

Brass fittings and access valves



IGLOO brass fittings for refrigeration and air-conditioning systems comply to DIN 8912 standard, SAE J513 standard, U.S. Military Standards MS-35867 through MS35873 inclusive, MS-35919, MS-24815 and MS-16993.

Features

- Recommended maximum working pressure (PS): **140 bar (2 030 psig)**
- Manufactured from brass forgings (compliant to standards EN 12420 and EN 12165) or drawn brass rod (compliant to standard EN 12164) eliminating the possibility of seepage by porosity
- Accurately machined and fully protected against damage during shipping, handling and storage to assure tight leakproof joints
- Smooth interior finish provides unrestricted flow and reduced pressure drop
- Smooth sealing surfaces finish and tight tolerances to eliminate the risk of leakage
- Risk category as per Art. 4 Par. 3 of Directive PED 2014/68/EU

Approvals

CE (PED, RoHS, REACH), EAC

Technical data

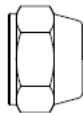
Suitable for HCFC, HFC and R744 (CO₂) refrigerants. Not suitable for ammonia.
 Guaranteed leakrate for IGLOO brass fittings is less than 0,1 gram/year of refrigerant.

Standard supplies

Standard packaging of fittings is plastic bags into carton boxes.
 Each plastic bag and each carton box has a label showing a bilingual description (italian/english), barcode, part number and q.ty of pieces contained.

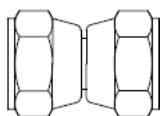
Ordering

Forged nuts



Part number	Thread ANSI/ASME B1.1	Flare connection SAE J513	Tube diameter		Tightening torque
	int thread (female)		mm	inch	Nm (lbf-ft)
NS4-4	7/16" - 20 UNF	1/4"	6	1/4"	11÷14 (8÷10)
NS4-5	1/2" - 20 UNF	5/16"	8	5/16"	11÷14 (8÷10)
NRS4-64	5/8" - 18 UNF	3/8"	6	1/4"	20÷25 (15÷18.5)
NRS4-65	5/8" - 18 UNF	3/8"	8	5/16"	20÷25 (15÷18.5)
NS4-6	5/8" - 18 UNF	3/8"	-	3/8"	20÷25 (15÷18.5)
NS4-6M10	5/8" - 18 UNF	3/8"	10	-	20÷25 (15÷18.5)
NRS4-86	3/4" - 16 UNF	1/2"	-	3/8"	34÷47 (25÷34.5)
NS4-8M10	3/4" - 16 UNF	1/2"	10	-	34÷47 (25÷34.5)
NS4-8M12	3/4" - 16 UNF	1/2"	12	-	34÷47 (25÷34.5)
NS4-8	3/4" - 16 UNF	1/2"	-	1/2"	34÷47 (25÷34.5)
NS4-10M12	7/8" - 14 UNF	5/8"	12	-	54÷75 (40÷55)
NRS4-108	7/8" - 14 UNF	5/8"	-	1/2"	54÷75 (40÷55)
NS4-10M14	7/8" - 14 UNF	5/8"	14	-	54÷75 (40÷55)
NS4-10	7/8" - 14 UNF	5/8"	16	5/8"	54÷75 (40÷55)
NS4-12M14	1.1/16" - 14 UNS	3/4"	14	-	68÷71 (50÷52)
NRS4-1210	1.1/16" - 14 UNS	3/4"	16	5/8"	68÷71 (50÷52)
NS4-12M18	1.1/16" - 14 UNS	3/4"	18	-	68÷71 (50÷52)
NS4-12	1.1/16" - 14 UNS	3/4"	19	3/4"	68÷71 (50÷52)
NS4-14	1.1/4" - 12 UNF	7/8"	22	7/8"	90÷120 (66÷98)
NRS4-1614	1.3/8" - 12 UNF	1"	22	7/8"	120÷150 (98÷110)
NS4-16	1.3/8" - 12 UNF	1"	-	1"	120÷150 (98÷110)

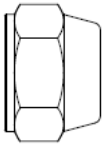
Swivel nuts



Part number	Thread ANSI/ASME B1.1	Flare Connection SAE J513	Tightening torque
	int thread (female)		Nm (lbf-ft)
US4-4	7/16" - 20 UNF	1/4"	11÷14 (8÷10)
US4-6	5/8" - 18 UNF	3/8"	20÷25 (15÷18.5)
US4-8	3/4" - 16 UNF	1/2"	34÷47 (25÷34.5)
US4-10	7/8" - 14 UNF	5/8"	54÷75 (40÷55)

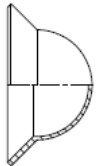
Ordering
(continued)

Forged cap nuts



Part number	Thread ANSI/ASME B1.1	Flare Connection SAE J513	Tightening torque
	int thread (female)		Nm (lbf-ft)
N5-4	7/16" - 20 UNF	1/4"	11÷14 (8÷10)
N5-5	1/2" - 20 UNF	5/16"	8.5÷11.5 (6÷8.5)
N5-6	5/8" - 18 UNF	3/8"	20÷25 (15÷18.5)
N5-8	3/4" - 16 UNF	1/2"	34÷47 (25÷34.5)

Copper gaskets



Part number	Flare Connection SAE J513	Maximum Working Pressure
		PS bar (psi)
B1-4	1/4"	30 (430)
B1-6	3/8"	30 (430)
B1-8	1/2"	30 (430)
B1-10	5/8"	30 (430)
B1-12	3/4"	30 (430)

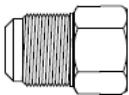


B2-4	1/4"	140 (2 030)
B2-6	3/8"	140 (2 030)
B2-8	1/2"	140 (2 030)
B2-10	5/8"	140 (2 030)
B2-12	3/4"	140 (2 030)



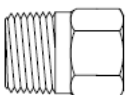
B3-4	1/4"	140 (2 030)
B3-6	3/8"	140 (2 030)
B3-8	1/2"	140 (2 030)
B3-10	5/8"	140 (2 030)
B3-12	3/4"	140 (2 030)

Flared plugs



Part number	Thread ANSI/ASME B1.1	Flare connection SAE J513
	ext thread (male)	
P2-4	7/16" - 20 UNF	1/4"
P2-6	5/8" - 18 UNF	3/8"
P2-8	3/4" - 16 UNF	1/2"

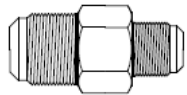
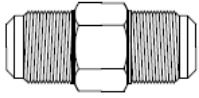
NPT plugs



Part number	NPT Connection Thread ANSI B1.20.1
	ext thread (male)
P1-A	NPT 1/8"
P1-B	NPT 1/4"
P1-C	NPT 3/8"
P1-D	NPT 1/2"

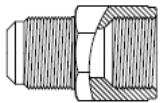
Ordering
(continued)

Straight unions, male-male Flare



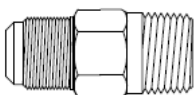
Part number	Thread ANSI/ASME B1.1		Flare Connection SAE J513	
	ext thread (male)	ext thread (male)	ext flare (male)	ext flare (male)
U2-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	1/4"
UR2-64	5/8" - 18 UNF	7/16" - 20 UNF	3/8"	1/4"
U2-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	3/8"
UR2-84	3/4" - 16 UNF	7/16" - 20 UNF	1/2"	1/4"
UR2-86	3/4" - 16 UNF	5/8" - 18 UNF	1/2"	3/8"
U2-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	1/2"
UR2-104	7/8" - 14 UNF	7/16" - 20 UNF	5/8"	1/4"
UR2-106	7/8" - 14 UNF	5/8" - 18 UNF	5/8"	3/8"
UR2-108	7/8" - 14 UNF	3/4" - 16 UNF	5/8"	1/2"
U2-10	7/8" - 14 UNF	7/8" - 14 UNF	5/8"	5/8"
UR2-128	1.1/16" - 14 UNS	3/4" - 16 UNF	3/4"	1/2"
UR2-1210	1.1/16" - 14 UNS	7/8" - 14 UNF	3/4"	5/8"
U2-12	1.1/16" - 14 UNS	1.1/16" - 14 UNS	3/4"	3/4"

Straight unions, male-female Flare



Part number	Thread ANSI/ASME B1.1		Flare Connection SAE J513	
	int thread (female)	ext thread (male)	int flare (female)	ext flare (male)
UP3-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	1/4"
UR3-46	7/16" - 20 UNF	5/8" - 18 UNF	1/4"	3/8"
UR3-64	5/8" - 18 UNF	7/16" - 20 UNF	3/8"	1/4"
UP3-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	3/8"
UR3-68	5/8" - 18 UNF	3/4" - 16 UNF	3/8"	1/2"
UR3-84	3/4" - 16 UNF	7/16" - 20 UNF	1/2"	1/4"
UR3-86	3/4" - 16 UNF	5/8" - 18 UNF	1/2"	3/8"
UP3-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	1/2"
UR3-810	3/4" - 16 UNF	7/8" - 14 UNF	1/2"	5/8"
UR3-812	3/4" - 16 UNF	1.1/16" - 14 UNS	1/2"	3/4"
UR3-108	7/8" - 14 UNF	3/4" - 16 UNF	5/8"	1/2"
UR3-1012	7/8" - 14 UNF	1.1/16" - 14 UNS	5/8"	3/4"
UR3-128	1.1/16" - 14 UNS	3/4" - 16 UNF	3/4"	1/2"
UR3-1210	1.1/16" - 14 UNS	7/8" - 14 UNF	3/4"	5/8"

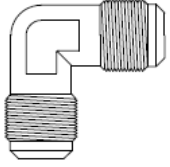
Flare-to-NPT straight unions



Part number	Flare Connection SAE J513 Thread ANSI/ASME B1.1		NPT Connection Thread ANSI B1.20.1
	ext thread (male)	ext flare (male)	ext thread (male)
U1-4A	7/16" - 20 UNF	1/4"	NPT 1/8"
U1-4B	7/16" - 20 UNF	1/4"	NPT 1/4"
U1-6B	5/8" - 18 UNF	3/8"	NPT 1/4"
U1-6C	5/8" - 18 UNF	3/8"	NPT 3/8"
U1-8C	3/4" - 16 UNF	1/2"	NPT 3/8"
U1-8D	3/4" - 16 UNF	1/2"	NPT 1/2"
U1-10D	7/8" - 14 UNF	5/8"	NPT 1/2"
U1-12F	1.1/16" - 14 UNS	3/4"	NPT 3/4"
			int thread (female)
U3-4A	7/16" - 20 UNF	1/4"	NPT 1/8"

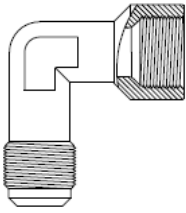
Ordering
(continued)

Elbow fittings, male-male Flare



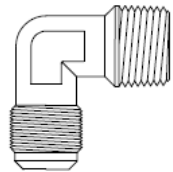
Part number	Thread ANSI/ASME B1.1		Flare Connection SAE J513	
	ext thread (male)	ext thread (male)	ext flare (male)	ext flare (male)
E2-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	1/4"
E2-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	3/8"
E2-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	1/2"
E2-10	7/8" - 14 UNF	7/8" - 14 UNF	5/8"	5/8"
E2-12	1.1/16" - 14 UNS	1.1/16" - 14 UNS	3/4"	3/4"

Elbow fittings, male-female Flare



Part number	Thread ANSI/ASME B1.1		Flare Connection SAE J513	
	int thread (female)	ext thread (male)	int flare (female)	ext flare (male)
E3-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	1/4"
E3-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	3/8"
E3-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	1/2"

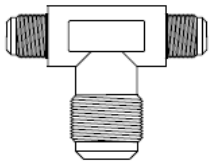
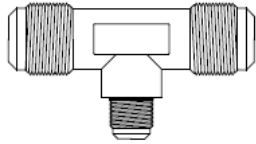
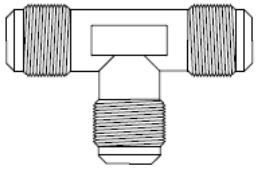
Flare-to-NPT elbow fittings



Part number	Flare Connection SAE J513 Thread ANSI/ASME B1.1		NPT Connection Thread ANSI B1.20.1
	ext thread (male)	ext flare (male)	ext thread (male)
E1-4A	7/16" - 20 UNF	1/4"	NPT 1/8"
E1-4B	7/16" - 20 UNF	1/4"	NPT 1/4"
E1-6B	5/8" - 18 UNF	3/8"	NPT 1/4"
E1-6C	5/8" - 18 UNF	3/8"	NPT 3/8"
E1-8C	3/4" - 16 UNF	1/2"	NPT 3/8"
E1-8D	3/4" - 16 UNF	1/2"	NPT 1/2"
E1-10D	7/8" - 14 UNF	5/8"	NPT 1/2"
E1-12F	1.1/16" - 14 UNS	3/4"	NPT 3/4"

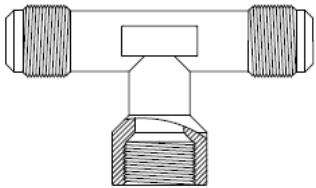
Ordering
(continued)

Tee fittings, male-male-male Flare



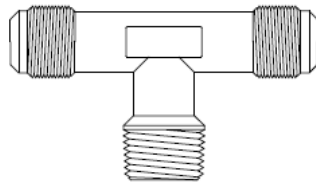
Part number	Thread ANSI/ASME B1.1						Flare Connection SAE J513
	1	ext thread (male)	2	ext thread (male)	3	ext thread (male)	ext-ext-ext flare (male-male-male)
T2-4		7/16" - 20 UNF		7/16" - 20 UNF		7/16" - 20 UNF	1/4"-1/4"-1/4"
TR2-46		7/16" - 20 UNF		5/8" - 18 UNF		7/16" - 20 UNF	1/4"-3/8"-1/4"
TR2-64		5/8" - 18 UNF		7/16" - 20 UNF		5/8" - 18 UNF	3/8"-1/4"-3/8"
T2-6		5/8" - 18 UNF		5/8" - 18 UNF		5/8" - 18 UNF	3/8"-3/8"-3/8"
TR2-68		5/8" - 18 UNF		3/4" - 16 UNF		5/8" - 18 UNF	3/8"-1/2"-3/8"
TR2-86		3/4" - 16 UNF		5/8" - 18 UNF		3/4" - 16 UNF	1/2"-3/8"-1/2"
T2-8		3/4" - 16 UNF		3/4" - 16 UNF		3/4" - 16 UNF	1/2"-1/2"-1/2"
TR2-810		3/4" - 16 UNF		7/8" - 14 UNF		3/4" - 16 UNF	1/2"-5/8"-1/2"
TR2-108		7/8" - 14 UNF		3/4" - 16 UNF		7/8" - 14 UNF	5/8"-1/2"-5/8"
T2-10		7/8" - 14 UNF		7/8" - 14 UNF		7/8" - 14 UNF	5/8"-5/8"-5/8"
TR2-1012		7/8" - 14 UNF		1.1/16" - 14 UNS		7/8" - 14 UNF	5/8"-3/4"-5/8"
TR2-1210		1.1/16" - 14 UNS		7/8" - 14 UNF		1.1/16" - 14 UNS	3/4"-5/8"-3/4"
T2-12		1.1/16" - 14 UNS		1.1/16" - 14 UNS		1.1/16" - 14 UNS	3/4"-3/4"-3/4"

Tee fittings, male-female-male Flare

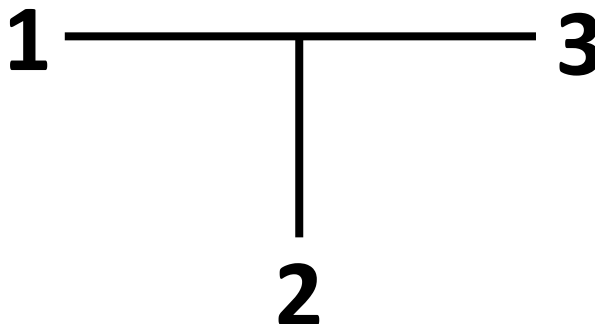


Part number	Thread ANSI/ASME B1.1					Flare Connection SAE J513	
	1	ext thread (male)	2	int thread (female)	3	ext thread (male)	ext-int-ext flare (male-female-male)
T6-4		7/16" - 20 UNF		7/16" - 20 UNF		7/16" - 20 UNF	1/4"-1/4"-1/4"

Flare-to-NPT Tee fittings

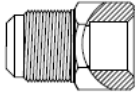


Part number	Thread ANSI/ASME B1.1 Flare SAE J513		NPT Thread ANSI/ASME B1.20.1	Thread ANSI/ASME B1.1 Flare SAE J513		
	1	ext thread (male)	2	ext thread (male)	3	ext thread (male)
T1-4A		7/16" - 20 UNF SAE Flare 1/4"	NPT 1/8"			7/16" - 20 UNF SAE Flare 1/4"
T1-4B		7/16" - 20 UNF SAE Flare 1/4"	NPT 1/4"			7/16" - 20 UNF SAE Flare 1/4"



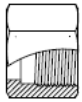
Ordering
(continued)

Flare-to-solder straight unions



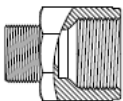
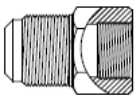
Part number	Flare Connection SAE J513 Thread ANSI/ASME B1.1		ODF Connection	
	ext thread (male)	ext flare (male)	mm	inch
US3-44	7/16" - 20 UNF	1/4"	-	1/4"
US3-4M8	7/16" - 20 UNF	1/4"	8	-
US3-66	5/8" - 18 UNF	3/8"	-	3/8"
US3-6M10	5/8" - 18 UNF	3/8"	10	-
US3-8M12	3/4" - 16 UNF	1/2"	12	-
US3-88	3/4" - 16 UNF	1/2"	-	1/2"
US3-1010	7/8" - 14 UNF	5/8"	16	5/8"
US3-12M18	1.1/16" - 14 UNS	3/4"	18	-

Flare-to-solder swivel nut + adapter



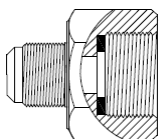
Part number	Thread ANSI/ASME B1.1	Flare connection SAE J513	Tube diameter		Tightening torque
	int thread (female)		mm	inch	Nm (lbf-ft)
NGR-4M6	7/16" - 20 UNF	1/4"	6	-	11÷14 (8÷10)
NGR-4	7/16" - 20 UNF	1/4"	-	1/4"	11÷14 (8÷10)
NGR-6	5/8" - 18 UNF	3/8"	-	3/8"	20÷25 (15÷18.5)
NGR-6M10	5/8" - 18 UNF	3/8"	10	-	20÷25 (15÷18.5)
NGR-8M12	3/4" - 16 UNF	1/2"	12	-	34÷47 (25÷34.5)
NGR-8	3/4" - 16 UNF	1/2"	-	1/2"	34÷47 (25÷34.5)
NGR-10	7/8" - 14 UNF	5/8"	16	5/8"	54÷75 (40÷55)
NGR-12M18	1.1/16" - 14 UNS	3/4"	18	-	68÷71 (50÷52)
NGR-12	1.1/16" - 14 UNS	3/4"	19	3/4"	68÷71 (50÷52)
NGR-14	1.1/4" - 12 UNF	7/8"	22	7/8"	90÷120 (66÷98)

Flare-to-BSP / Flare-to-GAS straight unions



Part number	Flare Connection SAE J513 Thread ANSI/ASME B1.1		BSP Connection Thread GAS ISO 228	
	ext thread (male) ext flare (male)	int thread (female) int flare (female)	ext thread (male)	int thread (female)
UP3-4G4F	7/16" - 20 UNF external Flare 1/4"	-	-	GAS f-1/4"
UP3-4G4M	-	7/16" - 20 UNF internal Flare 1/4"	GAS m-1/4"	-

Bottle adaptors: SAE Flare-to-BSW / SAE Flare-to-Withworth



Part number	Flare Connection SAE J513 Thread ANSI/ASME B1.1	BSW Connection Thread Withworth BS 84	Notes
	ext thread (male) ext flare (male)	int thread (female)	
U3X-4DX	7/16" - 20 UNF Flare 1/4"	W21,8-14 (right hand thread)	The adaptors are supplied with a Teflon® (PTFE) gasket inside.
U3X-4SX	7/16" - 20 UNF Flare 1/4"	W20-14 (left hand thread)	
U32-4SX **	7/16" - 20 UNF Flare 1/4"	W21,8-14 (left hand thread)	

** Adapter U32-4SX is specific for R32 refrigerant bottles.