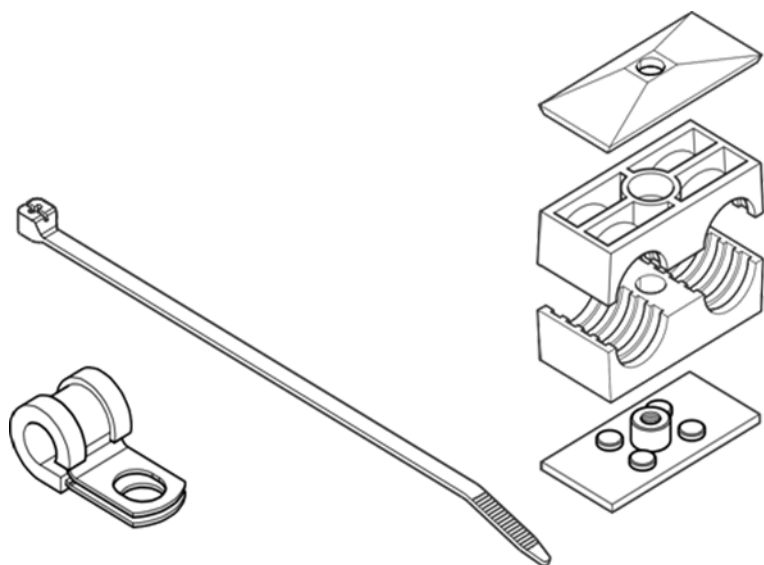
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>L</i>	<i>Material</i>
12mm	8.5mm	F113069	17012	per 1 meter	PA 6
13.5mm	10mm	F112685	14008	per 1 meter	PA 6
15.8mm	12mm	F114745	-	per 1 meter	PA 6
19mm	14mm	F115078	02212	per 1 meter	PA 6
21mm	17mm	F115079	02312	per 1 meter	PA 6
25.5mm	22mm	F115080	11912	per 1 meter	PA 6
31.2mm	25.8mm	F116441	-	per 1 meter	PA 6
34.5mm	29mm	F116825	-	per 1 meter	PA 6
42.4mm	36mm	F116442	-	per 1 meter	PA 6

4.11 Protection sleeves

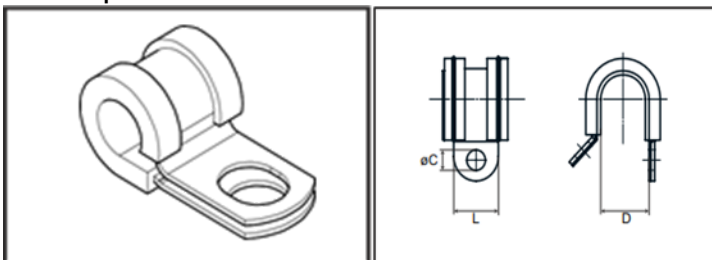


$\varnothing D$	C	p/n new	p/n old	L	Material
7mm	0.5mm	F113446	36608	per 1 meter	pvc

5 FASTENERS



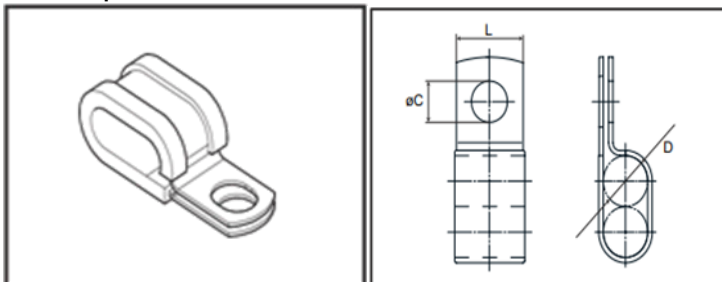
5.1 Clamps lined



$\varnothing D$	$\varnothing C$	p/n new	p/n old	L	Material
4mm	5mm	F104575	00908	12	steel
6mm	5mm	F104573	01008	12	steel
6mm	5mm	F122062	81102	12	inox
8mm	5mm	F104637	01108	12	steel
8mm	5mm	F120657	81202	12	inox
10mm	5mm	F104571	01208	12	steel
10mm	5mm	F122796	81302	12	inox
12mm	5mm	F104574	01308	12	steel
12mm	5mm	F200126	38222	12	inox
13mm	5mm	F171184	-	12	inox
14mm	5mm	F113425	00112	12	steel
16mm	5mm	F118878	00212	12	steel
20mm	5mm	F104572	01408	12	steel
6mm	6mm	F207612	-	12	steel
8mm	6mm	F111400	17833	12	steel
10mm	6mm	F117114	14208	12	steel
13mm	6mm	F206150	-	12	steel
18mm	6mm	F104576	00808	15	steel
22mm	6mm	F113438	22909	15	steel
25mm	6mm	F127882	14308	15	steel

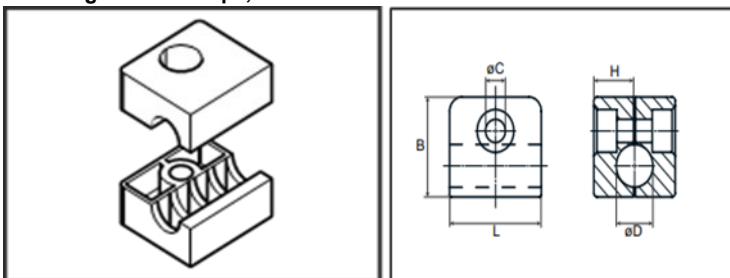
8mm	8mm	F113439	34908	19	steel
16mm	8mm	F113440	08512	19	steel
18mm	8mm	F117153	23009	15	steel
20mm	8mm	F202094	-	20	inox
28mm	8mm	F115077	18112	19	steel
35mm	8mm	F109737	03508	19	steel
6mm	10mm	F170756	-	16	steel
8mm	10mm	F170579	39908	16	steel
8mm	10mm	F202038	-	16	inox
9.5mm	10mm	F191591	-	19.05	steel
12mm	10mm	F171197	-	20	steel
12.7mm	10mm	F191592	-	19.05	steel
14mm	10mm	F116460	39008	16	steel
14mm	10mm	F171185	-	16	inox
23.8mm	10mm	F191583	-	19.05	steel
25.4mm	10mm	F191584	-	19.05	steel
27mm	10mm	F191585	-	19.05	steel
28mm	10mm	F171192	-	25	steel
12.7mm	12mm	F211204	-	19.05	steel

5.2 Clamps lined double



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>L</i>	<i>Material</i>
12.7mm	10mm	F205295	-	19.05	steel

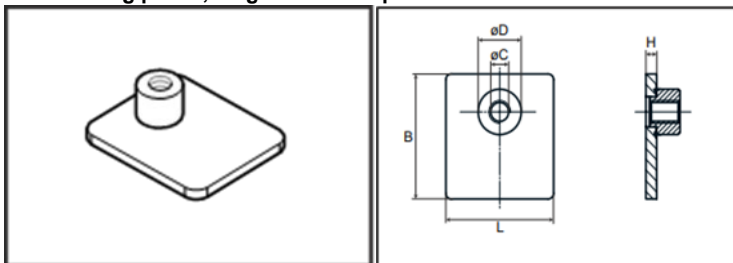
5.3 Single tube clamps, one bolt



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
6mm	6.5mm	F179120 ¹⁾	-	28	13	30	nylon 6
8mm	6.5mm	F179121 ¹⁾	-	28	13	30	nylon 6
10mm	6.5mm	F179122 ¹⁾	-	28	13	30	nylon 6
12mm	6.5mm	F179123 ¹⁾	-	28	13	30	nylon 6

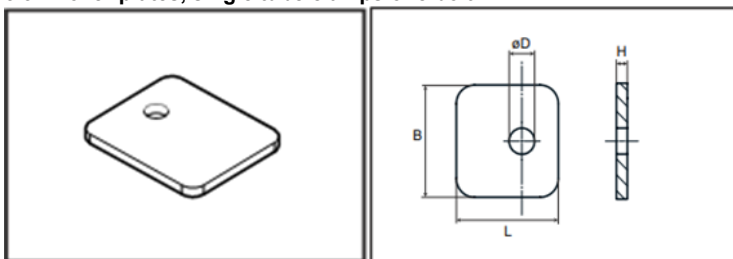
¹⁾ Consists out of two parts.

5.4 Welding plates, single tube clamps one bolt



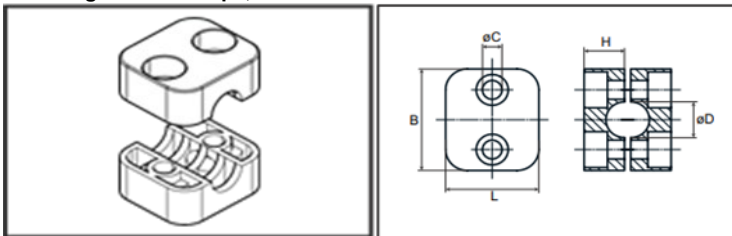
ϕD	ϕC	p/n new	p/n old	B	H	L	Material
12mm	M6	F179124	-	33	3	30	steel

5.5 Cover plates, single tube clamps one bolt



ϕD	ϕC	p/n new	p/n old	B	H	L	Material
7mm	-	F179125	-	30	3	28	steel

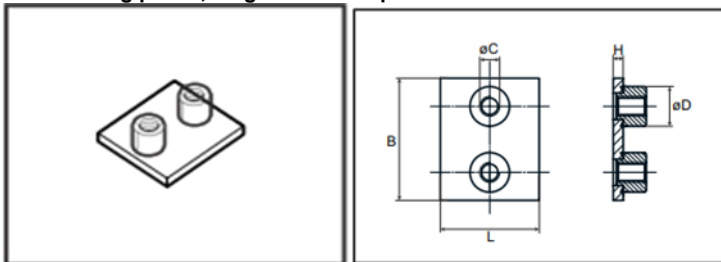
5.6 Single tube clamps, two bolts



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
6mm	6.3mm	F174110 ¹⁾	81502	34	13	30	nylon 6
8mm	6.3mm	F110287 ¹⁾	81602	34	13	30	nylon 6
10mm	6.3mm	F110288 ¹⁾	81702	34	13	30	nylon 6
12mm	6.3mm	F110282 ¹⁾	81802	34	13	30	nylon 6
15mm	6.3mm	F110283 ¹⁾	81902	40	16.1	30	nylon 6
22mm	6.3mm	F122885 ¹⁾	83802	50	17	30	nylon 6
25mm	6.3mm	F127807 ¹⁾	15712	50	17.5	30	nylon 6

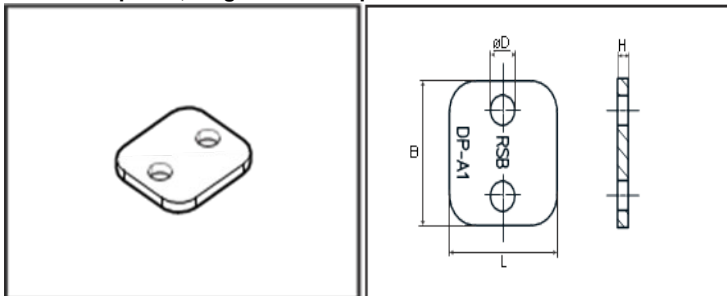
¹⁾ Consists out of two parts.

5.7 Welding plates, single tube clamps two bolts



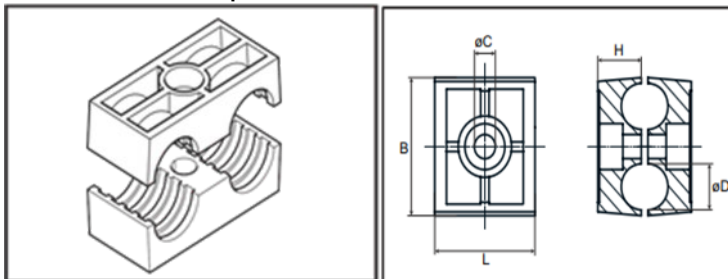
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
12mm	M6	F110289	82002	37	3	30	steel
12mm	M6	F110284	82102	42	3	30	steel
12mm	M6	F122884	83902	50	3	30	steel

5.8 Cover plates, single tube clamps two bolts



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
7mm	-	F116549	16012	34	3	30	steel
7mm	-	F120728	21612	34	3	30	inox
7mm	-	F170286	-	40	3	30	steel
7mm	-	F122295	15912	48	3	30	steel

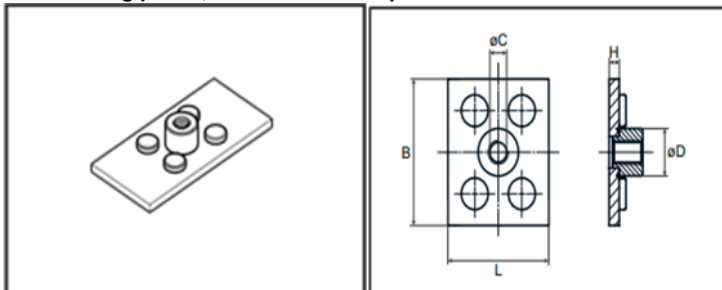
5.9 Double tube clamps



$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
6mm	6.3mm	F116473 ¹⁾	78401	36	13	30	nylon 6
8mm	6.3mm	F116624 ¹⁾	78501	36	13	30	nylon 6
10mm	6.3mm	F113533 ¹⁾	78601	36	13	30	nylon 6
12mm	6.3mm	F113534 ¹⁾	78701	36	13	30	nylon 6
15mm	9mm	F122886 ¹⁾	15212	53	13	30	nylon 6
16mm	9mm	F121140 ¹⁾	15312	53	13	30	nylon 6
22mm	9mm	F116866 ¹⁾	12912	66	18	30	nylon 6

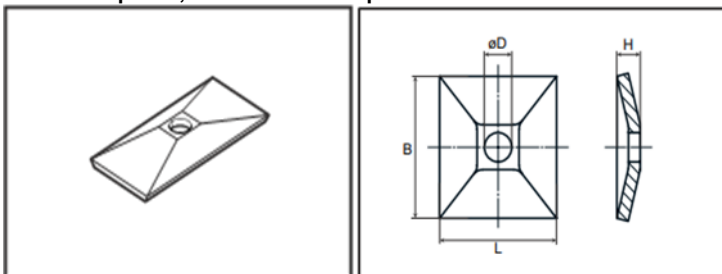
¹⁾ Consists out of two parts.

5.10 Welding plates, double tube clamps



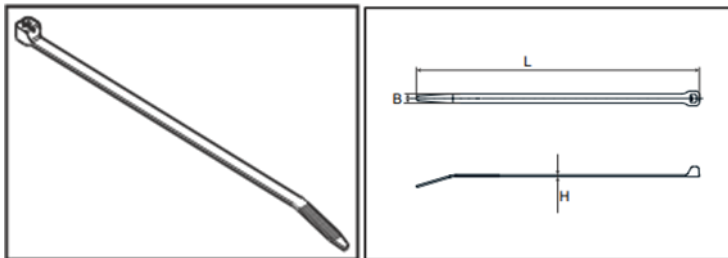
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
12mm	M6	F113451	78801	37	3	30	steel
14mm	M8	F122887	15412	55	5	30	steel
14mm	M8	F122294	13012	70	5	30	steel

5.11 Cover plates, double tube clamps



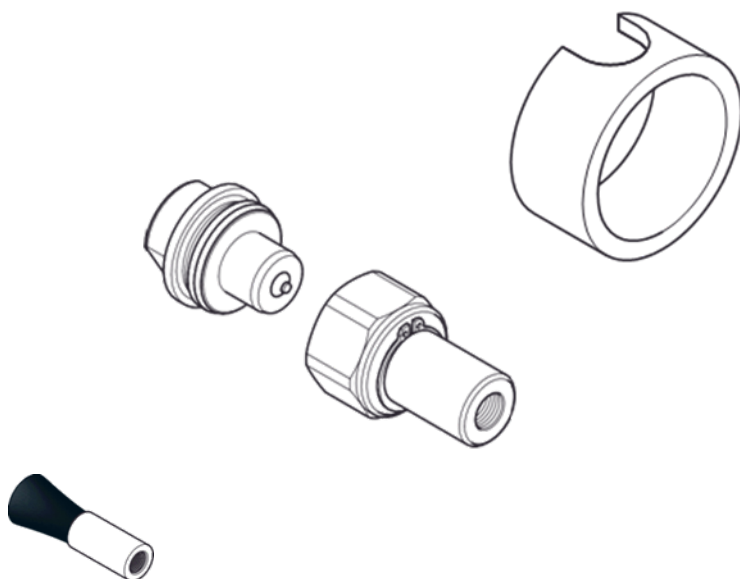
$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
7mm	-	F115932	13312	34	6	30	steel
7mm	-	F120648	21512	34	6	30	inox
9.5mm	-	F121139	15512	51.5	6	30	steel
8.5mm	-	F116867	15612	65	7.5	30	steel

5.12 Cable ties

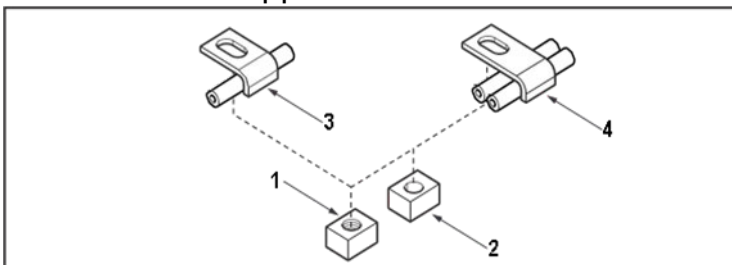


$\varnothing D$	$\varnothing C$	<i>p/n new</i>	<i>p/n old</i>	<i>B</i>	<i>H</i>	<i>L</i>	<i>Material</i>
-	-	F111891	00208	5	1	188	nylon black
-	-	F104556	11107	7	1.6	340	nylon black

6 SPECIAL PARTS

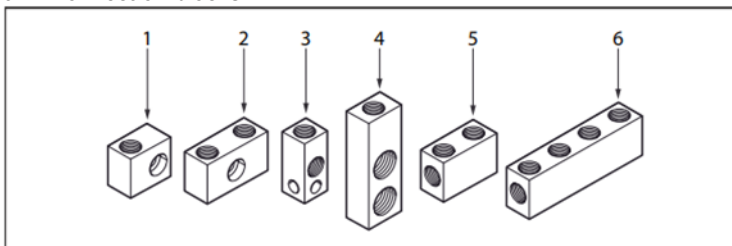


6.1 Brackets for ø10mm pipes



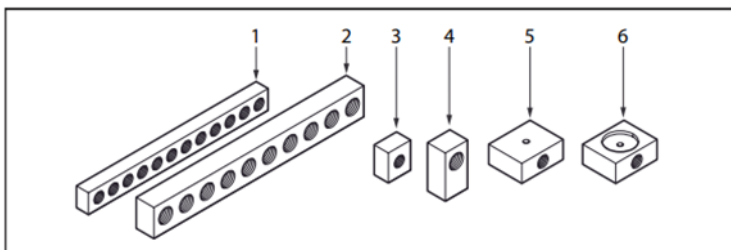
Pos.	p/n new	p/n old	Description	Material
1	F176943	-	Welding block M8	steel
2	F173292	-	Filler block	steel
3	F173293	-	Bracket for ø10mm pipe	steel
4	F176944	-	Bracket for two ø10mm pipes	steel

6.2 Connection blocks



Pos.	p/n new	p/n old	Description	Material
1	F105394	20901	Connection block 1 channel - G1/8"	aluminium
2	F121135	21001	Connection block 2 channels - G1/8"	aluminium
3	F128974	-	Connection block 1 channel - G1/8"	steel
4	F107980	06812	Connection block 2 channels - G1/4"	steel
5	F170766	-	Connection block 5 ports - G1/8"	brass
6	F170765	-	Connection block 7 ports - G1/8"	brass

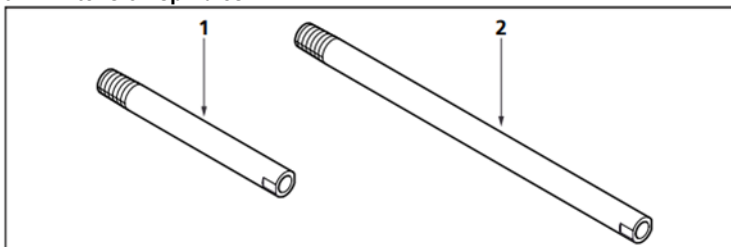
6.3 Welding blocks / strips



Pos.	p/n new	p/n old	Description	Material
1	F105978 1)	13101	Welding strip G1/8" holes (12 holes)	steel
2	F105979 1)	13201	Welding strip G1/4" holes (10 holes)	steel
3	F178137	87402	Welding block G1/8"	steel
4	F105234	08222	Welding block G1/4"	steel
5	F102344	87502	Welding block G1/8" - ø4mm	steel
6	F105199	22502	Welding block G1/8" - ø24mm - ø6.5mm	steel

1) Order per hole.

6.4 Extension spindles



Pos.	p/n new	p/n old	Description	Material
1	F120334	65102	Extension spindle M10x1.5 / L=120mm	steel
2	F107414	36722	Extension spindle M10x1.5 / L=300mm	steel

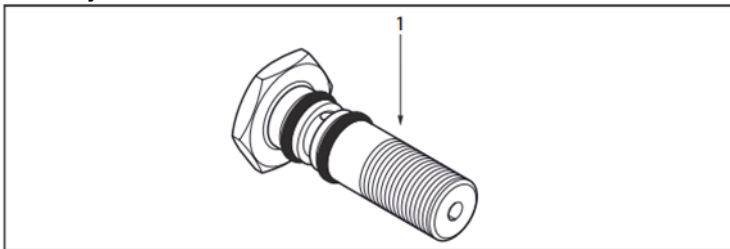
6.5 Banjo bushings

$\varnothing D$	$\varnothing C$	p/n new	p/n old	$\varnothing B$	$\varnothing F$	H	H1	Material
20.1	29	F173114	-	10.5	G1/8"	20	3	steel
30	-	F171390	-	10.5	G1/8"	23	-	steel
18	30	F109515	25912	10.5	G1/8"	30	15	steel
19.6	30	F106744	24922	10.5	G1/8"	23	8	steel
19.6	30	F202185	-	10.5	G1/8"	31	8	steel
19.6	30	F106742	24722	10.5	G1/8"	26	11	steel
20.9	30	F202328	-	10.5	G1/8"	47.5	25	steel
23	30	F202489	-	10.5	G1/8"	32.5	10	steel
23	30	F176941	-	10.5	G1/8"	34	19	steel
24	30	F176942	-	10.5	G1/8"	23	8	steel
24	30	F204004 ¹⁾	-	10.5	G1/8"	23	8	steel
24	30	F200673	-	10.5	G1/8"	25	10	steel
24	30	F210321	-	10.5	G1/8"	35	18	steel
24	30	F206723	-	10.5	G1/8"	50	33	steel
33	-	F206459	-	10.5	G1/8"	17	-	steel
35	-	F206176	-	10.5	G1/8"	17	-	steel
35	-	F202924	-	10.5	G1/8"	35	-	steel
19	38	F209228 ²⁾	-	12.5	1/8"NPT	23	8	steel
23	38	F207252 ¹⁾	-	10.5	G1/8"+ M12x1	29	12	steel
19.6	30x38	F209226 ²⁾	-	12.5	G1/8"	30	8	steel
29	45	F202923 ¹⁾	-	10.5	G1/8"+ M12x1	32	14	steel

¹⁾ This banjo bushing has two holes ($\varnothing F$).

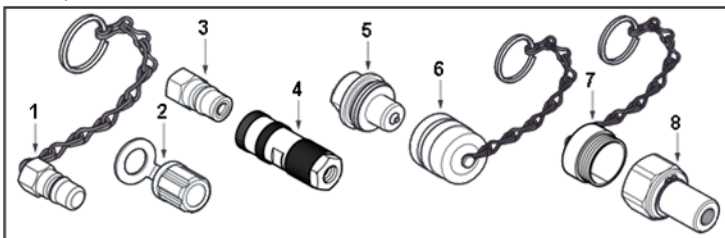
²⁾ This banjo bushing is oval ($\varnothing C$).

6.6 Banjo bolts



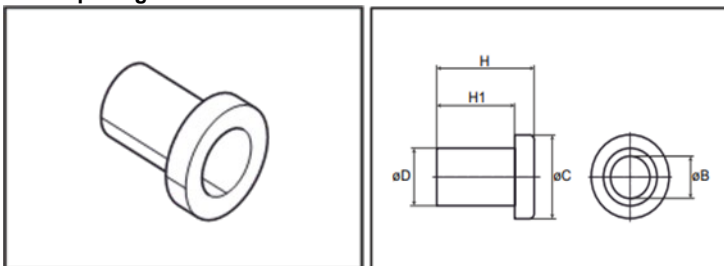
Pos.	p/n new	p/n old	Description	Material
	F119055	-	Banjo bolt G1/8" / L=35mm incl. O-rings	steel
	F205084	-	Banjo bolt G1/8" / L=40mm incl. O-rings	steel
	F124313	-	Banjo bolt G1/8" / L=45mm incl. O-rings	steel

6.7 Quick connectors



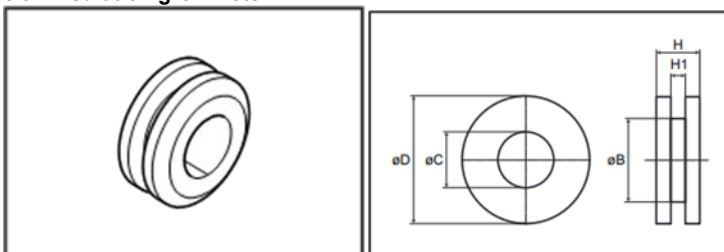
Pos.	p/n new	p/n old	Description	Material
2	F100258	03501	Dust cap	rubber
3	F100056	02001	Quick connector G1/4" with bullet (male)	steel
4	F103083	01901	Quick connector G1/4" with bullet (female)	steel
5	F112627	80101	Quick screw connector G1/4"	steel
	F123739	18417	Quick screw connector G1/2"	steel
6	F113078	80301	Dust cap for F112627	steel
	F123740	18617	Dust cap for F123739	steel
7	F113077	80201	Dust cap for F112626	steel
	F123741	18717	Dust cap for F123738	steel
8	F112626	80001	Quick screw connector G1/4"	steel
	F123738	18517	Quick screw connector G1/2"	steel

6.8 Top hat grommets



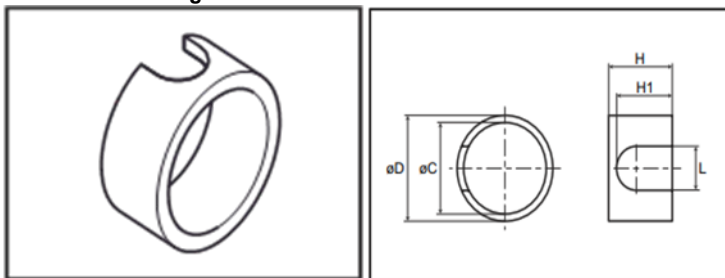
$\varnothing D$	$\varnothing C$	$\varnothing B$	<i>p/n new</i>	<i>p/n old</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
8mm	12mm	5mm	F104616	00608	21	18	-	rubber
11mm	16mm	8mm	F104547	00108	20	16	-	rubber
14mm	18.5mm	10mm	F103347	24401	20	16	-	rubber
20mm	28mm	14mm	F205836	-	24.5	20.5	-	rubber

6.9 Insulation grommets



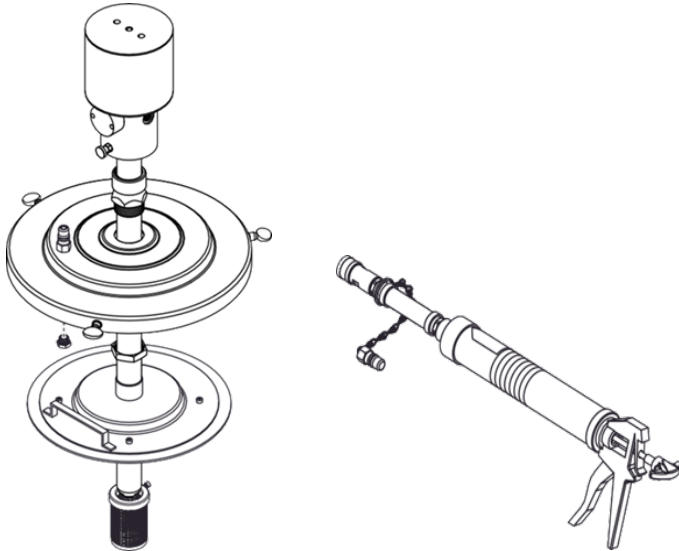
$\varnothing D$	$\varnothing C$	$\varnothing B$	<i>p/n new</i>	<i>p/n old</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
28mm	14mm	20mm	F104517	02108	12	4	-	rubber
35mm	15.5mm	23mm	F178289	03408	12	4	-	rubber

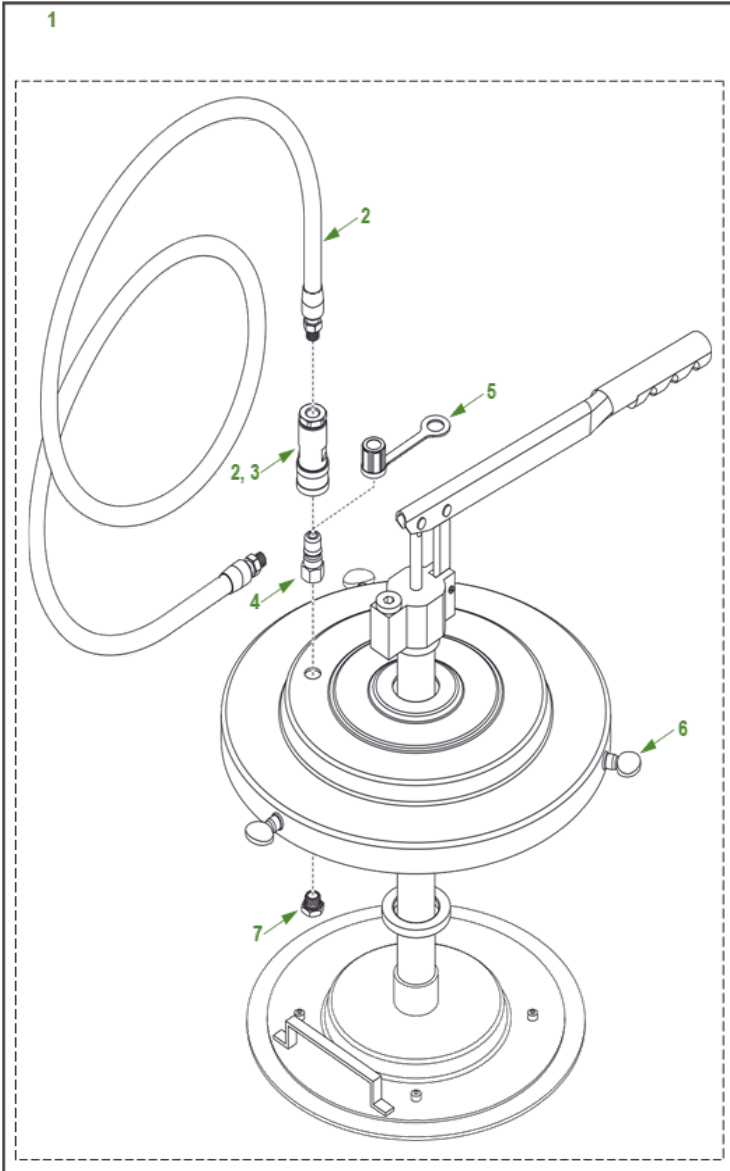
6.10 Protection rings



ϕD	ϕC	<i>p/n new</i>	<i>p/n old</i>	<i>H</i>	<i>H1</i>	<i>L</i>	<i>Material</i>
60mm	52mm	F105110	39702	40	35	25	steel
70mm	61mm	F105109	39802	40	35	25	steel

7 FILLER PUMPS





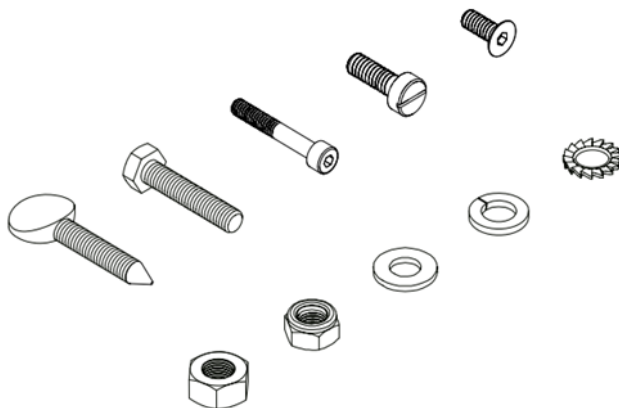
7.1 Manual filler pump 20L for NLGI-2

<i>Pos.</i>	<i>p/n new</i>	<i>p/n old</i>	<i>Description</i>
1	F121623	-	Kit manual filler pump 20L for NLGI-2
2	F131650	-	High pressure hose assembly
3	F120542	-	Quick connector M18x1.5 without bullet (female)
4	F100359	-	Quick connector G1/4" without bullet (male)
5	F100258	03501	Dust cap
6	F175187	-	Thumb screw M8x50
7	F000527	08608	Reducing adapter G1/4" - G1/8"

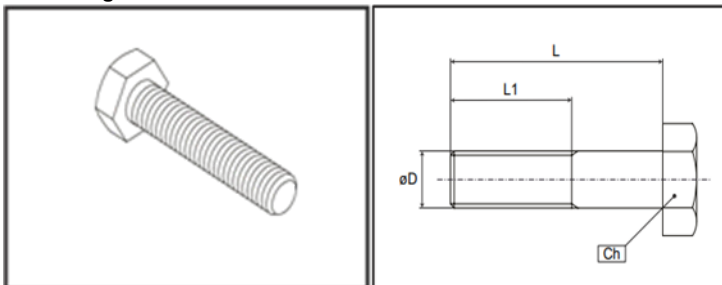
7.2 Manual filler pump 20L for NLGI-0

<i>Pos.</i>	<i>p/n new</i>	<i>p/n old</i>	<i>Description</i>
1	F178054	-	Kit manual filler pump 20L for NLGI-0
2	F131652	-	Hose assembly
3	F103083	01901	Quick connector G1/4" with bullet (female)
4	F100056	02001	Quick connector G1/4" with bullet (male)
5	F100258	03501	Dust cap
6	F175187	-	Thumb screw M8x50
7	F000527	08608	Reducing adapter G1/4" - G1/8"

8 BOLTS, NUTS AND WASHERS



8.1 Hexagonal bolts



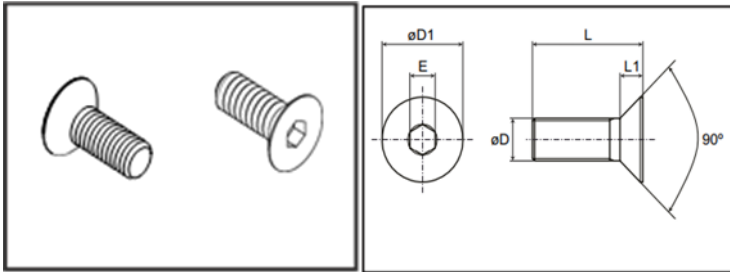
ϕD	L	L1	p/n new	p/n old	Ch	Thread	Material
M4	30	-	F177963	104030	7	0.7	steel
M5	10	-	F110866	105010	8	0.8	steel
M5	10	-	F177865	81402	8	0.8	inox
M5	40	-	F116336	105040	8	0.8	steel
M6	12	-	F114683	106012	10	1.0	steel
M6	16	-	F110869	106016	10	1.0	steel
M6	20	-	F001029	106020	10	1.0	steel
M6	25	-	F122692	106025	10	1.0	steel
M6	30	-	F110879	106030	10	1.0	steel
M6	40	-	F118312	106040	10	1.0	steel
M6	60	-	F114939	106060	10	1.0	steel
M8	16	-	F113433	108016	13	1.25	steel
M8	20	-	F116050	108020	13	1.25	steel
M8	20	-	F177958	118020	13	1.25	inox
M8	25	-	F110878	108025	13	1.25	steel
M8	30	-	F113434	108030	13	1.25	steel
M8	30	-	F120736	118030	13	1.25	inox
M8	35	-	F104653	108035	13	1.25	steel
M8	35	-	F123156	118035	13	1.25	inox

M8	40	-	F113435	108040	13	1.25	steel
M8	40	-	F172823	-	13	1.25	inox
M8	45	-	F113436	108045	13	1.25	steel
M8	45	-	F122374	118045	13	1.25	inox
M8	50	-	F113437	108050	13	1.25	steel
M8	50	-	F177868	-	13	1.25	inox
M8	60	-	F113291	108060	13	1.25	steel
M8	65	-	F116921	108065	13	1.25	steel
M8	80	-	F113536	108080	13	1.25	steel
M8	100	-	F172850	-	13	1.25	steel

M10	16	-	F113428	101016	17	1.5	steel
M10	16	-	F177954	111016	17	1.5	inox
M10	20	-	F112232	101020	17	1.5	steel
M10	25	-	F115475	101025	17	1.5	steel
M10	30	-	F112335	101030	17	1.5	steel
M10	30	-	F177870	111030	17	1.5	inox
M10	35	-	F116633	101035	17	1.5	steel
M10	40	-	F113429	101040	17	1.5	steel
M10	40	-	F120722	111040	17	1.5	inox
M10	45	-	F113430	101045	17	1.5	steel
M10	50	-	F116920	101050	17	1.5	steel
M10	50	-	F177957	111050	17	1.5	inox
M10	55	-	F116868	101055	17	1.5	steel
M10	60	-	F113431	101060	17	1.5	steel
M10	65	-	F177873	101066	17	1.5	steel
M10	70	-	F113432	101070	17	1.5	steel
M10	80	32	F177953	108080	17	1.5	steel

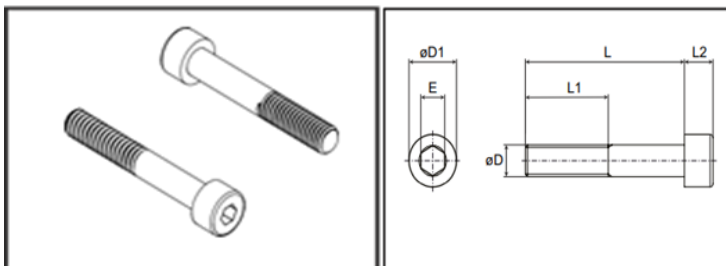
M10	90	-	F117322	101090	17	1.5	steel
M10	90	-	F600695	-	17	1.5	inox
M10	100	-	F119484	101065	17	1.5	steel
M10	110	-	F116807	101110	17	1.5	steel
M10	110	-	F177872	111110	17	1.5	inox
M10	150	32	F121018	101150	17	1.5	steel
M10	170	32	F200626	-	17	1.5	steel
M12	30	-	F121913	101230	19	1.75	steel

8.2 Countersunk socket head screws



$\varnothing D$	$\varnothing D1$	L	$L1$	E	<i>p/n new</i>	<i>p/n old</i>	<i>Thread</i>	<i>Material</i>
M6	12	10	3.3	4	F177955	126010	1	steel
M8	16	10	4.4	5	F129966	128010	1.25	steel
M8	16	16	4.4	5	F121880	128015	1.25	steel
M10	20	20	5.5	6	F177861	121020	1.5	steel

8.3 Allen screws

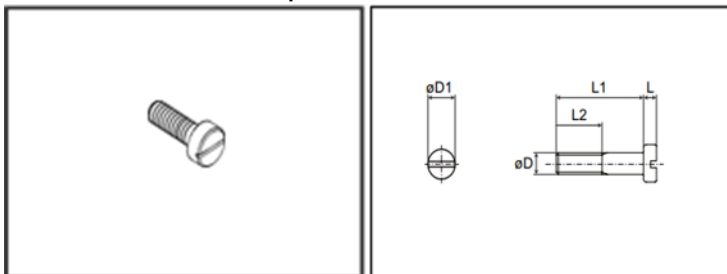


$\varnothing D$	L	$\varnothing D1$	$L1$	$L2$	E	p/n new	p/n old	Thread	Material
M5	10	8.5	-	5	4	F171811	125010	0.8	steel
M5	16	8.5	-	5	4	F119397	125016	0.8	steel
M5	30	8.5	16	5	4	F110863	125030	0.8	steel
M5	35	8.5	22	5	4	F116382	125035	0.8	steel
M5	45	8.5	16	5	4	F110864	125045	0.8	steel
M5	45	8.5	16	5	4	F604962		0.8	steel Zn/Ni
M5	50	8.5	16	5	4	F111740	125050	0.8	steel
M5	50	8.5	16	5	4	F605481		0.8	steel Zn/Ni
M5	55	8.5	22	5	4	F213345	125055	0.8	steel
M5	55	8.5	22	5	4	F605717		0.8	steel Zn/Ni
M6	16	10	-	6	5	F113441	126016	0.8	steel
M6	20	10	-	6	5	F110296	126020	0.8	steel
M6	20	10	-	6	5	F122373	136020	1.0	inox
M6	25	10	-	6	5	F103068	126025	1.0	steel
M6	25	10	-	6	5	F177863	136025	1.0	inox
M6	30	10	-	6	5	F101272	126030	1.0	steel
M6	30	10	-	6	5	F117393	136030	1.0	inox
M6	35	10	24	6	5	F115930	126035	1.0	steel
M6	40	10	18	6	5	F104050	126040	1.0	steel
M6	40	10	24	6	5	F177866	136040	1.0	inox

M6	45	10	18	6	5	F118957	126045	1.0	steel
M6	50	10	24	6	5	F117845	126050	1.0	steel
M6	50	10	25	6	5	F171832	136050	1.0	inox
M6	65	10	24	6	5	F111619	126065	1.0	steel
M6	70	10	26	6	5	F122694	136070	1.0	inox
M6	80	10	24	6	5	F111620	-	1.0	steel
M6	90	10	24	6	5	F117863	126090	1.0	steel
M6	100	10	24	6	5	F111621		1.0	steel
M6	190	10	24	6	5	F114685	20414	1.0	steel
M8	30	13	-	8	6	F177956	128030	1.25	steel
M8	50	13	28	8	6	F211386	-	1.25	steel

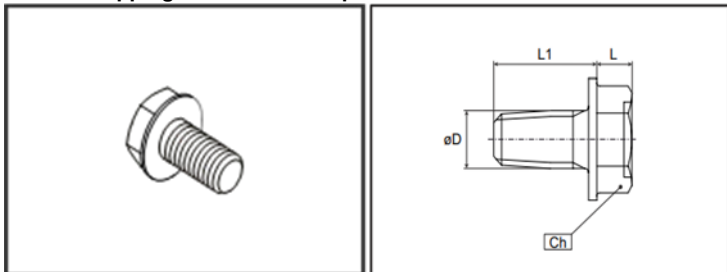
$\varnothing D$	L	$\varnothing D$ 1	L 1	L 2	E	p/n new	p/n old	Threa d	Materi al
M8	11 0	13	2 8	8	6	F12131 6	12811 0	1.25	steel
M8	12 0	13	2 8	8	6	F11602 7	12812 0	1.25	steel
M1 0	25	16	-	1 0	8	F10260 8	31001	1.5	steel
M1 0	30	16	-	1 0	8	F17795 9	-	1.5	steel
M1 0	35	16	-	1 0	8	F12788 1	-	1.5	steel
M1 0	60	16	-	1 0	8	F10325 5	48801	1.5	steel
M1 0	70	16	-	1 0	8	F10104 1	22122	1.5	steel

8.4 Slotted screws head cap



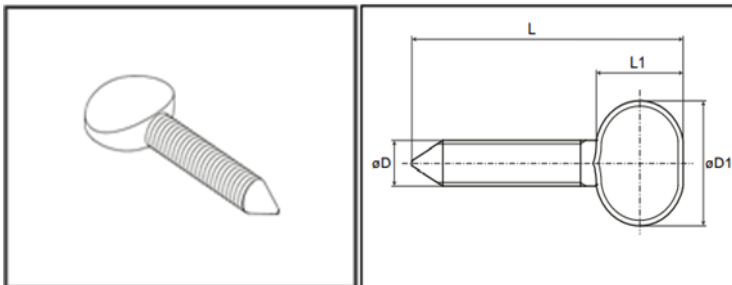
ϕD	$\phi D1$	L	L1	L2	p/n new	p/n old	Thread	Material
M3	5.5	2	16	-	F111506	003016	0.5	steel
M4	7	2.6	20	-	F125288	004020	0.7	steel
M4	7	2.6	25	-	F171956	004025	0.7	steel

8.5 Self tapping screws for clamps



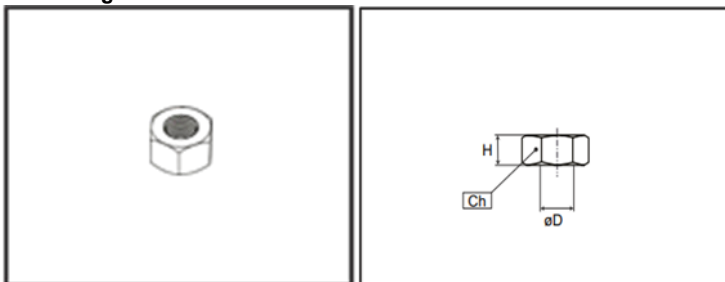
ϕD	L	L1	p/n new	p/n old	Ch	Thread	Material
M5	3.4	10	F104509	02701	8	0.8	steel
M5	3.4	12	F601112	-	8	0.8	steel

8.6 Thumb screws



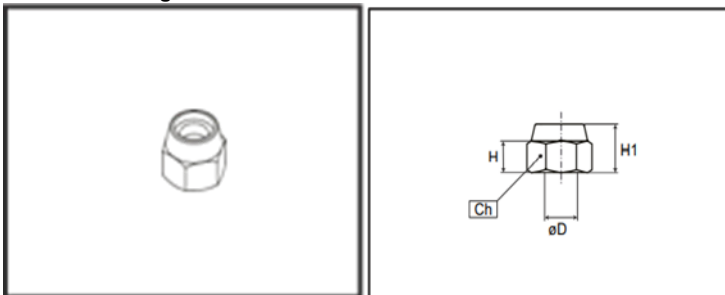
$\varnothing D$	$\varnothing D1$	L	L1	L2	p/n new	p/n old	Thread	Material
M8	22	50	16	-	F175187	-	1.25	steel

8.7 Hexagonal nuts



$\varnothing D$	H	H1	p/n new	p/n old	Ch	Thread	Material
M4	3.2	-	F171957	200004	7	1.75	steel
M5	4	-	F101724	200005	8	0.8	steel
M5	4		F604963		8	0.8	steel Zn/Ni
M6	5	-	F110880	200006	10	1.0	steel
M6	5	-	F119655	210006	10	1.0	inox
M8	6.5	-	F104585	200008	13	1.25	steel
M10	8	-	F000725	200010	17	1.5	steel
M10	8	-	F000563	210010	17	1.5	inox
M12	10	-	F121939	200012	19	1.75	steel

8.8 Self-locking nuts



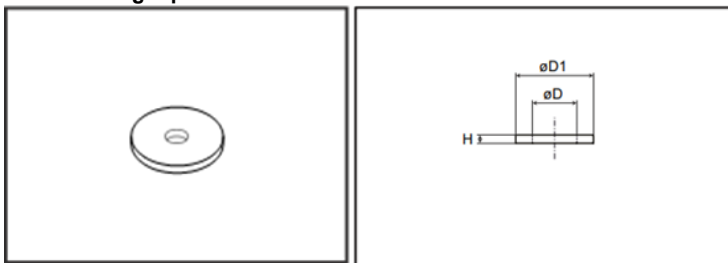
$\varnothing D$	H	$H1$	p/n new	p/n old	Ch	Thread	Material
M6	4.8	7.8	F111806	91303	10	1.0	steel
M6	3	6	F117846	230006	10	1.0	inox
M8	6.4	10.6	F113423	220008	13	1.25	steel
M8	7.3		F116046	DIN 980M	13	1.25	steel
M8	6.4	10.6	F120707	230008	13	1.25	inox
M10	8	12.3	F113424	220010	17	1.5	steel
M10	8	12.3	F120708	230010	17	1.5	inox

8.9 Plain washers



$\varnothing D$	$\varnothing D1$	H	p/n new	p/n old	Ch	Thread	Material
M4	8	0.8	F100016	300004	-	-	steel
M5	10	0.8	F173771	300005	-	-	steel
M5	10	0.8	F604964				Steel Zn/Ni
M6	12	1.5	F110870	300006	-	-	steel
M6	12	1.6	F117392	310006	-	-	inox
M8	17	1.6	F104586	300008	-	-	steel
M8	17	1.6	F120709	310008	-	-	inox
M10	20	2	F113426	300010	-	-	steel
M10	20	2	F177961	310010	-	-	inox
M12	24	2.5	F117724	300012	-	-	steel
M14	28	2.5	F111012	300014	-	-	steel

8.10 Mudwing repair washers



ϕD	$\phi D1$	H	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Thread</i>	<i>Material</i>
M5	15	1.5	F111648	325015	-	-	steel
M5	30	1.25	F127637	325030	-	-	steel
M6	25	1.5	F200458	326025	-	-	steel
M6	30	1.5	F107157	326030	-	-	steel
M8	30	1.5	F171921	328030	-	-	steel
M8	21	4	F204814	-	-	-	steel
M10	30	2.5	F178041	321030	-	-	steel

8.11 Lock washers



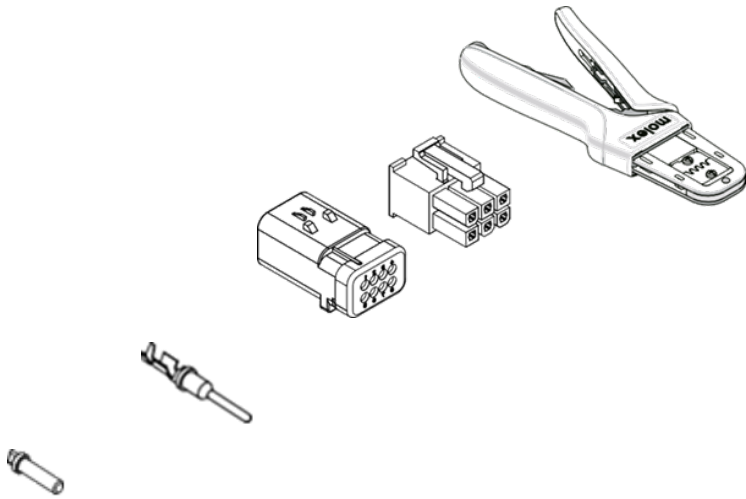
$\varnothing D$	$\varnothing D1$	H	p/n new	p/n old	Ch	Thread	Material
M4	7.3	0.9	F100998	330004	-	-	steel
M5	8.9	0.9	F110867	330005	-	-	steel
M5	8.9	0.9	F604965				steel Zn/Ni
M6	11.4	1.6	F110872	330006	-	-	steel
M6	11.4	1.6	F120727	350006	-	-	inox
M8	14.4	2	F104587	330008	-	-	steel
M8	14.8	2	F122662	350008	-	-	inox
M10	17.5	2	F113427	330010	-	-	steel
M10	18.1	2.2	F120773	350010	-	-	inox
M12	21.2	2.5	F121938	330012	-	-	steel

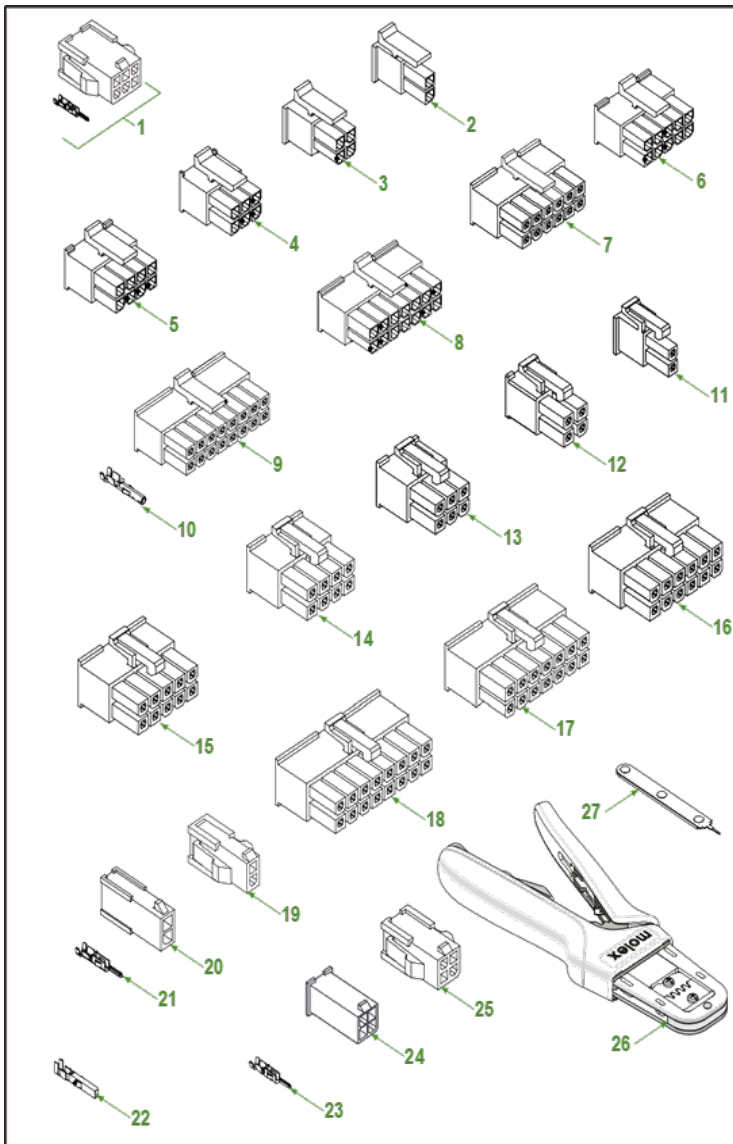
8.12 Serrated lock washers



$\varnothing D$	$\varnothing D1$	H	<i>p/n new</i>	<i>p/n old</i>	<i>Ch</i>	<i>Thread</i>	<i>Material</i>
M6	11	2.1	F110297	09202	-	-	steel
M10	18	2.2	F000564	360010	-	-	inox

9 ELECTRICAL PARTS



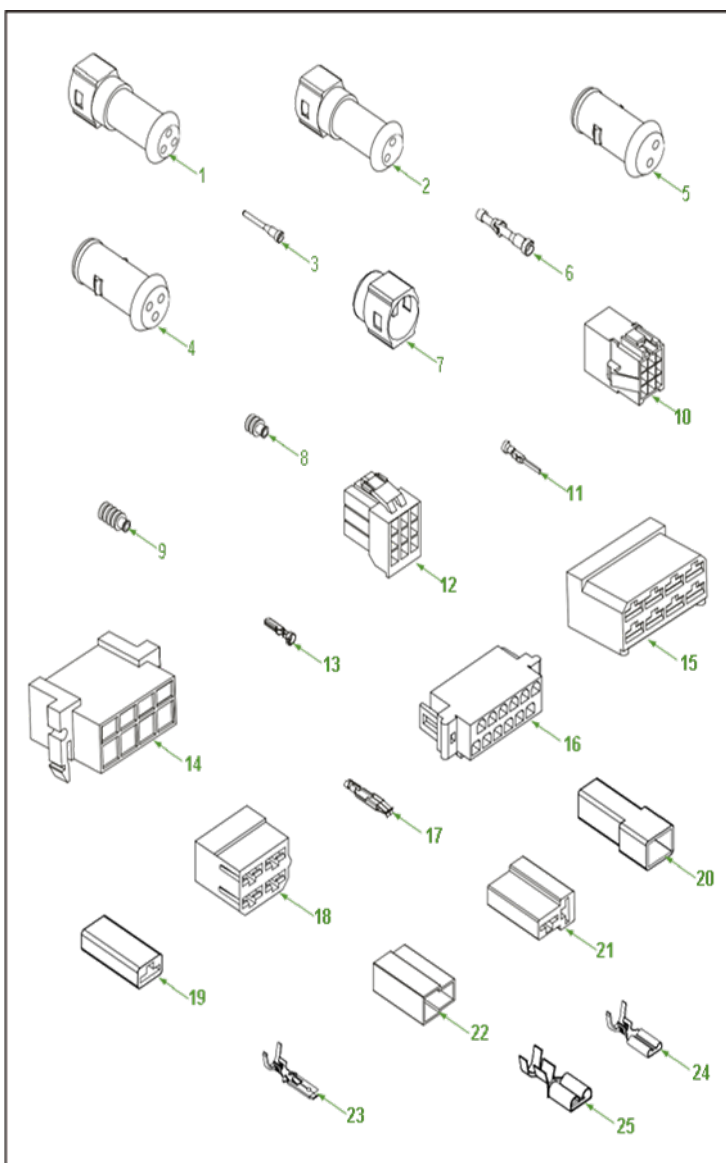


9.1 Molex electrical parts

Pos.	p/n new	p/n old	Description
1	F121527	-	Display connection kit
2	F121150	-	Microfit connector 2P
3	F121151	-	Microfit connector 4P
4	F121152	-	Microfit connector 6P
5	F121277	-	Microfit connector 8P
6	F121153	-	Microfit connector10P
7	F121154	-	Microfit connector 12P
8	F121244	-	Microfit connector 14P
9	F123067	-	Microfit connector 16P
10	F121155	-	Terminal microfit - wire range 1.5mm ²
11	F110586	-	Minifit connector F2x1
12	F119600	-	Minifit connector F2x2
13	F119612	-	Minifit connector F2x3
14	F175129	-	Minifit connector F2x4
15	F171662	-	Minifit connector F2x5
16	F120823	-	Minifit connector F2x6
17	F119622	-	Minifit connector F2x7
18	F120130	-	Minifit connector F2x8
19	F119610	-	Minifit plug connector F2x1
20	F121885	-	Microfit connector 2P (male)
21	F121886	-	Terminal microfit - wire range 1.5mm ² (male)
22	F110590	-	Terminal minifit - wire range 1.3mm ²
23	F119611	-	Terminal minifit - wire range 0.3 - 3mm ²
24	F126344	-	Minifit connector 4P
25	F175941	-	Minifit plug connector F2x2
26*	63819-0000	-	Molex crimp tool for microfit
	63819-0900		Molex crimp tool for minifit

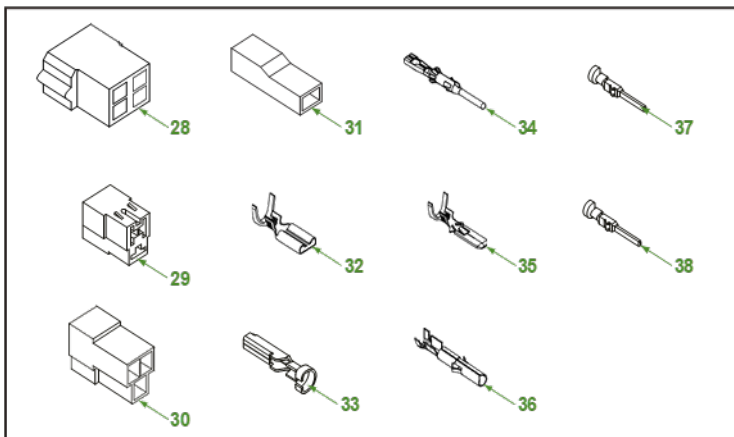
27*	11-03-0043	-	Molex extractor for microfit
	11-03-0044	-	Molex extractor for minifit

*** Not available for ordering please order at your local tool supplier.**

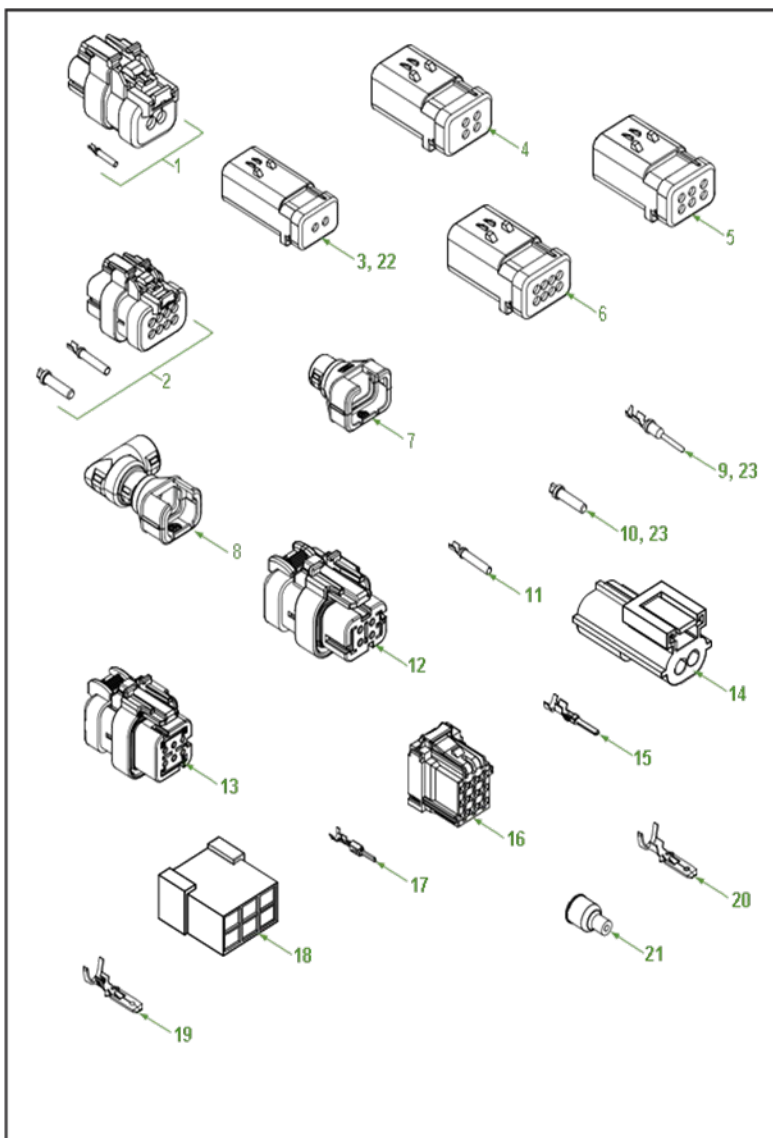


9.2 Amp electrical parts

Pos.	p/n new	p/n old	Description
1	F110617	39503	3P econoseal pin housing (female)
2	F117697	188413	2P Econoseal pin housing (female)
3	F114090	188400	Pin contact - wire range 2 - 2.5mm ²
4	F117332	188414	3P econoseal socket housing (male)
5	F117698	188498	2P econoseal socket housing (male)
6	F114091	188441	Socket contact - wire range 2 - 2.5mm ²
7	F117161	188601	Dust plug
8	F117415	800018	Wire seal isolated diameter 2.6 - 3.3
9	F112745	26033	Econoseal cavity plug
10	F188468	188468	Universal cap housing 9P
11	F188467	188467	Universal tab contact - wire range 1.2 - 2mm ² (male)
12	F188466	188466	Universal power plug 9P
13	F188465	188465	Universal Receptable contact - wire range 1.2 -2mm ² (female)
14	F174161	22603	Tab housing 8P (female)
15	F174162	13003	Receptable housing 8P (male)
16	F104581	07701	Connector housing 12P
17	F104579	07801	Junior contact - wire range 0.50 - 1.50mm ²
18	F110889	13103	Connector housing 4P (male)
19	F112758	67606	Connector housing 1P (female)
20	F113466	67706	Connector housing 1P (male)
21	F104543	61106	Connector housing 2P (female)
22	F104582	61006	Connector housing 2P (male)
23	F112757	61416	Tab contact - wire range 1.2 - 1.6mm ² (male)
24	F104635	67806	Receptable - wire range 1.2 - 1.6mm ² (female)
25	F104529	68606	Receptable - wire range 2.5mm ² (female)

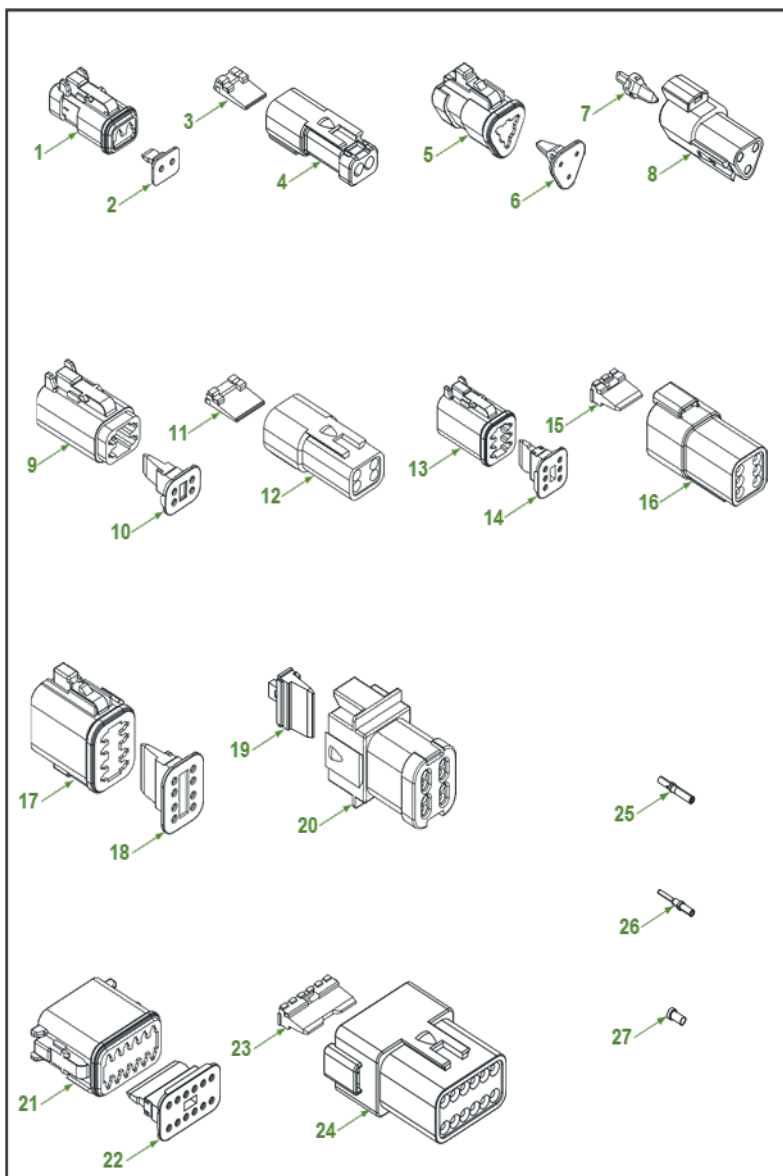


Pos.	p/n new	p/n old	Description
28	F112759	67506	Connector housing 4P (female)
29	F113852	-	Connector housing 3P (female)
30	F116164	-	Connector housing 3P (male)
31	F113015	00617	Insulating sleeve for F113014
32	F113014	00517	Receptable - wire range 1.5 - 2.8mm ²
33	F178062	800016	Mini receptable contact - wire range 0.75 - 1.5mm ²
34	F111937	14114	Contact pin - wire range 1.5mm ²
35	F117748	68706	Tab contact - wire range 1.5mm ²
36	F171831	-	Receptable pin - wire range 1.00 - 2.5mm ²
37	F178059	800013	Mini tab contact - wire range 0.35 - 0.5mm ²
	F178060	800014	Mini tab contact - wire range 0.75 - 1.5mm ²
38	F178061	800015	Mini receptable contact - wire range 0.35 - 0.5mm ²



9.3 Tyco electrical parts

<i>Pos.</i>	<i>p/n new</i>	<i>p/n old</i>	<i>Description</i>
1	F127306	-	Tyco pressure switch connection kit
2	F127305	-	Tyco pump connector kit
3	F122247	-	Connector housing 2P
4	F122250	-	Connector housing 4P
5	F122248	-	Connector housing 6P
6	F122251	-	Connector housing 8P
7	F128114	-	Backshell TYCO
8	F128115	-	Backshell TYCO
9	F122263	-	Contact pin - wire range 1.3mm ²
10	F122264	-	Sealing plug
11	F122262	-	Socket contact
12	F122249	-	Connector housing 4P
13	F128975	-	Connector housing 6P
14	F206411	-	2 way tab housing
15	F206412	-	Tab contact - wire range 1.5 - 2mm ²
16	F174126	-	Connector housing 9P
17	F188476	188476	Contact pin - wire range 1.2 - 2.1mm ²
18	F127574	-	Connector housing 6P
19	F112757	-	Receptable - wire range 0.75mm ² (male)
20	F128538	-	Tab contact - wire range 1.4 - 2.3mm ² (male)
21	F206413	-	Single wire seal - wire range 0.5 - 1.5mm ²
22	F213496	-	Tyco 2-pins connection kit (female)

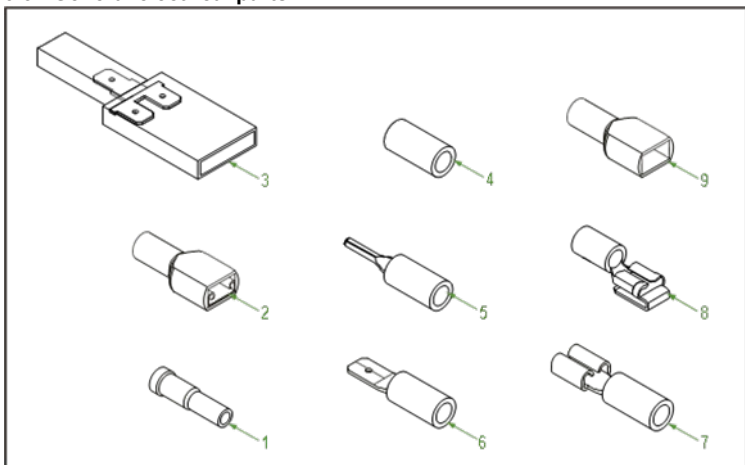


9.4 Deutsch electrical parts

Pos.	p/n new	p/n old	Description
1	F119553	-	Deutsch 2-core connector DT06-2S-EP06
2	F119554	-	Deutsch 2-core wedge lock W2S
3	F174928	-	Deutsch 2-core wedge lock W2P
4	F174927	-	Deutsch 2-core connector DT04-2P-CE03
5	F117501	-	Deutsch 3-core connector DT06-3S-EP04
6	F117502	-	Deutsch 3-core wedge lock W3S
7	F118080	-	Deutsch 3-core wedge lock W3P
8	F118079	-	Deutsch 3-core connector DT04-3P-EP04
9	F200791	-	Deutsch 4-core connector DT06-4S
10	F200792	-	Deutsch 4-core wedge lock W4S
11	F121368	-	Deutsch 4-core wedge lock W4P
12	F121367	-	Deutsch 4-core connector DT04-4P
13	F200793	-	Deutsch 6-core connector DT06-6S
14	F200794	-	Deutsch wedge lock W6S
15	F120848	-	Deutsch wedge lock W6P
16	F120847	-	Deutsch 6-core connector DT04-6P-E004
17	F200795	-	Deutsch 8-core connector DT06-8S
18	F200796	-	Deutsch wedge lock W8S
19	F176729	-	Deutsch wedge lock W8P
20	F120776	-	Deutsch 8-core connector DT04-08PA-E005
21	F118234	-	Deutsch 12-core connector DT06-12SA-P012
22	F118235	-	Deutsch 12-core wedge lock W12S-P012
23	F118233	-	Deutsch wedge lock W12P
24	F118230	-	Deutsch 12-core connector DT04-12PA
25	F117503	-	Deutsch socket contact 0462-201-16141 (1.5mm ²)
	F118390	-	Deutsch socket contact 0462-209-16141 (2.0mm ²)

26	F118081	-	Deutsch pin contact 0460-202-16141 (1.5mm ²)
	F118360	-	Deutsch pin contact 0460-215-16141 (2.0mm ²)
27	F118232	-	Deutsch plug 114017 TRU 114019

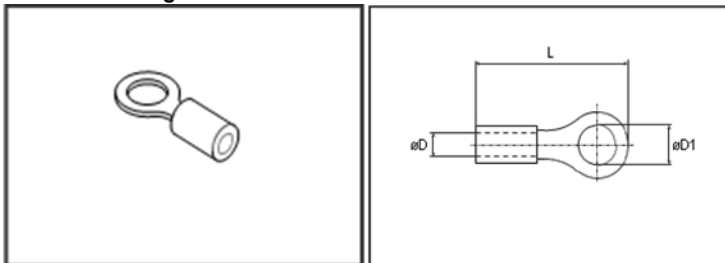
9.5 General electrical parts



Pos.	p/n new	p/n old	Description
1	F100870	802002	Female isolated - wire range 0.5 - 1mm ² (RED)
2	F122785	801003	S - Receptable - wire range 0.25 - 1mm ² (RED)
3	F104403	890007	Splitter connector - wire range max 6mm ²
4	F173789	803002	Splice butt - wire range 1 - 2.5mm ² (BLUE)
5	F122828	802003	Round pin - wire range 1 - 2.5mm ² (BLUE)
6	F120218	890003	Blade - wire range 0.5-2.5mm ² ((6.3) BLUE)
7	F122788	801002	Receptable - wire range 4 - 6mm ² (YELLOW)
	F170825	801001	Receptable - wire range 1.5 - 2.5mm ² (BLUE)
8	F176484	890002	Piggy back 1.5 - 2.5mm ² (BLUE)

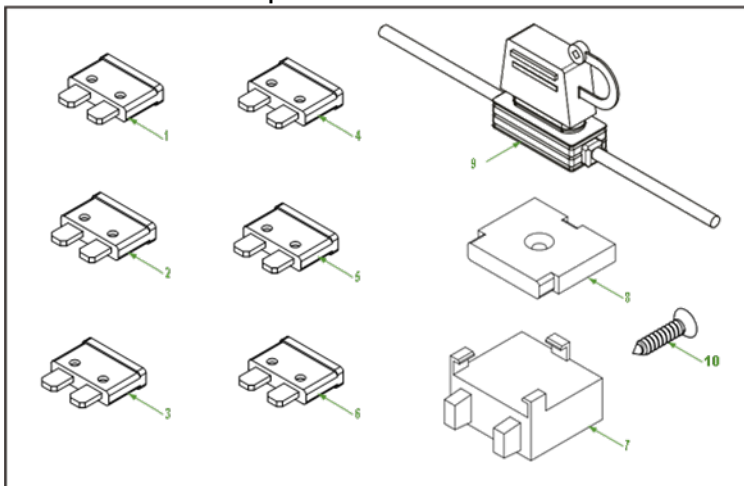
9	F111476	03203	S - Receptable - wire range 1 - 2.5mm ² (BLUE)
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9.6 Contact tingues



$\varnothing D$	$\varnothing D1$	H	p/n new	p/n old	Description
2.5	3.3	20	F124093	800001	Contact tingues (red PVC insulation)
4.3	4.4	22.1	F176452	-	Contact tingues (blue PVC insulation)
2.5	5.3	25	F104595	800002	Contact tingues (blue PVC insulation)
3.6	6.4	2.8	F117986	800004	Contact tingues (red PVC insulation)
3.6	8	29.3	F176409	-	Contact tingues (red PVC insulation)
4	8.5	34.5	F104596	800003	Contact tingues (yellow PVC insulation)
4.3	10.5	33.5	F179041	-	Contact tingues (blue PVC insulation)

9.7 Würth fuse electrical parts



Pos.	p/n new	p/n old	Description
1	F175942	15508	Blade type fuse 3Amp
2	F113444	15608	Blade type fuse 5Amp
3	F113603	15708	Blade type fuse 7.5Amp
4	F113445	19508	Blade type fuse 10Amp
5	F176485	15808	Blade type fuse 15Amp
6	F177962	17208	Blade type fuse 20Amp
7	F117315	17408	Fuse holder single
8	F117316	17508	Support fuse holder
9	F117388	03108	Fuse holder IP67
10	F117317	17608	Allen screw for F117316

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