



GENERAL CATALOGUE

2016



Pressure vessels



Linear components



Vibroeliminators



Oil level control



Electronic components



Filters

Contents

GENERAL INFORMATION	2
TYPE CODE	3
PRESSURE VESSELS	4
Refrigerant receivers FP-LR	4
Suction accumulators FP-AS	5
OIL CONTROL SYSTEM	5
Oil separators FP-OS	5
FeedWay. Electronic oil level regulator FP-ERL	6
Adapters FP-ERL	6
Oil receivers FP-OR	7
Oil filters FP-OF	7
Differential check valve FP-DV	7
Sight glasses FP-OG	7
LINEAR COMPONENTS	8
Vibroeliminators FP-VA	8
Filter-driers with replaceable core FP-SDF	8
Moisture indicators FP-SG	8
Rotalock valves FP-RV	9
Safety valves FP-SV	9
Safety valves adapters FP-SV	9
Nuts and corks	9
EVAPORATOR MANAGEMENT SYSTEM	10
Refrigeration cycle controller FP-MC	10
Pressure sensors FP-PT	10
Electronic expansion valves FP-ERV	11
DRAWINGS AND CHARTS	12



COMPANY HISTORY

The history of the plant began in 2000, with a small factory for the production of refrigeration receivers. Today the product range consists of 159 models component of the cooling systems. The factory area is 2200 square meters, the factory has more than 70 people. The quality of products recognized by Frigopoint customers around the world and confirmed by the world leader in certification - TUV Rheinland.

RANGE OF PRODUCTS

Currently under FP are serially produced on serial basis the following components of the cooling system:

- Electronic oil level regulator “FeedWay”;
- Liquid receivers, suction accumulator;
- Oil separators, oil receivers, oil filters;
- Sight glasses, moisture indicators;
- Safety valves;
- Vibroeliminators;
- Differential check valves;
- Rotalock valves;
- Filter-driers with replaceable core;
- Refrigeration controllers;
- Pressure sensors;
- Electronic expansion valves.

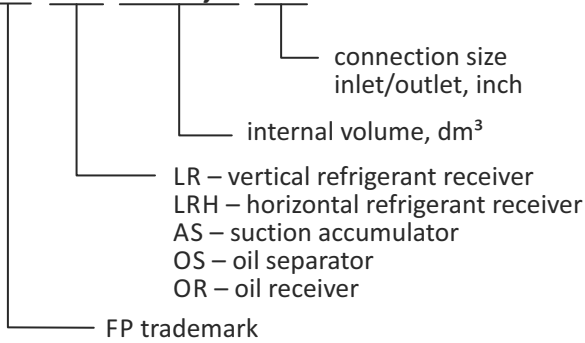
All information and news you can find on our website: <http://frigopoint.com/en>

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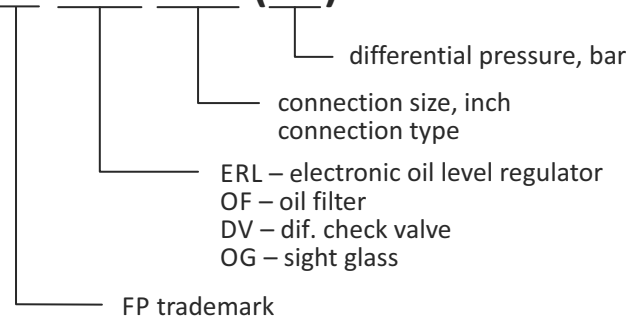
PRESSURE VESSELS

FP-XX-XXX,X-XX



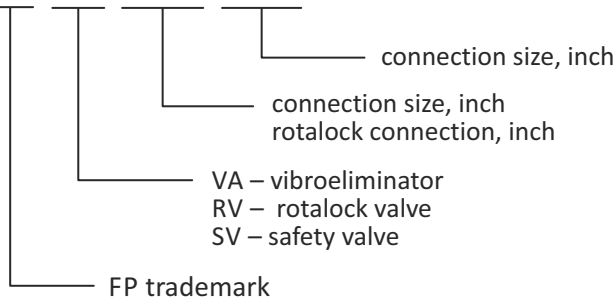
OIL CONTROL SYSTEMS

FP-XXX-XXX-(XX)

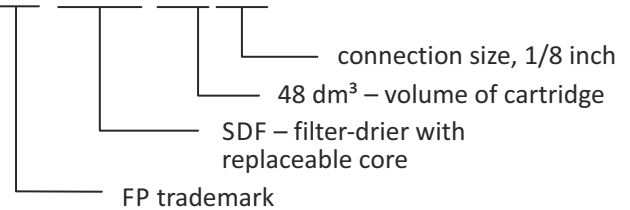


LINEAR COMPONENTS

FP-XX-XXX-XXX

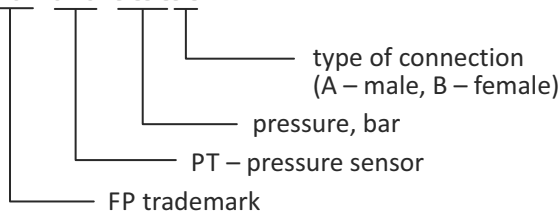


FP-SDF-48XX

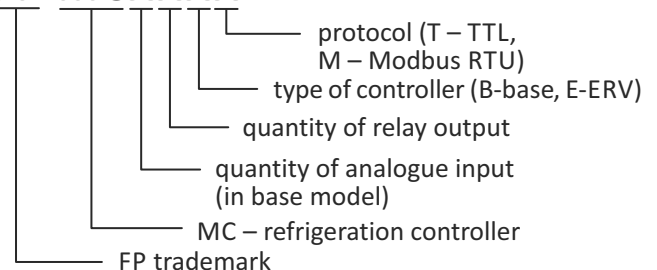


EVAPORATOR MANAGEMENT SYSTEM

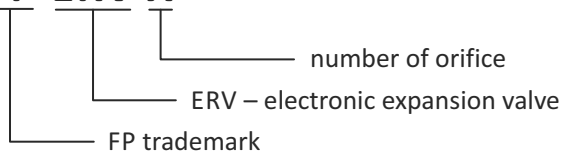
FP-PT-XXX



FP-MCXXXX









FP-ERV-X



REFRIGERANT RECEIVERS


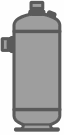
Receiver is a container for liquid refrigerant storing. Receivers are designed to collect liquid after the condenser for smooth refrigerant supply to the evaporator and creating refrigerant reserve in a system. According to construction and technical characteristics all FRIGOPOINT receivers can be apply to work with all refrigerant kinds, under admissible working pressure, except NH₃.

Vertical refrigerant receivers												
Type	Model	Ø D, mm	H, mm	A, mm	In/Out UN, inch	SG ⁽¹⁾ , 1¼", pcs	SVP ⁽²⁾ , 1¼"	Volume, dm ³	Notes			
	FP-LR-1,0	102	121	27	3/8 ⁽³⁾	–	–	1.0	Type A Drawing 1			
	FP-LR-1,6	133	139	37	3/8 ⁽³⁾	–	–	1.6				
	FP-LR-2,5	159	170	–	1/2 (1) ⁽⁴⁾	–	–	2.5	Type B Drawing 2			
	FP-LR-4,0	159	245	–	1/2 (1) ⁽⁴⁾	–	–	4.0				
	FP-LR-6,3	159	370	–	1/2 (1) ⁽⁴⁾	–	–	6.3				
	FP-LR-10,0 K1	190	430	147	1	–	+	10.0	Type C Drawing 3			
	FP-LR-12,5 K1	190	534	147	1	–	+	12.5				
	FP-LR-16,0 K1	190	639	147	1	–	+	16.0				
	FP-LR-20,0 K1	240	551	160	1 1/4	–	+	20.0				
	FP-LR-24,8 K1	240	638	160	1 1/4	–	+	24.8				
	FP-LR-25,0 K1	240	638	160	1 1/4	1	+	25.0	Type C Drawing 4 Drawing 5			
	FP-LR-32,5 K1	240	847	160	1 1/4	1	+	32.5				
	FP-LR-40,0 K1	240	964	160	1 1/4	2	+	40.0				
	FP-LR-50,0 K1	325	731	170	1 3/4	2	+	50.0				
	FP-LR-63,0 K1	325	876	170	1 3/4	2	+	63.0				
	FP-LR-80,0 K1	325	1111	170	1 3/4	2	+	80.0				
	FP-LR-100,0 K1	325	1301	170	1 3/4	3	+	100.0				
	FP-LR-120,0 K1	325	1551	170	1 3/4	3	+	120.0				
	FP-LR-160,0 K1	450	1140	220	2 1/4	3	+	160.0				
	FP-LR-200,0 K1	450	1430	220	2 1/4	3	+	200.0				
	FP-LR-250,0 K1	450	1590	220	2 1/4	3	+	250.0				
Horizontal refrigerant receivers												
Type	Model	Ø D, mm	L, mm	L1, mm	A, mm	A1, mm	H, mm	In/Out UN, inch	SG ⁽¹⁾ , 1¼, pcs	SVP ⁽²⁾ , 1¼"	Volume, dm ³	Notes
	FP-LRH-12,0 K1	133	924	850	258	198	193	1	–	+	12.0	Type A Drawing 6
	FP-LRH-16,0 K1	159	938	850	258	198	219	1	–	+	16.0	
	FP-LRH-25,0 K1	190	982	850	340	280	250	1 1/4	1	+	25.0	
	FP-LRH-40,0 K1	240	976	850	365	305	296	1 1/4	1	+	40.0	
	FP-LRH-70,0 K1	325	1011	850	365	305	385	1 3/4	1	+	70.0	
	FP-LRH-100,0 K1	325	1310	750	500	420	375	1 3/4	2	+	100.0	Type B Drawing 7
	FP-LRH-120,0 K1	325	1560	1000	500	420	375	1 3/4	2	+	120.0	
	FP-LRH-160,0 K1	450	1165	510	600	520	520	2 1/4	2	+	160.0	
	FP-LRH-250,0 K1	450	1615	960	600	520	520	2 1/4	2	+	250.0	

NOTES: SG⁽¹⁾, 1¼" – Sight glass, 1¼";
 SVP⁽²⁾, 1¼" – Safety valve port, 1¼";
 3/8⁽³⁾ – In ODS (Out ODS);
 1/2 (1)⁽⁴⁾ – In ODS (Out UN).



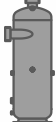
SUCTION ACCUMULATORS

Suction line accumulator's main purpose – deliver refrigerant to a compressor only as a gas. All units with flooded evaporators need this item, as well as system with overheated evaporators to prevent liquid refrigerant accumulation in suction line. Apart from liquid separation suction accumulators provides oil return to compressor.

Suction accumulators									
Type	Model	Ø D, mm	H, mm	A, mm	In/Out ODS, inch	SVP ⁽¹⁾ , 1¼"	Volume, dm ³	Notes	
	FP-AS-2,0-012	102	326	55	1/2	–	2.0	Type C Drawing 8	
	FP-AS-2,0-058	102	326	55	5/8	–	2.0		
	FP-AS-2,0-034	102	326	55	3/4	–	2.0		
	FP-AS-3,5-034	102	526	55	3/4	–	3.5		
	FP-AS-3,5-078	102	526	55	7/8	–	3.5		
	FP-AS-3,5-118	102	526	55	1 1/8	–	3.5		
	FP-AS-5,0-118	133	526	70	1 1/8	–	5.0		
	FP-AS-5,0-138	133	526	70	1 3/8	–	5.0		
	FP-AS-7,0-138	159	440	90	1 3/8	–	7.0		
	FP-AS-7,0-158	159	440	90	1 5/8	–	7.0		
	FP-AS-12,0-218 K1	190	562	336	2 1/8	+	12.0	Type B Drawing 9 Drawing 10 Table 1 Table 2	
	FP-AS-12,0-258 K1	190	565	336	2 5/8	+	12.0		
	FP-AS-25,0-218 K1	240	680	455	2 1/8	+	25.0		
	FP-AS-25,0-258 K1	240	680	455	2 5/8	+	25.0		
	FP-AS-45,0-258 K1	325	655	411	2 5/8	+	45.0		
	FP-AS-45,0-318 K1	325	655	411	3 1/8	+	45.0		

OIL SEPARATORS

Oil separators are used to separate oil dissolved in refrigerant in order to return it to compressor's crankcase. Effectiveness of FP oil separators is more than 90% which increases system's productivity by preventing excessive oil circulation.

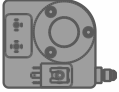
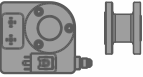
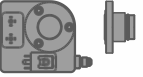
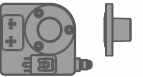
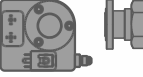
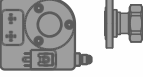
Oil separators										
Type	Model	Ø D, mm	H, mm	A, mm	B, mm	In/Out ODS, inch	ORP ⁽²⁾ , inch	SVP ⁽¹⁾ 1¼" SAE	Volume, dm ³	Notes
	FP-OS-2,0-012	102	326	55	–	1/2	3/8" SAE	–	2.0	Type C Drawing 11
	FP-OS-2,0-058	102	326	55	–	5/8	3/8" SAE	–	2.0	
	FP-OS-3,5-078	102	526	55	–	7/8	3/8" SAE	–	3.5	
	FP-OS-3,5-118	102	526	55	–	1 1/8	3/8" SAE	–	3.5	
	FP-OS-5,0-118	133	443	70	–	1 1/8	3/8" SAE	–	5.0	
	FP-OS-5,0-138	133	443	70	–	1 3/8	3/8" SAE	–	5.0	
	FP-OS-7,0-138	159	440	90	–	1 3/8	3/8" SAE	–	7.0	
	FP-OS-7,0-158	159	440	90	–	1 5/8	3/8" SAE	–	7.0	
	FP-OS-12-218	190	562	166	336	2 1/8	3/8" SAE	+	12.0	Type B Drawing 12 Drawing 14 Chart 1
	FP-OS-12-258	190	565	166	336	2 5/8	3/8" SAE	+	12.0	
	FP-OS-25-218	240	680	166	455	2 1/8	3/8" SAE	+	25.0	
	FP-OS-25-258	240	680	166	455	2 5/8	3/8" SAE	+	25.0	
	FP-OS-45-218	325	655	166	411	2 1/8	3/8" SAE	+	45.0	
	FP-OS-45-258	325	655	166	411	2 5/8	3/8" SAE	+	45.0	
	FP-OS-80-318	325	1170	178	853	3 1/8	1 3/4" UN	+	80.0	Type A Drawing 13 Drawing 14 Chart 2
	FP-OS-200-418	450	1480	266	1121	4 1/8	2 1/4" UN	+	200.0	
	FP-OS-80-318F	325	1170	178	853	3 1/8	1 3/4" UN	+	80.0	
	FP-OS-200-418F	450	1480	266	1121	4 1/8	2 1/4" UN	+	200.0	

NOTES: SVP⁽¹⁾, 1¼" – Safety valve port, 1¼";
ORP⁽²⁾ – Oil return port .

FEEDWAY. ELECTRONIC OIL LEVEL REGULATOR

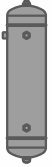
Electronic oil level regulator Feedway designed for installation into oil distribution circuit of compressor stations to control and maintain level of oil in compressor's crankcase and to give alarm signal and disconnect compressor in case of accident or low level of oil in crankcase.

Operation of electronic oil level control is based on electro-mechanics and uses hall-effect sensor as a sensitive element which allows to eliminate false alarms and to effectively control the level of oil in crankcase of compressor.

Feedway. Electronic oil level regulators				
Type	Model	Parameter	Value	Notes
	FP-ERL3	Max. operating pressure	4.5 MPa	Drawing 15 Drawing 16
		Test pressure	5.4 MPa	
		Power supply	230 V, 50/60Hz, 0.04A	
		Range of filling	40%...60% from sight glass height	
		Protection class	Ip54	
		Time fill delay	10 sec	
		Alarm relay delay	120 sec	
		Alarm relay	max. 3A, 230V, 50/60Hz	
		Length of cables of power supply / alarm relay	3 m	
		Oil connection	Thread 7/16"-20UNF (1/4"SAE)	
		Valve coil electrical connection	DIN43650B	
Power supply / alarm relay connection	DIN43650C			
Electronic oil level regulator with adapters				
Type	Model	Manufacturer – Type of compressor	Notes	
	FP-ERL3 + UA Flange adapter 3 holes Ø 6,7 mm, D 47.6 mm 4 holes Ø 6,7 mm, D 50.0 mm	Copeland: D2, D3, D4, D6, D9, 4CC, 6CC Bitzer: 4VC, 4C, 4TC, 4NC, 4J, 4H, 4G, 6J6F, 8GC, 8FC Dorin: all K, KP sizes (except FP-ERL-BB.100) Frascold: A, B, D, F, S, V, Z Bock: HA, HG, O except HG/HA12/22/34 Carrier: 06E Arctic Circle: G2, G4, G6	Drawing 17	
	FP-ERL3 + BB Screw adapter 1 1/8"-14NPTF, flange and 2 O-rings included	Bitzer: all series 2...C, 4FC, 4EC, 4DC, 4CC Dorin: all H, K – 100, 150, 180 CC/CS, 200CC, K230 CS K235CC, K240SB, K40CC, K50CS, K75CC/CS Bock: HG/HA12/22/34 Tecumseh: TAG Maneurop: MT, NTZ, SM, SZ Danfoss: MLZ	Drawing 18	
	FP-ERL3 + AA Screw adapter 3/4"-14NPTF, flange and 1 O-ring included	Copeland: ZB15...48, ZS21...45, ZF06...25 before 06/2014 ZB56, 75, 92, 11, ZF24...48, ZS56...11 before 05/2012 Bitzer: ZL, ZM Bristol: H29, H2, H7, H79	Drawing 19	
	FP-ERL3 + CD Rotalock adapter 1 3/4"-12UNF	Copeland: ZB220; ZH; ZF24...48; ZR90, 11, 12, 16, 19; ZR250...380; ZS56...11	Drawing 20	
	FP-ERL3 + CE Rotalock adapter 1 1/4"-12UNF	Copeland: – ZB15...48; ZF06...25; ZS21...45 after 06/2014 ZB50, 58, 66, 76, 95, 114; ZR94, 108, 125, 144, 160, 190	Drawing 21	

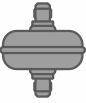
OIL RECEIVERS

The range of oil receivers consists of models from 5.0 to 25.0 liters and is designed for storage of temporary unclaimed at the moment oil. Identical for all models connection size is a big advantage in designing a refrigeration system and in oil receiver installation. In order to control the level of oil there are two ports for sight glasses and one port 3/8" SAE with thread 5/8 UNF for connection of differential valve.

Oil receivers									
Type	Model	∅ D, mm	H, mm	A, mm	In/Out UN inch	SG ⁽¹⁾ , 1¼", pcs	DVP ⁽²⁾ , ⅜", SAE	Volume, dm ³	Notes
	FP-OR-5,0	102	664	486	1	2	+	5.0	Drawing 22 Drawing 23 Chart 3 Chart 4 Chart 5
	FP-OR-8,0	133	664	494	1	2	+	8.0	
	FP-OR-12,0	159	669	502	1	2	+	12.0	
	FP-OR-16,0	190	658	–	1	2	+	16.0	
	FP-OR-25,0	240	658	–	1	2	+	25.0	


OIL FILTERS

Oil filters FP-OF are designed to protect components of oil circuit from dirt and other contaminants. They can be used with any types of refrigerants and oils. The use of two niobium magnets allows to filter flow of oil in both directions and to stop magnetized parts of much smaller size than it is done by filter net.

Oil filters						
Type	Model	Connection A, SAE, inch	L, mm	L ₁ , mm	D, mm	Notes
	FP-OF-014	7/16"-20 UNF (1/4"SAE)	86	36	75	Drawing 24
	FP-OF-038	5/8"-18 UNF (3/8"SAE)	92	36	75	
	FP-OF-012	3/4"-16 UNF (1/2"SAE)	98	36	75	
	FP-OF-058	7/8"-14 UNF (5/8"SAE)	100	36	75	


DIFFERENTIAL CHECK VALVE

Differential check valve FP-DV designed for maintaining of the difference in pressure in oil receiver for low pressure systems. The valve is installed on oil returning line between oil receiver and suction line. Differential valve FP-DV can be used with any type of refrigerants (except from ammonia) and refrigeration oils.

Differential check valves				
Type	Model	Connection, SAE, inch	Pressure difference, bar	Notes
	FP-DV-038-15	3/8 SAE	15	Drawing 25
	FP-DV-038-30	3/8 SAE	30	

SIGHT GLASSES


Sight glasses FP-OG are designed to visual control of oil return lines. Sight glass has threading connection SAE.

Sight glasses					
Type	Model	Connection A, SAE, inch	Overall dimensions		Notes
			L, mm	H, mm	
	FP-OG-038	3/8	70	24	Drawing 26

NOTES: SG⁽¹⁾, 1¼" – Sight glass, 1¼";
DVP⁽²⁾, ⅜" – Diff. valve port, ⅜" SAE.

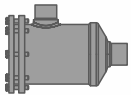
VIBROELIMINATORS

Vibroeliminators are designed for use in stationary or mobile refrigeration systems. The main function of vibroeliminator is to eliminate of vibrations from the compressor working on pumping or suction pipe of the refrigeration system.

Vibroeliminators							
Type	Model	Overall dimensions		Connection		Process pressure t= -40...+50 °C, MPa	Notes
		L, mm	Ø D, mm	l, mm	Ød ODS, inch		
	FP-VA-038	230	15	10	3/8	4.5	Drawing 27
	FP-VA-012	230	18	10	1/2	4.5	
	FP-VA-058	255	20	15	5/8	4.5	
	FP-VA-034	255	27	15	3/4	4.5	
	FP-VA-078	290	32	20	7/8	4.5	
	FP-VA-118	330	38	20	1 1/8	4.5	
	FP-VA-138	375	50	20	1 3/8	4.5	
	FP-VA-158	430	60	25	1 5/8	4.0	
	FP-VA-218	510	73	30	2 1/8	3.5	
	FP-VA-258	690	90	35	2 5/8	3.0	
FP-VA-318	690	108	35	3 1/8	3.0		

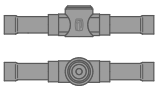
FILTER-DRIERS WITH REPLACEABLE CORE

Filter with replaceable core FP-SDF is designed to protect refrigeration and air-conditioning systems from solid particles, moisture and acids. Filter is usually installed on the liquid line before the expansion valve or suction pipe of the compressor. The FP-SDF filter standard disposable cartridge 48 cubic inches can be installed.

Filter-driers with replaceable core						
Type	Model	Connection Ød ODS, inch	Overall dimensions		H ₁ , mm	Notes
			L, mm	L ₁ , mm		
	FP-SDF-485	5/8	232	158	80	Drawing 28
	FP-SDF-487	7/8	232	158	80	
	FP-SDF-489	1 1/8	232	158	80	
	FP-SDF-4811	1 3/8	232	163	90	
	FP-SDF-4813	1 5/8	232	163	90	
	FP-SDF-4817	2 1/8	232	163	90	
	FP-SDF-4821	2 5/8	232	163	90	

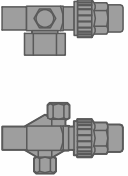
MOISTURE INDICATORS

Moisture indicator FP-SG is designed for visual inspection of the state of the refrigerant in the liquid lines of refrigeration facilities. The main function of the moisture indicator is the indication of the moisture content in the refrigerant, which allows you to control a drying capacity of the filter drier.

Moisture indicators					
Type	Model	Connection	Overall dimensions		Notes
		Ød ODS, inch	L, mm	H, mm	
	FP-SG-014	1/4	101	24	Drawing 29
	FP-SG-038	3/8	119	24	
	FP-SG-012	1/2	146	29	
	FP-SG-058	5/8	146	31	
	FP-SG-078	7/8	173	38	


ROTALOCK VALVES

Rotalock valves are made for blocking pressure vessels, which allows to make service maintenance on-time and make it easier to change receiver if needed.

Rotalock valves						
Type	Model	Connection		L, mm	□, mm	Notes
		∅D, UN, inch	∅d, ODS, inch			
	FP-RV-1-038	1	3/8	106	SW 20	Drawing 30
	FP-RV-1-012	1	1/2	106	SW 20	
	FP-RV-1-058	1	5/8	106	SW 20	
	FP-RV-114-058	1 1/4	5/8	109	SW 22	
	FP-RV-114-034	1 1/4	3/4	142	SW 30	
	FP-RV-114-078	1 1/4	7/8	142	SW 30	
	FP-RV-114-118	1 1/4	1 1/8	145	SW 30	
	FP-RV-134-078	1 3/4	7/8	142	SW 30	
	FP-RV-134-118	1 3/4	1 1/8	185	SW 36	
	FP-RV-134-138	1 3/4	1 3/8	187	SW 36	
	FP-RV-134-158	1 3/4	1 5/8	191	SW 36	
	FP-RV-214-138	2 1/4	1 3/8	201	SW 50	
	FP-RV-214-158	2 1/4	1 5/8	203	SW 50	
	FP-RV-214-218	2 1/4	2 1/8	205	SW 50	


SAFETY VALVES

Safety valve should be installed on all vessels that have a safety valve port. It is designed to protect the vessels working under pressure against excessive pressure by dumping excess fluid.

Safety valves				
Type	Model	Connection		Notes
		NPT, inch	SAE, inch	
	FP-SV-38	3/8	3/8	Drawing 31


SAFETY VALVE ADAPTERS

Adapter connecting vessel's safety valve port (thread 1 1/4") with safety valve with internal taper threaded 1/2" or 3/8". Front socket for hex wrench makes adapter to a safety valve installation easier.

Safety valve adapters				
Type	Model	Connection NPT, inch		Notes
	Adapter FP-A-012 (1/2")	1/2		Drawing 32
	Adapter FP-A-038 (3/8")	3/8		


NUTS AND CORKS

Nuts and corks are needed for installation on connection fittings of threading connections SAE.

Nuts and corks				
Type	Model	∅ d, SAE, inch	B, mm	Notes
	Nuts and corks 3/8" SAE	3/8" SAE	22	Drawing 33 Drawing 34



REFRIGERATION CYCLE CONTROLLERS

The refrigeration controller FP-MC-23 is designed to control superheat, room temperature, defrost cycle and fan. The controller has 3 temperature and 1 pressure sensor, 3 power relays (compressor, fan, defrost) and 1 triac (ERV).

Refrigeration cycle controllers			
Type	Parameters	Value	Notes
	Power capacity	~230B ±10%; 50/60 Hz	Drawing 35
	Dimension	Outline dimension 77x35.5x79(65,5) mm Panel 77x35.5 mm	
	Interface	Rs485 Modbus RTU	
	Environment	-5...+55 °C, relative humidity 10..90%	
	Ingress protection	IP65 front panel, IP20 case	
	Analogue inputs	FP-TSN(PX3-42H) range -45..110 °C - 4 pcs 4...20 mA - 1 pcs	
	DIN	Dry contact, configured	
	Relay output C, F, D	Inductive load (AC15) 250 V/3A, (DC13) 30 V/3A Resistive load (AC1) 250 V/8A, (DC1) 30 V/8A	
	ERV	Triac (AC15) 10...230 V/1A	
	Connection	Connection till 1.5 mm ²	

PRESSURE SENSORS

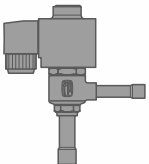
Pressure sensors FP-PT are designed to install to the pressure side and the suction line of the refrigerant circuit, to measure gauge pressure. The main function of the sensors is to transform the working pressure range in a unified 4-20 mA current signal. Pressure sensors are elements of automation, control and regulation of the refrigeration cycle. Pressure sensors are compatible with all types of refrigerants have a high vibration resistance and impact resistance. The sensor body is made of stainless steel and corrosion resistant action.

Pressure sensors						
Type	Model	Pressure range, bar	Connection, UNF, inch	Output, mA	Voltage, VDC	Notes
	FP-PT-10A	-0.5...10	7/16-20 (A)	4...20	8...25	Drawing 36
	FP-PT-35A	0...35	7/16-20 (A)	4...20	8...25	
	FP-PT-12B	-0.5...10	7/16-20 (B)	4...20	8...25	Drawing 37
	FP-PT-35B	0...35	7/16-20 (B)	4...20	8...25	

ELECTRONIC EXPANSION VALVES

Electronic expansion valves FP-ERV are electrically operated expansion valves designed for refrigeration and air conditioning system. Electronic expansion valve are controlled by refrigeration controller FP-MC-23EM. Valve capacity is in range from 1 till 16,3 kW (R22) and designated by orifice (from FP-ERV-1 till FP-ERV-6).

Electronic expansion valves

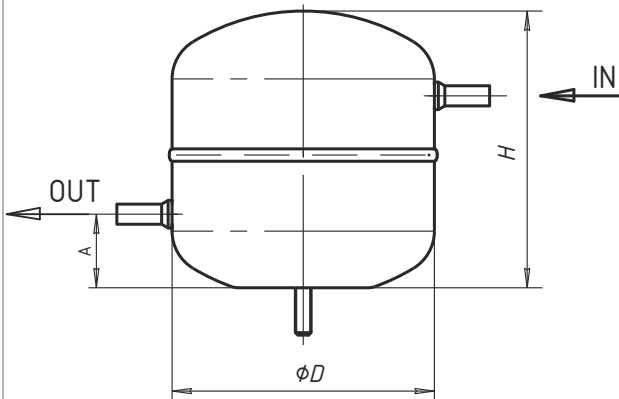
Type	Parameters	Meaning	Notes
	Voltage	220 V, ±10%	Drawing 38
	Ingress protection rating	IP 67	
	Operating principle	PWM	
	Recommend period	6 seconds	
	Capacity (R22)	1...16,3 kW	
	Capacity range	10...100 %	
	Working temperature	– 50...50 °C	
	Plunger sealing leakage	<0.02 % from kv-value	
	MOPD	18 bar	
	Maximum operating pressure	45 bar	

Electronic expansion valves

Тип клапана	Nominal capacity, kW				kv-value, m ³ /h	Connection ODS, In x Out, inch
	R22	R134a	R404A/R507	R407C		
ERV-1	1.0	0.9	0.8	1.1	0.010	3/8 × 1/2
ERV-2	1.6	1.4	1.3	1.7	0.017	3/8 × 1/2
ERV-3	2.6	2.1	2.0	2.5	0.025	3/8 × 1/2
ERV-4	4.1	3.4	3.1	4.0	0.046	3/8 × 1/2
ERV-5	6.4	5.3	4.9	6.4	0.064	3/8 × 1/2
ERV-6	10.2	8.5	7.8	10.1	0.114	3/8 × 1/2
ERV-7	16.3	13.5	12.5	17.0	0.162	3/8 × 1/2

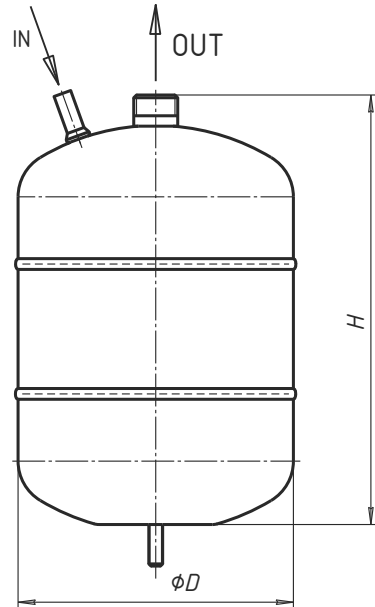
Drawing 1.

Vertical refrigerant receivers. Type A. Page 4



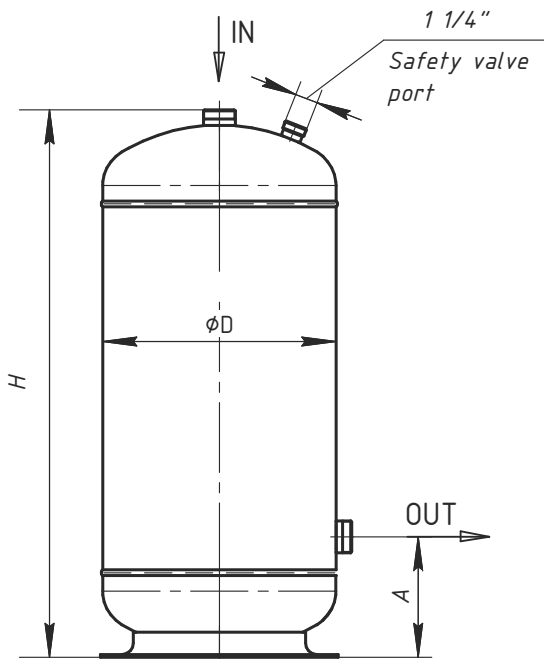
Drawing 2.

Vertical refrigerant receivers. Type B. Page 4



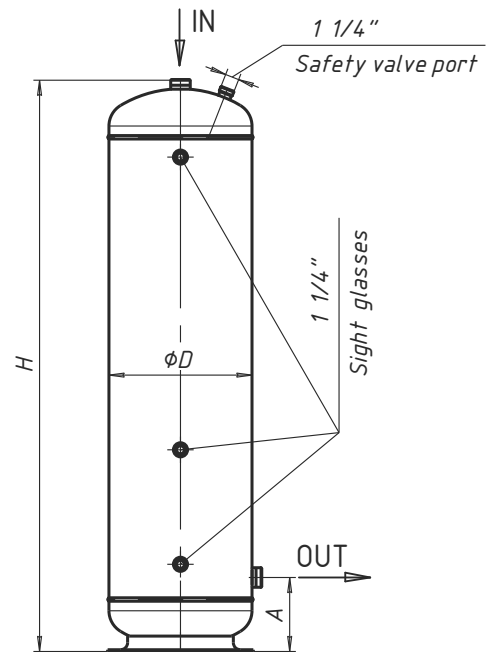
Drawing 3.

Vertical refrigerant receiver. Type C. Page 4



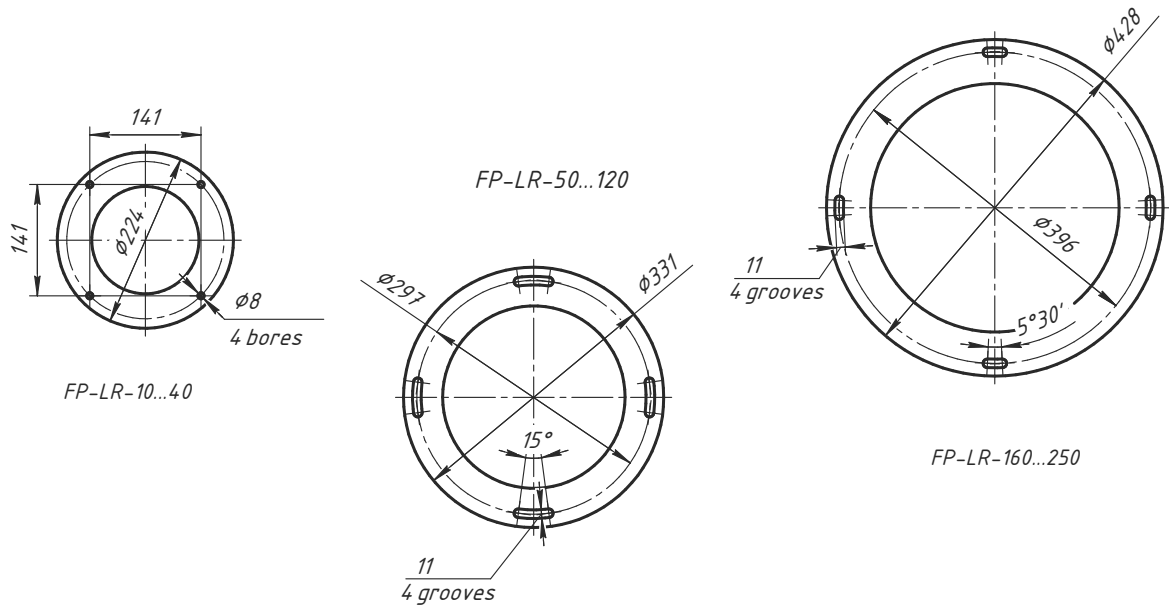
Drawing 4.

Vertical refrigerant receiver. Type C. Page 4



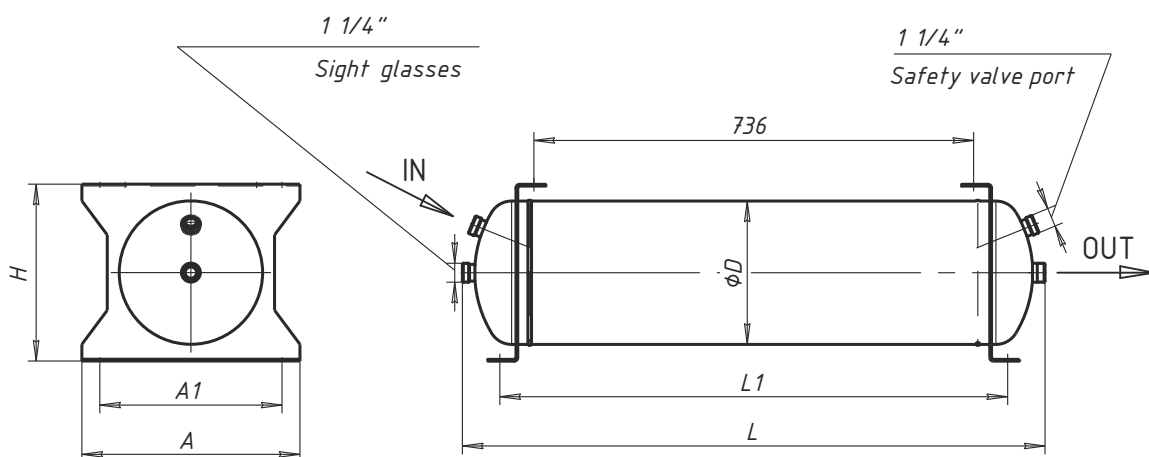
Drawing 5.

Vertical receivers circular platforms. Type C. Page 4



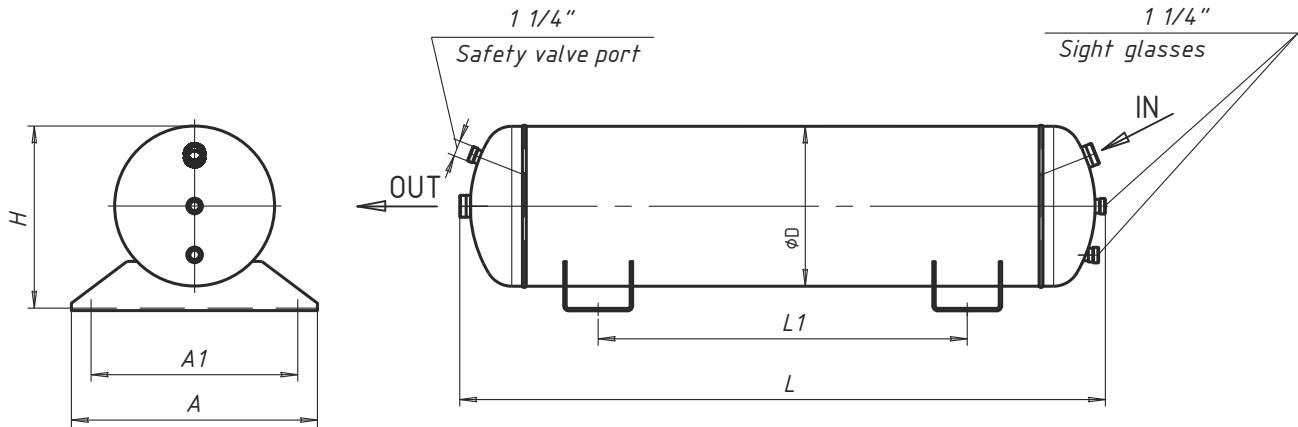
Drawing 6.

Horizontal refrigerant receiver. Type A. Page 4



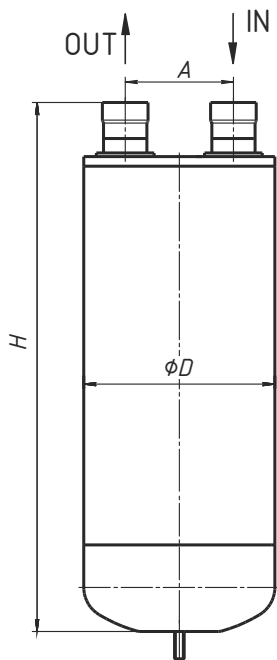
Drawing 7.

Horizontal refrigerant receiver. Type B. Page 4



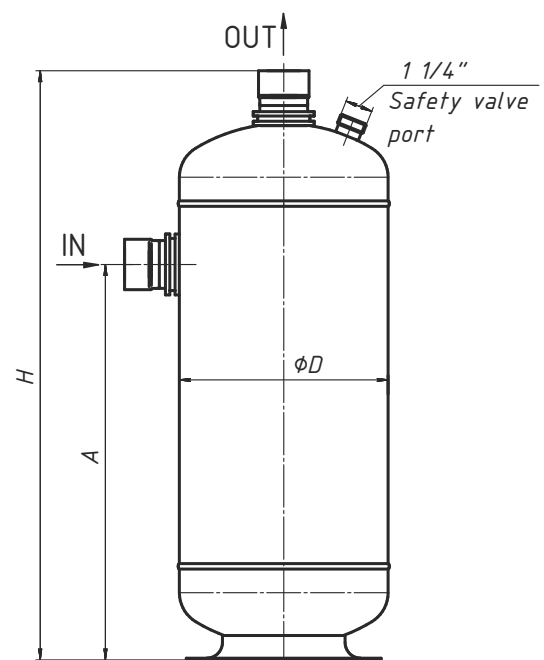
Drawing 8.

Suction accumulator. Type C. Page 5



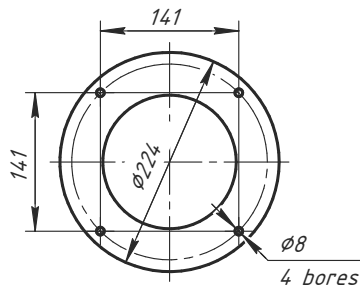
Drawing 9.

Suction accumulator. Type B. Page 5

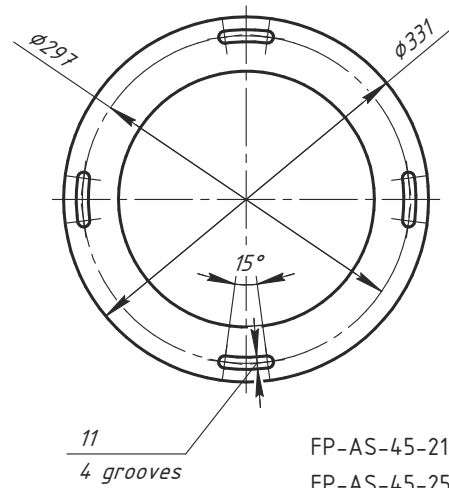


Drawing 10.

Suction accumulators circular platforms. Type B. Page 5



FP-AS-12-218
FP-AS-12-258
FP-AS-25-218
FP-AS-25-258



FP-AS-45-218
FP-AS-45-258

Table 1. Nominal capacity of the suction accumulators, kW

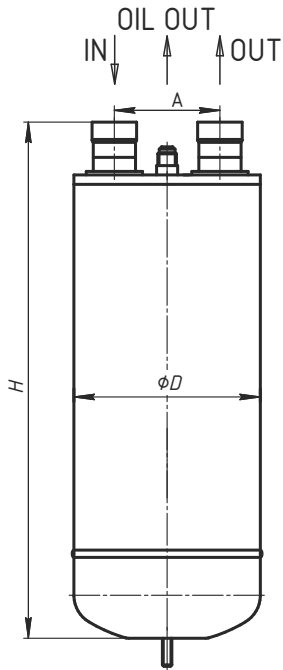
Model	Q _o (R22)	Q _o (R134A)	Q _o (R507)
FP-AS-2,0-012	7	4	4,5
FP-AS-2,0-058	10	6	7
FP-AS-2,0-034 / FP-AS-3,5-034	14	8	9
FP-AS-3,5-078	25	15	16
FP-AS-3,5-118 / FP-AS-5,0-118	41	25	27
FP-AS-5,0-138 / FP-AS-7,0-138	65	37	43
FP-AS-7,0-158	100	61	64
FP-AS-12,0-218	144	105	112
FP-AS-12,0-258 / FP-AS-25,0-218 / FP-AS-25,0-258 / FP-AS-45,0-258	159	117	127
FP-AS-45,0-318	315	256	266

Table 2. Correction coefficients for another working conditions

C	4	0	-5	-10	-15	-20	-25	-30	-35	-40
Kk	1	1,1	1,3	1,7	2	2,5	3	3,5	5	6,5

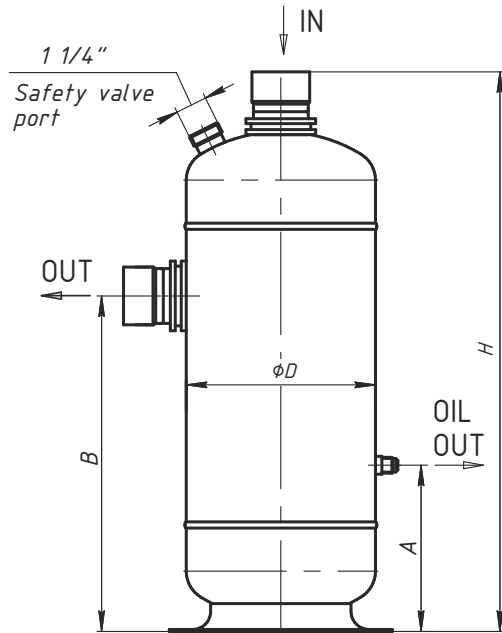
Drawing 11.

Oil separator. Type C. Page 5



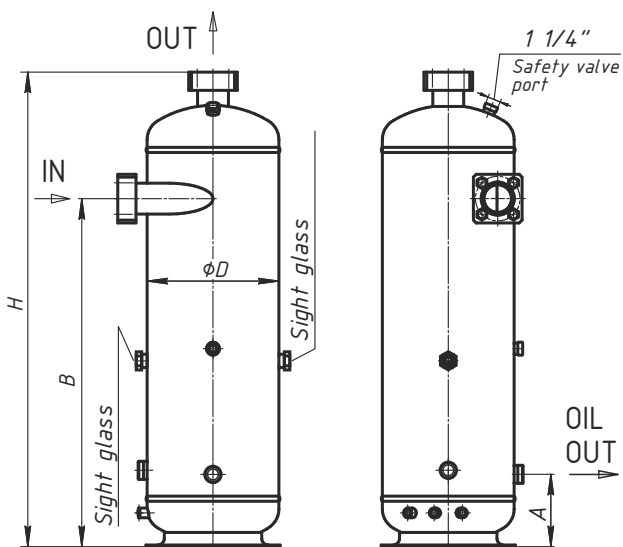
Drawing 12.

Oil separator. Type B. Page 5



Drawing 13.

The cyclone oil separator. Type A. Page 5



Drawing 14.

Oil separators circular platforms. Type A/B. Page 5

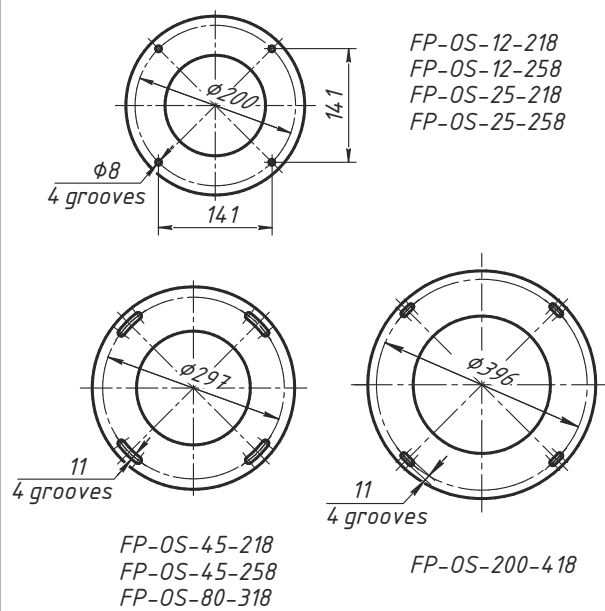


Chart 1. Quick selection chart for oil separator

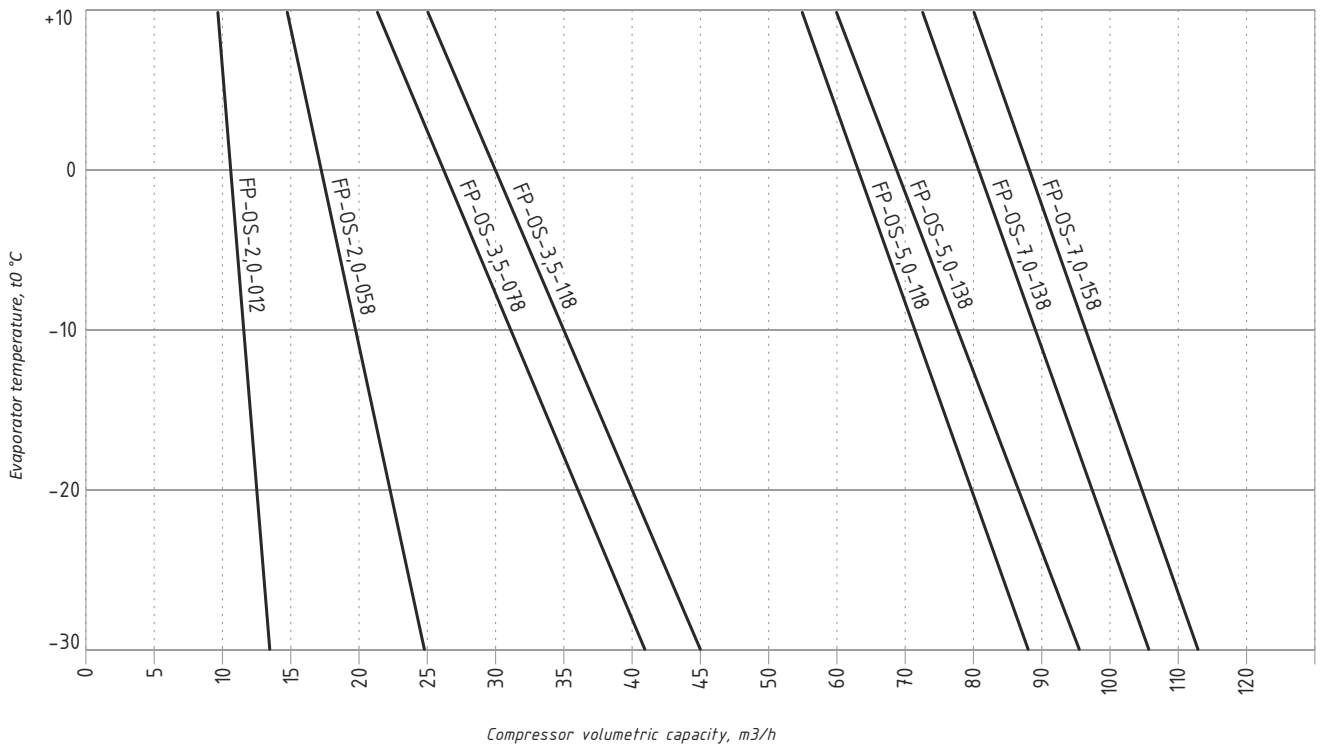
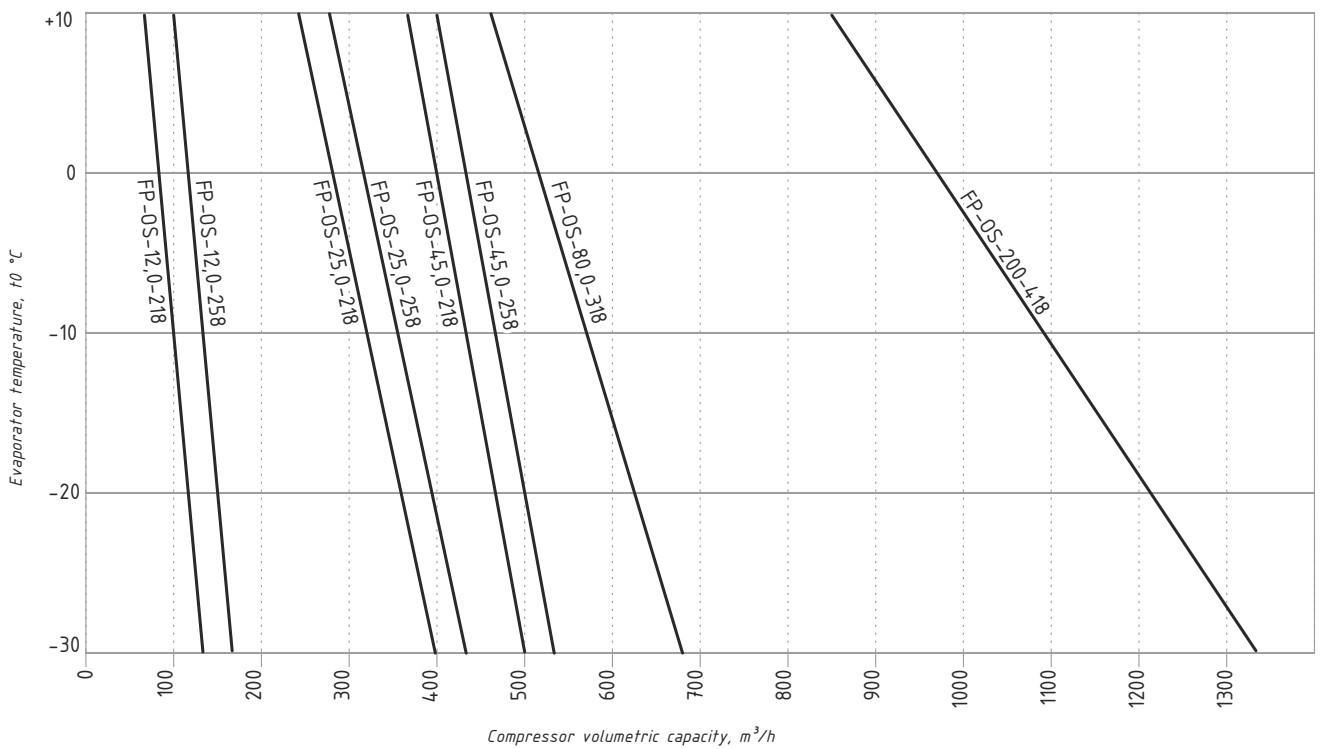
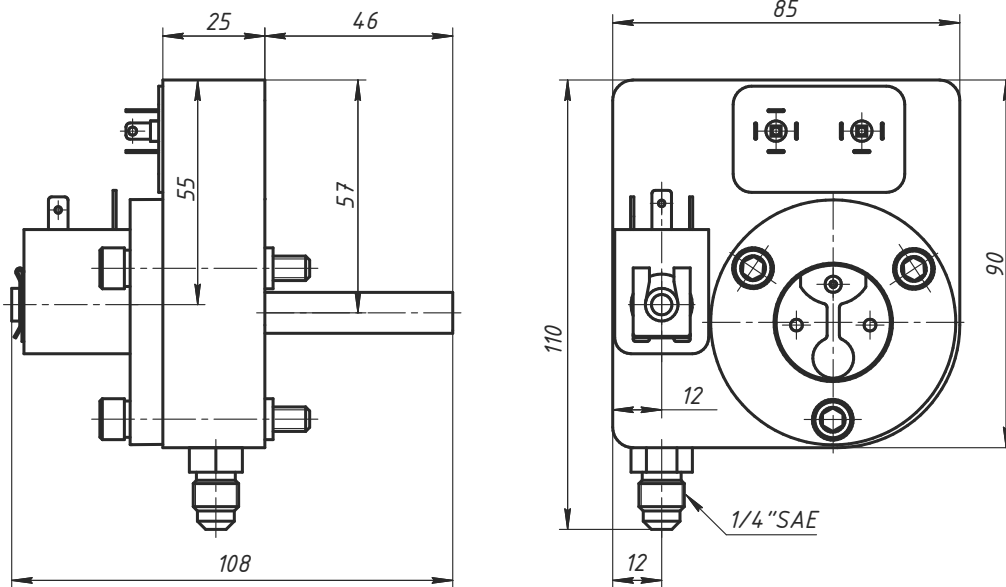


Chart 2. Quick selection chart for oil separators



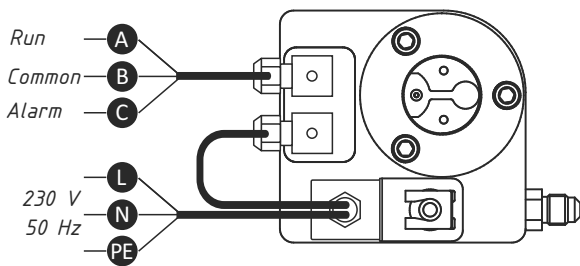
Drawing 15.

Feedway. Electronic oil level regulator. Page 6



Drawing 16.

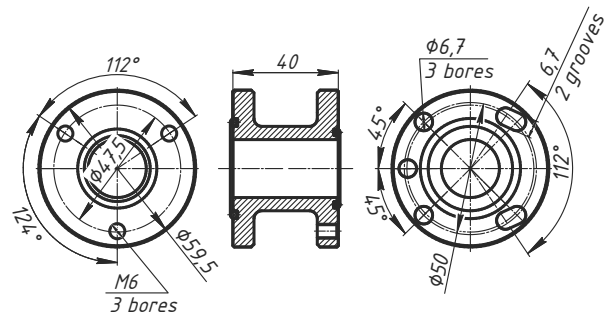
Electrical connections. Page 6



- A - green (open in alarm)
- B - white (common)
- C - red (close in alarm)
- L - brown (line)
- N - blue (neutral)
- PE - yellow-green (protective earth)

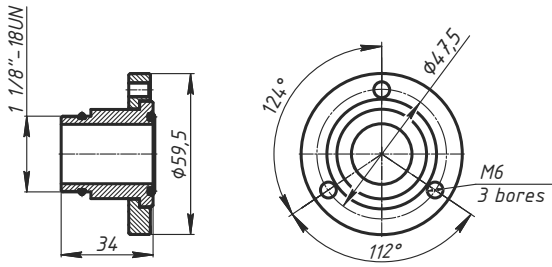
Drawing 17.

Adapter FP-ERL-UA. Page 6



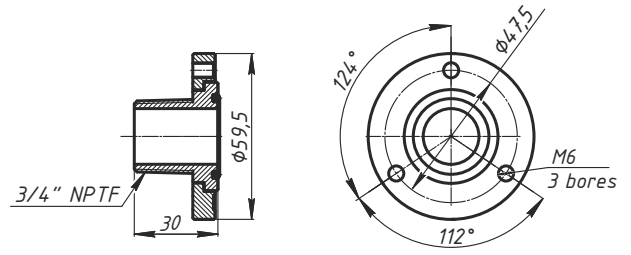
Drawing 18.

Adapter FP-ERL-BB. Page 6



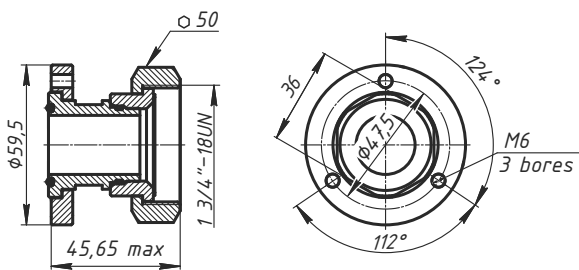
Drawing 19.

Adapter FP-ERL-AA. Page 6



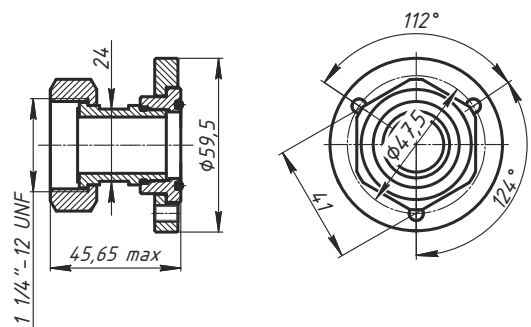
Drawing 20.

Adapter FP-ERL-CD. Page 6



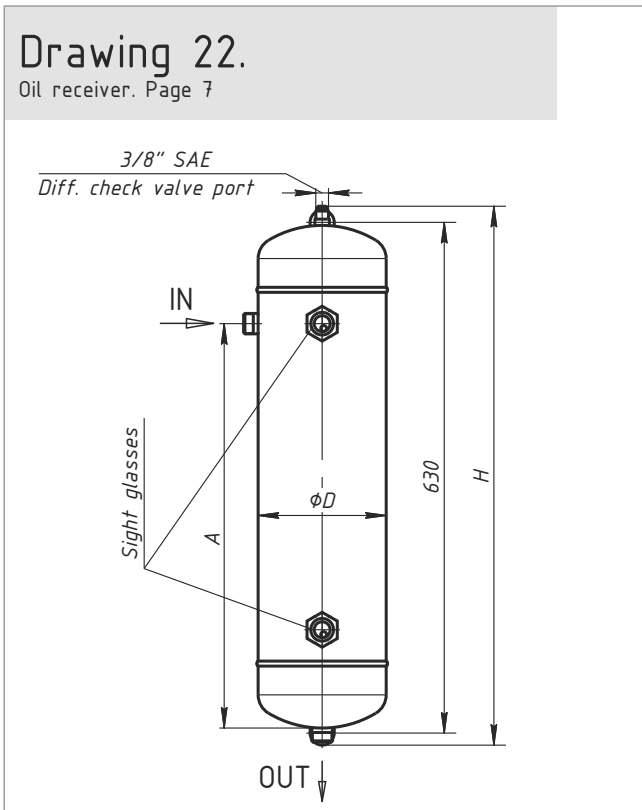
Drawing 21.

Adapter FP-ERL-CE. Page 6



Drawing 22.

Oil receiver. Page 7



Drawing 23.

Oil receiver. Page 7

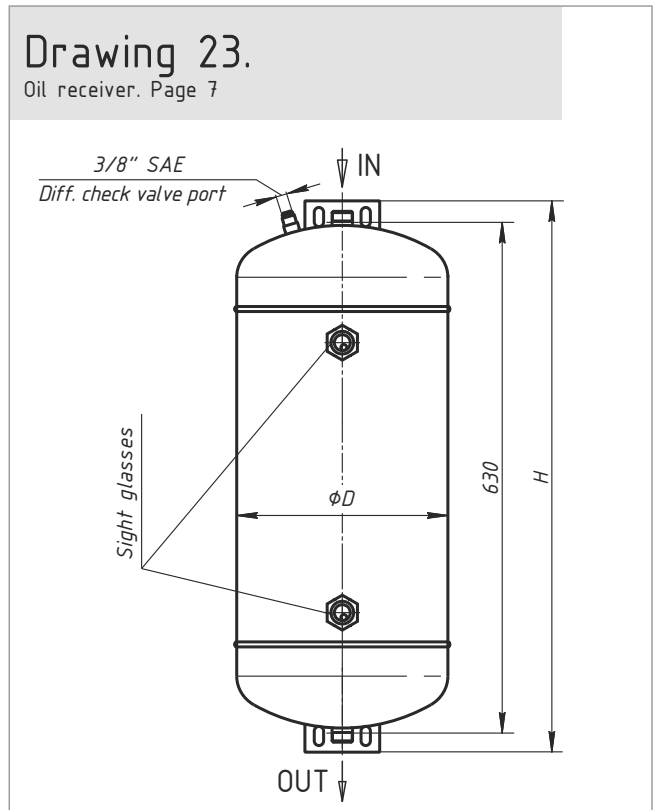


Chart 3. Quick selection chart for oil receivers

OIL RECEIVERS FOR 2 COMPRESSOR STATION

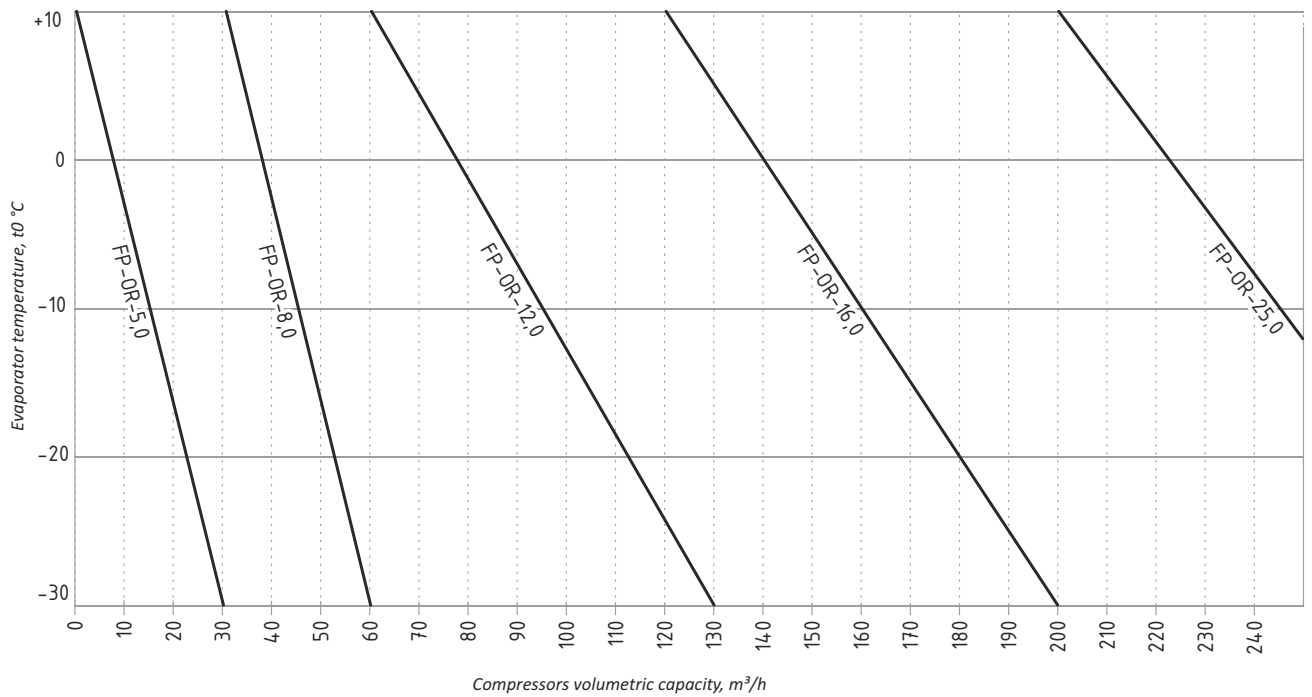


Chart 4. Quick selection chart for oil receivers

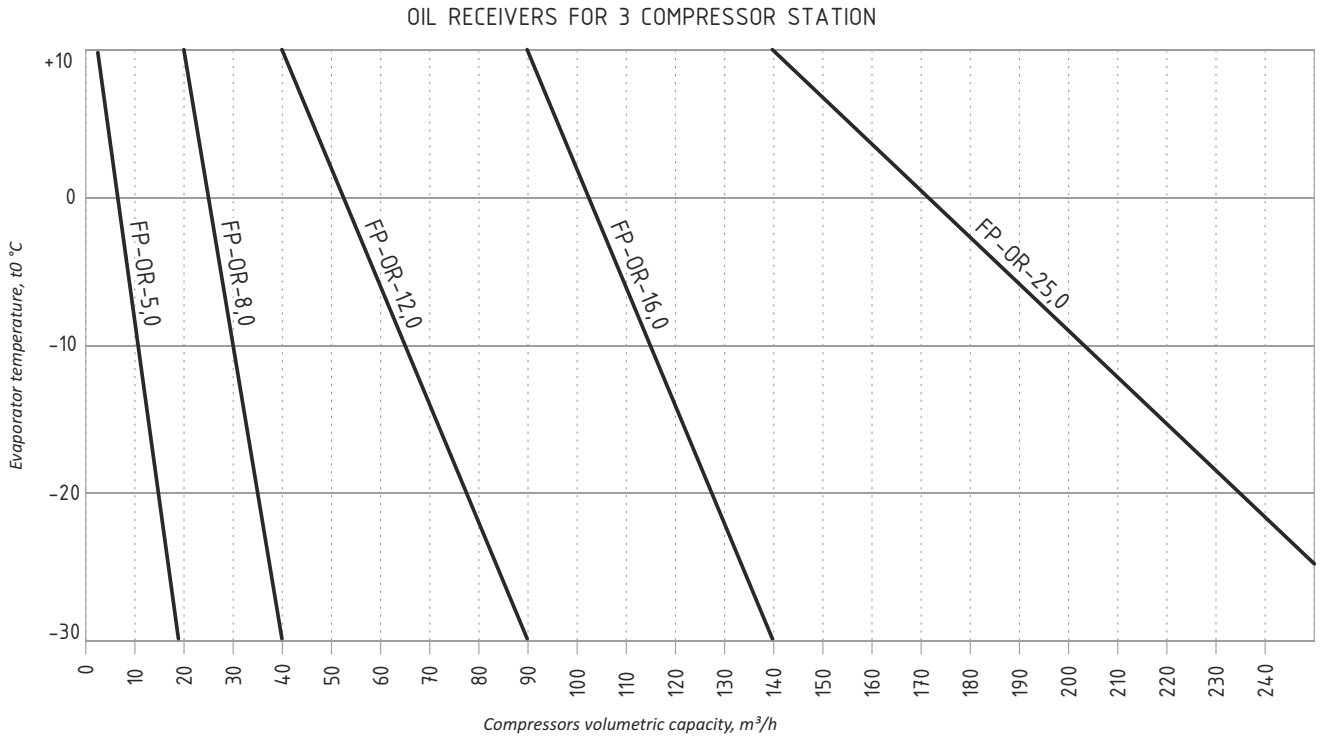
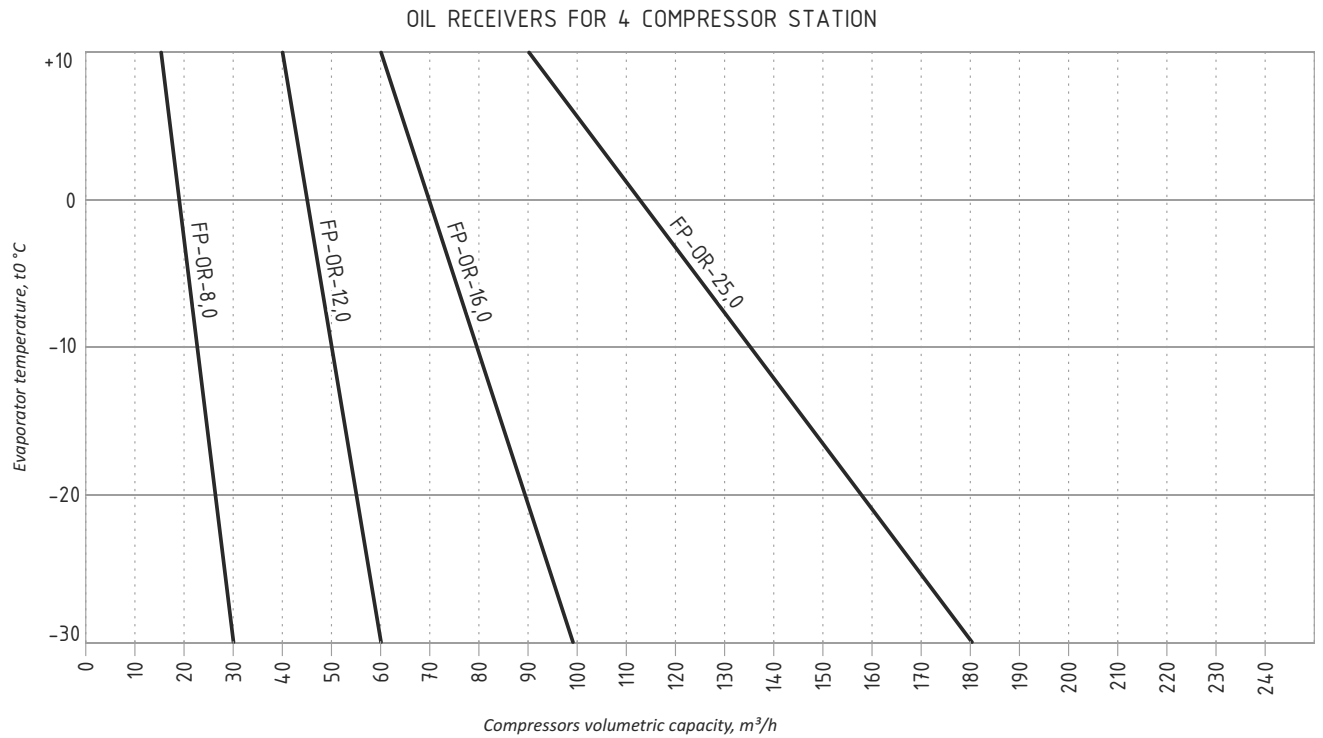
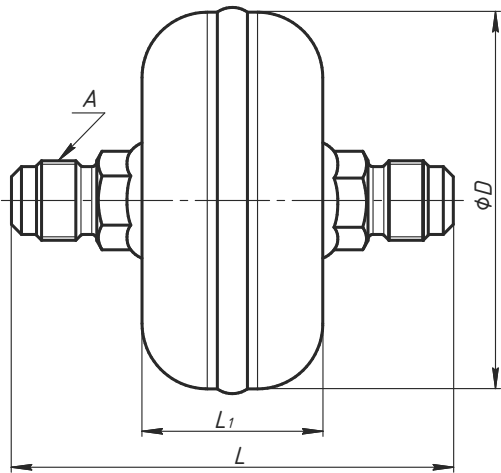


Chart 5. Quick selection chart for oil receivers



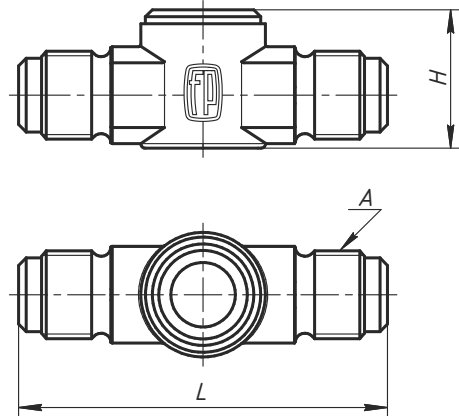
Drawing 24.

Oil filter. Page 7



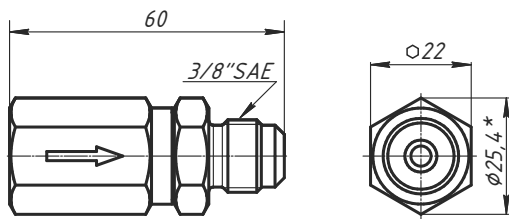
Drawing 25.

Sight glass. Page 7



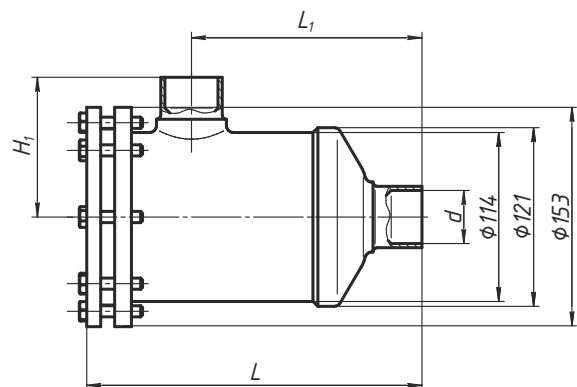
Drawing 26.

Differential check valve. Page 7



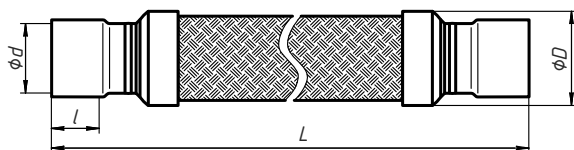
Drawing 28.

Filter-drier with replaceable core. Page 8



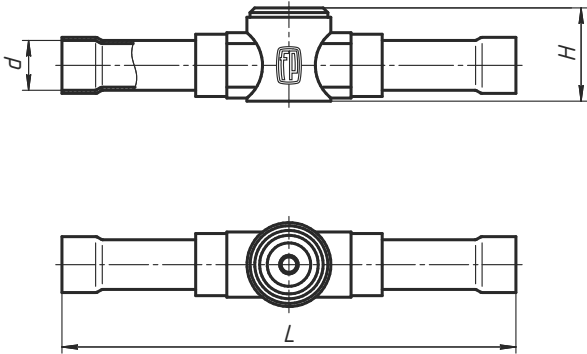
Drawing 27.

Vibroeliminator. Page 8



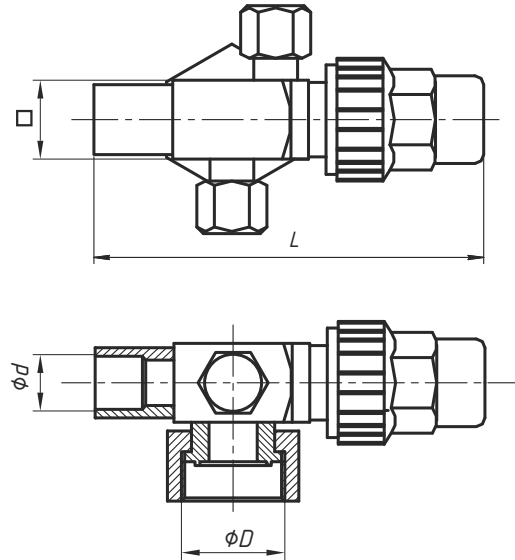
Drawing 29.

Moisture indicator. Page 8



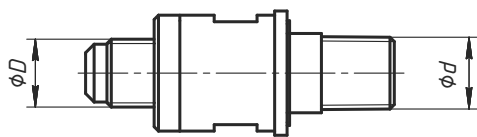
Drawing 30.

Rotalock valve. Page 9



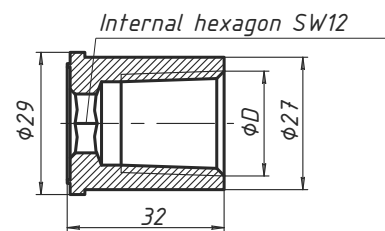
Drawing 31.

Safety valve. Page 9



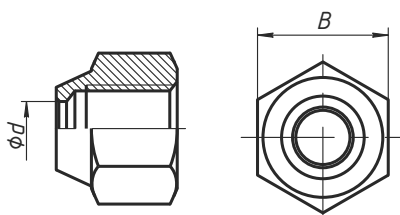
Drawing 32.

Adapter for safety valve. Page 9



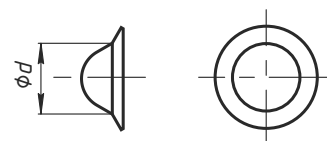
Drawing 33.

Nut. Page 9



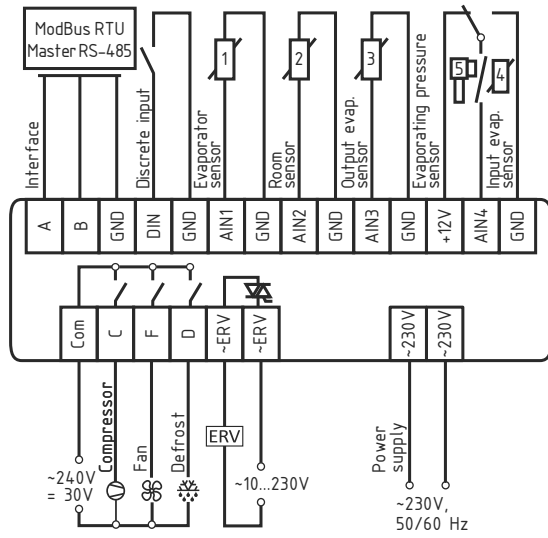
Drawing 34.

Cap. Page 9



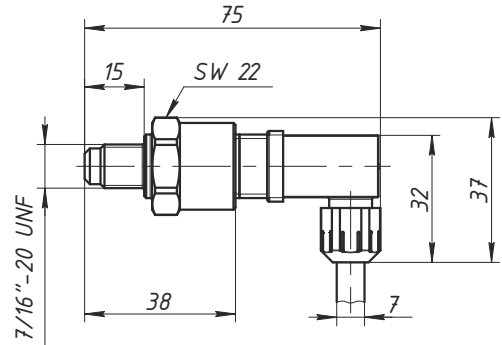
Drawing 35.

Refrigeration controller electrical conn. Page 10



Drawing 36.

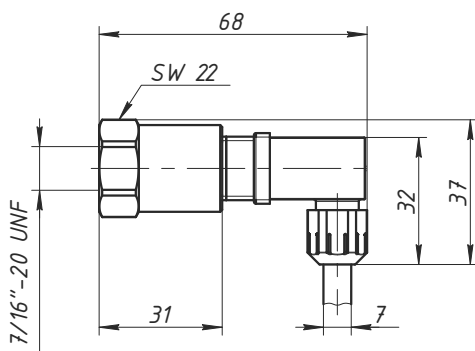
Pressure sensor. Page 10



Pin	Purpose
1	Power supply «+»
2	Power supply «-»
3	-
⊕	Frame ground

Drawing 37.

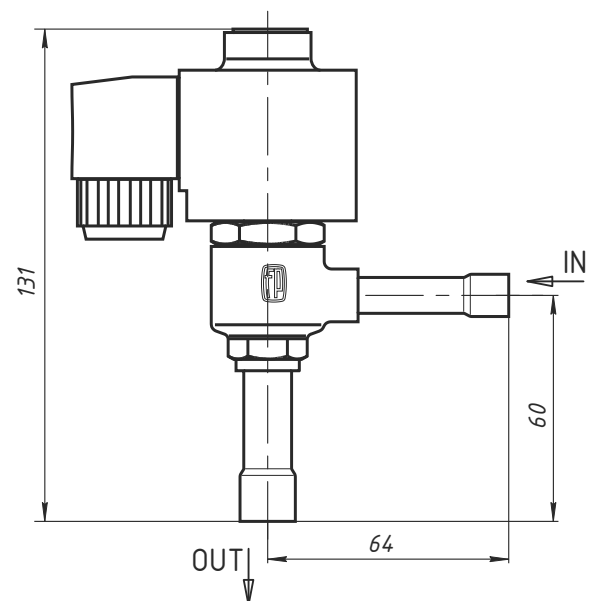
Pressure sensor. Page 10



Pin	Purpose
1	Power supply «+»
2	Power supply «-»
3	-
⊕	Frame ground

Drawing 38.

Electronic expansion valve. Page 11



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