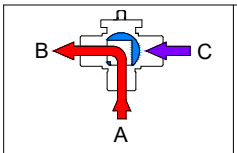
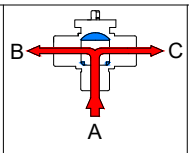
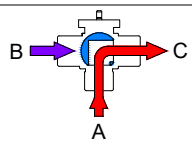
2"1/8 ÷ 2"5/8 BALL VALVE FOR R744 SUBSCRITICAL SYSTEMS

2 and 3 ways ball valve for HVAC-R systems.

This new shut-off valve is the result of a consolidated experience in applications with R744 in the transcritical cycle. The main technical features of this valve are the high energy efficiency and the optimum pressure tightness, both results have been obtained through the choice of innovative and high quality materials.

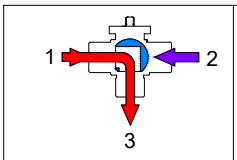
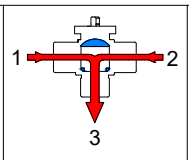
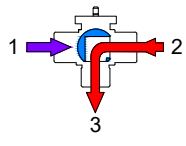
MAXIMUM DIFFERENTIAL PRESSURE IN DIVERTING VALVE

Flowrate enters the central way. Pressures are p_A, p_B, $p_C \leq 60$ bar

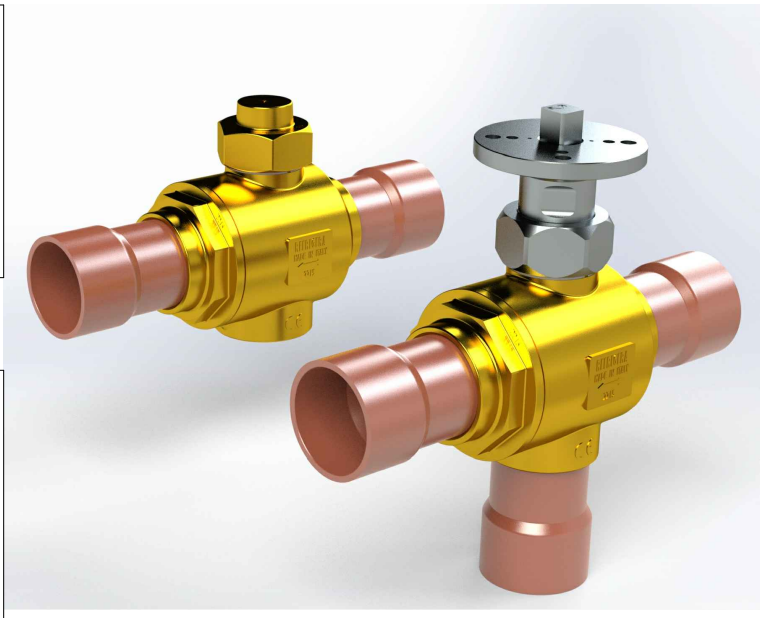
 DIRECT WORKING $\Delta p_d = p_A - p_C \leq 60$ bar REVERSE WORKING $\Delta p_r = p_C - p_A \leq (*)$ bar	 TRANSITIONAL REGIME (DURING THE ROTATION)	 DIRECT WORKING $\Delta p_d = p_A - p_B \leq 60$ bar REVERSE WORKING $\Delta p_r = p_B - p_A \leq (*)$ bar

MAXIMUM DIFFERENTIAL PRESSURE IN MIXING VALVE

Flowrate enters the side ways. Pressures are p_1, p_2, $p_3 \leq 60$ bar

 DIRECT WORKING $\Delta p_d = p_1 - p_2 \leq 60$ bar REVERSE WORKING $\Delta p_r = p_2 - p_1 \leq (*)$ bar	 TRANSITIONAL REGIME (DURING THE ROTATION)	 DIRECT WORKING $\Delta p_d = p_2 - p_1 \leq 60$ bar REVERSE WORKING $\Delta p_r = p_1 - p_2 \leq (*)$ bar

(*) Values to be checked through hydraulic test on the ball valve ports. Available soon.



NO.G25012023

MAIN FEATURES

- These new valves have been designed with the use of high performance materials for a perfect internal tightness in any application.
  New generation technopolymers guarantee high mechanical and thermal resistance, which combined with a low rotation torque enable to achieve high results in terms of energy efficiency.
- The typical application is the cascade system.
  In the secondary circuit there is R744 at low temperature: it can be gas compressed or at liquid status with a circulating pump.
  In the primary circuit there is a traditional refrigerant HFC (R134a, R404a, ...): it has to mantain the condensing temperature of the R744 below the critical point, generally between -5 and -10 °C
- The 2 ways valves are suitable for the applications where a bidirectional flow is required.
- Functional tests are executed on 100% of the produced ball valves by using a proper high pressure system.

SPECIFICATIONS

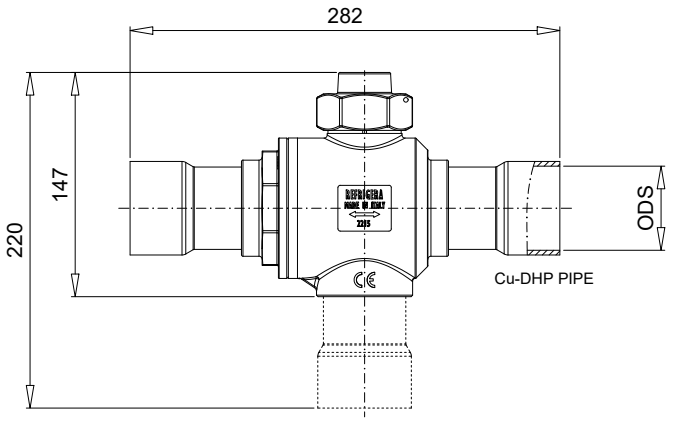
Refrigerants	R744 (subcritical)
Media temperature range	- 40 °C + 150 °C
Maximum working pressure (PS)	60 bar (870 psig)
Maximum test pressure	PS x 1,43
Oils	POE, PAG
Valve Body	G-TYPE
Approvals	CE 2014 / 68 / UE PED

■ CONNECTIONS SIZE AND OVERALL DIMENSIONS

The valves are available with increased thickness Cu-DHP ODS connections.

	CONNECTIONS SIZE		Kv (ON-OFF)	
	mm	in	2 way	3 way
ODS Cu-DHP	54	2-1/8	273	56
	64		-	-
		2-5/8	-	-

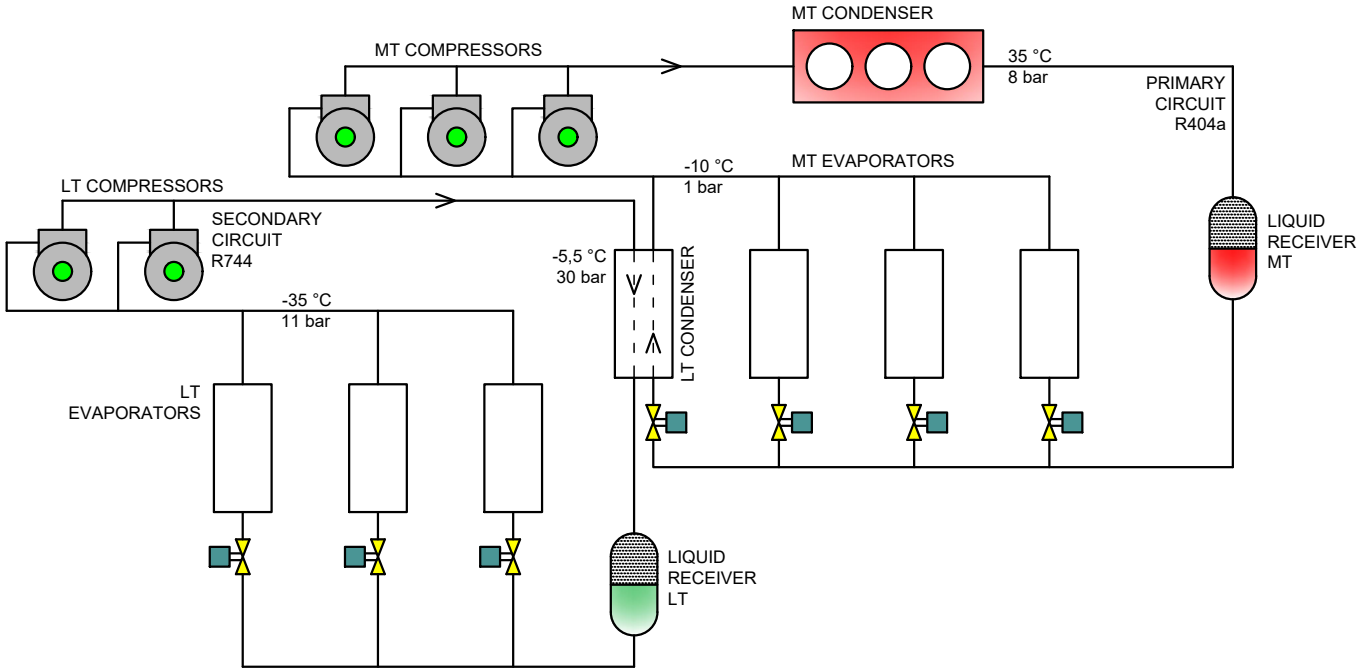
(-) Available soon.



■ MOTORIZATION

All Refrigera valves are suitable for actuators. The junction kit is hermetically sealed according to EN 14903 Standard and connects valve and actuator through an ISO 5211 F05, F07 flange with a square 14 or 17 spindle.

■ CASCADE SYSTEM APPLICATION



■ WORKING AS MODULATING VALVE (V-PORT)

The ball has a V-shaped hole in order to supply a better and more accurate flow regulation (following an exponential curve).
The modulating servomotor is controlled by a signal type (0 ÷ 10 Vcc) or (4 ÷ 20 mA) that stops the rotation of the ball with an angle depending on the pilot signal intensity.