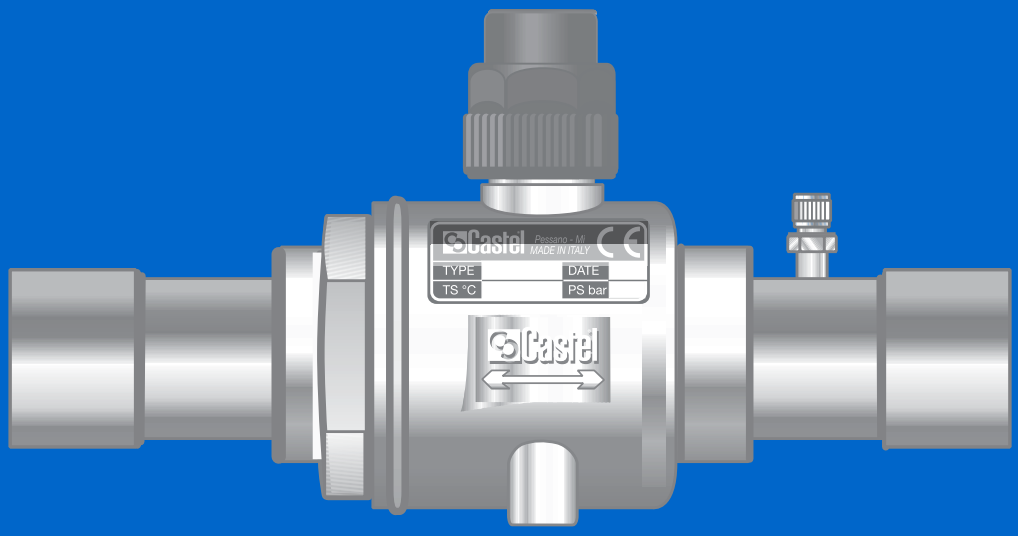
VALVES



Castel®

HERMETIC VALVES

APPLICATIONS

The hermetic valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

These valves are available in the following two types:
- two-ways shut-off valves types 6010/2 and 6012/22;
- three-ways valves; two main connections plus a third one for charging or manometer connection, types:
  - 6060 with right access connection;
  - 6070 with left access connection.

On both types, the access connection may be shut off by the back-seating of the spindle.

The main parts of the hermetic valves are made with the following materials:
- hot forged brass EN 12420 – CW 617N for body;
- steel, with proper surface protection, for the spindle;
- chloroprene rubber (CR) and aramidic fibers for gland seal;
- glass reinforced PBT for cap that covers the spindle.

TABLE 1: General Characteristics

Catalogue Number	Connections					Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare			ODS (4)			min.	max.		
	(1)	(2)	(3)	Ø [in.]	Ø [mm]					
6010/2	–	1/4"	1/4"	–	–	0,27	-60	+4,5+130	45	Art. 3.3
6012/22		1/4"	–	1/4"						
6020/222	1/4"	1/4"	1/4"	–		0,39		+110		
6020/233		3/8"	3/8"			1,20				
6020/244		1/2"	1/2"			2,20				
6020/255		5/8"	5/8"			2,80				
6060/22M6		1/4"	–		6	0,46				
6060/23M10		3/8"			10	1,38				
6070/22M6		1/4"			6	0,46				
6070/23M8		3/8"			8	1,29				
6070/23M10		3/8"			10	1,38				
6070/24M12		1/2"			12	2,55				
6070/25M16		5/8"			16	3,40				

6010/2

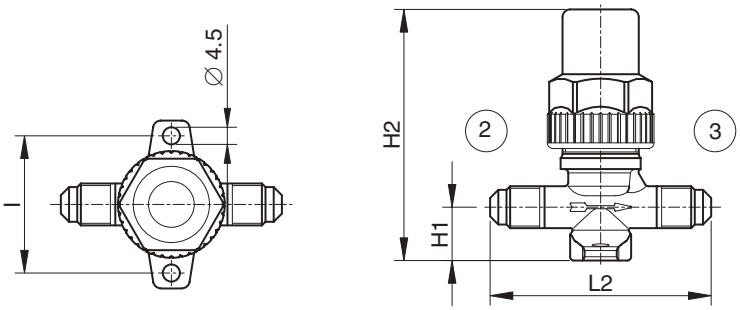
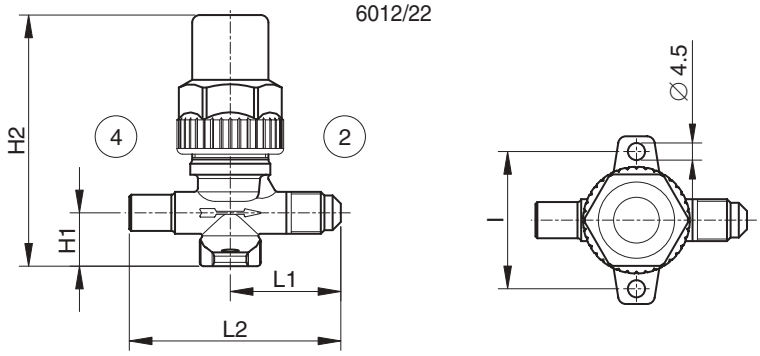


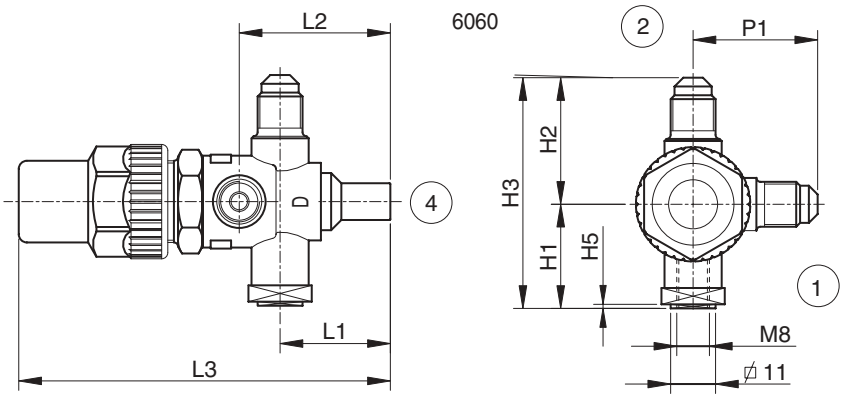
TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm]										Weight [g]
	H_1	H_2	H_3	H_4	H_5	I	L_1	L_2	L_3	P_1	
6010/2	14	66	–	–	–	36	–	58	–	–	160
6012/22							29	55,5			145
6020/222	25	51	61	115		–	62	–			360
6020/233							67				370
6020/244	26,5	52	68,5	127			77				520
6020/255							79				530
6060/22M6	25,5	31	56,5	–	1	–	24	34	92	30,5	205
6060/23M10		33	58,5				27	37	91		200
6070/22M6		31	56,5				24	34	92		205
6070/23M8		33	59				27	37	90		210
6070/23M10											220
6070/24M12	29,5	38,5	68				28	43,5	102	32,5	310
6070/25M16		39,5	69								320

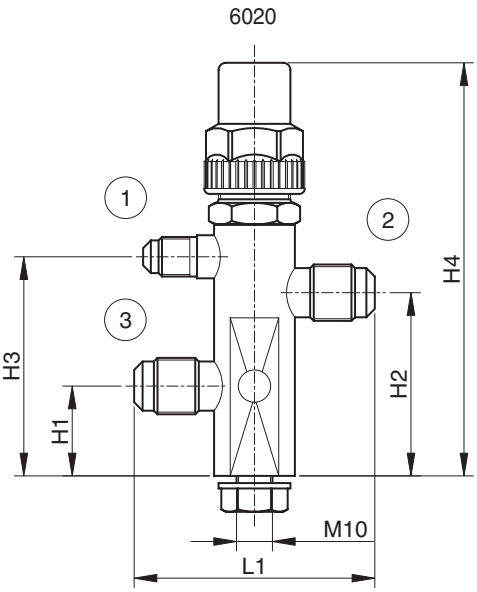
6012/22



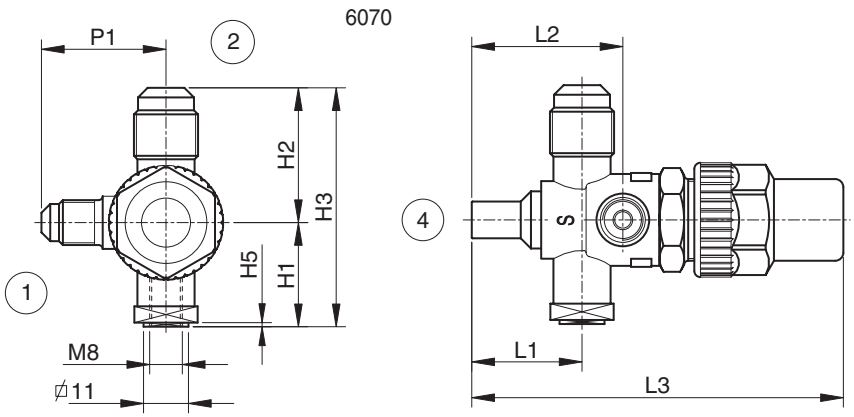
6060



6020



6070



RECEIVER VALVES

APPLICATIONS

The receiver valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

These valves are available in the following two types:
- two-ways valves, 90° angle connections, types 6110 and 6120;
- three-ways valves; two main connections (90° angle) plus a third one for charging, type 6132. The access connection may be shut off by the back-seating of the spindle;
- two-ways valves, 120° angle connections, type 6140.

The main parts of the receiver valves are made with the following materials:
- hot forged brass EN 12420 – CW 617N for body;
- steel, with proper surface protection, for the spindle;
- chloroprene rubber (CR) and aramidic fibers for gland seal;
- glass reinforced PBT for cap that covers the spindle.

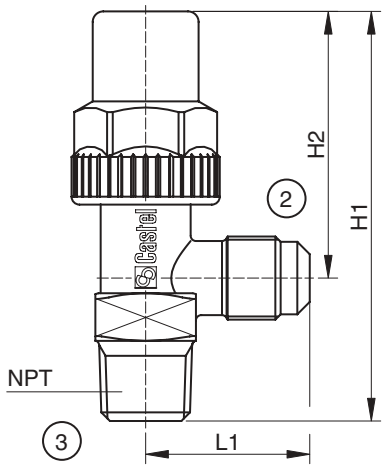
TABLE 1: General Characteristics

Catalogue Number	Connections			Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare		NPT		min.	max.		
	(1)	(2)	(3)					
6110/21	–	1/4"	1/8"	0,44	-60	+130	45	Art. 3.3
6110/22		1/4"	1/4"					
6110/X15	1/4" f	1/4"	–					
6110/23	–	1/4"	3/8"	0,45				
6110/32		3/8"	1/4"	1,35				
6110/33		3/8"	3/8"					
6110/X13	3/8" f	3/8"	–					
6110/43	–	1/2"	3/8"	2,40				
6110/44		1/2"	1/2"	3,40				
6110/54		5/8"	1/2"					
6110/66		3/4"	3/4"	6,00				
6120/22		1/4"	1/4"	0,44				
6120/23		1/4"	3/8"	0,45				
6120/33		3/8"	3/8"	1,35				
6120/43		1/2"	3/8"	2,40				
6120/44		1/2"	1/2"	3,40				
6120/54		5/8"	1/2"					
6120/66		3/4"	3/4"	6,00				
6132/22	1/4"	1/4"	1/4"	0,45		+110		
6132/33		3/8"	3/8"	1,20				
6132/44		1/2"	1/2"	2,20				
6132/54		5/8"	1/2"	3,85				
6140/22	–	1/4"	1/4"	0,36		+130		
6140/23		1/4"	3/8"					

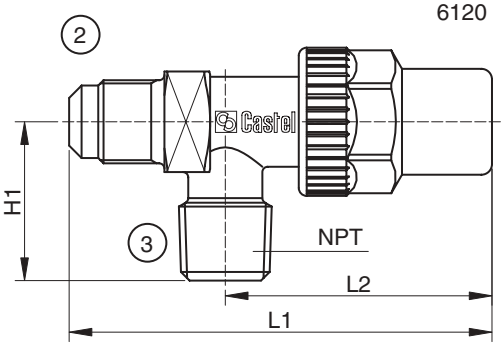
TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm] H_1	H_2	L_1	L_2	Weight [g]
6110/21	70,5	48	27,5	–	100
6110/22	72				110
6110/X15	83				130
6110/23	77	50	29		135
6110/32			31		130
6110/33					140
6110/X13	87				175
6110/43	88	55,5	34,5		220
6110/44	92				235
6110/54					245
6110/66	128	88	42,5		675
6120/22	27,5	–	72	48	110
6120/23	30		77	50	130
6120/33			80		140
6120/43			93	55,5	225
6120/44	33				305
6120/54			94		245
6120/66	40		130	88	670
6132/22	56	29	94	64	240
6132/33			97		250
6132/44	63,5	36	112	75	375
6132/54			115		365
6140/22	57	–	69	46	115
6140/23					125

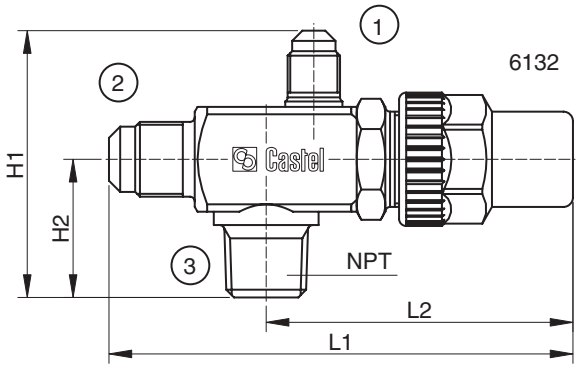
6110



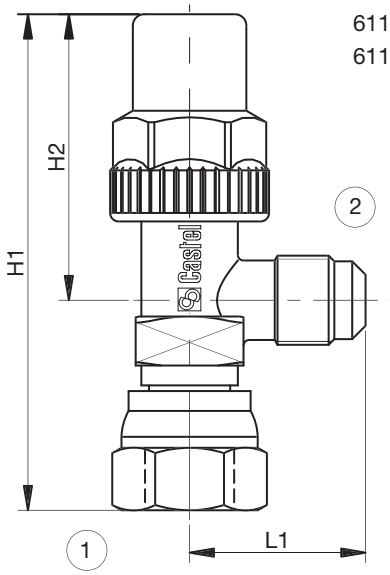
6120



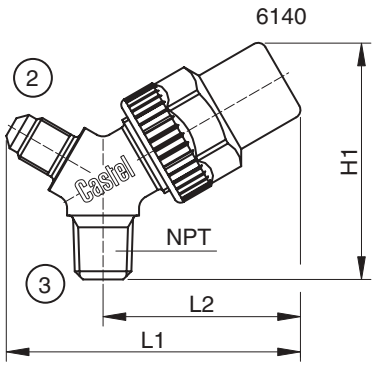
6132



6110/X13
6110/X15



6140



STOP VALVES

APPLICATIONS

The stop valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

The very compact design of these brass valves allows minimum dimensional sizes and the fixing flange complies with current market requirements.
Valves 6170 and 6175 must be completed with the following devices, to be ordered separately:
– valve code 8394/A or code 8394/B;
– cap with gasket code 8392/A.

The main parts of the stop valves are made with the following materials:
– hot forged brass EN 12420 – CW 617N for body;
– brass EN 12164 – CW 614N for spindle and protection cap;
– chloroprene rubber (CR) for outlet seal gaskets for series 6165 and 6175;
– chloroprene rubber (CR) and aramidic fibers for gland seal, only for series 6170.

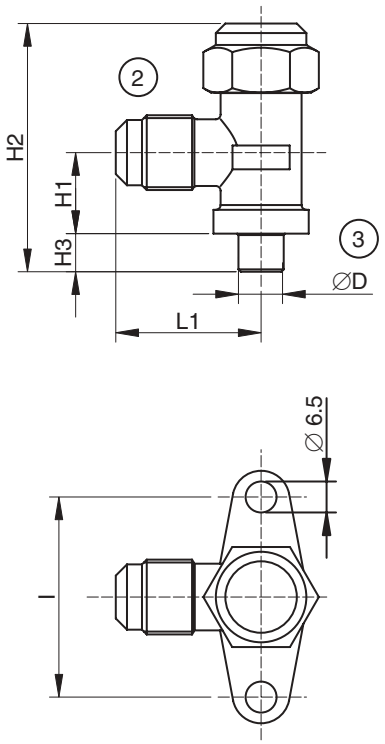
TABLE 1: General Characteristics

Catalogue Number	Way Nr.	Connections				Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
		SAE Flare		ODS (3)			min.	max.		
		(1)	(2)	Ø [in.]	Ø [mm]					
6165/22	2	–	1/4"	1/4"	–	0,68	-20	+110	45	Art. 3.3
6165/33			3/8"	3/8"		1,70				
6175/33	3	1/4"	3/8"	3/8"		1,70				
6175/44			1/2"	1/2"		3,40				
6175/55			5/8"	5/8"	16	4,60				
6170/66			3/4"	3/4"	–	9,00				
6170/77			7/8"	7/8"		10,80				

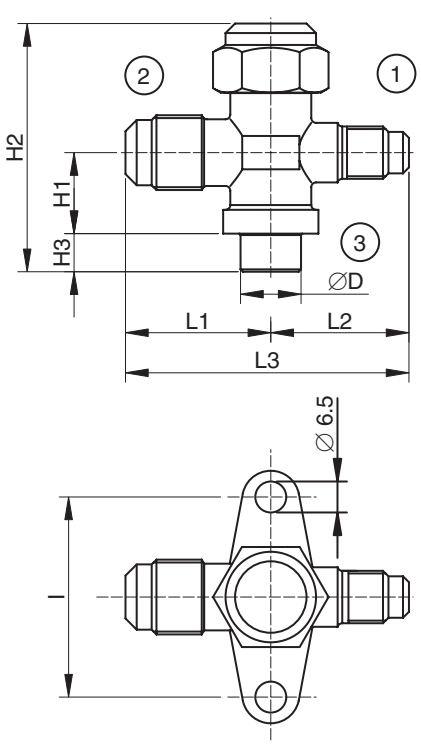
TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm]								Weight [g]
	H_1	H_2	H_3	Ø D	L_1	L_2	L_3	I	
6165/22	17	52	8	9,5	29	–	–	38	113
6165/33				12,7	30,5				120
6175/33						29	59,5		135
6175/44	20	65		15,9	36	31	67		225
6175/55				19					235
6170/66	28,5	104	12	22,2	47	36	83	50	655
6170/77				28,6					670

6165



6170
6175



DIAPHRAGM VALVES

APPLICATIONS

The diaphragm valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

Diaphragm valves don’t have gland seal. The external sealing is ensured by some thin metal discs (diaphragms), which hermetically divide the spindle chamber from the fluid flow area.

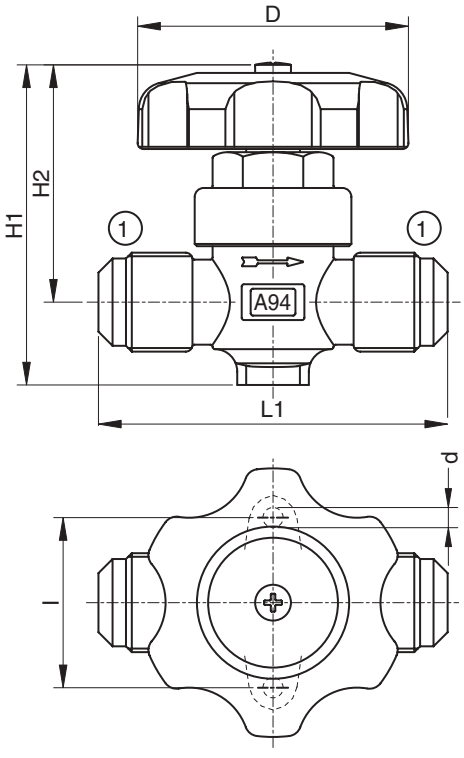
The main parts of the hermetic valves are made with the following materials:
- hot forged brass EN 12420 – CW 617N for body;
- brass EN 12164 – CW 614N for spindle;
- harmonic steel for spring;
- nylon for seat sealing gaskets.

TABLE 1: General Characteristics

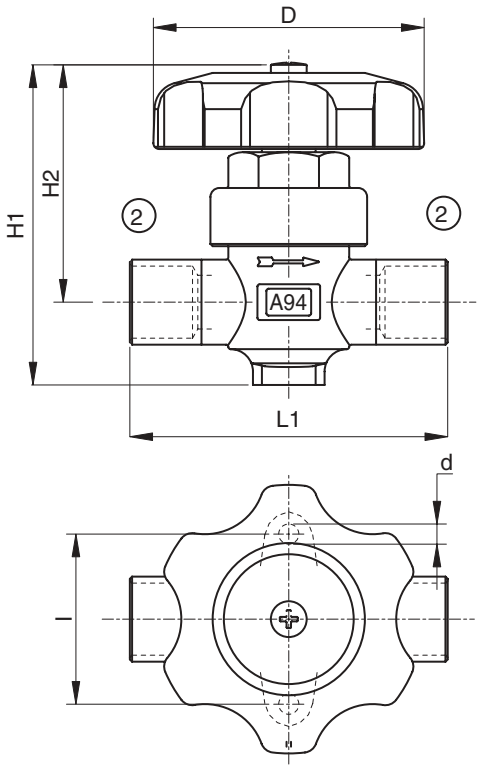
Catalogue Number	Connections			Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare (1)	ODS (2) Ø [in.]	ODS (2) Ø [mm]		min.	max.		
6210/2	1/4"	–	–	0,28	-35	+90	28	Art. 3.3
6210/3	3/8"			1,00				
6210/4	1/2"			1,30				
6210/5	5/8"			1,80				
6210/6	3/4"			3,65				
6220/2	–	1/4"		0,28				
6220/3		3/8"		1,00				
6220/4	–	1/2"		1,30				
6220/5		5/8"	16	1,80				
6220/6		3/4"	–	3,65				
6220/7		7/8"						

TABLE 2: Dimensions and Weights							
Catalogue Number	Dimensioni [mm]						Weight [g]
	H_1	H_2	L_1	d	I	D	
6210/2	68	53,5	58	4,5	36	52	200
6210/3	72		74		38		325
6210/4			78				335
6210/5							340
6210/6	86	62,5	98	6,2	50	60	655
6220/2	68	53,5	53	4,5	36	52	195
6220/3	72		61		38		300
6220/4			70				305
6220/5			71				
6220/6	86	62,5	92	6,2	50	60	580
6220/7			94				645

6210



6220



ROTALOCK VALVES

APPLICATIONS

The rotalock valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

Rotalock valves, mounted with 7910 fittings and 7990 gaskets, assure fast installation and safe sealing.
Before tightening it is possible to turn the valve in every direction.
All Rotalock valves have an additional charging connection, which can be excluded by the back sealing of the spindle.
Fittings 7910 and gaskets 7990 have to be ordered separately.

The main parts of the hermetic valves are made with the following materials:
- hot forged brass EN 12420 – CW 617N for body;
- steel, with proper surface protection, for the spindle;
- chloroprene rubber (CR) and aramidic fibers for gland seal;
- glass reinforced PBT for cap that covers the spindle;
- steel bar EN 10277-3 11 S Mn Pb 37 for 7910 fittings;
- P.T.F.E. for 7990 gaskets.

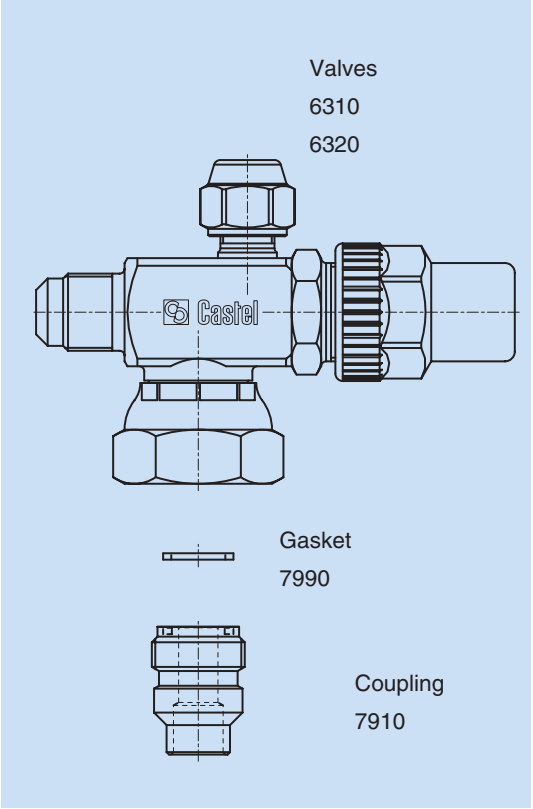


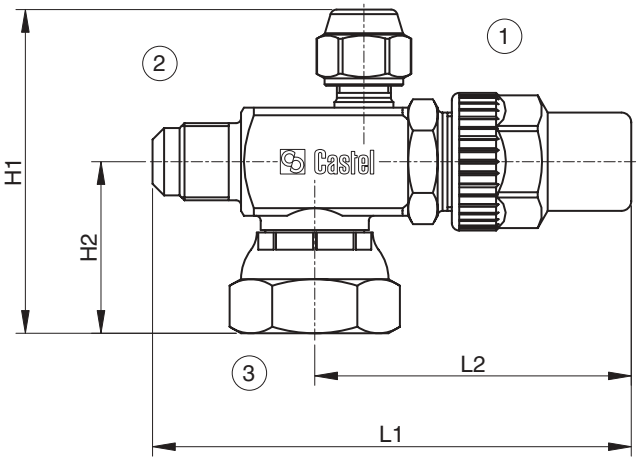
TABLE 1: General Characteristics

Catalogue Number	Connections			Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare		Swivel nut		min.	max.		
	(1)	(2)	(3)					
6310/2	1/4"	1/4"	3/4" UNF	0,46	-60	+110	45	Art. 3.3
6310/3		3/8"		1,35				
6310/4		1/2"						
6320/3		3/8"	1" UNS	1,40				
6320/4		1/2"		3,10				
6320/5		5/8"		3,4				
6320/6		3/4"						

TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm]				Weight [g]
	H_1	H_2	L_1	L_2	
6310/2	68,5	33,5	94	64	290
6310/3			97		300
6310/4					
6320/3	69,5	34,5			330
6320/4	72	36,5	114,5	77,5	400
6320/5			117,5		415
6320/6					425

6310
6320



CAPPED VALVES

APPLICATIONS

The capped valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

The main parts of the capped valves are made with the following materials:
- hot forged brass EN 12420 – CW 617N for body;
- steel, with proper surface protection, for the spindle;
- chloroprene rubber (CR) and aramidic fibers for gland seal;
- glass reinforced PBT for cap that covers the spindle.

INSTALLATION

The brazing of capped valves with solder connections, type 6420, should be carried out with care, using a low melting point filler material. It‘s necessary to remove the spindle assembly, with gland too, before brazing the body. It’s important to avoid direct contact between the torch flame and the valve body, which could be damaged and compromise the proper functioning of the valve.

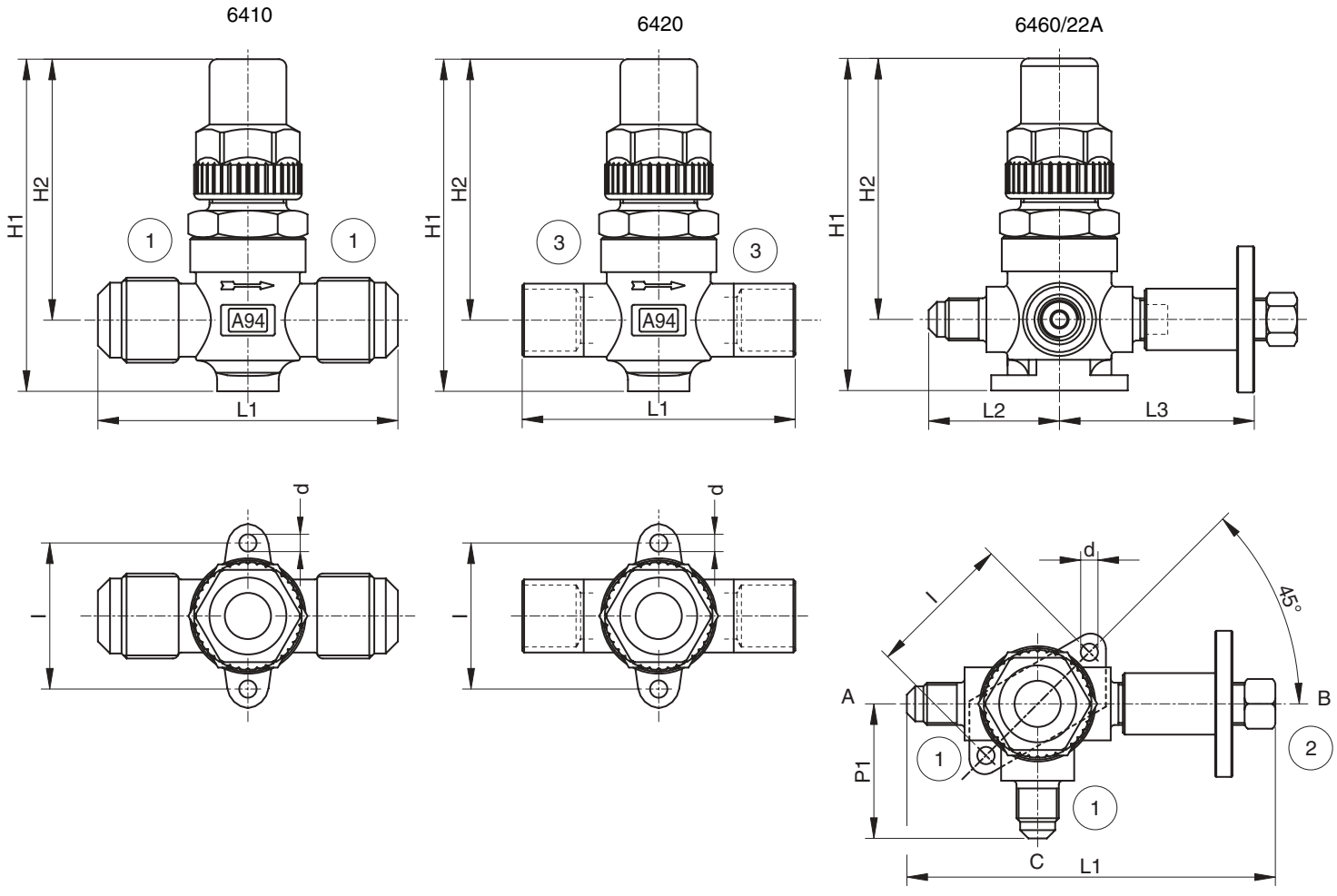
TABLE 1: General Characteristics

Catalogue Number	Connections				Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare		ODS (3)			min.	max.		
	(1)	(2)	Ø [in.]	Ø [mm]					
6410/2	1/4"				0,40				
6410/3	3/8"				1,00				
6410/4	1/2"		–		1,45				
6410/5	5/8"			–	1,70				
6410/6	3/4"				3,50				
6420/2			1/4"		0,40				
6420/3			3/8"		1,00				
6420/M10		–	–	10		-60	+110	45	Art. 3.3
6420/M12				12	1,45				
6420/4	–		1/2"	–					
6420/5			5/8"	16	1,70				
6420/M18			–	18					
6420/6			3/4"	–	3,50				
6420/M22			–	22					
6420/7			7/8"						
6460/22A [E]	1/4"	1/4"	–	–	0,35				

[E] *Until exhaustion of the stock*

TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm]								Weight [g]
	H_1	H_2	L_1	L_2	L_3	P_1	d	l	
6410/2	85,5	67	68	–	–	–	4,5	38	305
6410/3			74						325
6410/4			78						330
6410/5									
6410/6	113	89,5	98				6,2	50	695
6420/2	85,5	67	57				4,5	38	300
6420/3			61						305
6420/M10									
6420/M12			70						
6420/4									
6420/5			71						
6420/M18	113	89,5	92				6,2	50	700
6420/6									685
6420/M22			94						690
6420/7									
6460/22A	85,5	67	97	34	51	35	4,5	38	395



N.B. *When the valve 6460/22A is closed, connections* ***A-B*** *are open and* ***C*** *is stopped; when opened, all connections are open.*

GLOBE VALVES

APPLICATIONS

The globe valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

These valves are available in the following two types:
– 6512 with straight solder connections;
– 6532 with solder angle connections;
The main parts of the globe valves are made with the following materials:
– hot forged brass EN 12420 – CW 617N for body, cover and cap that covers the spindle;
– steel, with proper surface protection, for the spindle;
– chloroprene rubber (CR) and aramidic fibers for gland seal;
– metal-rubber laminated for outlet seal gaskets
– P.T.F.E. for seat gaskets.

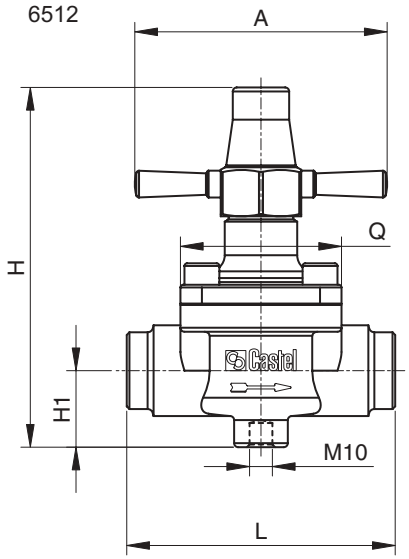
TABLE 1: General Characteristics

Catalogue Number	Connections				Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
	ODS		ODM			min.	max.		
	Ø [in.]	Ø [mm]	Ø [in.]	Ø [mm]					
6512/M22	–	22	–	28	7,1	-35	+160	45	Art. 3.3
6512/7	7/8"	–	1.1/8"	–					
6512/M28	–	28	1.3/8"	35	8,4				
6512/9	1.1/8"	–	1.3/8"	35					
6512/11	1.3/8"	35	1.5/8"	–	15,0				
6512/13	1.5/8"	–	2"	–	25,0				I
6512/M42	–	42	2"	–					
6512/17	2.1/8"	54	–	–	40,00				
6532/M22	–	22	–	28	8,2				Art. 3.3
6532/7	7/8"	–	1.1/8"	–					
6532/M28	–	28	1.3/8"	35	9,1				
6532/9	1.1/8"	–	1.3/8"	35					
6532/11	1.3/8"	35	1.5/8"	–	18,7				
6532/13	1.5/8"	–	2"	–	38,0				I
6532/M42	–	42	2"	–					
6532/17	2.1/8"	54	–	–	48,5				

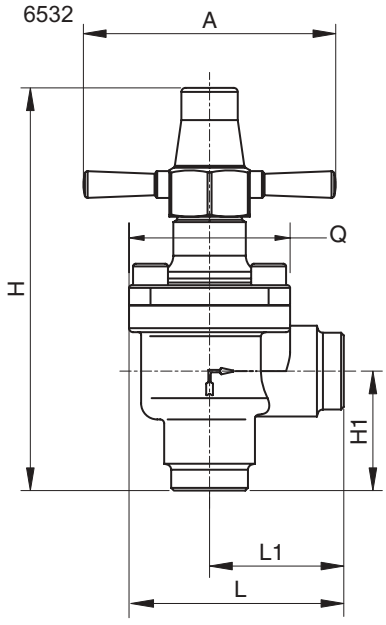
TABLE 2: Dimensions and Weights

Catalogue Number	Dimensions [mm]						Weight [g]
	H	H_1	L	L_1	Q	A	
6512/M22	136	28,5	100	–	60	94	1415
6512/7							
6512/M28							1310
6512/9							
6512/11	166	34	118		68	126	2020
6512/13	199	37	141		88	138	3500
6512/M42							
6512/17	215	42,5	173		104		5050
6532/M22	147	44,5	80	50	60	94	1350
6532/7							
6532/M28							1290
6532/9							
6532/11	165	52,5	93	59	68	126	1910
6532/13	238	65	139	86,5	104	138	4920
6532/M42							
6532/17							4765

6512



6532



BALL VALVES

APPLICATIONS

The ball valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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).

CONSTRUCTION

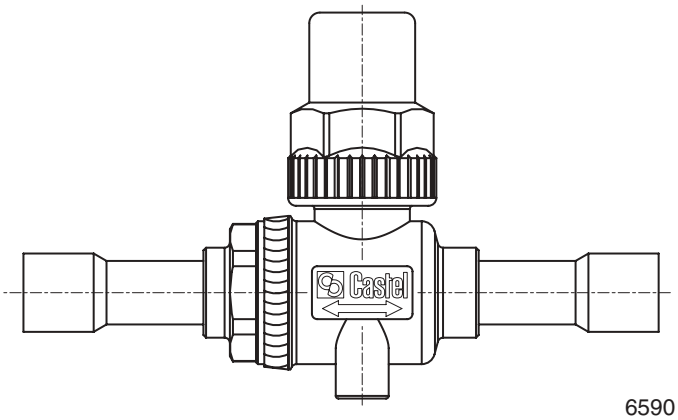
The specific design of Castel ball valves:
– ensures the internal equilibrium of pressures when the valve is closed;
– permits the bi-directional flow of the refrigerant and, consequently, the assembly on the plant without taking into account the direction of the refrigerant;
– prevents any risk of ejection or explosion of the spindle.

The opening and closing of the valve is realized by turning the spindle one fourth of a turn. A standstill in turning realizes either a full opening or a full closing, moreover the arrow printed on the spindle head shows the flow direction.
The electric welding of the bodies and the seal gaskets, assembled on the spindle, prevent any leaks.
Ball valves are available in the following two types:
– type 6590 (full port) and type 6591 (reduced port) without access fitting.
– type 6590/A (full port) and type 6591/A (reduced port) with access fitting.
These ball valves are equipped with valve core 8394/A and cap 8392/A.

The main parts of the valves are made with the following materials:
– hot forged brass EN 12420 – CW 617N for body;
– hot forged brass EN 12420 – CW 617N, chromium plated, for ball;
– copper tube EN 12735-1 – Cu-DHP for solder connections;
– steel, with proper surface protection, for the spindle;
– chloroprene rubber (CR) for outlet seal gaskets;
– P.T.F.E. for seat ball gaskets;
– glass reinforced PBT for cap that covers the spindle. Hot forged brass EN 12420 – CW 617N for caps on sizes from 6590/M64A up to 6591/34A.

INSTALLATION

The brazing of ball valves should be carried out with care, using a low melting point filler material. It is important to avoid direct contact between the torch flame and the valve body, which could be damaged and compromise the proper functioning of the valve.



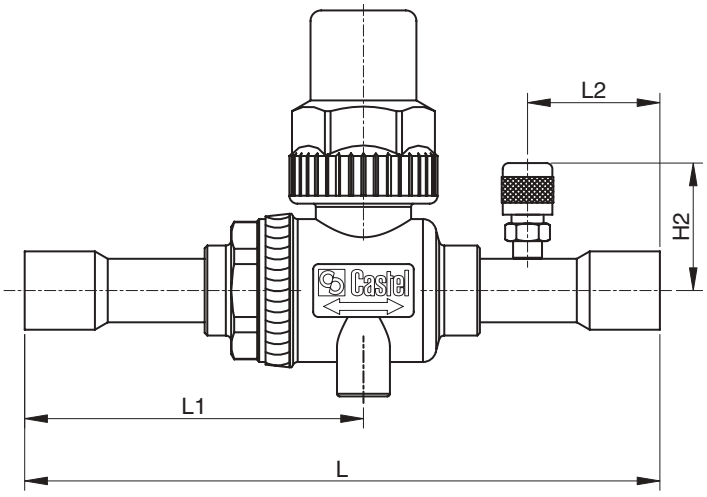
6590

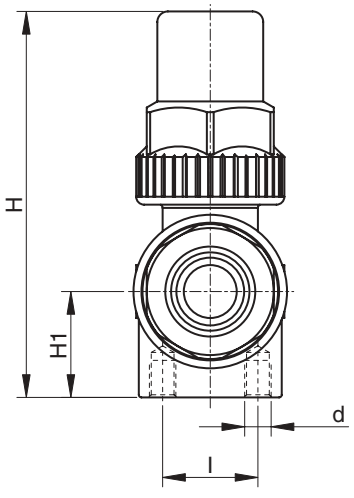
TABLE 1: General Characteristics

Catalogue Number		Connections		Ball Port Ø [mm]	Kv Factor [m³/h]	TS [°C]		PS [bar]	Risk Category according to PED
without access fitting	with access fitting	ODS				min.	max.		
		Ø [in.]	Ø [mm]						
6590/M6	–	–	6	10	0,8	-40	+150	45	Art. 3.3
6590/2		1/4"	–						
6590/3	6590/3A	3/8"	–		3,0				
6590/M10	6590/M10A	–	10						
6590/M12	6590/M12A	–	12		5,0				
6590/4	6590/4A	1/2"	–						
6591/5	–	5/8"	16						
6590/M15	6590/M15A	–	15	15	14,5				
6590/5	6590/5A	5/8"	16						
6590/M18	6590/M18A	–	18						
6590/6	6590/6A	3/4"	–						
6591/7	–	7/8"	22						
6590/7	6590/7A	7/8"	22	19	24,0				
6591/M28	–	–	28						
6591/9		1.1/8"	–						
6590/M28	6590/M28A	–	28	25	40,0				
6590/9	6590/9A	1.1/8"	–						
6591/11	–	1.3/8"	35						
6590/11	6590/11A	1.3/8"	35	32	68,0				
6591/13	–	1.5/8"	–						
6591/M42		–	42						
6590/13	6590/13A	1.5/8"	–	38	100,0				I
6590/M42	6590/M42A	–	42						
6591/17	–	2.1/8"	54						
6590/17	6590/17A	2.1/8"	54	50	178,0				
6591/M64	6591/M64A	–	64						
6591/21	6591/21A	2.5/8"	–						
–	6590/M64A	–	64	65	293,0				
	6590/21A	2.5/8"	–						
	6591/24A	3"							
	6591/25A	3.1/8"							
	6590/25A	3.1/8"	80	80	430			42	
	6591/28A	3.1/2"	89						
	6591/29A	3.5/8"	–						
	6591/33A	4.1/8"	105						
	6591/34A	4.1/4"	108						

TABLE 2: Dimensions and Weights

Catalogue Number		Dimensions [mm]								Weight [g]
		H	H_1	H_2	L	L_1	L_2	l	d	
6590/M6	–	73	20	–	121	65	–	18	M5	260
6590/2										
6590/3	6590/3A			33			24			300
6590/M10	6590/M10A									
6590/M12	6590/M12A									
6590/4	6590/4A									
6591/5	–			–	138	73,5	–			290
6590/M15	6590/M15A	80	24	36	141	74	32			410
6590/5	6590/5A									
6590/M18	6590/M18A									
6590/6	6590/6A									
6591/7	–			–	177	92	–			450
6590/7	6590/7A	95,5	27,5	38	175	93	33			760
6591/M28	6591/M28		–	–	206	108,5	–			800
6591/9	–									
6590/M28	6590/M28A	101,5	30	41	206	109	43	30	M6	1050
6590/9	6590/9A									
6591/11	–			–	248	130	–			
6590/11	6590/11A	117	38	45	247	129	49			2050
6591/13	–			–			–			
6591/M42										
6590/13	6590/13A	130	45	48	262	136	49			3320
6590/M42	6590/M42A									
6591/17	–			–	292	151	–			3240
6590/17	6590/17A	150	55	53	303	162	58			5450
6591/M64	6591/M64A									5500
6591/21	6591/21A									
–	6590/M64A	172,5	62	64	330	175	58	75	M10	8120
	6590/21A									8090
	6591/24A				350	185	68			8310
	6591/25A									8350
	6590/25A	196,5	75	70	380	199	76			12400
	6591/28A									12450
	6591/29A									
	6591/33A				400	209	86			12500
	6591/34A									





6590/..A

GAUGE MOUNTING VALVES

APPLICATIONS

The valves, shown in this chapter, are classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
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). They are used for mounting and intercepting the gauges on control panels.

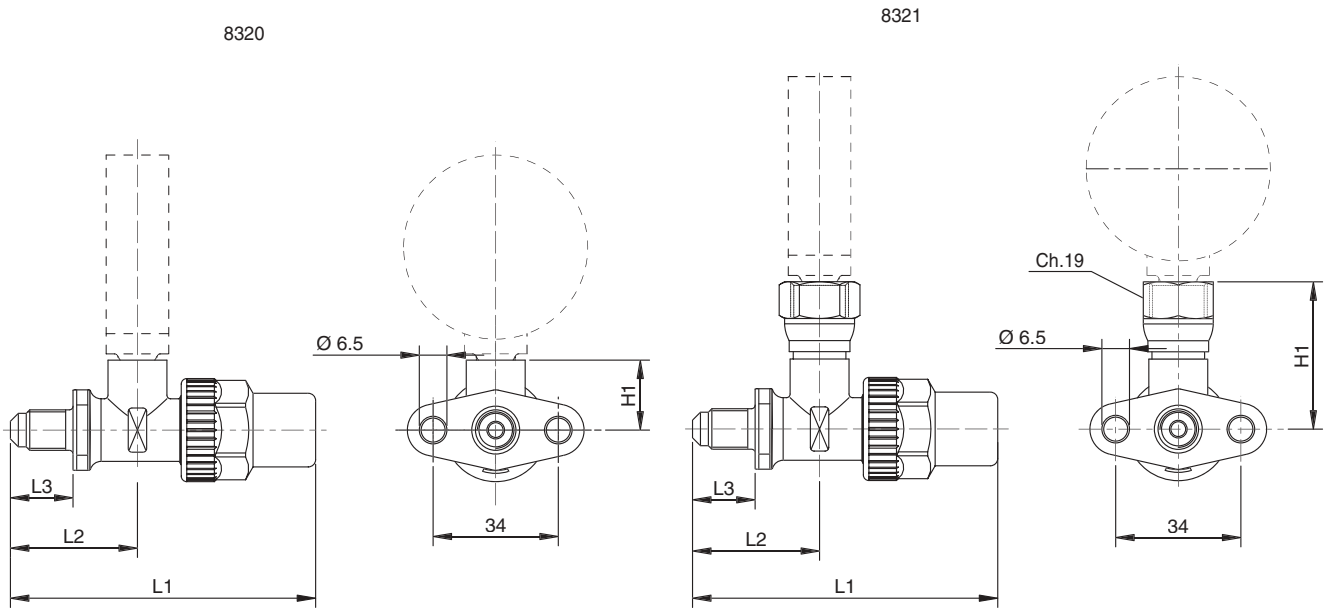
CONSTRUCTION

The valves are equipped with:
– a little flange for fixing the valve to the control panel;
– a SAE-Flare connection for joining it to the copper tube;
– an NPT (type 8320) or a swivel SAE FLare (8321) connection for mounting the gauge.

The main parts of this valve are made with the following materials:
– Hot forged brass EN 12420 – CW 617N for body;
– Steel, with proper surface protection, for the spindle;
– Chloroprene rubber (CR) and aramidic fibers for gland seal;
– Glass reinforced PBT for cap that covers the spindle.

TABLE 1: General Characteristics, Dimensions and Weight

Catalogue Number	Connections			Dimensions [mm]				Peso [g]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare	NPT	SAE Flare	H_1	L_1	L_2	L_3		min.	max.		
8320/21	1/4"	1/8"	–	19	83	35	17	140	-60	+130	45	Art. 3.3
8320/22	1/4"	1/4"	–	37				186				
8321/22	1/4"	–	1/4" f	40								



LINE PIERCING VALVE

APPLICATIONS

The valve, shown in this chapter, is classified “Pressure accessories” in the sense of the Pressure Equipment Directive 97/23/EC, Article 1, Section 2.1.4 and are subject of Article 3, Section 1.3 of the same Directive.
It is 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).
The piercing valve is a fast and cheap means of providing a loading, outlet or inlet point in the refrigerating system. It can be applied on copper tube with a 6 mm to 10 mm diameter, and can be installed in any position on the system.

CONSTRUCTION

The main parts of the piercing valve are made with the following materials:
– Hot forged brass EN 12420 – CW 617N for body;
– Hardened steel for the needle;
– Chloroprene rubber (CR) for the outlet seal gaskets.

INSTALLATION

The threaded fork must be installed astride of the copper tube, the valve is fastened to the pipe by tightening the lower nut and screwing it the needle pierces the pipe. The hole, pierced by the needle, connects the pipe inlet with the SAE-Flare connection as shown in figures 1 and 2.

TABLE 1: General Characteristics, Dimensions and Weight

Catalogue Number	Connections		Dimensions [mm]				Weight [g]	TS [°C]		PS [bar]	Risk Category according to PED
	SAE Flare	Pipe diameter [mm]	H_1	L_1	L_2	L_3		min.	max.		
8330/A	1/4"	6 - 10	72	25,5	29	36	104	-10	+70	25	Art. 3.3

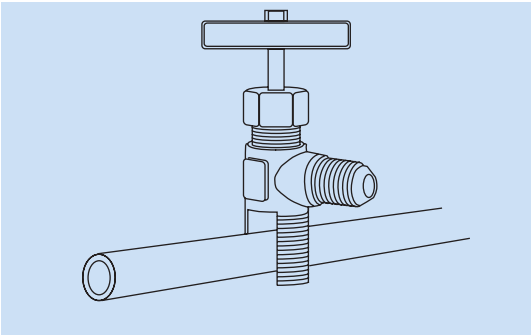


Fig. 1 - The valve is installed with the threaded fork astride of the copper pipe to be pierced.

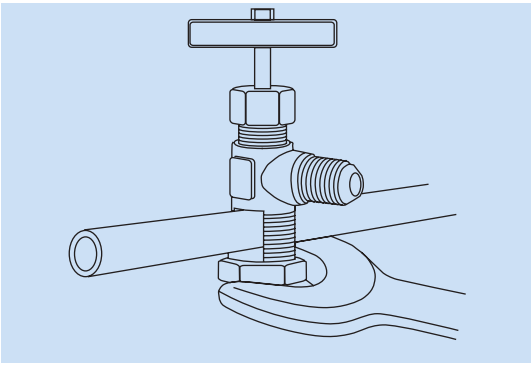


Fig 2 - Tightening of lower screw nut.