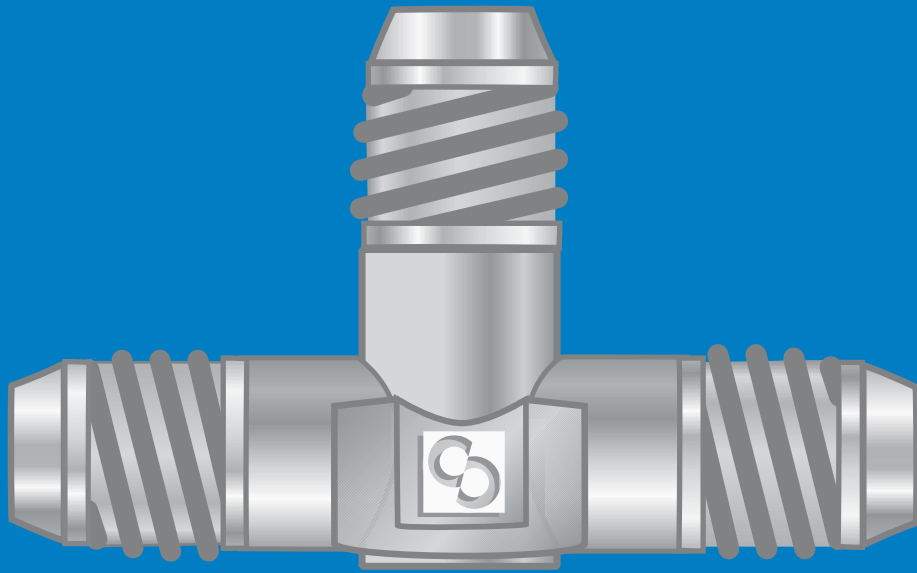


THREADED BRASS FITTINGS



 **Castel**[®]



THREADED BRASS FITTINGS

APPLICATIONS

All the fittings, shown in this chapter, are excluded from the scope of Directive 97/23/EC, as specified in the Guidelines 1/8 and 1/9, because they are piping components.

They are designed for installation on commercial refrigerating systems and on civil and industrial conditioning plants, which use refrigerant fluids proper to the Group II (as defined in Article 9, Section 2.2 of Directive 97/23/EC and referred to in Directive 67/548/EEC).

OPERATION

The sealing system between the end of a male connection and a nut series 7010, 7020 and 7030 requires a special flaring of the end of copper tube, the so-called flared connection.

The sealing system between the end of a male connection and a Flare-ODS adapter allows avoiding the flaring process on copper tube end (national laws of some European countries don't accept this operation) because the tube end is brazed into the solder connection of the adapter. We wish to remember to our customers that they may assure no leakage of the male

connection/adapter system only interposing the copper gasket 7580, supplied with the same adapter.

Flange joints 7630 consist of two brass bushes for brazing to the copper tubes. When the four flange screws are tightened, a gasket, put between the two bushes, assures the seal of flanged joints.

CONSTRUCTION

All nuts, from series 7010 to series 7050, and all the elbows, TEE and cross fittings, from series 7210 to series 7410, are manufactured with hot forged brass EN 12420 – CW 617N.

All straight fittings, from series 7110 to series 7170, and all the plug, from series 7510 to series 7520, are machined by brass bar EN 12164 – CW 614N.

Seal caps series 7560 and gaskets series 7580 are made with copper Cu – ETP UNI 5649.

The main parts of the flanges joints are made with the following materials:

- hot forged brass EN 12420 – CW 617N for bushes and flanges;
- aramidic fibers for seal gasket of the flanges.

TABLE 1: General Characteristics

	Catalogue Number	International Reference	SAE Flare	Copper pipe		PS [bar]	Dimensions [mm]			Wrench torque min / max [Nm]	Weight [g]
				Ø [in]	Ø [mm]		Ø D	L	Ch		

SAE Flare nuts (inch tubing)

	7010/22	NS4-4	1/4"	1/4"	6	45	6,5	15,5	17	11 / 14	19
	7010/33	NS4-6	3/8"	3/8"	-		9,7	19,5	22	20 / 25	38
	7010/44	NS4-8	1/2"	1/2"	-		13	22,5	25	34 / 47	49
	7010/55	NS4-10	5/8"	5/8"	16		16,2	25	28	54 / 75	64
	7010/66	NS4-12	3/4"	3/4"	-		19,4	29,5	33	68 / 71	97
	7010/77	NS4-14	7/8"	7/8"	22		22,5	36,5	41	90 / 120	186
	7010/88	NS4-16	1"	1"	-		25,6	36,5		120 / 150	153

SAE Flare cap nuts

	7020/20	N5-4 CAP NUT	1/4"			45		15,5	17	11 / 14	20
	7020/X01	N5-5 CAP NUT	5/16"	cieco	cieco		-	16	19	14 / 20	25

SAE Flare reducing nuts (inch tubing)

	7020/32	NRS4-64	3/8"	1/4"	6	45	6,5	19,5	22	11 / 14	38
	7020/43	NRS4-86	1/2"	3/8"	-		9,7	22,5	25	20 / 25	53
	7020/54	NRS4-108	5/8"	1/2"	-		13	25	28	34 / 47	69
	7020/65	NRS4-1210	3/4"	5/8"	16		16,2	29,5	33	54 / 75	104
	7020/87	NRS4-1614	1"	7/8"	22		22,5	36,5	41	90 / 120	160

SAE Flare nuts (metric tubing)

	7030/3M8	-	3/8"	-	8	45	8,3	19,5	22	20 / 25	37
	7030/3M10				10		10,3				36
	7030/4M10				10		10,3				53
	7030/4M12		1/2"		12		12,3	22,5	25	34 / 47	50
	7030/4M14				14		14,3				47
	7030/5M12		5/8"		12		12,3	25	28	54 / 75	70
	7030/5M14				14		14,3				68
	7030/6M14		3/4"		14		14,3	29,5	33	68 / 71	106
	7030/6M18				18		18,3				98

SAE Flare twin nuts

	7050/2	US4-4	1/4"			45		32	17	11 / 14	39
	7050/3	US4-6	3/8"					40	22	20 / 25	78
	7050/4	US4-8	1/2"	-	-			46	25	34 / 47	105
	7050/5	US4-10	5/8"					51	28	54 / 75	140


TABLE 2: General Characteristics

	Catalogue Number	International Reference	Connections		PS [bar]	Dimensions [mm]		Weight [g]
			SAE Flare	NPT		L	Ch	

SAE Flare unions

	Catalogue Number	International Reference	SAE Flare	NPT	PS [bar]	L	Ch	Weight [g]
	7110/2	U2-4	1/4"		45	38	12	23
	7110/3	U2-6	3/8"			44	17	46
	7110/4	U2-8	1/2"			50	20	73
	7110/5	U2-10	5/8"			58	23	113
	7110/6	U2-12	3/4"			63	27	164
	7110/8	U2-16	1"			72	36	304

Reducing SAE Flare unions

	Catalogue Number	International Reference	SAE Flare	NPT	PS [bar]	L	Ch	Weight [g]
	7120/23	UR2-64	1/4" x 3/8"		45	42	17	38
	7120/24	UR2-84	1/4" x 1/2"			45		58
	7120/34	UR2-86	3/8" x 1/2"			48	20	66
	7120/35	UR2-106	3/8" x 5/8"			52	23	89
	7120/45	UR2-108	1/2" x 5/8"			54	23	98
	7120/56	UR2-1210	5/8" x 3/4"			61,5	27	170

SAE Flare / NPT unions

	Catalogue Number	International Reference	SAE Flare	NPT	PS [bar]	L	Ch	Weight [g]
	7130/2	U1-4B	1/4"	1/4"	45	38,1	14	32
	7130/3	U1-6C	3/8"	3/8"		41,2	17	48
	7130/4	U1-8D	1/2"	1/2"		49,8	22	92
	7130/6	U1-12F	3/4"	3/4"		57,6	27	152
	7130/8	U1-16H	1"	1"		68	36	277

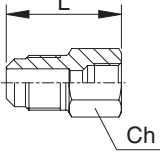
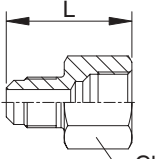
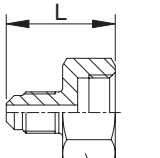
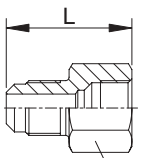
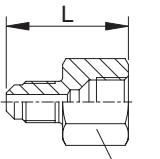
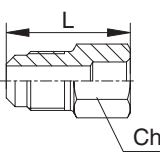
SAE Flare / NPT reducing unions

	Catalogue Number	International Reference	SAE Flare	NPT	PS [bar]	L	Ch	Weight [g]
	7140/21	U1-4A	1/4"	1/8"	45	32,9	12	20
	7140/32	U1-6B	3/8"	1/4"		41,1	17	39
	7140/43	U1-8C	1/2"	3/8"		45,2	20	64
	7140/54	U1-10D	5/8"	1/2"		53,8	23	102

[R] Available on request

[E] Until exhaustion of the stock

TABLE 3: General Characteristics

	Catalogue Number	International Reference	Connections						PS [bar]	Dimensions [mm]		Weight [g]
			SAE Flare		NPT	GAS	ODS			L	Ch	
			m	f			Ø [in.]	Ø [mm]				
Male/female reducing unions (reduced female)												
	7150/21	U3-4A	1/4"	-	1/8" f	-	-	-	45	29	14	21
	7150/32	UR3-46	3/8"	1/4"	-	-	-	33		17	38	
	7150/43	UR3-68	1/2"	3/8"	-	-	-	38		22	66	
	7150/54	UR3-810	5/8"	1/2"	-	-	-	45		25	99	
	7150/64	UR3-812	5/8"	1/2"	-	-	-	46,5		27	132	
	7150/65	UR3-1012	3/4"	5/8"	-	-	-	49,5		30	157	
Male/female reducing unions (reduced male)												
	7150/23	UR3-64	1/4"	3/8"	-	-	-	45	33	22	49	
	7150/24	UR3-84	1/4"	1/2"	-	-	-		36	25	66	
	7150/34	UR3-86	3/8"	1/2"	-	-	-		39	25	74	
	7150/45	UR3-108	1/2"	5/8"	-	-	-		44	30	127	
	7150/46	UR3-128	1/2"	3/4"	-	-	-		45	34	140	
	7150/56	UR3-1210	5/8"	3/4"	-	-	-		49	34	150	
Cylinder adaptors												
	7154/2	-	1/4"	20 - 14 filetti sx. femmina				45	25	46		
	7156/2	-	1/4"	W 21,8 - 14 filetti dx. femmina					29	27	52	
Male/female unions												
	7160/2	-	1/4"	1/4"	-	-	-	45	30,5	17	31	
	7160/3 ^R	-	3/8"	3/8"	-	-	-		36	22	57	
	7160/4	-	1/2"	1/2"	-	-	-		41	25	84	
Unions SAE Flare to BSP												
	7164/2	-	1/4"	-	-	G1/4" f	-	45	32,5	20	45	
	7166/2	-	-	1/4"	-	G1/4" m	-		32	17	25	
Male SAE Flare/solder unions												
	7170/22	US3-44	1/4"	-	-	-	1/4"	-	45	26,5	12	17
	7170/2M8	-					-	8				
	7170/33	US3-66	3/8"				3/8"	-				
	7170/3M10	-					-	10				
	7170/44	US3-88	1/2"				1/2"	-				
	7170/4M12	-					-	12				
	7170/55	US3-1010	5/8"				5/8"	16				
	7170/6M18	-	3/4"				-	18				

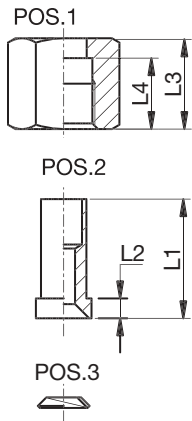
^R Available on request



TABLE 3: General Characteristics

Item Position	Catalogue Number	Connections			PS [bar]	Dimensions [mm]					Wrench torque min/max [Nm]	Weight [g]
		SAE Flare	ODS			L ₁	L ₂	L ₃	L ₄	Ch		
			Ø [in.]	Ø [mm]								

Flare / ODS adapters



1	9900/X58					-	-	16	12,5	17	11/14	
2	9900/X62	1/4"	1/4"	-		21	3,5	-	-	-	-	67
3	7580/2											
1	9900/X58					-	-	16	12,5	17	11/14	
2	9900/X70	1/4"	-	6		21	3,5	-	-	-	-	83
3	7580/2											
1	9900/X59					-	-	18,5	14,7	22	20/25	
2	9900/X63	3/8"	3/8"	-		23,5	4	-	-	-	-	114
3	7580/3											
1	9900/X59					-	-	18,5	14,7	22	20/25	
2	9900/X71	3/8"	-	10		23,5	4	-	-	-	-	130
3	7580/3											
1	9900/X60					-	-	21	17	27	34/47	
2	9900/X64	1/2"	1/2"	-	45	26	4,5	-	-	-	-	207
3	7580/4											
1	9900/X60					-	-	21	17	27	34/47	
2	9900/X72	1/2"	-	12		26	4,5	-	-	-	-	226
3	7580/4											
1	9900/X61					-	-	22,5	18	30	54/75	
2	9900/X65	5/8"	5/8"	16		27,5	5	-	-	-	-	271
3	7580/5											
1	9900/X68					-	-	25	20	36	68/71	
2	9900/X69	3/4"	3/4"	-		30	5	-	-	-	-	404
3	7580/6											
1	9900/X68					-	-	25	20	36	68/71	
2	9900/X77	3/4"	-	18		30	5	-	-	-	-	455
3	7580/6											

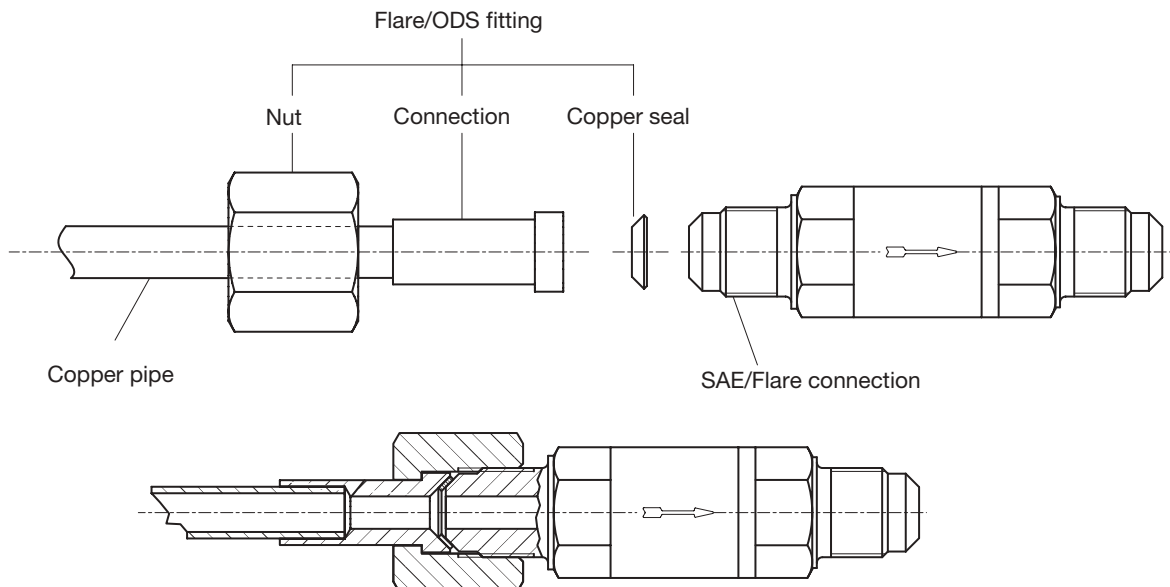


TABLE 5: General Characteristics

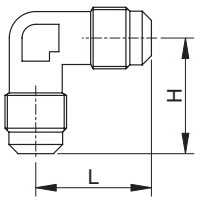
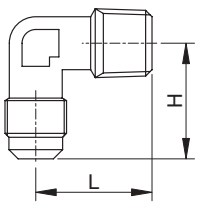
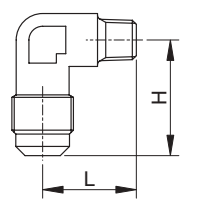
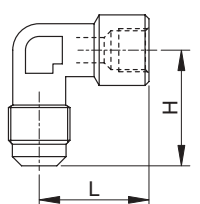
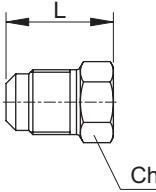
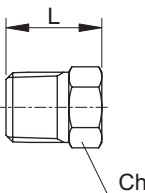
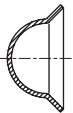

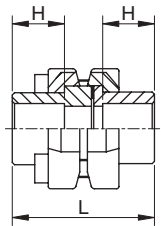
	Catalogue Number	International Reference	Connections			PS [bar]	Dimensions [mm]		Weight [g]
			SAE Flare		NPT		H	L	
			m	f					
SAE Flare elbows									
	7210/2	E2-4	1/4"			45	26	26	29
	7210/3	E2-6	3/8"				29,5	29,5	49
	7210/4	E2-8	1/2"	-	-		32,5	32,5	83
	7210/5	E2-10	5/8"				36	36	116
	7210/6	E2-12	3/4"				42,5	42,5	192
SAE Flare / NPT elbows									
	7220/2	E1-4B	1/4"		1/4"	45	26	24	33
	7220/3	E1-6C	3/8"		3/8"		29,5	28,5	54
	7220/4	E1-8D	1/2"	-	1/2"		32,5	32	91
	7220/6	E1-12F	3/4"		3/4"		42,5	39,5	183
SAE Flare / reduced NPT elbows									
	7230/21	E1-4A	1/4"		1/8"	45	26	21	30
	7230/32	E1-6B	3/8"		1/4"		29,5	29,5	46
	7230/43	E1-8C	1/2"	-	3/8"		32,5	31	75
	7230/54	E1-10D	5/8"		1/2"		36	35	114
Male/female SAE Flare elbows									
	7240/2		1/4"	1/4"		45	28,5	28	56
	7240/3	-	3/8"	3/8"	-		32	31	84
	7240/4		1/2"	1/2"			39,5	38	198



TABLE 6: General Characteristics

	Catalogue Number	International Reference	Connections					PS [bar]	Dimensions [mm]		Weight [g]
			SAE Flare				NPT (3)		H	L	
			(1)	(2)	(3)	(4)					
SAE Flare TEE											
	7310/2	T2-4	1/4"	1/4"	1/4"	-	-	45	23,5	47	32
	7310/3	T2-6	3/8"	3/8"	3/8"	-	-		29	58	69
	7310/4	T2-8	1/2"	1/2"	1/2"	-	-		31,5	63	97
	7310/5	T2-10	5/8"	5/8"	5/8"	-	-		36	72	153
	7310/6	T2-12	3/4"	3/4"	3/4"	-	-		41,5	83	235
SAE Flare reducing TEE (reduced side connections)											
	7320/223	TR2-46	1/4"	1/4"	3/8"	-	-	45	29	56	77
	7320/334	TR2-68	3/8"	3/8"	1/2"	-	-		32,5	63	95
	7320/445	TR2-810	1/2"	1/2"	5/8"	-	-		38	72	153
	7320/556	TR2-1012	5/8"	5/8"	3/4"	-	-		41,5	83	228
SAE Flare reducing TEE (reduced central connection)											
	7320/332	TR2-64	3/8"	3/8"	1/4"	-	-	45	28	58	77
	7320/443	TR2-86	1/2"	1/2"	3/8"	-	-		32,5	63	101
	7320/554	TR2-108	5/8"	5/8"	1/2"	-	-		38	72	158
	7320/665	TR2-1210	3/4"	3/4"	5/8"	-	-		41,5	83	220
SAE Flare / NPT TEE (taper central connection)											
	7330/221	T1-4A	1/4"	1/4"	-	-	1/8"	45	28,5	28	56
	7330/222	T1-4B	1/4"	1/4"	-	-	1/4"		39,5	38	198
Male/female SAE Flare TEE (female central connection)											
	7340/222	T6-4	1/4"	1/4"	1/4"	-	-	45	27,5	56	78
SAE Flare cross											
	7410/2	C1-4	1/4"	1/4"	1/4"	1/4"	-	45	52	52	55

TABLE 7: General Characteristics

	Catalogue Number	International Reference	Connections				PS [bar]	Dimensions [mm]			Wrench torque min / max [Nm]	Weight [g]
			SAE Flare	NPT	ODS			H	L	Ch		
					Ø [in.]	Ø [mm]						
SAE Flare plugs												
	7510/2	P2-4	1/4"	-	-	-	45	-	23	12	11 / 14	19
	7510/3	P2-6	3/8"	-	-	-	45	-	26	17	20 / 25	40
	7510/4	P2-8	1/2"	-	-	-	45	-	30	20	34 / 47	67
NPT plugs												
	7520/1	121-B-02	-	1/8"	-	-	45	-	15,9	12	10 / 13	12
	7520/2	121-B-04	-	1/4"	-	-	45	-	23,1	14	15 / 20	27
	7520/3	121-B-06	-	3/8"	-	-	45	-	23,2	17	17 / 22	43
	7520/4	121-B-08	-	1/2"	-	-	45	-	29,8	22	25 / 35	87
	7520/6	121-B-12	-	3/4"	-	-	45	-	32,1	27	30 / 40	149
	7520/8	121-B-16	-	1"	-	-	45	-	39	34	60 / 80	279
Copper seal caps												
	7560/2	B1-4	1/4"	-	-	-	45	-	-	-	-	0,5
	7560/3	B1-6	3/8"	-	-	-	45	-	-	-	-	1
	7560/4	B1-8	1/2"	-	-	-	45	-	-	-	-	1,5
	7560/5	B1-10	5/8"	-	-	-	45	-	-	-	-	2
	7560/6	B1-12	3/4"	-	-	-	45	-	-	-	-	4
	7560/7	B1-14	7/8"	-	-	-	45	-	-	-	-	10
Copper gaskets												
	7580/2	B2-4	1/4"	-	-	-	45	-	-	-	-	0,5
	7580/3	B2-6	3/8"	-	-	-	45	-	-	-	-	0,5
	7580/4	B2-8	1/2"	-	-	-	45	-	-	-	-	1
	7580/5	B2-10	5/8"	-	-	-	45	-	-	-	-	1,5
	7580/6	B2-12	3/4"	-	-	-	45	-	-	-	-	3
Flange joints												
	7630/7	-	-	7/8"	-	-	45	-	-	-	20 / 24	315
	7630/9	-	-	1.1/8"	-	-	45	23	63	-	20 / 24	490
	7630/11	-	-	1.3/8"	35	-	45	-	-	-	42 / 50	1045
	7630/13	-	-	1.5/8"	-	-	45	24	67	-	42 / 50	1340
	7630/M42	-	-	-	42	-	45	24	67	-	42 / 50	1340
	7630/17	-	-	-	2.1/8"	54	-	45	25	71	-	68 / 80

