

Helical oil separators with receiver FP-OSR

for high pressure oil return systems

28 bar
SERIES

Cu-St
FP WELD

FP-OSR HELICAL OIL SEPARATORS WITH RECEIVER

Helical oil separators with receiver they are used in systems with active oil return (high-pressure oil return systems). The oil separator performs the functions of both separating and storing oil, which eliminates the need to use an oil receiver. The new two-stage oil separation system combines the advantages of cyclone and coalescent oil separators.

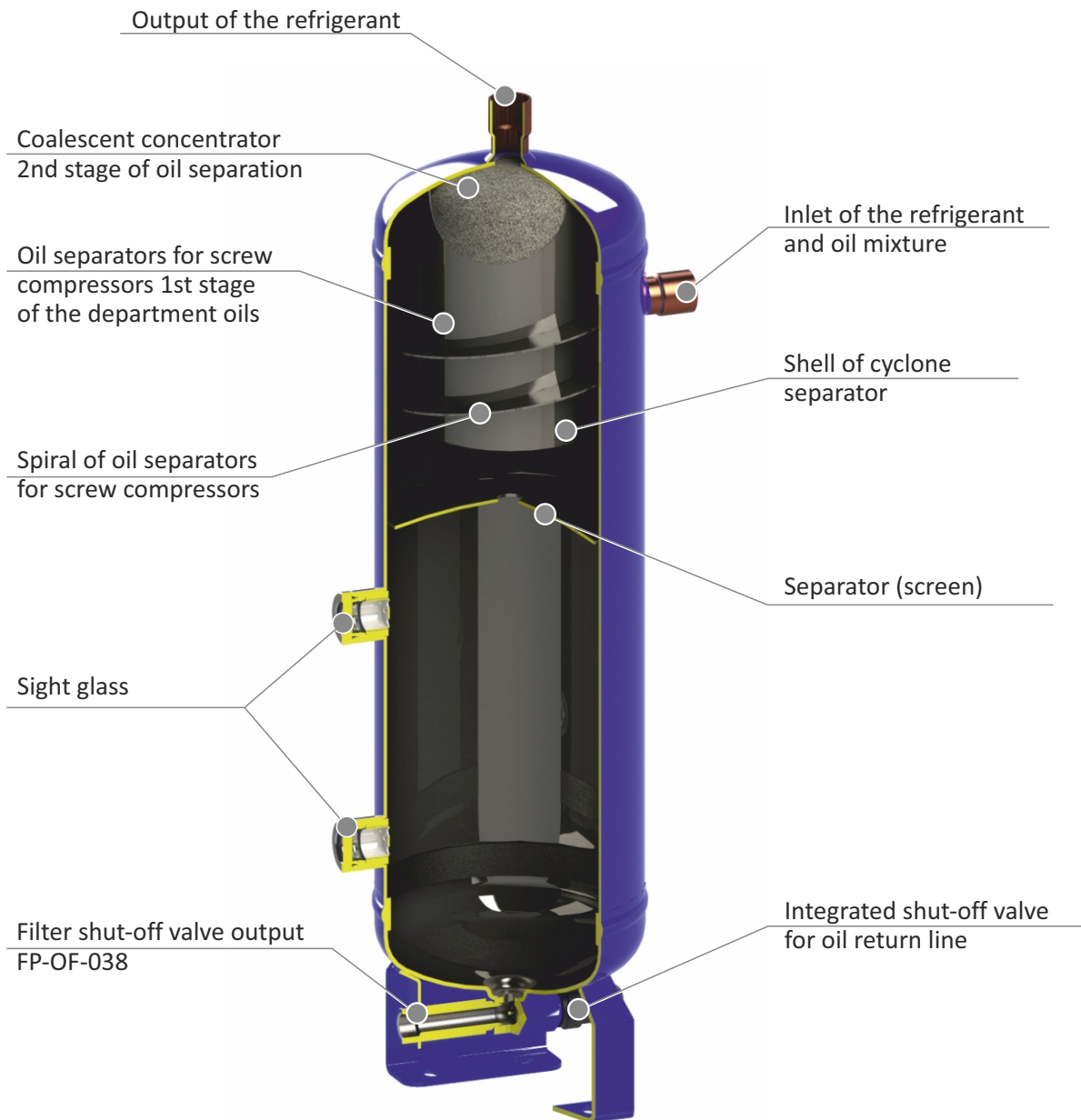
PRODUCT DESCRIPTION:

- High oil capture efficiency – up to 99%;
- Float-free design;
- Designed for use in high-pressure oil return systems;
- Two stages of oil separation ;
- Use for CFC, HCFC refrigerants and all types of oils;
- * Has a certificate of conformity TR CU 032/2013;
- High oil return rate due to high pressure drop on the ROOM;
- Has a shut-off valve on the oil return line with an internal 3/8" SAE thread for the FP-OF-038 filter;
- Copper pipes using Cu-St welding technology;
- Save space, simplify and reduce the cost of installation.

MANUFACTURER:

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PRINCIPLE OF OPERATION

The principle of operation of the FP-OSR helical oil separators with receiver is based on a two-stage oil separation system:

1. The primary stage of separation is a cyclone separator, where the direction and speed of the refrigerant vapors change repeatedly during rotation, which leads to the deposition of the main amount of oil on the walls of the apparatus, followed by draining into the oil receiver.
2. The secondary stage of separation is a coalescent oil concentrator with a developed deposition surface, where as a result of the chaotic movement of refrigerant vapors, the remaining oil molecules after the primary separation collide with each other and gather in fairly large formations, followed by drops falling into the oil receiver.

OVERALL AND CONNECTING DIMENSIONS

Model	∅D, mm	H, mm	h1, mm	IN/OUT ODS	A, mm	B, mm	Объем, dm ³	Volume of oil receiver, dm ³
FP-OSR-6-034(18mm)	133	601	495	18 мм	60	100	6.0	4.0
FP-OSR-8-078	159	615	481	7/8"	60	100	8.0	5.5
FP-OSR-8-118	159	620	481	1 1/8"	60	100	8.0	5.5
FP-OSR-12-138	159	767	621	1 3/8"	60	100	12.0	9.0
FP-OSR-12-158	159	768	616	1 5/8"	60	100	12.0	9.0
FP-OSR-16-218	190	726	546	2 1/8"	90	110	16.0	12.0

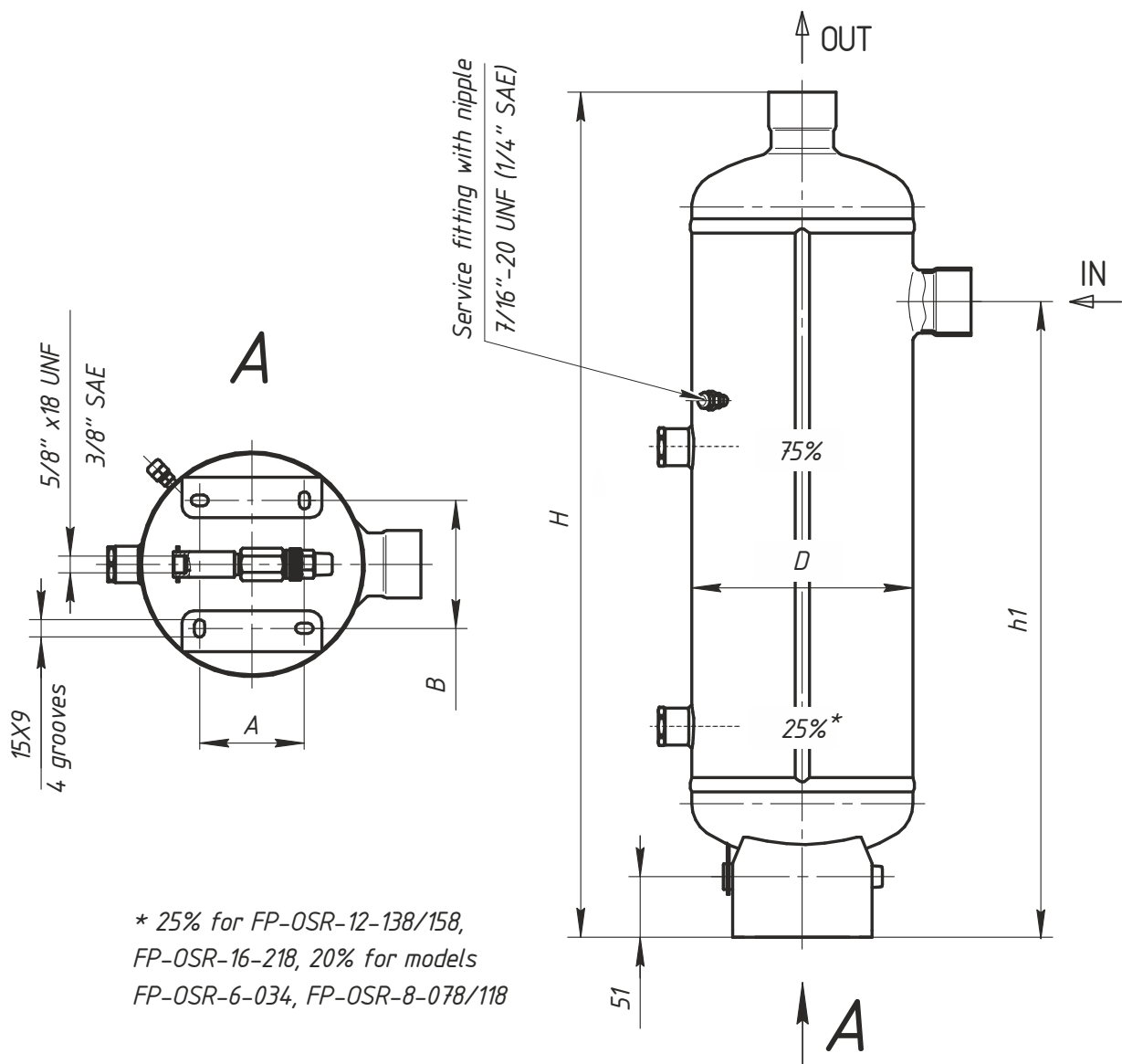


TABLE OF ANALOGUES

FP	Henry	Frigomec
FP-OSR-6-034(18 мм)		SRO\ERS-33(18)
FP-OSR-8-078	S-5387-6L-CE	
FP-OS-8-118	S-5388-6L-CE, S-5388-CE	
FP-OSR-12-138	S-5390-CE & SH-5390-CE	
FP-OSR-12-158	S-5392-CE & SH-5392-CE	
FP-OSR-16-218	S-5422-CE	

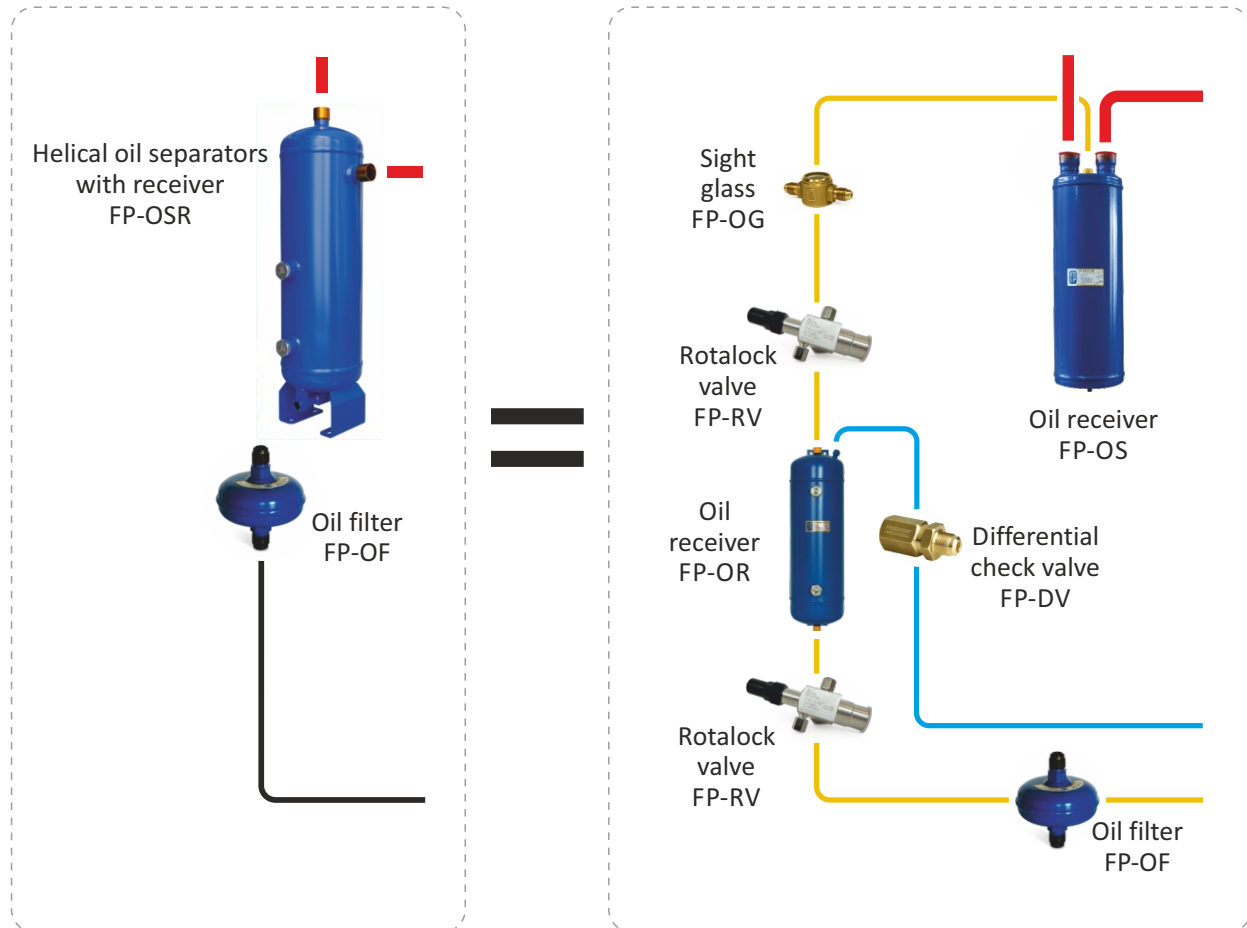
TECHNICAL PARAMETERS

Параметры	Значение
Maximum working pressure	2.8 МПа
Test pressure	3.5 МПа
Maximum oil return line pressure	2.8 МПа
Compatibility with oil level regulators	Compatible with electronic oil level sensor (MOPD > 21 bar) Not compatible with mechanical (float) oil level controls. Not compatible with optical oil level controllers.
Oil return port	5/8"-18UNF (3/8" SAE) internal (for filter FP-OF-038)
Service fitting (for filling oil)	7/16"-20 UNF (1/4" SAE) with a nipple

TABLE OF SELECTION OF OIL SEPARATORS

Model	Cooling capacity at the nominal temperature of the evaporator, kW								
	R404A/507			R134a			R407C		
	-40 °C	-20 °C	5 °C	-40 °C	-10 °C	5 °C	-40 °C	-10 °C	5 °C
FP-OSR-6-034(18 mm)	20.0	24.0	26.0	15.3	18.0	19.0	29.0	29.0	30.0
FP-OSR-8-078	23.0	28.0	30.0	15.8	19.3	19.4	26.7	29.3	31.3
FP-OSR-8-118	29.8	35.9	38.7	21.1	25.4	26.4	35.6	39.7	41.7
FP-OSR-12-138	42.2	49.3	52.8	28.2	33.2	35.2	49.0	55.1	57.3
FP-OSR-12-158	52.8	62.9	66.9	38.7	43.8	45.8	62.4	68.7	72.9
FP-OSR-16-218	109.0	136.0	144.0	77.4	92.0	95.0	129.0	147.0	151.0

COMPARISON OF COMPONENTS OF THE ACTIVE OIL RETURN SYSTEM AND THE SYSTEM WITH AN OIL RECEIVER



COMPARATIVE TABLE

Active oil return system	Oil return system with oil receiver	
FP-OSR-6-034	FP-OS-2-034+FP-OR-5	2xFP-RV-1-038
FP-OSR-8-078	FP-OS-3,5-078 + FP-OR-5	FP-DV-038
FP-OSR-8-118	FP-OS-3,5-118 + FP-OR-5	FP-OG-038
FP-OSR-12-138	FP-OS-5-138+FP-OR-8	Element for fixing the oil collector OR.
FP-OSR-12-158	FP-OS-7-158+FP-OR-8	Clamp for mounting the oil filter.
FP-OSR-16-218	FP-OS-12-218+FP-OR-12	10mm ~2m copper pipe (DV and suction line connection, OS and OR connection).
		Nut 3/8" – 4 pcs.