VINETA
ENGINEERING PLANT

Heat-Exchange Equipment

2.0

- Coolers ОКП type
- Coolers ОКН type
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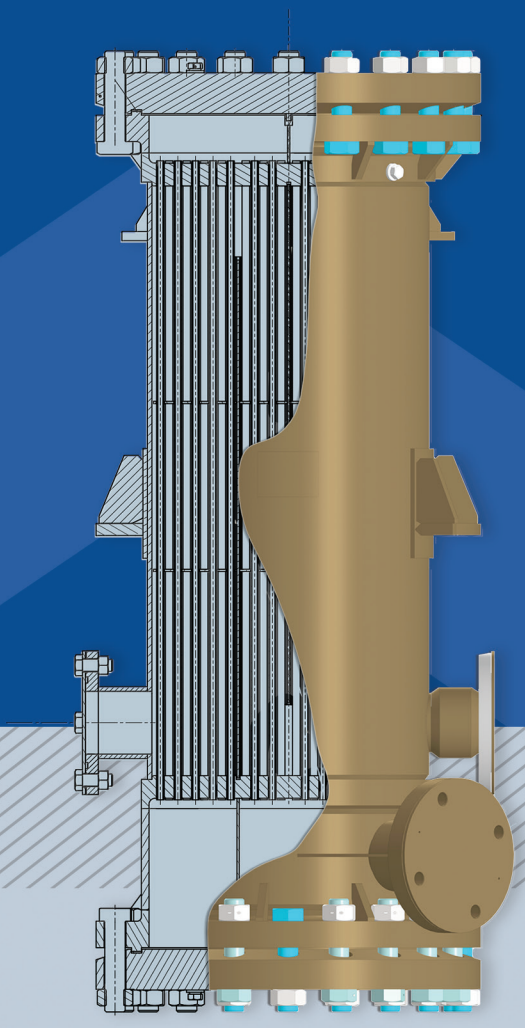


Coolers ОКП type

Index	ОКП 3,4-170		ОКП 17-420		ОКП 29-420		ОКП 58-600		ОКП 90-700		ОКП 190-920					
Medium to be cooled	Fresh water		Steam-turbine oil Тп-46 ГОСТ 9972-74 or Т46 ТУ38-101251-77		Gas turbine oil ГОСТ 10289-79		Steam-turbine oil Тп-46 ГОСТ 9972-74 or Т46 ТУ38-101251-77	Steam-turbine oil ГОСТ 10289-79	Steam-turbine oil Тп-46 ГОСТ 9972-74 or Т46 ТУ38-101251-77		65% mixture of steam-turbine oil ГОСТ 10289-79 and 35% mixture of МС-20 oil ГОСТ21743-76		Steam-turbine oil Тп-46 ГОСТ 9972-74		Fresh water	
Inlet temperature of the medium to be cooled, °C	36	90	55	130	120	130	55	130	70	130	70	90	72	93	63	72
Outlet temperature of the medium to be cooled, °C	22	52	35	58	50	58	35	58	38	58	40	50	42	53	35	40
Flow of the medium to be cooled, kg/sec (t/h)	0,83 (3,0)	1,3 (5,0)	2,7 (10,0)		2,7 (10,0)		13,8 (50,0)		11,0 (40,0)		27,7 (100,0)	38,8 (140,0)	27,7 (100,0)	38,8 (140,0)	29,1 (105,0)	50,0 (180,0)
Pressure of the medium to be cooled, MPa (kgf/cm²)	1,0 (10,0)		1,0 (10,0)		1,0 (10,0)		0,6 (6,0)		1,0 (10,0)		1,0 (10,0)					
Inlet temperature of the cooling medium, °C	15	28	20	30	20	30	20	30	20	30	20				25	
Flow of the cooling medium, kg/sec (t/h)	2,78 (10,0)	4,17 (15,0)	6,9 (25,0)	10,8 (39,0)	11,1 (40,0)		27,7 (100,0)	44,4 (160,0)	19,4 (70,0)	44,5 (160,0)	55,5 (200,0)		83,3 (300,0)		111,0 (400,0)	
Pressure of the cooling medium, MPa (kgf/cm²)	0,6 (6,0)															
Overall dimensions, L x W x H, mm	1395 x 290 x 335		1351 x 600 x 730		1760 x 600 x 730		1974 x 780 x 931		2015 x 900 x 1055		2450 x 1170 x 1290					
Weight, kg	144		509		633		1246		2110		3570					

Coolers OKH type

Index	OKH 0,2-74-1МД			OKH 2,5-170-2МД				OKH 7,5-310-1		OKH 9,7-420-1
Medium to be cooled	Oil and hydraulic oil		Fresh and distilled water	Spindle improved petroleum-based plain mineral oil, hydraulic fire resistant fluid		Fresh water		Fresh water		Fresh water
Mode	1	2	3	1	2	3	4	1	2	1
Inlet temperature of the medium to be cooled, °C	57,0	70,0	80,0	60,0	40,0	18,5	36,0	90,0		60
Outlet temperature of the medium to be cooled, °C	55,0	65,0	75,0	40,0	35,0	15,0	22,0	76,0	73,0	55
Flow of the medium to be cooled, kg/sec (t/h)	0,4(1,5)	0,4(1,5)	0,4(1,5)	1 (3,6)	1,3 (4,8)	0,8 (3,2)	0,83 (3,0)	8,3(30,0)		25,0(90,0)
Pressure of the medium to be cooled, MPa (kgf/cm²)	0,6(6,0)			1,0(10,0)				0,6(6,0)		1,0(10,0)
Cooling medium	Sea water			Sea water				Sea water		Sea water
Inlet temperature of the cooling medium, °C	32	30	28	20	10	9	15	32	30	28
Flow of the cooling medium, kg/sec (t/h)	0,8(2,8)	0,8(2,8)	0,8(2,8)	2,7(10,0)	0,5 (2,0)	1,9(7,0)	2,7 (10,0)	min 8,3 (30,0)	13,8(50)	19,4 (70)
Pressure of the cooling medium, MPa (kgf/cm²)	4,3(43,0)			4,3(43,0)				0,6(6,0)		0,6(6,0)
Overall dimensions, L x W x H, mm	559x188x169			1000x290x340				954x460x530		1125x600x725
Weight, kg	27,5			129				265		413

Coolers OKH type

Index	OKH 9,7-420-2							OKH 15,8-420-1		OKH 15,8-420-1П		
Medium to be cooled	Fresh water							Distilled water ГОСТ 6709		Distilled water ГОСТ 6709		
Mode	1	2	3	4	5	6	7	1	2	1	2	3
Inlet temperature of the medium to be cooled, °C	85				60		75	47	38	51,7	53,7	56
Outlet temperature of the medium to be cooled, °C	44	55	45	54	55	56	60	36	35	45		
Flow of the medium to be cooled, kg/sec (t/h)	2,2(8,0)				25,0(90)		11,1(40)	4,1(15)	6,9 (25)	4,1 (15)	4,1(15)	4,1(15)
Pressure of the medium to be cooled, MPa (kgf/cm²)	1,0(10,0)							1,0(10,0)		1,0(10,0)		
Cooling medium	Sea water							Sea water		Fresh water		
Inlet temperature of the cooling medium, °C	28	28	30	21,4	28	32	28	28	30	40		
Flow of the cooling medium, kg/sec (t/h)	17,5(63)	16,4(59)	17,5(63)	17,5(63)	19,4 (70)	19,4(70)	11,1(40)	8,3 (30)	6,9(25)	23(6,4)	8,3 (30)	7,5(27)
Pressure of the cooling medium, MPa (kgf/cm²)	0,6(6,0)							4,3(43,0)		4,3(43,0)		
Overall dimensions, L x W x H, mm	1125x600x725							1080x600x650		1125x600x650		
Weight, kg	418							613		591		

Coolers OKH type

Index	OKH 26,9-420-1	OKH 26,9-420MK		OKH 28,6-600-1	OKH 108-700-2
Medium to be cooled	Distilled water ГОСТ 6709	Hydraulic oil Тп-46 ГОСТ 9972-74 or Т46		Fresh water	High-purity water
Mode	1	1	2	1	1
Inlet temperature of the medium to be cooled, °C	40,5	56	70	60,0	12,0
Outlet temperature of the medium to be cooled, °C	34,0	37	45	55,0	8,0
Flow of the medium to be cooled, kg/sec (t/h)	15,0(54,0)	5,27(19,0)		(38,8)140,0	22,2(80,0)
Pressure of the medium to be cooled, MPa (kgf/cm²)	1,0(10,0)	0,6(6,0)		0,6(6,0)	1,0(10,0)
Cooling medium	Sea water	Fresh water		Sea water	Sea water
Inlet temperature of the cooling medium, °C	28,0	32		28,5	7,0
Flow of the cooling medium, kg/sec (t/h)	22,2(80,0)	27,7(100,0)	10,25(37,0)	27,7(100,0)	83,3(300,0)
Pressure of the cooling medium, MPa (kgf/cm²)	4,3(43,0)	1,0(10,0)		1,0(10,0)	0,6(6,0)
Overall dimensions, L x W x H, mm	1560x600x725	1619x921x881		1645x780x936	2262x900x1056
Weight, kg	758	608		1013	2251

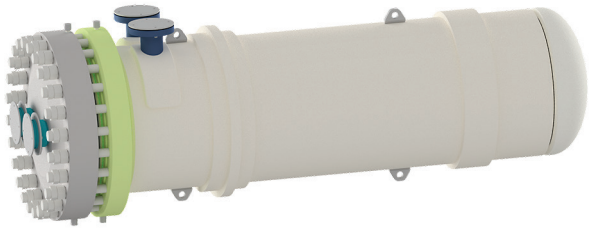
Coolers OKH type

Index	OKH 220-1050-1			OKH 220-1050-3				OKH 376-1050-1
Mode	1	2	3	1	2	3	4	1
Cooling medium	Hydraulic oil Тп-46 ГОСТ 9972	Fresh water	Hydraulic oil Тп-46 ГОСТ 9972 or Т46	Hydraulic oil Тп-46 ГОСТ 9972 or Т46 ОСТ 38.01281		Fresh water		Hydraulic oil Тп-46 ГОСТ 9972 or Т46 ОСТ 38.01281
Inlet temperature of the medium to be cooled, °C	60	72	70	59	70	63	72	55
Outlet temperature of the medium to be cooled, °C	42	40	50	42	50	35	40	38
Flow of the medium to be cooled, kg/sec (t/h)	50(180,0)			50(180,0)		29,1(105,0)	50(180,0)	55,5(200,0)
Pressure of the medium to be cooled, MPa (kgf/cm²)	1,0(10,0)			1,0(10,0)				0,11(1,1)
Cooling medium	Sea water			Sea water				Sea water
Inlet temperature of the cooling medium, °C	25	25	30	25	30	25		25
Flow of the cooling medium, kg/sec (t/h)	83,3(300,0)	111,1(400,0)	125(450,0)	83,3(300,0)	125(450,0)	111,1(400,0)		97,2(350,0)
Pressure of the cooling medium, MPa (kgf/cm²)	0,6(6,0)			0,6(6,0)				0,012(0,12)
Overall dimensions, L x W x H, mm	3045x1310x1398			3045x1310x1398				4630x1310x1398
Weight, kg	4337			5266				5703

Coolers ОПВ type

Function and technical data

- The cooler is intended to cool oil, hydraulic systems liquids, fresh and distilled water, as well as sea water in systems of marine power stations, auxiliary and other systems of ships and vessels



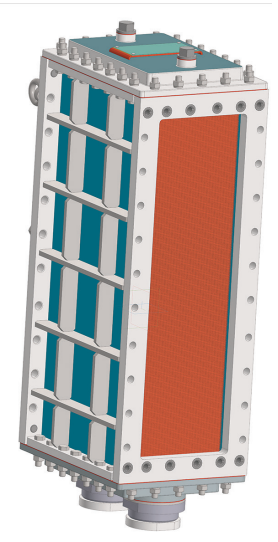
Technical data, main parameters and characteristics

Index	ОПВ 14-3		ОПВ-17		ОПВ-47	ОПВ-135		ОПВ-155
	mode 1	mode 2	mode 1	mode 2		mode 1	mode 2	
Medium to be cooled	Fresh water		Fresh or distilled water		Fresh or distilled water	Fresh water		
Inlet flow of the medium to be cooled, m³/h	30	50	22,4	28	100	200	150	105
Inlet temperature of the medium to be cooled, °C	42	43	37,7	48	42	40	37,7	from +40 up to +82
Outlet temperature of the medium to be cooled, °C	38	37	35	42,5	38	36	25	–
Outlet temperature of the cooling medium, °C	from -2 up to +33		from -2 up to +32	from +22 up to +36	32	32	20	from -2 up to +32
Inlet flow of the cooling medium, m³/h, max	30	50	30		100	100	200	
Design (operating) pressure of the cooling medium, MPa (kgf/cm²), max	6,0 (60,0)		6,4 (64,0)	0,5 (5,0)	6,4 (64,0)			8,5 (85)
Design (operating) pressure of the medium to be cooled, MPa (kgf/cm²), max	0,4 (4,0)		0,7 (7)		1,0 (10)			
Hydraulic resistance of the medium to be cooled, MPa (kgf/cm²), max	0,03 (0,3)	0,065 (0,65)	0,014 (0,14)	0,02 (0,2)	0,05 (0,5)	0,08 (0,8)		0,07 (0,7)
Hydraulic resistance of the cooling medium, MPa (kgf/cm²), max	0,035 (0,35)	0,075 (0,75)	0,023 (0,23)	0,02 (0,2)	0,06 (0,6)	0,016 (0,16)	0,003 (0,03)	0,017 (0,17)
Heat-transfer surface, m²	13,7		16,7		45-50	135		155
OD and WT of the heat-exchange tube, mm	10x1,5					14x1,5		
Q-ty of heat-exchange tubes, pcs.	538		788		876	1866		664
Weight, kg	335/445		430		763	2500/3650		3778/4958
Overall dimensions, mm	565x580 x1265		1303x717 x718		2475x717 x842	2965/1150/ 1246		3350/1180/ 1100

Charge air coolers

Function and technical data

- The charge air cooler is intended to cool charge air in the diesel-generator set.



Technical data, main parameters and characteristics

Index	2ОНВ.000-01 ОМ4	2ОНВ.000-06-02 ОМ4	6ДМ-185ВС
Medium to be cooled		Charge air	
Flow of the medium to be cooled, kg/sec (kg/h)	0,7(2700)	1(3600)	1,4(5040)
Inlet temperature of the medium to be cooled, K(°C)	423(150)	433(160)	543(270)
Outlet temperature of the medium to be cooled, K(°C)	348(75)		338(65)
Inlet relative pressure of the medium to be cooled, kPa (kgf/cm²)	118(1,2)	186(1,9)	534(5,34)
Pressure drop in the cavity of the medium to be cooled, kPa (kgf/cm²)	5(0,5)		
Cooling medium	Sea water		Cooling fluid of the fresh water circuit of the engine cooling system
Flow of the cooling medium, kg/sec (kg/h)	5,6(20000)		6,5
Inlet temperature of the cooling medium, K (°C)	313(40)		323(50)
Inlet relative pressure of the cooling medium, kPa (kgf/cm²)	245(2,5)		620(6,2)
Pressure drop in the cavity of the cooling medium, kPa (kgf/cm²)	44,1(0,45)		30(0,3)
Overall dimensions,LxWxH, mm	370x310x510	370x310x610	258x190x625
Weight, kg	115	130	95

Marine steam oil heaters ПМ type

Function and technical data

- Marine steam oil heaters ПМ type are intended to heat oil in oil separation systems as well as for other purposes in electric power installations of ships and watercrafts.
- Principle of operation: the medium to be heated enters the tube cavity, washed with the steam, is heated to a certain temperature and delivered to the consumer.
- Type: shell-and-tube with U-shaped heat-exchange tubes.
- Medium to be heated: М16Д and М-16Е30 engine oil, Т57 turbine oil, spindle improved petroleum-based plain mineral oil.
- Heating medium: saturated steam.

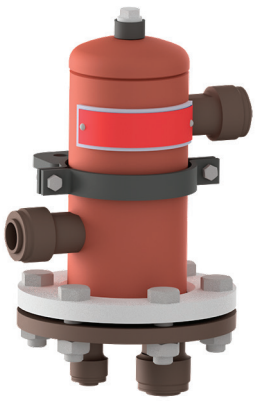
Technical data, main parameters and characteristics

Index	ПМ 1,7Г	ПМ 6,5В	ПМ 15-В-10М-1
Medium to be heated in the tubular space	Oil		
Inlet temperature of oil,	15	30	30
Outlet temperature of oil,	75	90	90
Design (operating) pressure of oil, MPa (kgf/cm²), max	0,8(8)		
Heating medium in the intertubular space	Saturated steam		
Data on the heating medium:			
Design (operating) pressure of saturated steam, MPa (kgf/cm²), max	1,6(16)		
General data			
OD and WT of heat-exchange tube, mm	12x1,5		
Heat-transfer surface, m²	1,74	6,46	14,7
Q-ty of heat-exchange tubes, pcs.	30	90	159
Overall dimensions, LxWxH, mm	985x374x420	1373x506x618	1613x621x641
Weight, kg	105	315	484

High-speed water heaters ПС type

Function and technical data

- High-speed water heaters ПС type are intended to heat fresh washing water.
- Heaters are part of the equipment of sanitary and amenity facilities (shower and wash rooms, galleys, sculleries).
- Type: shell-and-tube.
- Heating element is of a helical spiral form.
- Operating position: vertical.
- Heating medium: dry saturated steam.



Technical data, main parameters and characteristics

Index	Designation	Medium	Type	Weight, kg (dry/active)	Capacity under the differential pressure of 60°C, l/h, max	Flow of dry saturated steam under the max capacity, kg/h
ПС 700 ст	ИУШД.065157.001	Fresh water	Shell-and-tube	9/10	700	90
ПС 700 цП	ИУШД.065157.001-01	Fresh water	Shell-and-tube		700	90
ПС 700 мП	ИУШД.065157.001-09	Fresh water	Shell-and-tube		700	90
ПС 700 цМ	ИУШД.065157.001-10	Sea water	Shell-and-tube		700	90
ПС 700 мМ	ИУШД.065157.001-11	Sea water	Shell-and-tube		700	90
ПС 1100 ст	ИУШД.065157.001-02	Fresh water	Shell-and-tube	10/12	1100	140
ПС 1100 цП	ИУШД.065157.001-03	Fresh water	Shell-and-tube		1100	140
ПС 1100 мП	ИУШД.065157.001-08	Fresh water	Shell-and-tube		1100	140
ПС 1100 цМ	ИУШД.065157.001-06	Sea water	Shell-and-tube		1100	140
ПС 1100 мМ	ИУШД.065157.001-07	Sea water	Shell-and-tube		1100	140
ПС 1900 ст	ИУШД.065157.001-04	Fresh water	Shell-and-tube	11/14	1900	230
ПС 1900 цП	ИУШД.065157.001-05	Fresh water	Shell-and-tube		1900	230
ПС 1900 мП	ИУШД.065157.001-12	Fresh water	Shell-and-tube		1900	230
ПС 1900 цМ	ИУШД.065157.001-13	Sea water	Shell-and-tube		1900	230
ПС 1900 мМ	ИУШД.065157.001-14	Sea water	Shell-and-tube		1900	230

Capacitive water heaters ПЕ type

Function and technical data

- Capacitive water heaters ПЕ type are intended to heat washing and fresh drinking water.
- Heaters are part of the equipment of sanitary and amenity facilities.
- Type: shell-and-tube with U-shaped heat-exchange tubes.
- Upon the installation, heaters are of two versions — horizontal and vertical.

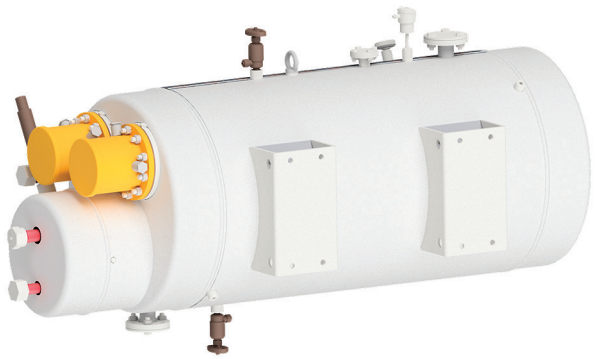
Technical data, main parameters and characteristics

Index	ПЕ 200 Вк	ПЕ 200Г лев. К	ПЕ 500Г лев. К	ПЕ 500Г пр. К
Medium to be heated	Washing and drinking water			
Capacity, l/h, max - under the differential pressure of 60 °C; - under the differential pressure of 35 °C;	3000 5000		8000 13000	
Outlet temperature of water,	90			
Max water pressure, MPa (kgf/cm²)	0,65(6,5)			
Heating medium in the intertubular space	Saturated steam			
Data on the heating medium:				
Steam pressure at the max capacity, MPa (kgf/cm²)	0,5(5,0)			
Flow of dry saturated steam under the max capacity, kg/h	370		980	
OD and WT of heat-exchange tube, mm	16x1,5			
Heat-exchange surface, m²	3,7		8,05	
Overall dimensions, LxWxH, mm	1850x795x720	1715x720x916	2038x897x1117	2038x897x1117
Weight, kg	280		512	
Active weight, kg	480		1012	

High-speed water heaters ПЭ, ППЭ type

Function and technical data

- Water heaters ПЭ, ППЭ type are intended to heat washing and fresh drinking water



Technical data, main parameters and characteristics

Index	Volume, l	Voltage, V	Power, kW	Volumetric flow rate, l/h, under the temperature drop	
				35 °C	60 °C
ПЭ 100/12	100	220/380	12	295	175
ПЭ 100/24	100	220/380	24	590	345
ПЭ 100/35	100	220/380	34,8	850	500

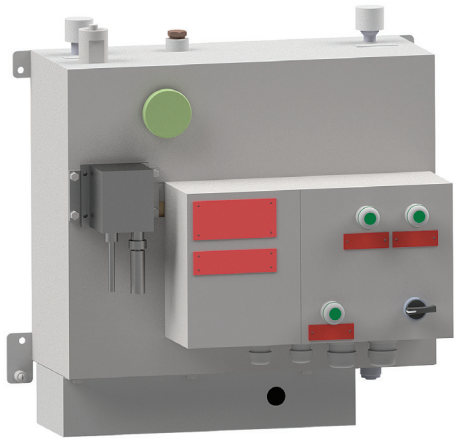
Index	Volume, l	Characteristics of the steam heating			
		Volumetric flow rate, l/h, max, under the temperature drop		Pressure of dry saturated steam under max capacity, MPa	Flow of dry saturated steam under max capacity, kg/h
		35 °C	60°C		
ППЭ 100/24	100	1700	1000	0,5(5,0)	120
ППЭ 100/35	100	1700	1000	0,5(5,0)	120
ППЭ 200/35	200	5000	3000	0,5(5,0)	370
ППЭ 500/35	500	1300	8000	0,5(5,0)	980
ППЭ 500/70	500	1300	8000	0,5(5,0)	980

Characteristics of the electric heating			
Power, kW	Voltage, V	Volumetric flow rate, l/h, under the temperature drop	
		35 °C	60°C
12	220/380	295	175
24	220/380	590	345
34,8	220/380	850	500
34,8	220/380	850	500
35	220/380	850	500
70	220/380	1700	1000

Flow-through hot-water heater ПВ-15

Function and technical data

- The hot-water heater is intended to prepare hot water for sanitary and daily living needs



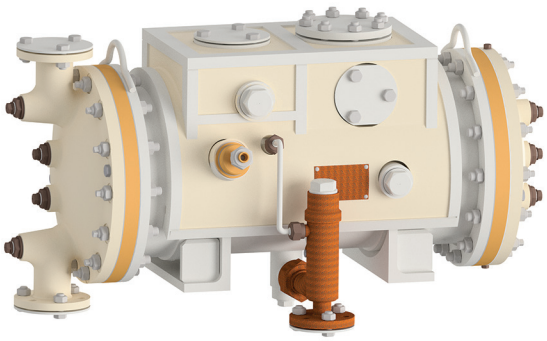
Technical data, main parameters and characteristics

Index	ПВ-15
Designation	ИУШД.065115.082
Power, kW	15
Medium	Fresh water under Sanitary Regulations and Standards 1.2.3685-21
Operating pressure, WP, max, MPa (kgf/cm²)	0,45(4,5)
Capacity, max, l/min	5±0,5
Max outlet temperature of the water to be pumped, °C	65±5
Voltage, V	380
Weight, kg - dry - active	 64 85
Protection degree	IP44
Overall dimension, LxWxH, mm	510x336x525

Exhausted steam condensers XB type

Function and technical data

- Exhausted steam condensers are installed on ships of all types and purposes, and are intended to condense steam and cool condensate.



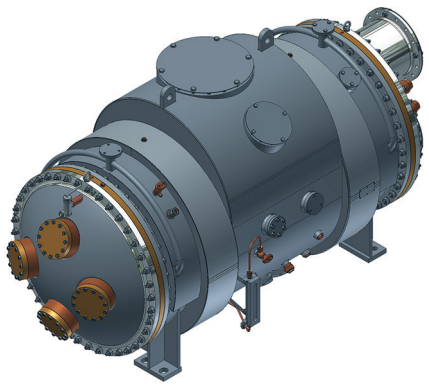
Technical data, main parameters and characteristics

№	Name	XB 4.3			XB 9.1			
		Modes						
		1	2	3	1	2	3	4
1	Steam, entering the condenser:							
	Flow rate, kg/h	450	–	600	2100	2300	2700	5600
	Max pressure, MPa (kg/cm²)	0,5 (5,0)	–	0,5 (5,0)	0,3 (3,0)	–	–	0,3 (3,0)
2	Condensate, entering the condenser:							
	Flow rate, kg/h	600	1900	–	2700	3000	1640	–
3	Outlet temperature of the condensate, K, °C	343 (70)			318 (45)			353 (80)
4	Pressure, MPa (kg/cm²)	0,1 (1,0)			0,015 (0,15)			0,1 (1,0)
5	Cooling water:							
	Flow rate, kg/h	1000			150 000			170 000
	Pressure, MPa (kg/cm²)	0,35 (3,5)			0,3 (3,0)			
	Inlet temperature, K, °C	301 (28)			291 (18)			305 (32)
6	Cooling area, m²	4,5			23,1			
7	Size of heat-exchange tubes of the cooler (OD, WT), mm	16 x 1,5 16 x 1,0						
8	Q-ty of heat-exchange tubes							
	16x1,5	15			35			
	16x1,0	123			311			

Exhausted steam condensers XB200 type

Function and technical data

- Condensers are installed on ships of the unrestricted navigation and intended for the steam condensation and condensate depression.
- Type – surface integral condenser with flat tubes, two-way as per the cooling medium.



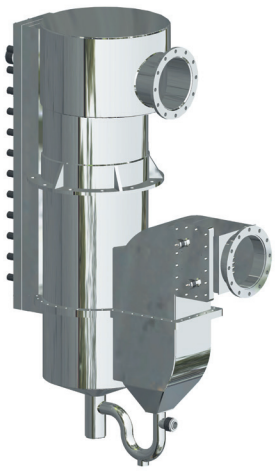
Technical data, main parameters and characteristics

№	Name	Mode		
		I	II	III
1	Steam, entering the condenser:			
	Flow rate, kg/h	24,0		24,0
	Temperature before the humidification, °C	265		300
2	Exhausted steam, entering the condenser:			
	Flow rate, kg/h	2,5	2,5	2,5
	Max possible flow rate, t/h	–	5,0	5,0
	Inlet temperature, °C	185	185	185
	Pressure, MPa (kgf/cm²)	0,103 (1,03)	0,103 (1,03)	0,103 (1,03)
3	Condensate for humidification:			
	Flow rate, kg/h	2,0		3,96
	Pressure, MPa (kgf/cm²)	0,5–0,7 (5–7)		0,5–0,7 (5–7)
4	Outlet temperature, °C	65		
5	Pressure in the condenser	atmospheric		
6	Max pressure, defined by the setting of the relief valve on the steam-supply pipeline, MPa (kgf/cm²)	0,4 (4)		
7	Cooling medium:	sea water		
	Flow rate, kg/h	800,0	500,0	600,0
	Pressure, MPa (kgf/cm²)	0,4 (4)	0,4 (4)	0,4 (4)
	Inlet temperature, °C	33	21	23
	Permissible pressure loss, MPa (kgf/cm²), max	0,035 (0,35)	0,035 (0,35)	0,035 (0,35)
8	Cooling surface, m²	176,2		
9	Heat-exchange tubes:			
	Size (OD, WT), mm	16 x 1,5		
	q-ty, pcs.	1754		
10	Dry weight, kg, max	5000		
11	Active weight, kg, max	6100		

Air-steam drier

Function and technical data

- Air-steam driers are intended to dry air-steam mixture in the air cleaning system, emitted by units of main and auxiliary sets as well as of refrigeration apparatuses.



Technical data, main parameters and characteristics

Index	OBC 1-2	OBC 4/4
Mass flow rate of the air-steam mixture, kg/h (kg/sec)	380(0,1)	298,8(0,083)
Mass flow rate of steam vapor of the air-steam mixture, kg/h (kg/sec)	60(0,016)	29,88-34,92(0,0083-0,0097)
Inlet temperature of the air-steam mixture,	10-70	65
Inlet pressure of the air-steam mixture, MPa (kgf/cm²)	0,004-0,04(0,04-0,4)	-
Absolute inlet pressure of the air-steam mixture, MPa (kgf/cm²)	-	0,125(1,25)
Outlet parameters of air: a) temperature, b) humidity, %, max c) absolute moisture load, g/kg, max	 28-35 70 -	 45 94 33
Mass flow rate of the moisture, extracted out of the mixture, discharged out of the drier, kg/h, max	56	-
Mass flow rate of the cooling water, kg/sec (kg/h)	0,97(3500)	1,39(5004)
Heat flux in the cooler, W (kcal/h)	46520(40000)	-
Temperature of the cooling water,: - specified - permissible	 -	 15 22

Index	OBC 1-2	OBC 4/4
Inlet temperature of the cooling water,	5-9	-
Cooling area, m²	7,1	-
Pressure of the cooling water, MPa (kgf/cm²)	4(40)	1,0(10,0)
Heat flux in the heater, W (kcal/h)	2093	-
Heating surface area, m²	0,073	-
Pressure resistance of the water loop of the drier, MPa (kgf/cm²)	-	0,04-0,01(0,4-0,1)
Air flow resistance of the air-steam loop, MPa (kgf/cm²)	-	0,007(0,7)
Heat duty of the heater, W	-	290,7
Size of heat-exchange tubes (OD, WT), m	-	0,16x0,001
Q-ty of heat-exchange tubes, pcs.	-	151
Heat duty of the cooler, W	-	24450
Mass flow rate of the heating steam, kg/h	3,3	-
Pressure of the heating steam, MPa (kgf/cm)	0,2-1,5(2-15)	-
Temperature of the heating steam,	270-300	-
Size of heat-exchange tubes of the cooler (OD, WT), m	-	0,01x0,001
Q-ty of heat-exchange tubes of the cooler, pcs.	-	400
Total heat exchange surface area, m²	-	4
Weight, kg: Dry Active	 239 245	 413 453
Allowable weight variation, %	From + 2,5 up to - 6,0	

Flow-through oil heater ПМП-1500

Function and technical data

- The heater is intended to heat hydraulic oil.

Technical data, main parameters and characteristics

Index	ПМП-1500
DN	32
Capacity, m³/h	1,5
Medium	Л3-КТ3 oil spec. 0253-021-5694358; Б-3В oil spec. 38.101295; Тп-22, Тп-30, Тп-46 hydraulic oil ГОСТ 9972
Operating pressure , MPa	0,4
Temperature of the medium, °C	Inlet: from +5 up to +20; Outlet: from +55 up to +70
Power, kW	39
Weight, LxWxH, mm	448/ 281/ 775
Dry weight, kg	89
Control board/location	Yes/separately
Maintenance area (availability)	Removal height of heating elements

Note

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