HPEOK®

Refrigeration&Air-Conditioning Components

CO_2 Components

CO_2 Service valve
Type PKHJ

Applications

PKJH Service valve is a manual shut–off valve, this valve is especially designed for transcritical CO_2–applications.

PKJH service valves are designed to use self–enclosed spindle, is installed to anywhere the refrigerant flow direction needed to be closed.

Features

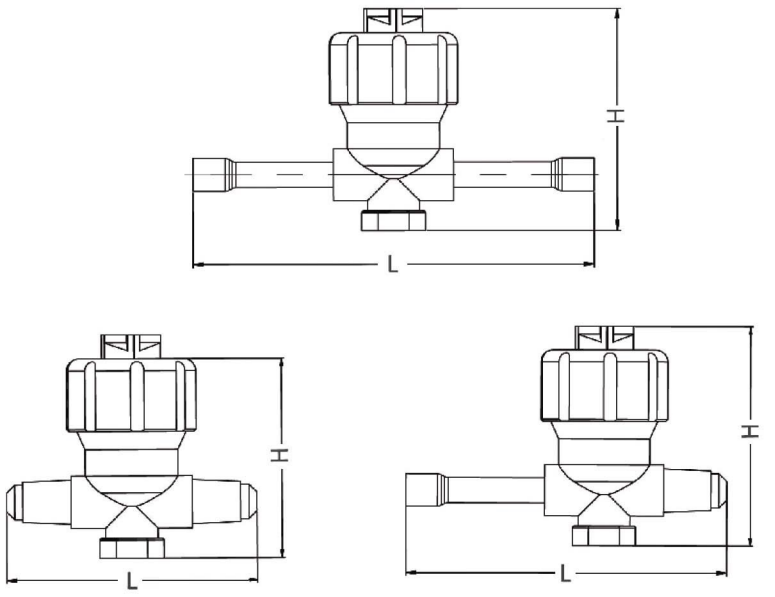
- Forged valve body and cap
- ODF Solder with Extended ends
- Stainless steel spindle

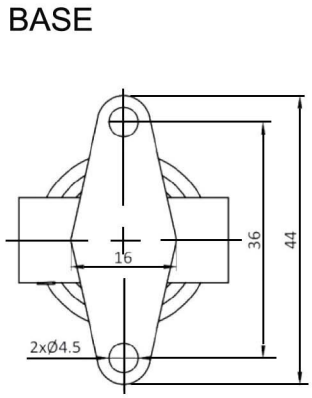
Technical data

- Applicable refrigerant: CO_2 (R744)
- Max working pressure: 140Bar (14Mpa)
- Medium temperature range:
- 40℃ – +150℃(- 40 °F – +300 °F)

Specification

Part No.	Connection Size(in)		Dimensions(mm)		Max working pressure(Mpa)
	SAE	ODF	H	L	
PKHJ–04S/07F	1/4	1/4	56	81	14.0
PKHJ–04S/M12	M12	1/4	56	81	
PKHJ–04S	–	1/4x1/4	56	100	
PKHJ–07F	1/4x1/4	–	56	62	





CO_2 Y filter
Type PKY

Applications

PKY Filter are used to filter undesired particles in refrigeration systems. Built–in spring ensures to avoid strainer damage when the higher pressure drop in the refrigeration system.

PKY Filter: Max. Working pressure 45bar
PKHY Filter: Max. Pressure 140bar

HPEOK suggests installing ball valves or stopping valves to the upstream and downstream of the filter, so that the strainer can be cleaned easily.

Features

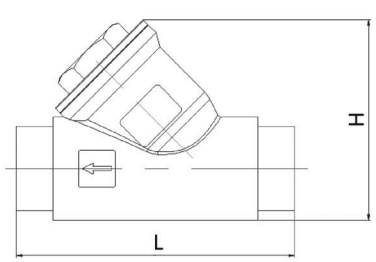
- Forged brass valve body and cap
- Built–in stainless steel strainer
- Low pressure drop, maximum through–flow
- Parts inside are easy to dismantle and reassemble

Note: Ensure the flow arrow points in the direction of desired flow

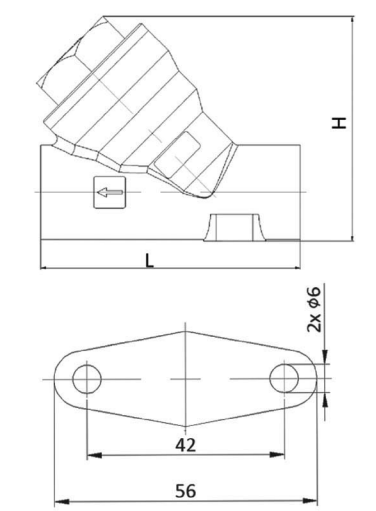
Technical data

- Max working pressure:
  45Bar (4.5Mpa)/140Bar (14Mpa)
- Medium temperature range:
  – 40℃ – +150℃ (– 40°F – +300°F)

Specification



Part No.	Connection(in)	L(mm)	H(mm)	Max working pressure(Mpa)
PKY–04	1/4	71	51	4.5
PKY–05	5/16			
PKY–06	3/8			
PKY–08	1/2			
PKY–10	5/8			
PKY–12	3/4	76	54	
PKY–14	7/8			



Part No.	Connection(in)	L(mm)	H(mm)	Max working pressure(Mpa)
PKHY–04	1/4	78	70	14.0
PKHY–05	5/16			
PKHY–06	3/8			
PKHY–08	1/2			
PKHY–10	5/8			
PKHY–12	3/4	83	70	
PKHY–14	7/8			

CO_2 Ball valve
Type PKHB

PKHB Ball valve is a manual shut–off valve, this valve is especially designed for transcritical CO_2 –applications.

PKHB Ball valve is designed to use ball and spindle to seal, using selected O ring material for CO_2 refrigerant.

Features

- Bi–flow
- Forged brass valve body with stainless steel connections
- Burst–proof spindle – prevents any risk of ejection or explosion of the spindle
- Indicator on top directly shows the valves is open or closed–no need to open cap to check the valve status
- Full flow in open direction
- 1/4 turn from fully open to fully closed
- Selected O ring material for CO_2 refrigerant

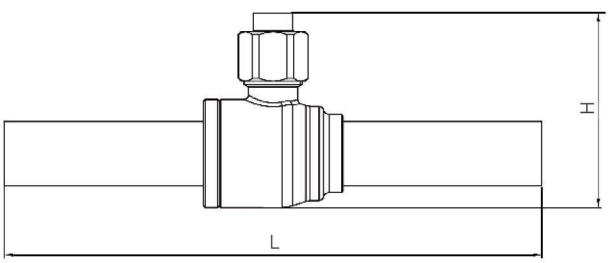
Technical data

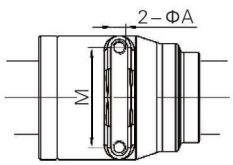
- Max working pressure: 140Bar (14Mpa)
- Medium temperature range: – 40℃ – +160℃

Specification

Part No.	Connection (mm)	Dimensions(mm)				Bill diameter	kv value (m^3/h)	Max working pressure(Mpa)
		L	H	M	ΦA			
PKHB–04	6	126	54	22	M4x0.7	13.2	0.8	14.0
PKHB–06	10	132	54	22	M4x0.7	13.2	3.0	
PKHB–08	12	140	54	22	M4x0.7	13.2	5.0	
PKHB–10	16	146	68	30	M4x0.7	13.2	10.0	
PKHB–12	18	146	67	30	M4x0.7	20.0	17.0	
PKHB–14	22	185	67	30	M4x0.7	20.0	28.0	
PKHB–18	28	205	84	32	M4x0.7	25.0	51.0	
PKHB–22	35	208	95	36	M6x1	32.0	80.0	
PKHB–26	42	242	117	55	M6x1	38.0	195.0	
PKHB–34	54	273	137	75	M6x1	50.0	240.0	

The Kv value is the flow of water in m3/h at a pressure drop across valve of 1 bar/14.5 psig.





CO_2 Filter drier
Type PKHE

Applications

PKHE Filter drier is made of stainless steel seamless tube, comprises of fine mesh and filter core.

PKHE Filter drier can be applied to absorb water and contaminants in the refrigeration system, and can be installed to the upstream of oil level regulators and electronic expansion valves.

Features

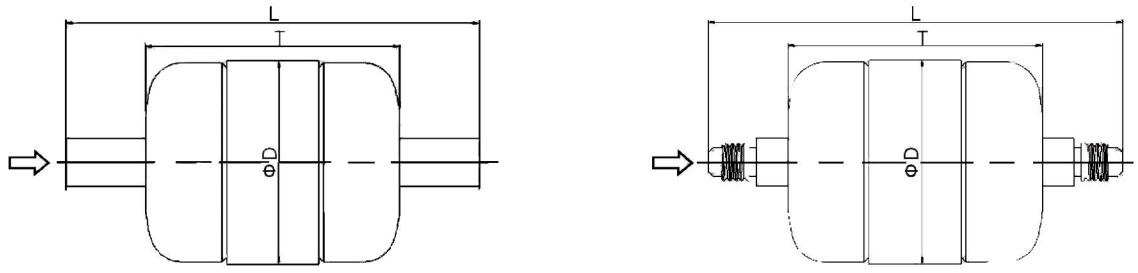
- Low pressure drop when full flow pass
- Corrosion resistant epoxy powder coated finish can be suitable for any environment
- Can filter contaminants larger 40 μm.

Technical data

- Medium temperature range: - 40℃– +100℃
- Max working pressure:
  60Bar (6.0Mpa) / 140Bar (14Mpa)

Specification

Part No.	Connection Size(in)		Volume (L)	Dimensions(mm)			Max working pressure(Mpa)
	ODF	SAE		L	H	ΦD	
PKHE-032-CDM	–	1/4	0.08	117	70	48	6.0
PKHE-032S-CDM	1/4	–	0.08	110	70	48	
PKHE-033-CDM	–	3/8	0.08	127	70	48	
PKHE-033S-CDM	3/8	–	0.08	114	70	48	
PKHE-083-CDM	–	3/8	0.2	158	101	60	
PKHE-083S-CDM	3/8	–	0.2	145	101	60	
PKHE-084-CDM	–	1/2	0.2	166	101	60	
PKHE-084S-CDM	1/2	–	0.2	151	101	60	
PKHE-032S-CDH	1/4	–	0.08	110	70	48	14.0
PKHE-033S-CDH	3/8	–	0.08	114	70	48	
PKHE-083S-CDH	3/8	–	0.2	145	101	60	
PKHE-084S-CDH	1/2	–	0.2	151	101	60	



CO_2 Take–Apart Filter Drier Shell
Type PKHA

Applications

PKHA is a replaceable core filter drier.
It is specifically designed for CO_2 (R744) systems, and installed in large commercial air conditioning and refrigeration systems to provide longer lasting protection from moisture and contaminants.

Features

- Unique internal core holder and high–precision spring installed flange for easy mounting cores
- Sturdy carbon steel connections is specially designed for 60Bar CO_2 application, and the stainless steel connections for 140Bar
- Corrosion resistant epoxy powder paint finish, can be used in all environment
- High filtering capability
  high moisture absorption and acid removal

Note: assure the flow arrow in the direction of desired flow.

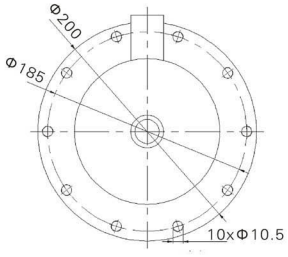
PKHA–969–CDH PKHA–487–CDH

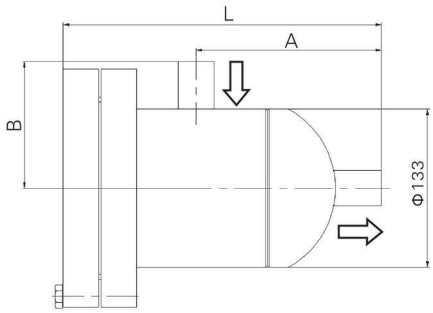
Technical data

- Medium temperature range: – 40℃– +100℃
- Max working pressure:
  60Bar (6.0Mpa) / 140Bar (14Mpa)

Specification

Part No.	Connection		Volume (L)	Core Qty.	Dimensions(mm)			Max working pressure(Mpa)
	mm	in			L	A	B	
PKHA–485–CDM	16	5/8	1.7	1	238	147	102	6.0
PKHA–487–CDM	22	7/8			247	156	107	
PKHA–489–CDM	28	1–1/8			252	159	112	
PKHA–4811–CDM	35	1–3/8			257	164	117	
PKHA–969–CDM	28	1–1/8	2.9	2	392	300	112	
PKHA–9611–CDM	35	1–3/8			396	304	117	
PKHA–9613–CDM	42	1–5/8			400	310	122	
PKHA–485–CDH	16	5/8	1.7	1	238	147	102	14.0
PKHA–487–CDH	22	7/8			247	156	107	
PKHA–489–CDH	28	1–1/8			262	159	112	
PKHA–4811–CDH	35	1–3/8			267	164	117	
PKHA–969–CDH	28	1–1/8	2.9	2	402	300	112	
PKHA–9611–CDH	35	1–3/8			406	304	117	
PKHA–9613–CDH	42	1–5/8			410	310	122	





CO_2 Suction line accumulator
Type PKHQ–CDM / PKHQ–CDH

PKHQ–22–CDM PKHQ–12–CDH

Applications

PKHQ–CDM Suction line accumulator is made of stainless steel seamless tube, it can withstand max. Suction pressure 60Bar CO_2 system, while PKHQ–CDH can installed to the suction line of transcritical system, the max. Working pressure can reach to 140Bar .

Features

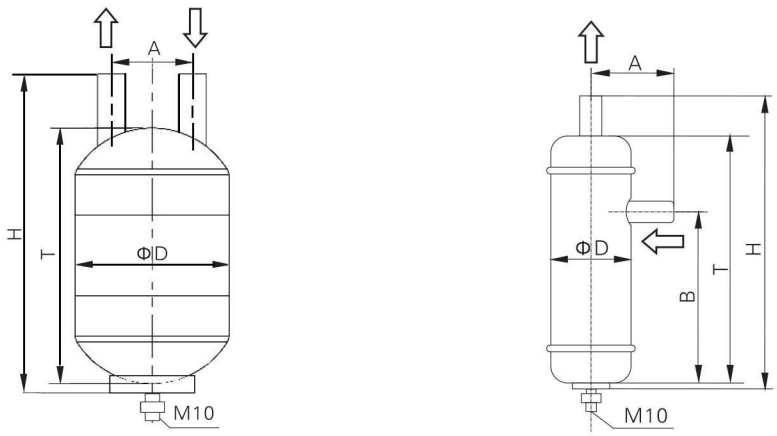
- An oil return orifice matched well with system capacity assures optimum liquid refrigerant and oil flow back to compressor
- An inlet deflector can separate the liquid and oil from the refrigerant gas trough lower the gas velocity and change direction
- The selected U–tube design can ensure the low pressure refrigerant gas and oil that has super–heat can be inhaled to the compressor
- Corrosion resistant epoxy powder coated finish can be suitable for any environment

Technical data

- Medium temperature range: – 40℃ – +100℃
- Max testing pressure: 60Bar (6.0Mpa)
  140Bar (14Mpa)

Specification

Part No.	Connection		Volume (L)	Dimensions(mm)					Max working pressure(Mpa)
	(mm)	(in)		H	T	A	B	ΦD	
PKHQ–12–CDM	12	1/2	1.0	207	112	60	–	114	6.0
PKHQ–16–CDM	16	5/8	1.3	237	190	60	–	114	
PKHQ–19–CDM	19	3/4	1.6	287	240	60	–	114	
PKHQ–22–CDM	22	7/8	1.8	307	260	60	–	114	
PKHQ–28–CDM	28	1–1/8	2.1	347	300	60	–	114	
PKHQ–12–CDH	12	1/2	0.8	252	205	85	120	89	14.0
PKHQ–16–CDH	16	5/8	2.0	335	288	97	185	114	
PKHQ–19–CDH	19	3/4	2.0	335	288	97	185	114	
PKHQ–22–CDH	22	7/8	2.5	368	350	107	247	114	



CO_2 Liquid Receiver
Type PKHC

Applications

PKHC liquid receiver acts as a stock of liquid refrigerant for the evaporators, and also store the full liquid refrigerant in the system when service the system.
The selection of the receiver size should be determined by refrigerant charge in the system, and it also should be sized to hold the full system charge during service work,
the capacity of each liquid receiver listed on Technical data sheet below.

Features

- Desired volume and length are available to be customized
- Equipped with two rotalock valves which are specially designed for 60Bar CO_2 applications, or stainless steel connections for 140Bar CO_2 transcritical applications
- Equipped with a G1/2" safety valve connction.
- Corrosion resistant epoxy powder paint finish, can be used in all environment

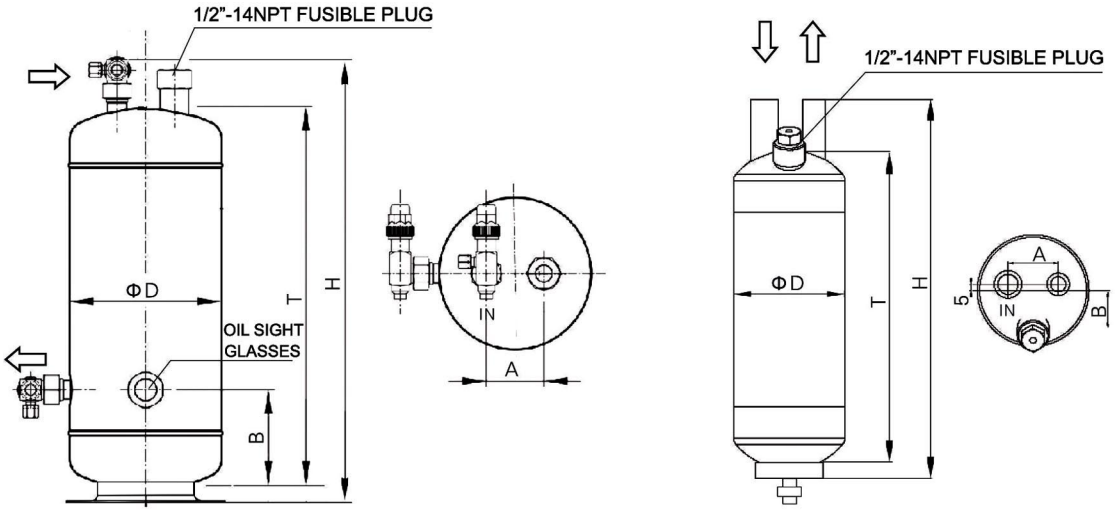
PKHC–1.2/16–12–CDH PKHC–2.0/19–16V–CDH

Technical data

- Max working pressure:
  60Bar (6.0Mpa) / 140Bar (14Mpa)
- Medium temperature range: – 40℃ – +100℃

Specification

Part No.	Connection(in)		Volume (L)	Dimensions(mm)					Max working pressure(Mpa)
	Inlet	Outlet		H	T	A	B	ΦD	
PKHC–10/16V–12V–CDM	5/8	3/4	10.4	387	320	120	130	219	6.0
PKHC–20/22V–16V–CDM	7/8	5/8	20.7	397	630	120	130	219	
PKHC–40/22V–22V–CDM	7/8	7/8	40.7	849	780	120	130	273	
PKHC–1.2/16–12–CDH	5/8	3/4	1.2	297	250	40	30	89	14.0
PKHC–2.0/19–16V–CDH	3/4	5/8	2.0	335	288	50	30	114	
PKHC–3.5/22–19–CDH	7/8	3/4	3.5	313	266	80	50	159	



CO_2 Oil separator
Type PKHW

PKHW–6211–CDH PKHW–4509–CDH

Applications

PKHW Oil Separator uses centrifugal force to separate oil from discharge gas, and return the oil back to the compressor's crankcase through oil lever regulator, this oil separator can achieve approximately 99% gas and oil separation efficiency.

Besides standard connections, other connections are available..

Technical data

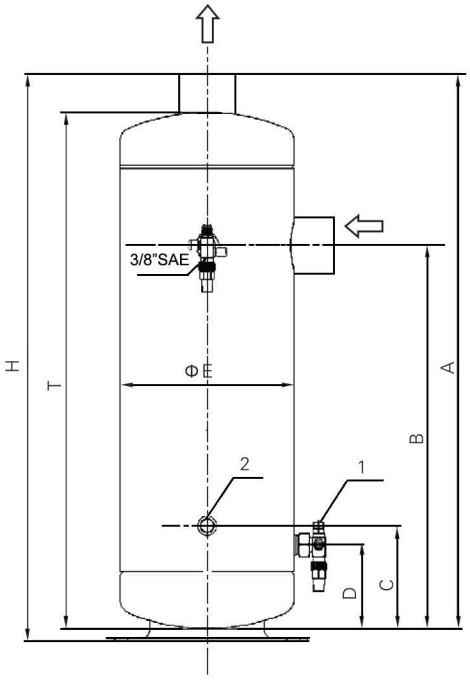
- Max working pressure: 60Bar (6.0Mpa)
  140Bar (14Mpa)
- Medium temperature range: – 40℃ – +140℃

Features

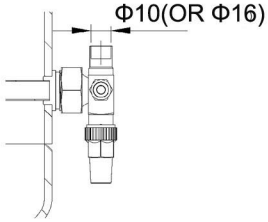
- Built–in helical deflector design, can get max. oil separation efficiency with low pressure drop through centrifugal flow path
- Assemble connection for oil level regulator instead of built–in float ball
- Assemble stop valve for CO_2 refrigerant
- Corrosion resistant epoxy powder coated finish can be suitable for any environment.

Specification

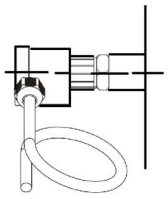
Part No.	Connection		Volume (L)	Oil receiver (L)	Dimensions(mm)							Max working pressure(Mpa)
	mm	in			H	T	A	B	C	D	ΦE	
PKHW–6213–CDM	42	1–5/8	10.4	2.5	740	670	720	590	165	135	159	6.0
PKHW–8617–CDM	54	2–1/8	22.1	5.0	700	630	680	490	165	130	219	
PKHW–10725–CDM	76	3–1/8	40.0	13.3	890	810	870	600	160	130	273	



1. OIL RETURN

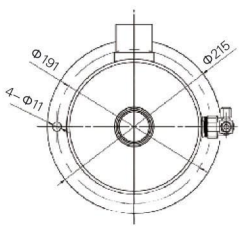


2. OIL LEVEL CONNECTION

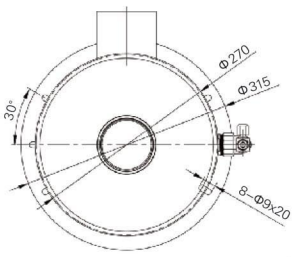


PKLM-01

PKHW-6213-CDM

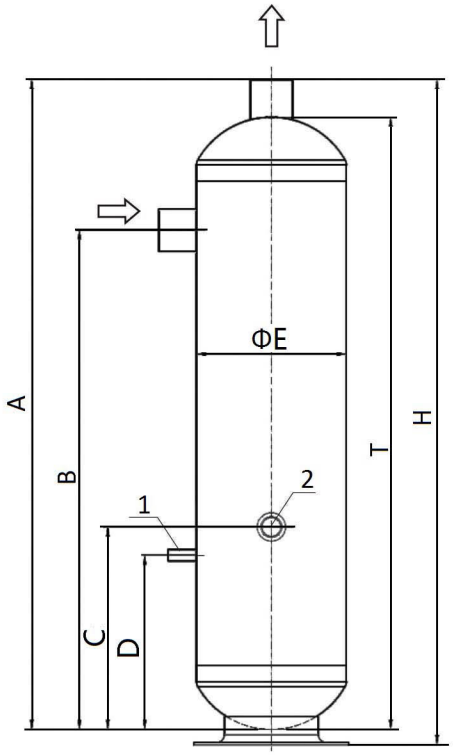


PKHW-8617-CDM
PKHW-10725-CDM

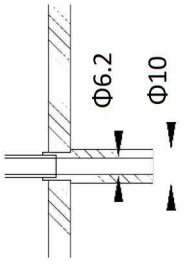


Specification

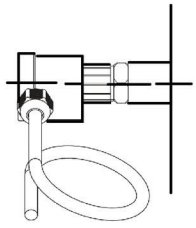
Part No.	Connection		Volume (L)	Oil receiver (L)	Dimensions(mm)							Max working pressure(Mpa)
	mm	in			H	T	A	B	C	D	ΦE	
PKHW-4509-CDH	28	1-1/8	4.1	1.3	620	570	610	450	185	150	114	14.0
PKHW-6211-CDH	35	1-3/8	10.2	3.0	710	650	690	530	215	185	159	
PKHW-8617-CDH	54	2-1/8	26.3	6.3	910	840	890	660	230	200	219	



1. Oil return



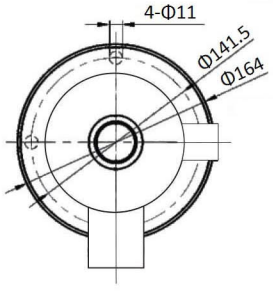
2. Oil level connection



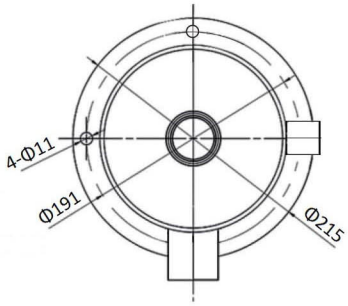
PKLM-01

Base Sketch

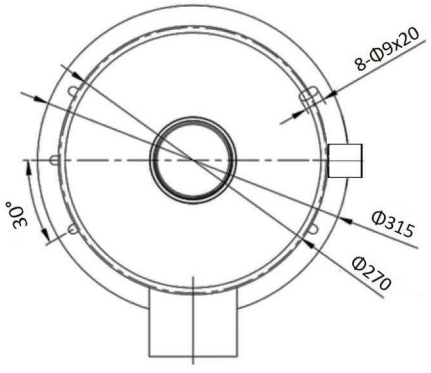
PKHW-4509-CDH



PKHW-6211-CDH



PKHW-8617-CDH



CO_2 Oil reservoirs
Type PKHO

Applications

The selection of Oil Reservoirs is determined by the number of compressors connected and oil charge, system refrigeration charge andoperating conditions of the parallel unit.
In the reservoirs, any refrigerant that is blended to oil will be evaporated; meanwhile, the oil can be recycled after cooling.

Features

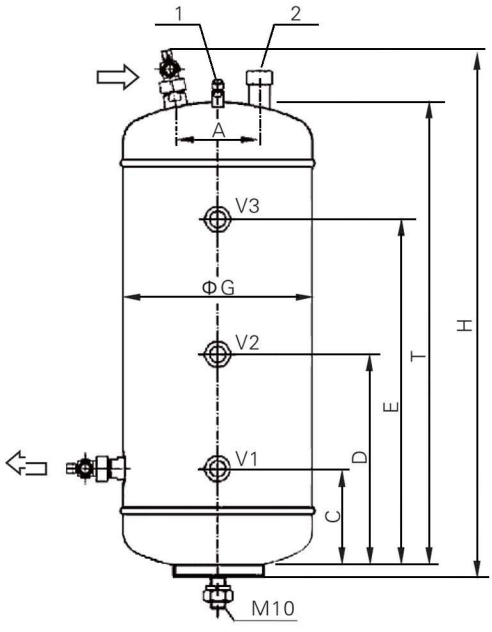
- Two/Three sight glasses
- Two Rotalock valves for CO_2 application.
- A 3/8" SAE Flare conn. allows the assembling of a pressure differential check valve.
- Corrosion resistant epoxy powder coated finish can be suitable for any environment

Technical data

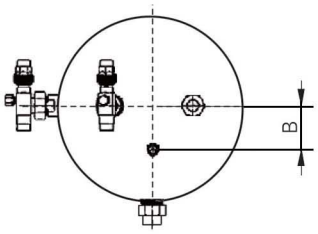
- Max working pressure: 60Bar (6.0Mpa)
  140Bar (14Mpa)
- Medium temperature range: - 40℃ – +140℃

Specification

Part No.	Connection (in)		Volume (L)	Oil receiver (L)			Dimensions(mm)								Max working pressure(Mpa)
	Inlet	Outlet		V1	V2	V3	H	T	A	B	C	D	E	ΦG	
PKHO-6-CDM	3/8	3/8	6.2	1.5	–	4.7	467	400	60	40	100	–	300	159	6.0
PKHO-8-CDM	3/8	3/8	8.3	1.5	–	6.8	598	530	60	40	100	–	430	159	
PKHO-12-CDM	3/8	3/8	12.1	1.5	6.1	10.6	837	770	60	40	100	385	670	159	
PKHO-20-CDM	5/8	5/8	20.9	7.4	–	13.5	490	420	120	60	150	–	270	273	
PKHO-30-CDM	5/8	5/8	30.2	7.4	15.1	15.1	670	600	120	60	150	300	450	273	

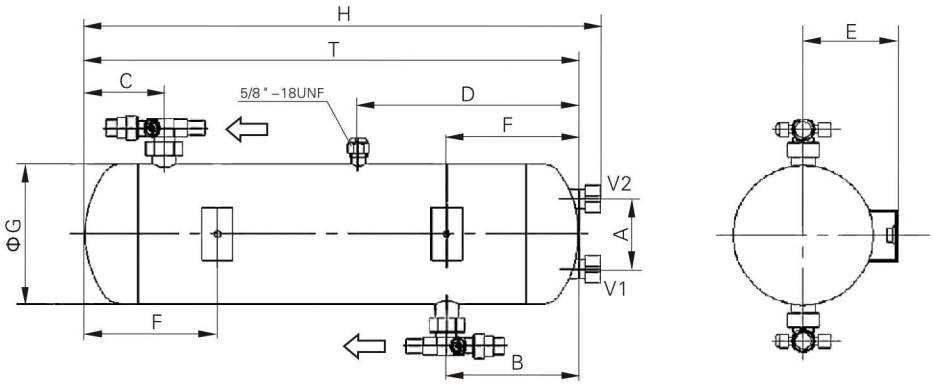


1. 3/8" SAE(5/8"-18UNF)
2. 1/2"-14NPT FUSIBLE PLUG



Specification

Part No.	Connection (in)		Volume (L)	Oil receiver (L)		Dimensions(mm)									Max working pressure(Mpa)
	Inlet	Outlet		V1	V2	H	T	A	B	C	D	E	F	ΦG	
PKHO-10CL-CDM	3/8	5/8	10.4	2.1	8.3	690	660	80	150	100	330	107	150	159	6.0
PKHO-20CL-CDM	3/8	5/8	20.7	4.5	6.2	400	400	130	130	130	200	159	120	273	
PKHO-40CL-CDM	5/8	7/8	40.6	9.0	31.6	840	800	130	200	150	400	159	200	273	



Specification

Part No.	Connection (in)		Volume (L)	Oil receiver (L)			Dimensions(mm)						Max working pressure(Mpa)
	Inlet	Outlet		V1	V2	V3	H	T	A	B	C	ΦG	
PKHO-5-CDH	1/2	1/2	5.0	0.8	2.5	4.2	730	680	120	340	560	114	14.0
PKHO-12-CDH	1/2	1/2	11.8	1.8	5.9	10	800	750	120	375	630	159	

1. 1/2"-14NPT Fusible plug
2. 1/4"-18NPT Fusible plug
3. 1/4"-18NPT Charging Plug
4. Photoelectric oil switch (PKLM-01) connection (M20x1.5)