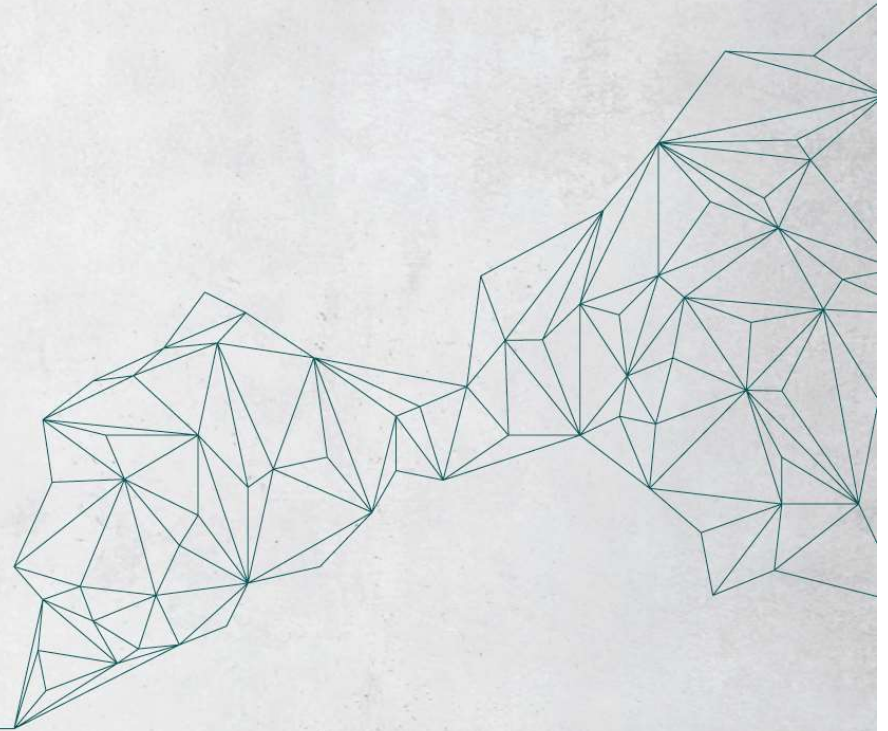


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Saginomiya components for R744 applications

Saginomiya company profile



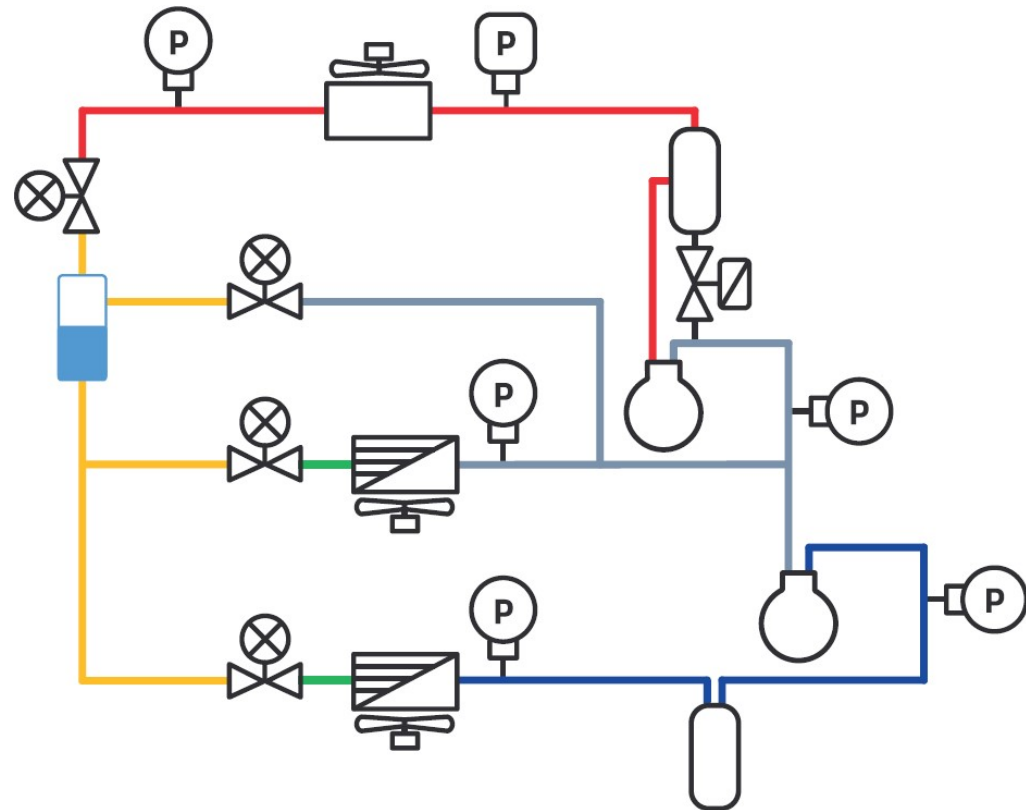
CO₂ components



Saginomiya CO₂ components include solenoid valves, electronic expansion valves, pressure switches and pressure sensors.

They were introduced as components for ECOcute CO₂ heat pumps for water heating and have been used for this application since early 2000's.

In recent years we see an increase in demand for components for other applications, which led to increased focus on development on Saginomiya's side, resulting in the introduction of new products.



CO₂ components



UKV-J & JKV Electronic Expansion Valves

HPV Solenoid Valves

HSK Pressure Sensors

CCB Pressure Controls

CKB Pressure Controls



UKV-J



HPV



HSK

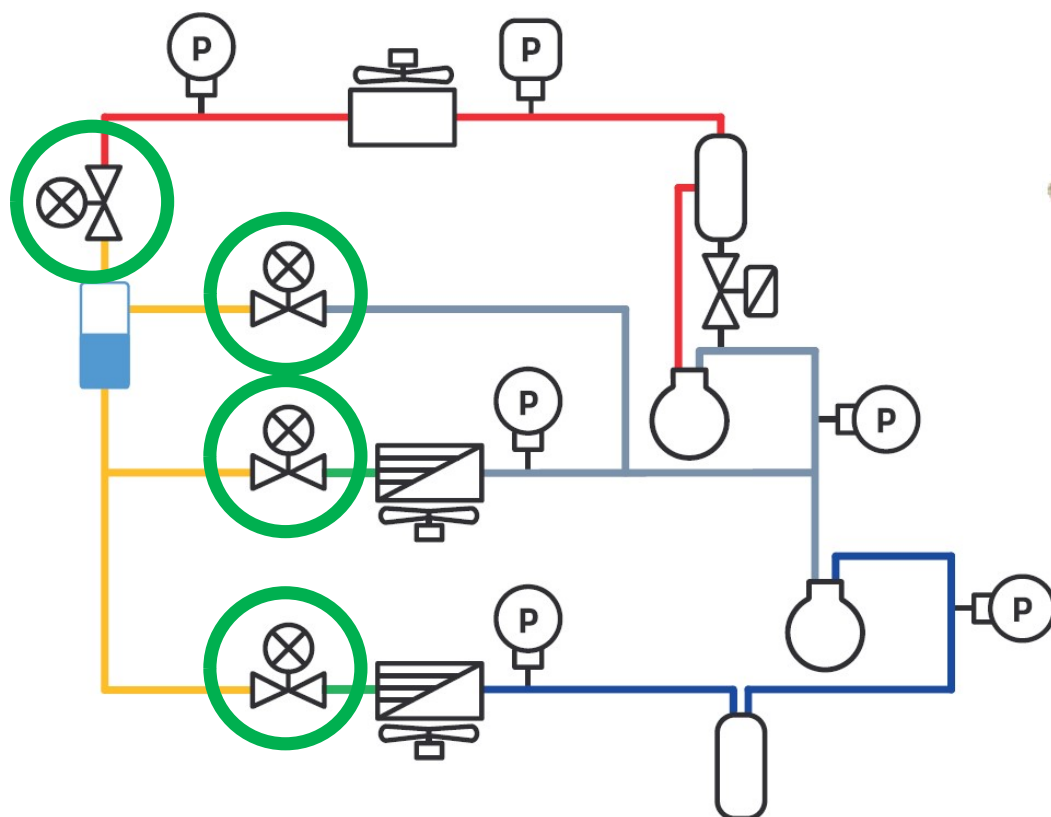


CCB



CKB

CO₂ components - UKV-J / JKV



UKV-J



JKV-20D



JKV-24D



JKV-40D

CO₂ components - UKV-J / JKV



Features:

- applicable for CO₂ up to 150 bar
- high sealing construction
- permanent magnet type direct operating stepper motor

Model	Port size [mm]	Kv	Connection		OPD [bar]		MWP [bar]	Temp. Range
			Pipe Ø	Style	Min.	Max.		
UKV-J08D	0.8	0.013	1/4"	Solder	0	100	150	-30°C - 70°C
UKV-J10D	1.0	0.022						
UKV-J14D	1.4	0.048						
JKV-20D	2.0	0.104	5/16"					
JKV-24D	2.4	0.147						
JKV-40D	4.0	0.519	1/2"					



UKV-J



JKV-20D

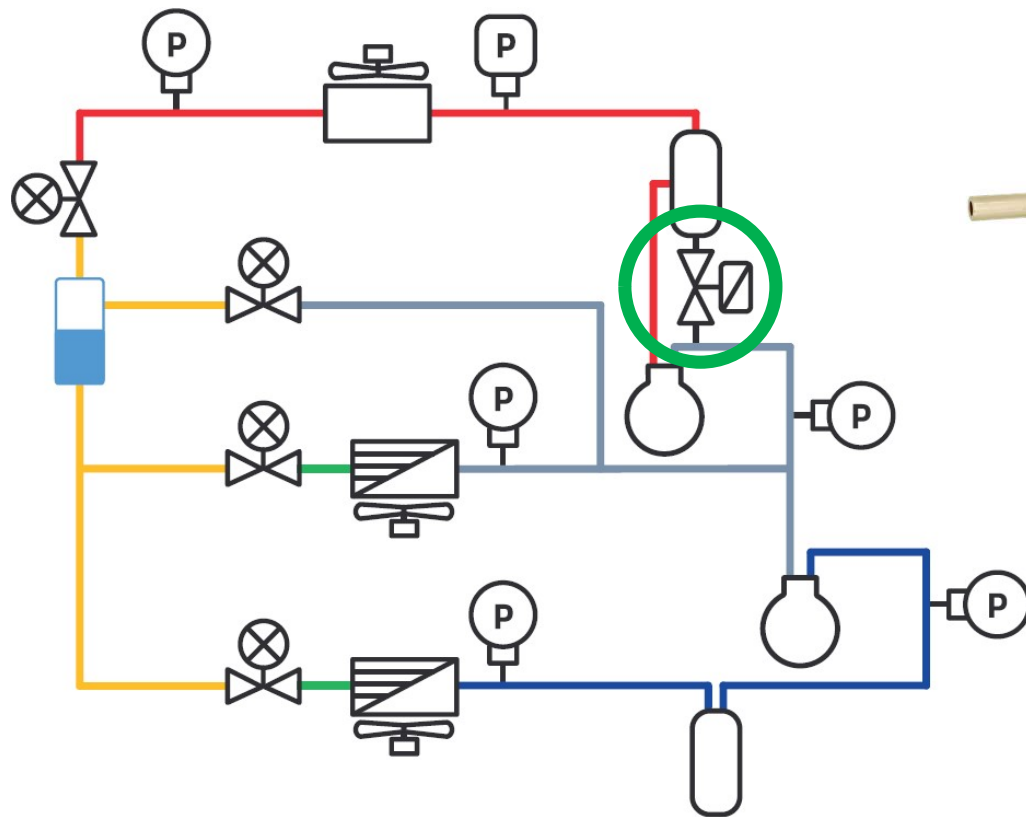


JKV-24D



JKV-40D

CO₂ components - HPV



HPV-102D



HPV-122D



HPV-825D

CO₂ components - HPV



Features:

- applicable for various purposes in CO₂ applications
- compact pilot type
- available for pressures up to 150 bar



HPV-102D



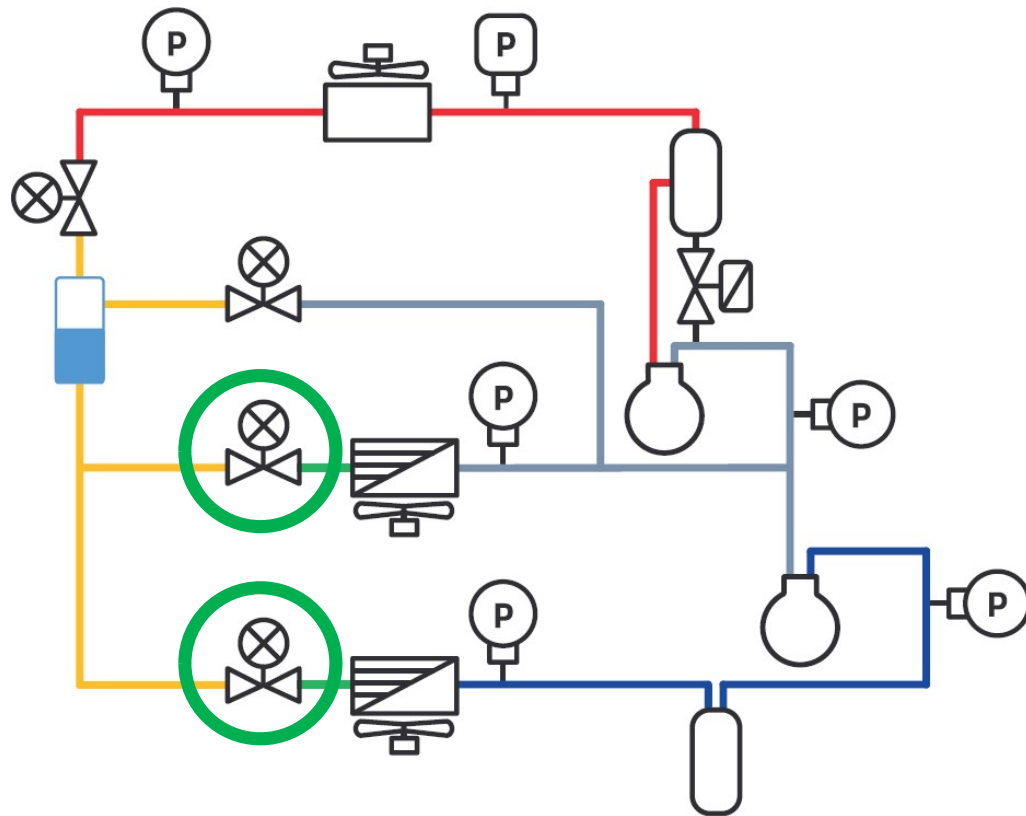
HPV-122D



HPV-825D

Model	Port size [mm]	Kv	Connection		OPD [bar]		MWP [bar]	Operation
			Pipe Ø	Style	Min.	Max.		
HPV-102D	1.0	0.024	1/4"	Solder	0	100	130	Normally closed
HPV-122D	1.2	0.033					138	
HPV-402D	4.0	0.280					140	
HPV-825DS	7.8	0.470	5/16"		1		150	

CO₂ components – HPV-E



CO₂ components – HPV-E



Features:

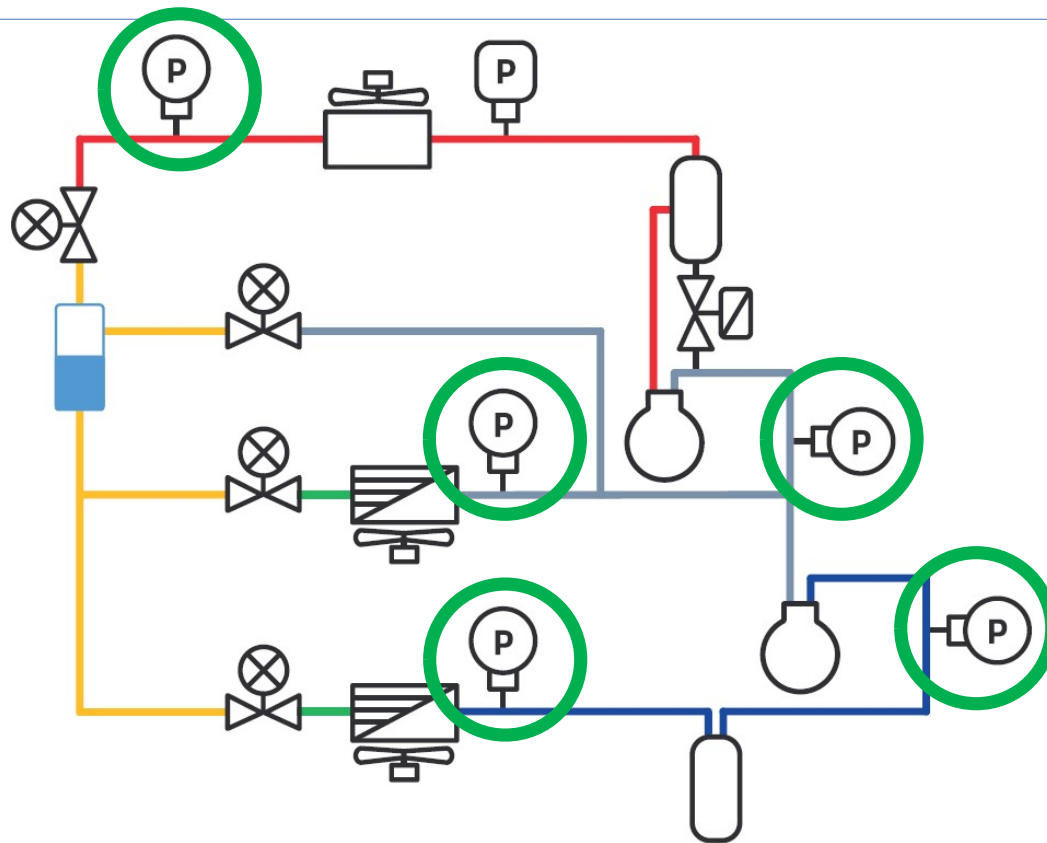
- applicable as PWM electronic expansion valves in CO₂ applications
- low operating noise
- no solenoid valve or backup power supply required

Model	Orifice size [mm]	Kv	Connection		OPD [bar]		MWP [bar]	Operation
			Pipe Ø	Style	Min.	Max.		
<u>HPV-E1120DQ1</u>	0.5	0.009	1/4"	Solder	0	60	80	Normally closed
<u>HPV-E1120DQ2</u>	0.6	0.017						
<u>HPV-E1120DQ3</u>	0.8	0.026						
<u>HPV-E1120DQ4</u>	1.1	0.041						



HPV-E

CO₂ components - HSK



HSK-BE



HSK-BC

CO₂ components - HSK

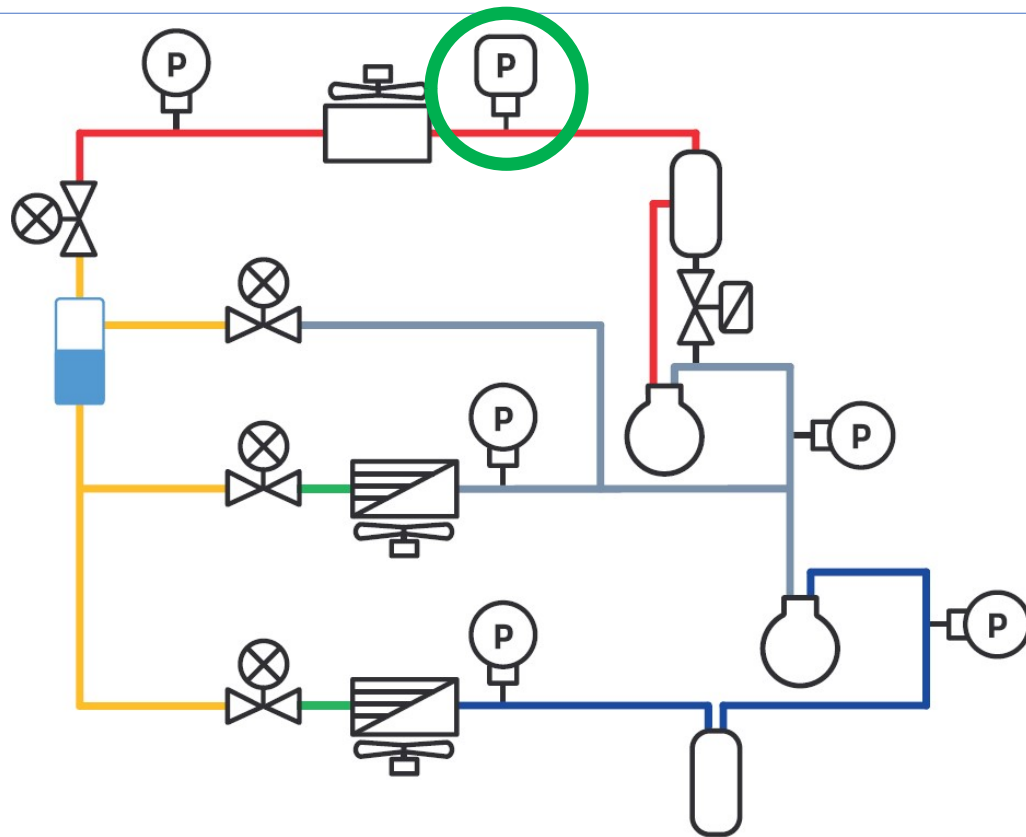


Features:

- one chip pressure sensing element
- compact & lightweight design
- high accuracy ($\pm 2.5\%$ FS)
- available for pressure up to 150 bar
- Packard or Molex electrical connector
- $\frac{1}{4}$ " or 6 mm solder connection

Model	Pressure range [bar]	Total accuracy	Ambient temp. range	Fluid temp. range	Enclosure
HSK-BE060D	0 - 60	$\pm 2.5\%$ FS	-30°C - 100°C	-30°C - 120°C	IP66
HSK-BE100D	0 - 100				
HSK-BE150D	0 - 150				





CO₂ components - CCB



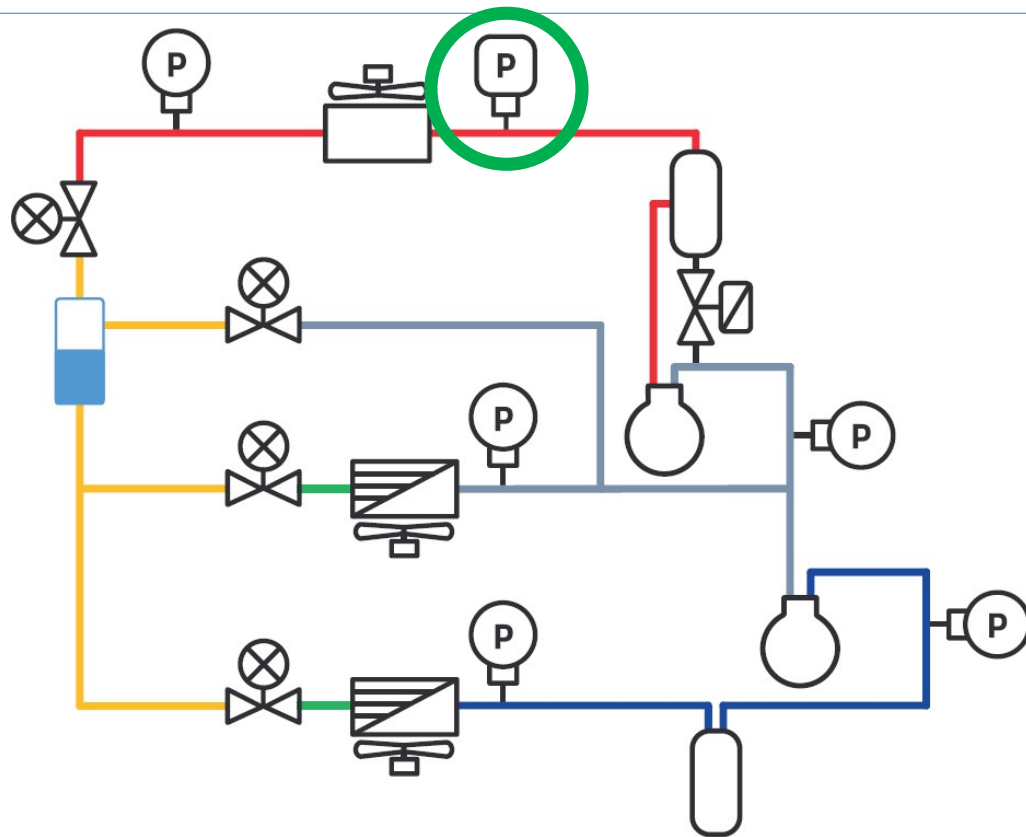
Features:

- applicable for pressure up to 165 bar
- compact & lightweight design
- waterproof version available (IP66)
- designed to work as a direct cut-out for up to 4A or controlling purpose signal from 1 to 50 mA

Parameter	Value
Operating pressure	110 - 160 bar
Maximum Working Pressure	up to 165 bar
Ambient Temperature	-30 - 100°C
Allowable Fluid Temperature	-30 - 120°C
Pressure Connection	1/4" solder



CO₂ components - CKB



CO₂ components - CKB

Due to increasing demand for high pressure switches with narrow differential and high accuracy, Saginomiya introduced CKB series pressure switches for CO₂ applications.

Features:

- wide setting range from 40 to 130 bar allowing use in both sub- and transcritical circuits
- 10 bar minimum pressure differential
- manual reset type available
- +0/-8% setting tolerance for compliance with EN12263
- high durability satisfying CE PED category IV



CO₂ components - CKB

Parameter	Value
Maximum Working Pressure	143 bar
Setting Range	40 - 130 bar
Ambient Temperature	-40 - 70°C
Fluid Temperature	-40 - 150°C
Differential	min. 10 bar
Accuracy	+0% / -8%
PED Category	Cat. IV
Wiring	DIN plug
Protection Level	IP65 (with plug)
Pressure Connection	1/4" female flare



Saginomiya components for R744 applications

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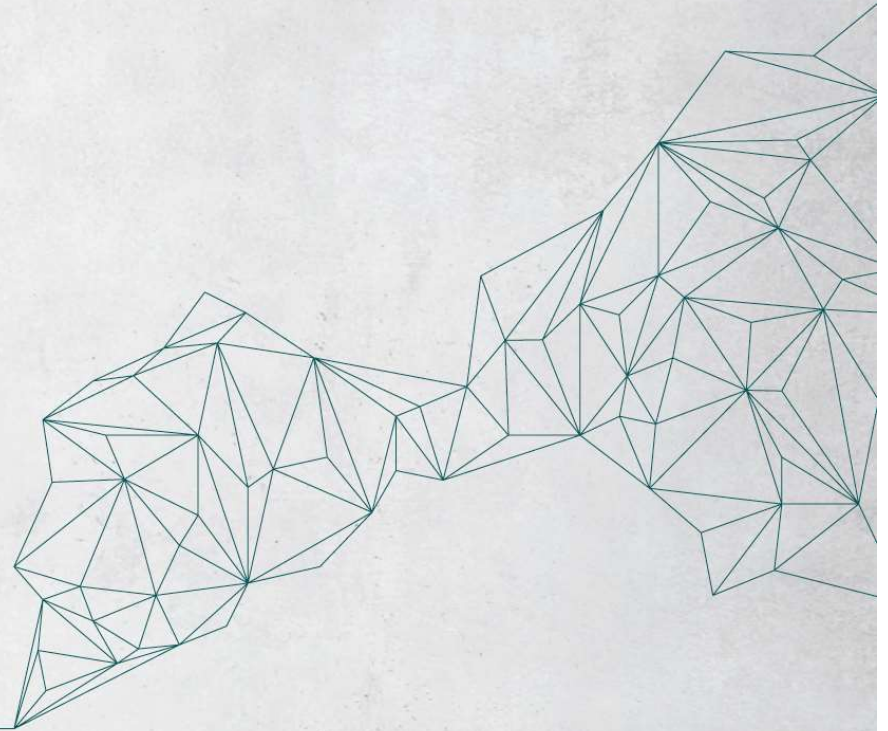
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