

# NORMALLY-CLOSED SOLENOID VALVES

FOR REFRIGERATION PLANTS  
THAT USE TRANSCRITICAL **R744** REFRIGERANT

Welcome  
14E

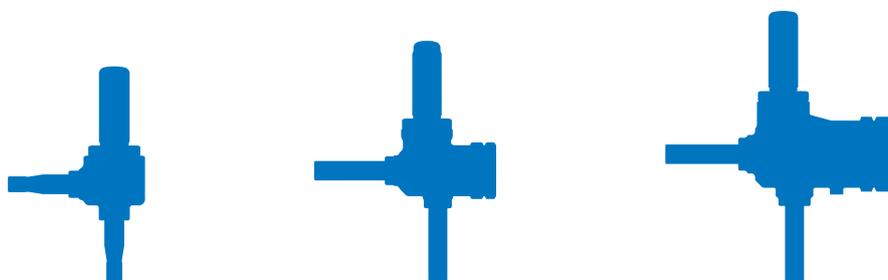


BORN FOR CO<sub>2</sub>

# CASTEL: GREEN EXTREME

Environmental commitment is one of our priorities. For ten years Castel has been engaged in the development of products for CO<sub>2</sub> systems and technological solutions aimed at reducing the environmental impact, directly and indirectly.

## WIDE RANGE

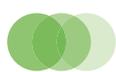


Solenoid Valves series 14-E are specifically designed to be suitable for CO<sub>2</sub> transcritical and subcritical systems with a maximum working pressure up to 140 bar.

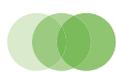
Large range of **capacities**, **sizes** and **voltages** (coils). Direct and Piston pilot operated valves.



**HIGH WORKING PRESSURE UP TO 140 BAR**

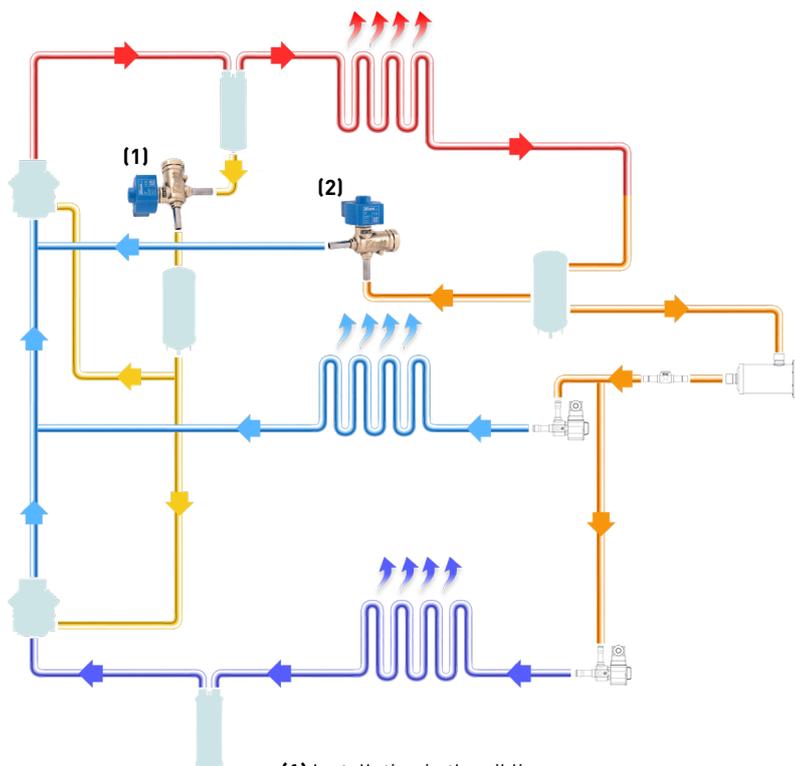


**LONG LIFE UP TO 6 MILLION CYCLES**



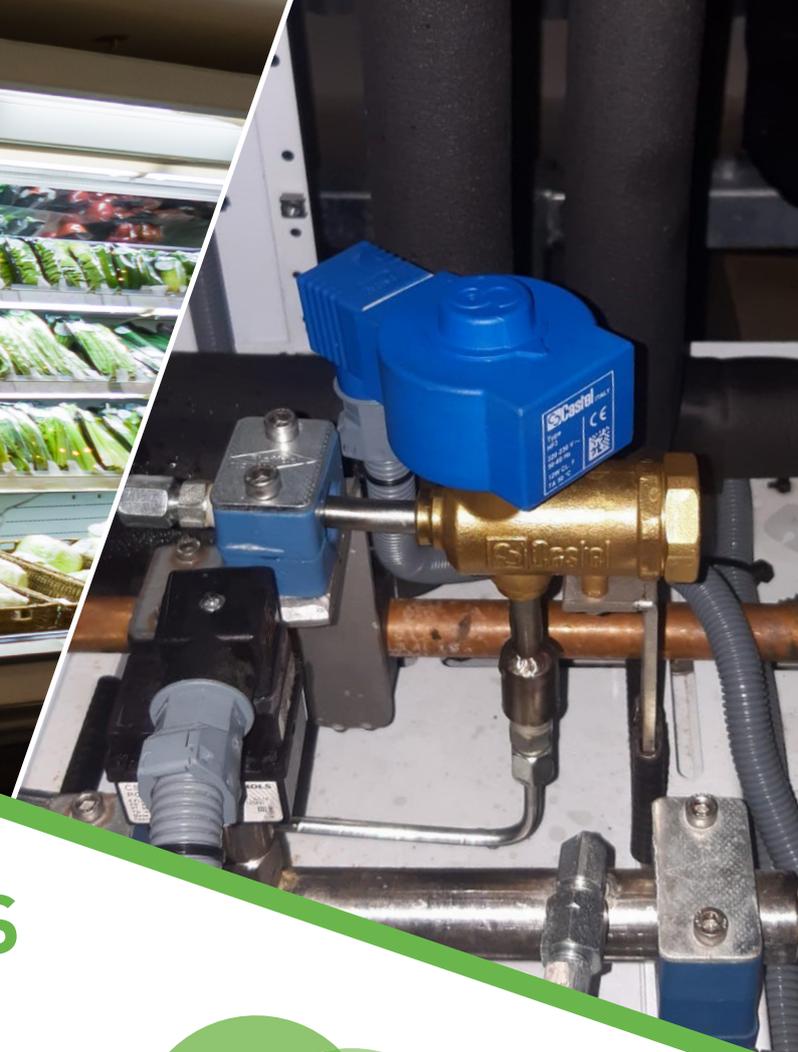
**STAINLESS STEEL CONNECTIONS 6, 10 AND 12 MM**

**COPPER K65 CONNECTIONS 1/4", 3/8", 1/2"**

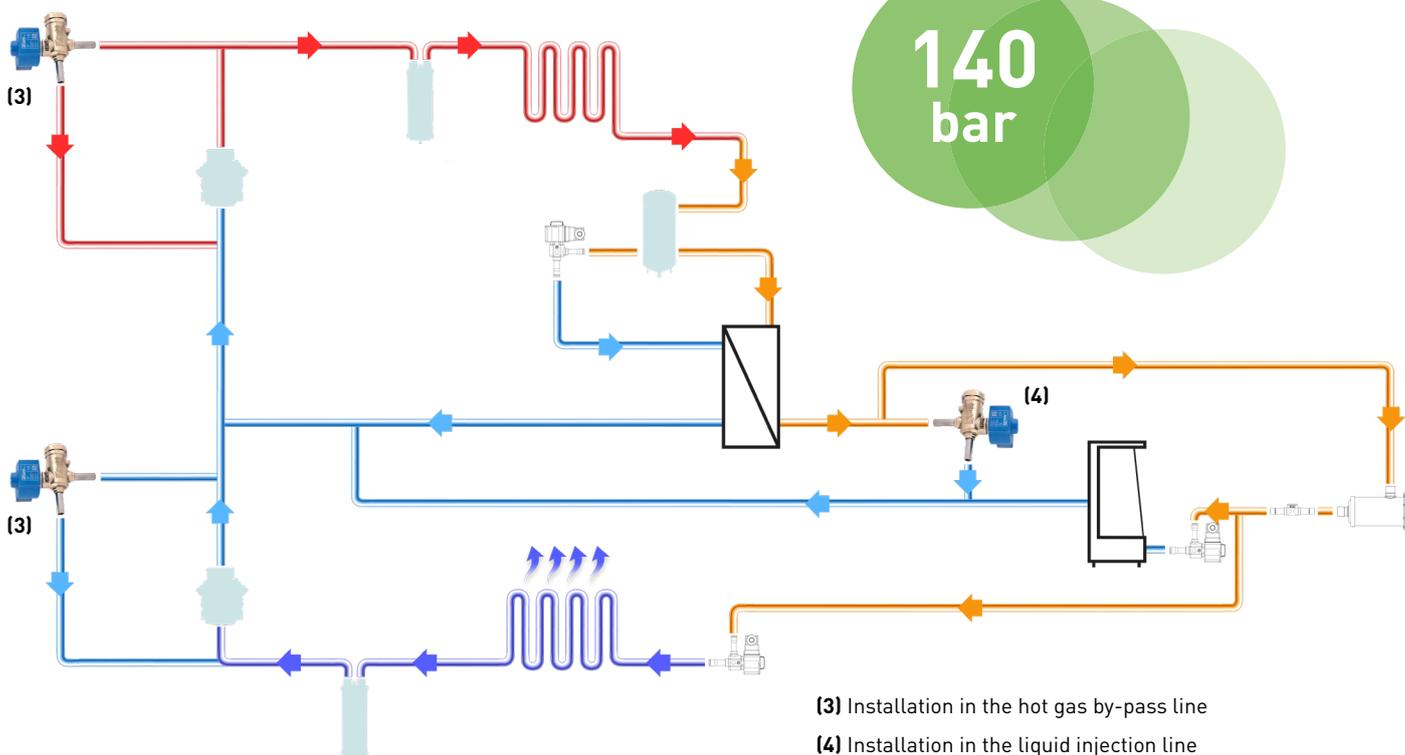


**(1)** Installation in the oil line

**(2)** Installation in the flash gas line



# BORN FOR ALL CO<sub>2</sub> APPLICATIONS



## Typical applications of the solenoid valve 14-E

- **Oil line** - it guarantees the return of the oil to the reservoir and keeps high the pressure inside it
- **Flash gas** - to maintain the MT receiver pressure during the system operation
- **Hot gas by-pass** - like a capacity control, it adjusts the flow of hot gas according to change of suction pressure
- **Liquid injection** - to decrease the temperature of fluid



Operating principle	Drawing	Part Number	Coil Type		Connections ODS Ø		Kv [m³/h]	PS [bar]	TS [°C]		Package Pcs.
			(1)		[in.]	[mm]			Min	Max	

#### With reinforced copper ods connections (k65)

Direct acting		1417E/2S05	HF3	1/4"	-	0,065	130	-40 (2)	+130 (2)	14
		1417E/3S05		3/8"	-					
Piston pilot operated		1427E/2S020		1/4"	-	0,15				
		1427E/3S020		3/8"	-					
		1427E/2S030		1/4"	-	0,32				
		1427E/3S030		3/8"	-					
		1437E/3S050 (3)		3/8"	-	0,80				
		1437E/4S050 (3)		1/2"	-					
		1437E/3S070 (3)		3/8"	-	1,10				
		1437E/4S070 (3)		1/2"	-					

#### With stainless steel connections

Direct acting		1418E/M6S05	HF3	-	6	0,065	140	-40 (2)	+130 (2)	14
		1418E/M10S05		-	10					
Piston pilot operated		1428E/M6S020		-	6	0,15				
		1428E/M10S020		-	10					
		1428E/M6S030		-	6	0,32				
		1428E/M10S030		-	10					
		1438E/M10S050 (3)		-	10	0,80				
		1438E/M12S050 (3)		-	12					
		1438E/M10S070 (3)		-	10	1,10				
		1438E/M12S070 (3)		-	12					

(1) : coils that can fit the valves

(2) : for use in the oil line TS = -10 /+70 °C

(3) : for use in the oil line please contact CASTEL

LOOKING FOR MORE CO<sub>2</sub> PRODUCTS?

VISIT US ON  
CASTEL.IT

GO GREEN

R744 • NATURAL REFRIGERANT



ISO 14001

Castel has always been aware of environmental sustainability issues and gives its contribution to a cleaner environment, supplying the refrigeration and air conditioning industry with state-of-the-art and environment-friendly technology. With its commitment and steady research in its laboratories, Castel has developed a whole range of products using natural refrigerants, which reduce emissions to the minimum. The large range of products belonging to the Castel "GoGreen" line has been developed to be used in CO<sub>2</sub> (R744) filled systems.

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