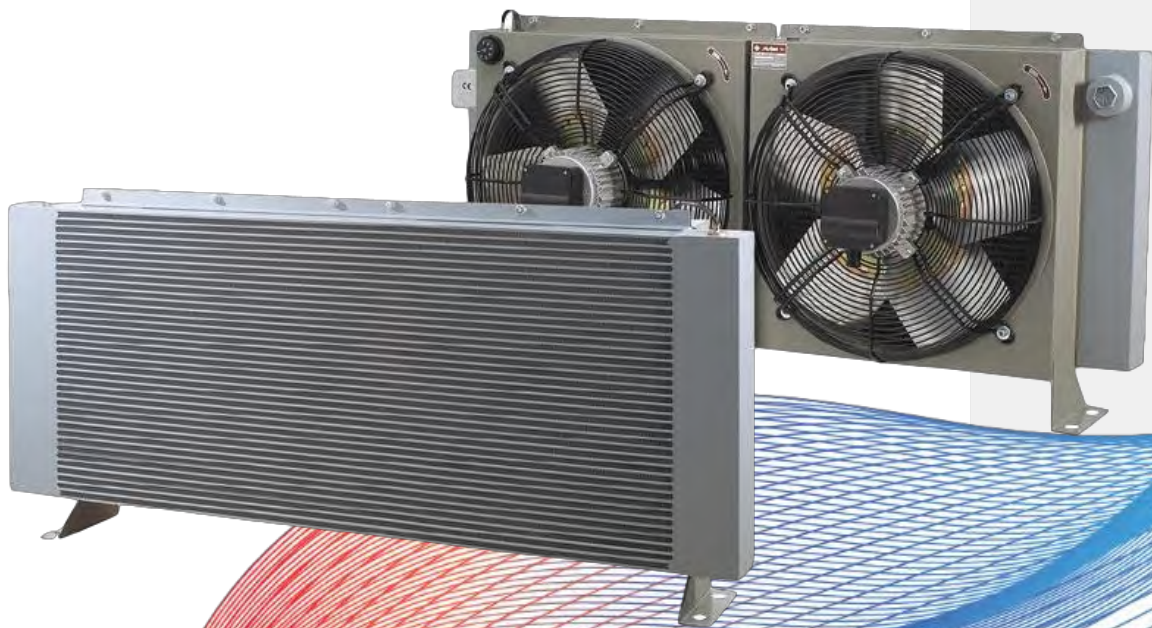


**sesino**

**AIR - OIL coolers**  
**AC motor driven**  
**AP range catalogue**



air - oil coolers

stationary applications  
mobile applications  
marine & ATEX applications

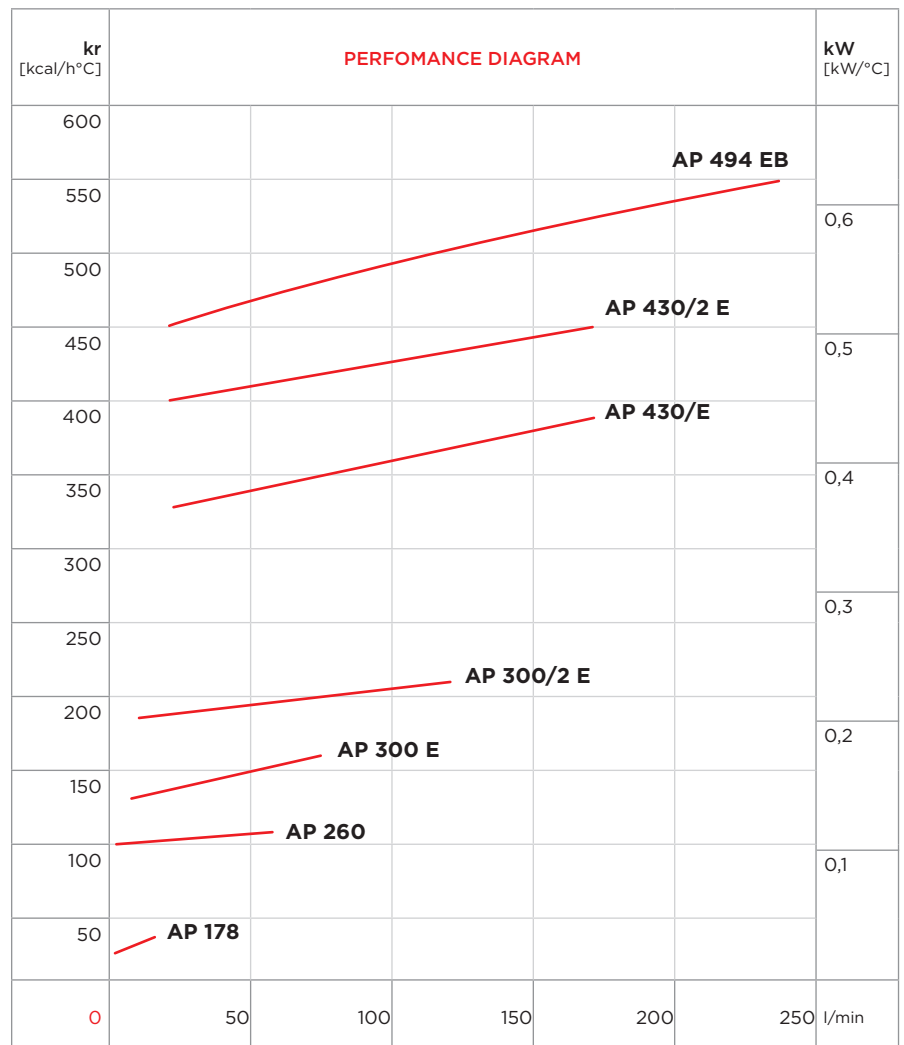
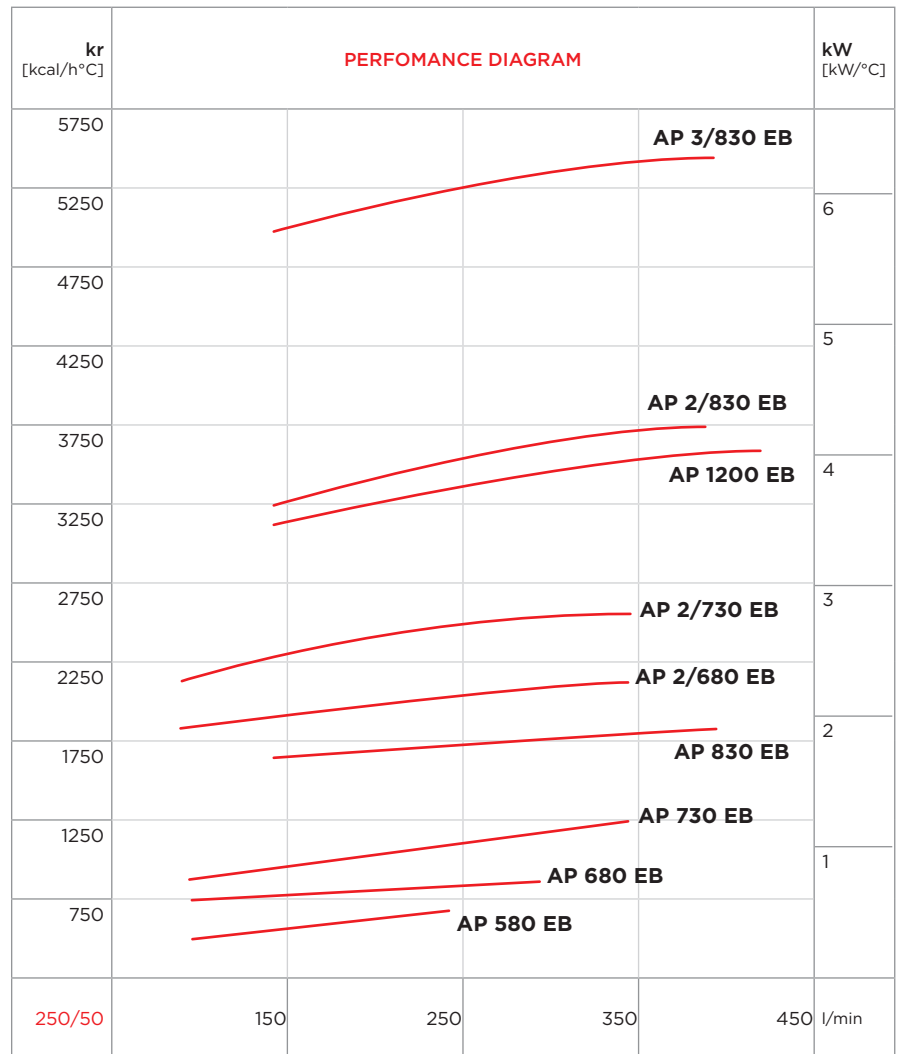
**mdt**

authorised regional warehouse  
and distributor of Sesino SPA

[www.mdtco.com](http://www.mdtco.com)

# AC MOTOR AIR OIL COOLERS

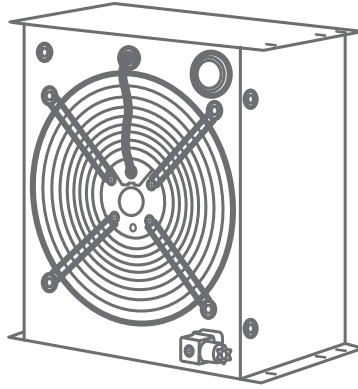
## 5D G9F =9G



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# AC MOTOR AIR-OIL HEAT EXCHANGERS

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The advantage of using air into the cooling of oleo hydraulic systems has its bases on the following facts:

- There is no need of water
- The system is independent of the connection to the water main
- Lower working costs in comparison with the water-oil exchangers, even if the starting investment is higher
- Possibility to use warm air to heat the room in winter.

The particular structure of the cooling element allows great thermic performances and pressure resistance. **Maximum working static pressure: 20 bar; test pressure: 35 bar.**

Our technical Department is available to suggest and find the better solution in case of particular working conditions, pressures, frequencies, vibrations, etc.

It is always recommended to assemble in parallel with the exchanger a by-pass valve to avoid extreme counter-pressures, particularly when the machine is started with cold oil. On the contrary, it is not useful to use a check valve as by-pass to protect the exchanger from pressure's peaks, since the inertia of the valve itself is too high in comparison with the speed of the pressure waves that occur into the oleo hydraulic systems.

The flow rates shown in the tables are the ones recommended for the exchanger proper working.

The efficiency curves show the specific exchange capacity in kcal/h°C or in kW/°C according to the different oil rates. To calculate the heat quantity the different exchangers are able to dissipate it is enough to multiply such capacity by the difference between the requested oil temperature and the summer room temperature.

The electric system of these exchangers is already wired, according to EN 20204 Regulation.

Starting from the type AP 300, all the exchangers of this series are equipped with an adjustable thermo switch, which allows keeping the oil temperature between 30°C and 90°C, according to the different needs.

Particular attention is paid to the noise of our fans that, working into industrial factories and close to the operators, should have low noise levels but at the same time should have the proper exchange efficiency.

For the right calculation of air-oil heat exchangers, we supply our customers with a calculation program on CD-ROM or that can be downloaded from our website.

The air-oil heat exchangers can be used to cool other kind of fluids, which must be compatible with aluminium and its alloys.

However, for each use, with the exception of oil cooling, we recommend to consult our Technical Department.

# AP 178 E



## PURCHASE CODES

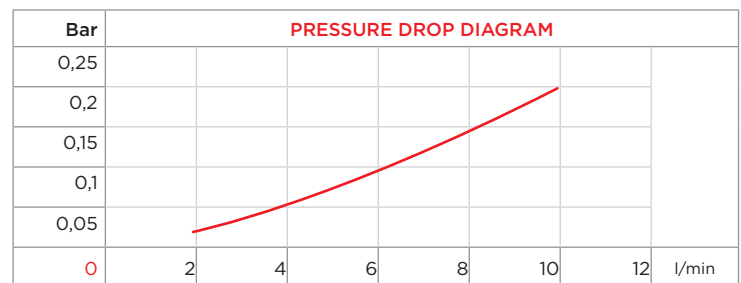
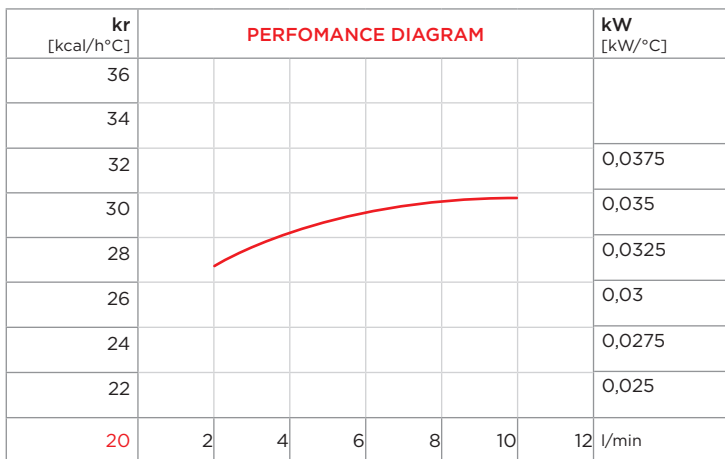
AP 178 E single-phase

3RAP178



## SPARE PARTS

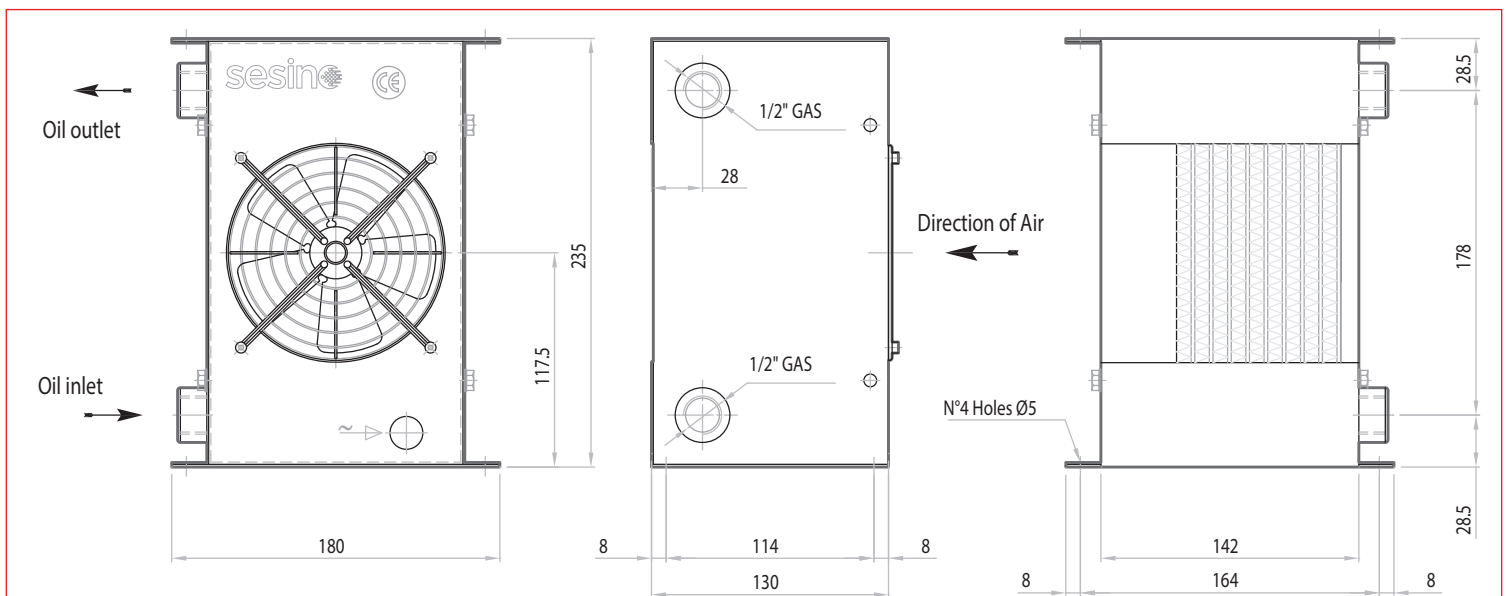
Cooling element	1RO92302
Fan grill	1GPR178
Frame	3CN178.1
Housing	3TL178.1
Electric Fan for 3RAP178	1VNAP178230



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m³/h	IP	dB(A)	kg	mm
1-10	0,5	230	50/60	19/18	1,2/1,1	125	54	55	4	125

# AP 260



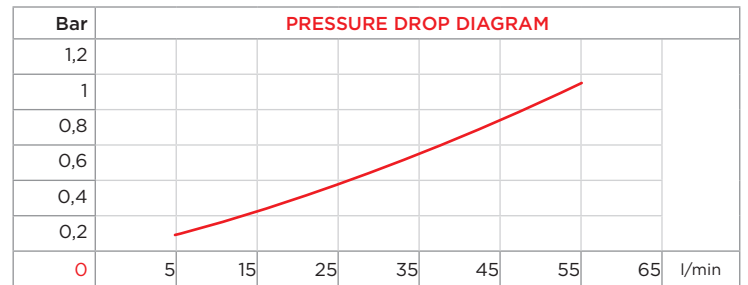
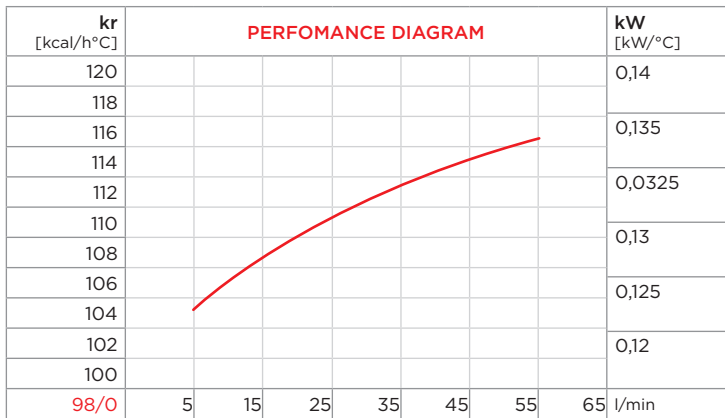
## PURCHASE CODES

AP 260 E single-phase	3RAP260T1
AP 260 E three-phase	3RAP26038T1



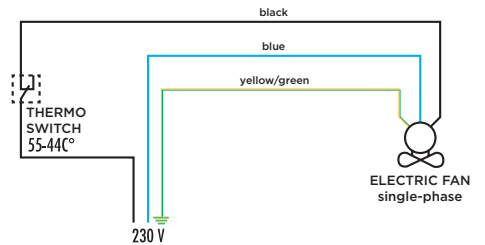
## SPARE PARTS

Cooling element	3RNAP260
Thermo-switch 55-42 IP54	1TRM55-42
Frame	3CNAP260CA.1
Electric Fan for 3RAP260T1	1VNA2E200.1
Electric Fan for 3RAP26038T1	1VNA2D200

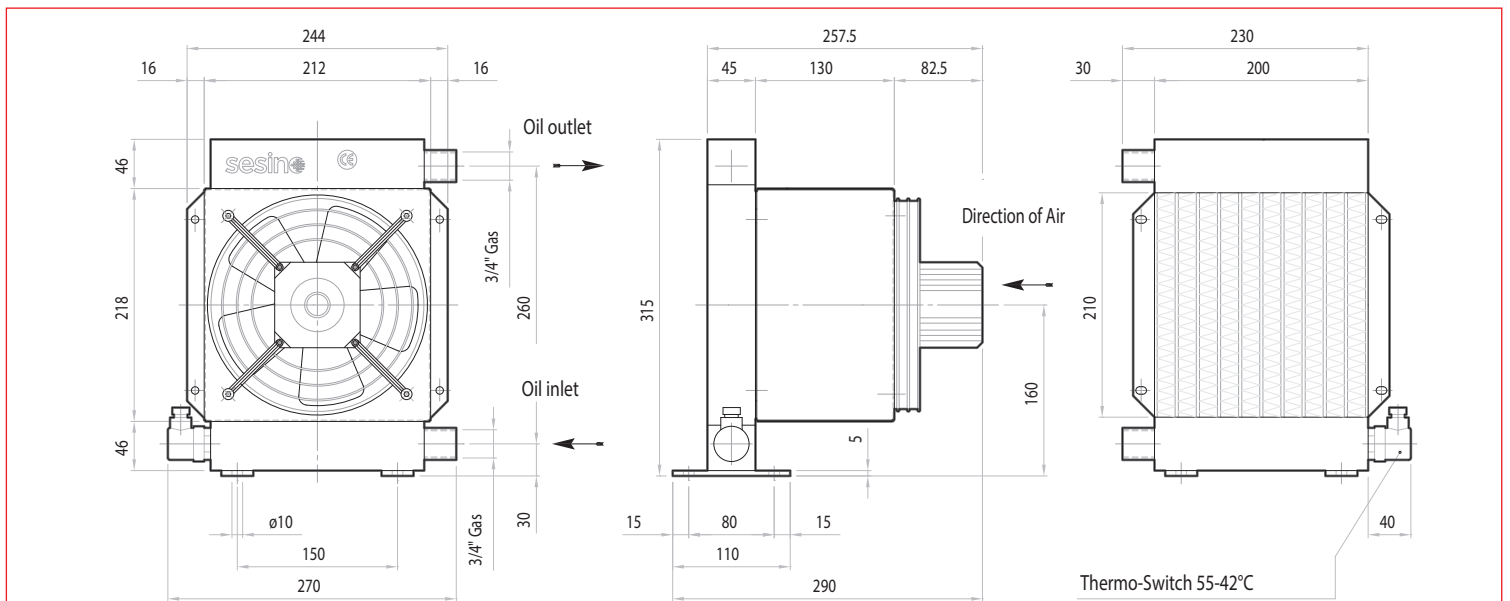


**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7



- Dimensions and technical characteristics are not binding



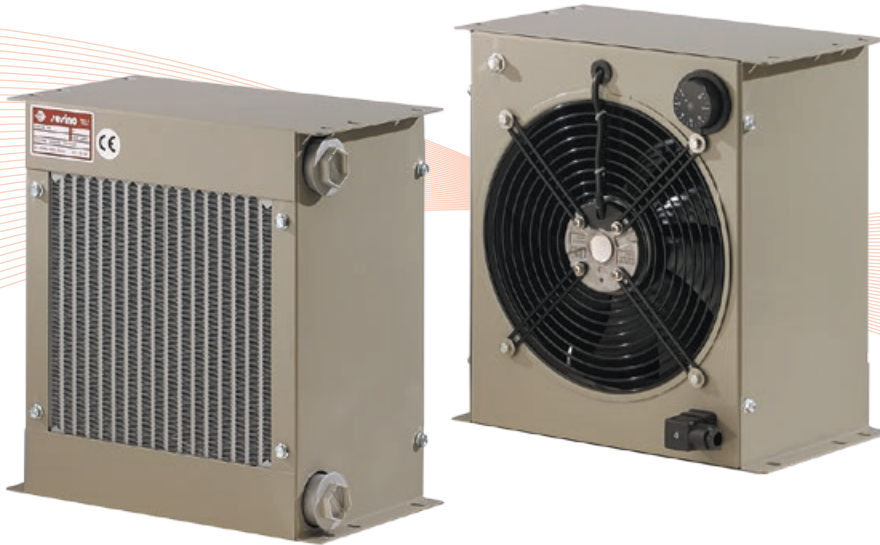
OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m³/h	IP	dB(A)	kg	mm
50-60	1,2	230/240	50/60	18/62	0,27	630	54	55	6	200
50-60	1,2	400	50/60	68/70	0,17/0,13	630	54	55	6	200

# AP 300 E



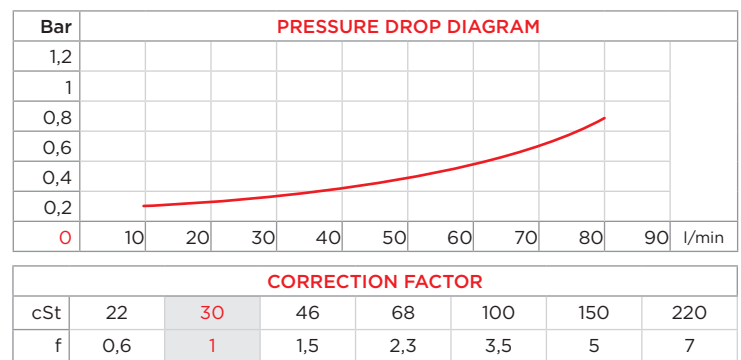
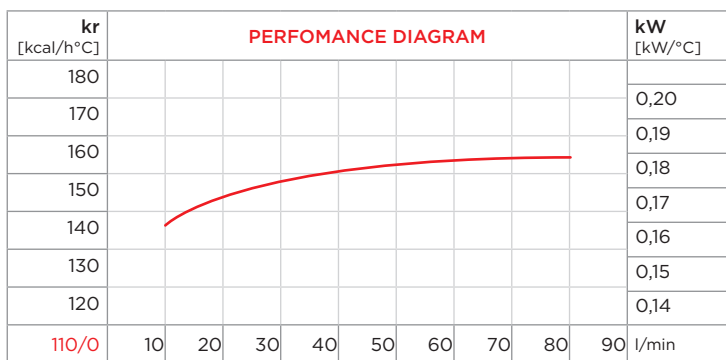
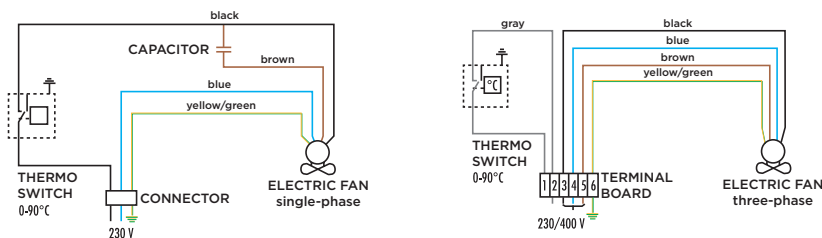
## PURCHASE CODES

AP 300 E single-phase	3RNAP300
AP 300 E three-phase	3RAP30038

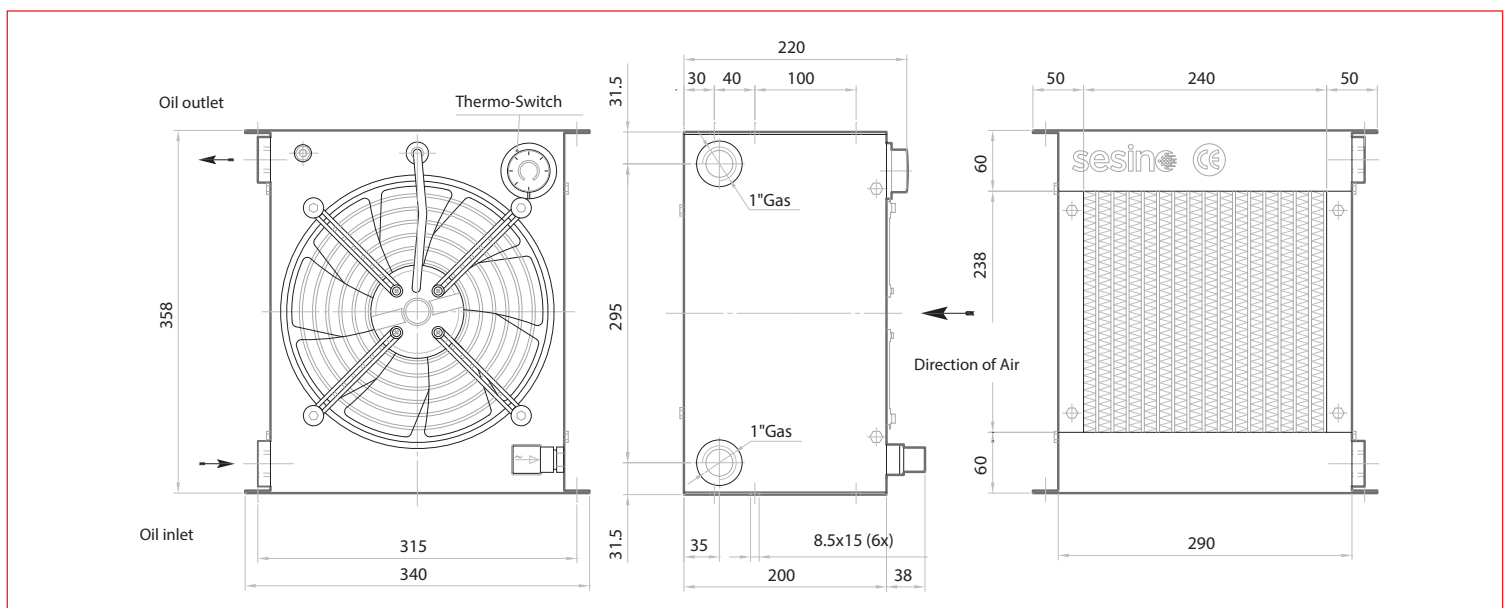


## SPARE PARTS

Cooling element	3RNAP300
Frame	3CNAP300
Housing	1300TLV
Adjustable thermo-switch	1TRMO-90
Electric fan for 3RNAP300	1VNA2E250G
Electric fan for 3RAP30038	1VNA2D250.2
Electric junction box for 3RAP30038	1CSSDSAREL



- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m³/h	IP	dB(A)	kg	mm
10-80	2	230	50/60	115/150	0,51/0,66	910	54	74	12	250
10-80	2	400	50/60	0,20/0,23	100/140	950	54	73	12	250

# AP 300 2/E



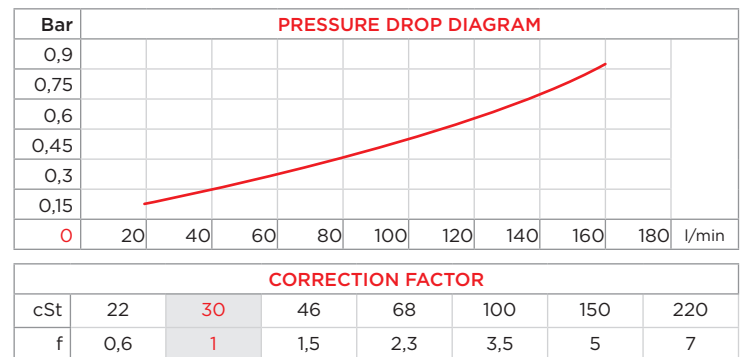
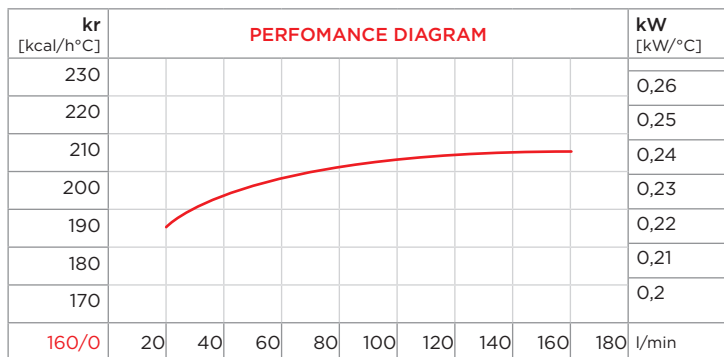
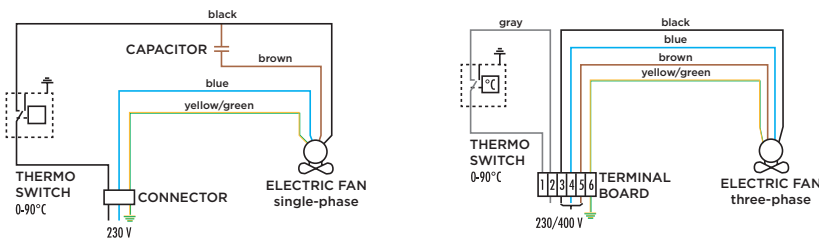
## PURCHASE CODES

AP 300/2 E single-phase	3RAP302
AP 300/2 E three-phase	3RAP30238

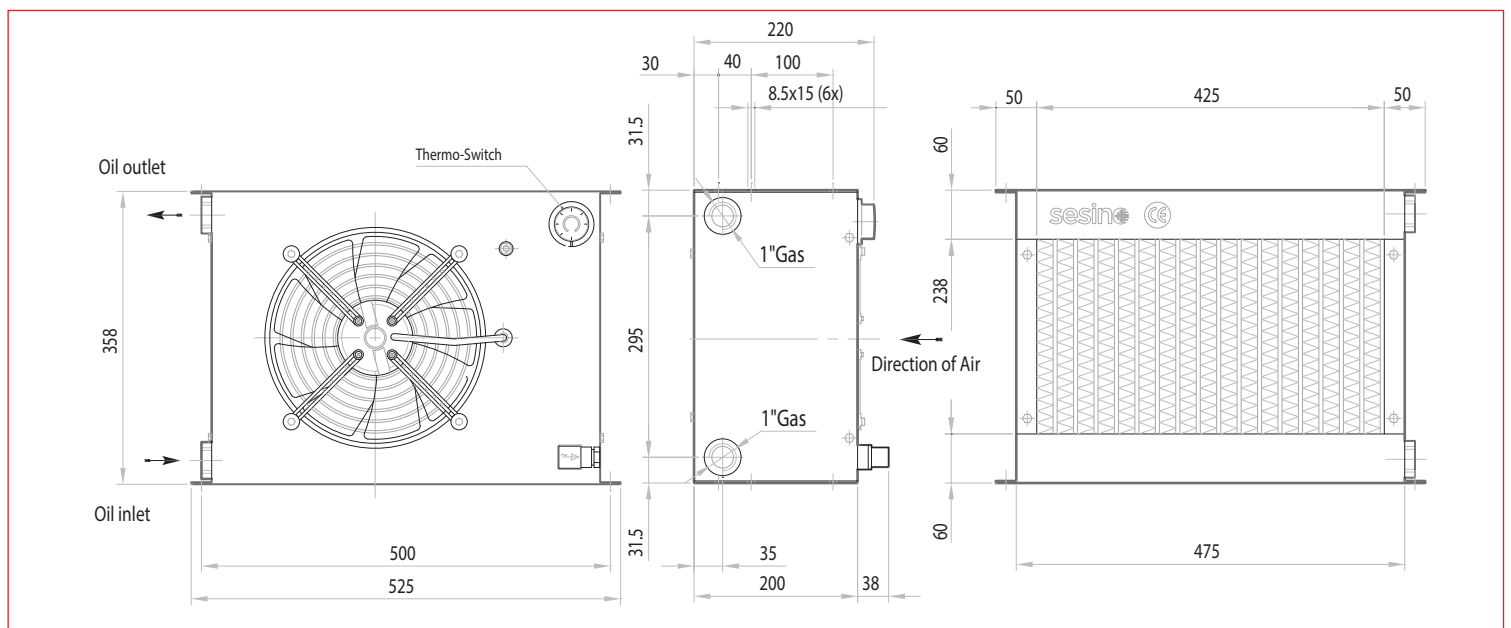


## SPARE PARTS

Cooling element	3RNAP302
Frame	3CNAP302
Housing	13O2TLV
Adjustable thermo-switch	1TRMO-90
Electric fan for 3RAP302	1VNA2E250G
Electric fan for 3RAP30238	1VNA2D250.2
Electric junction box for 3RAP30038	1CSSDSAREL



- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m³/h	IP	dB(A)	kg	mm
20-160	3,6	230	50/60	115/150	0,51/0,66	1.300	54	75	17	250
20-160	3,6	400	50/60	0,20/0,23	100/140	1.300	54	73	12	250

# AP 430 E



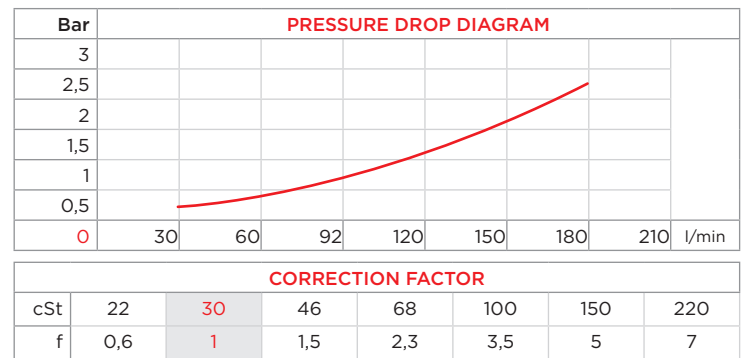
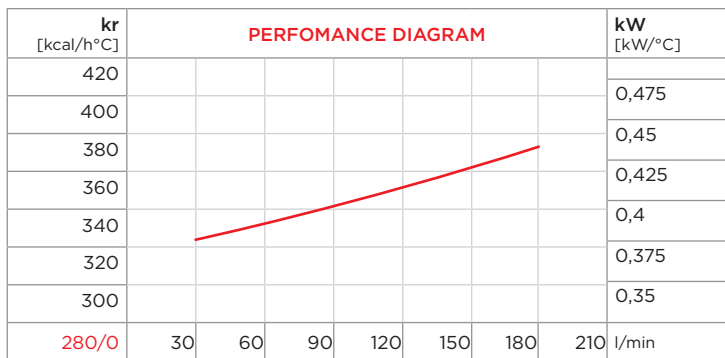
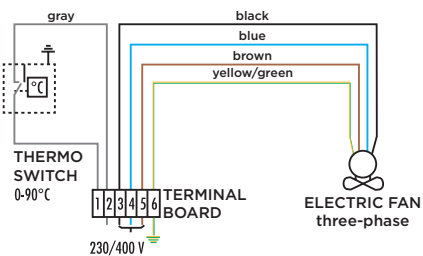
## PURCHASE CODES

AP 430 E three-phase

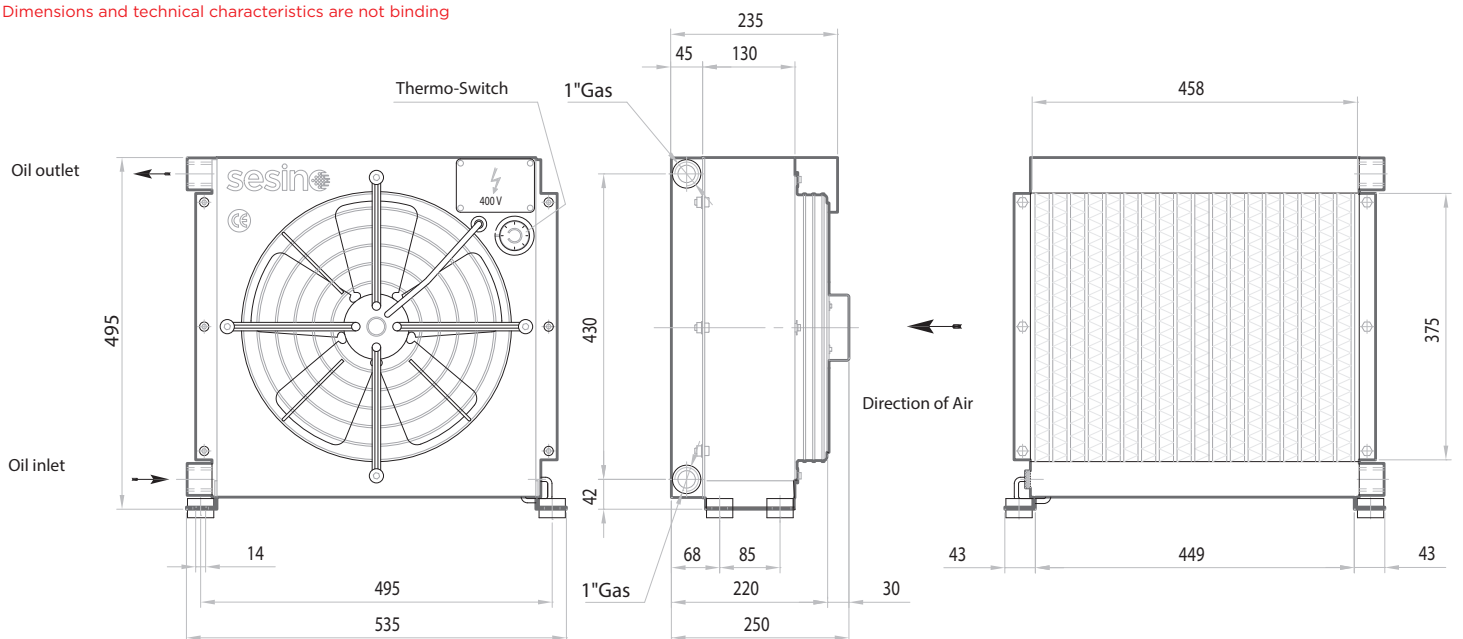
3RAP430

## SPARE PARTS

Cooling element	3RNAP430E
Frame	1430CNV
Adjustable thermo-switch	1TRM0-90
Shock isolating mounting (4 pcs)	3KIT4511
Electric Fan for 3RAP430	1VNELCO43038DV
Electric junction box for 3RAP430	1CSSDSAREL



- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
30-180	3,6	Δ 230 Y 400	50	110/205	0,67/0,39	2.750	55	73	18	350
30-180	3,6	Δ 265 Y 460	60	110/200	0,57/0,33	2.750	55	73	18	350

# AP 430 2/E



## PURCHASE CODES

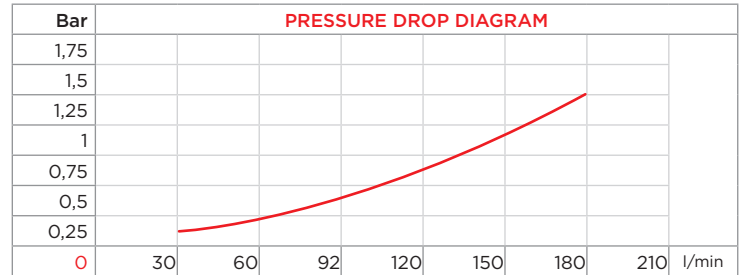
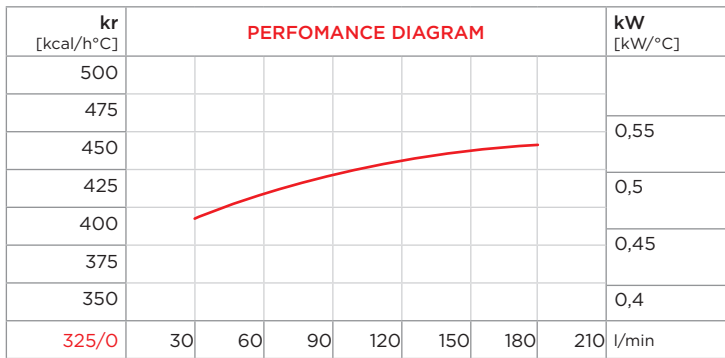
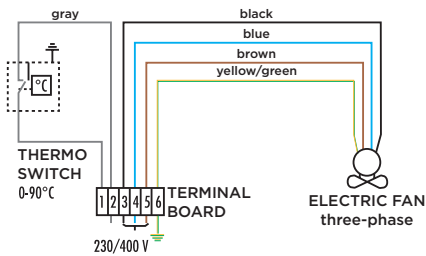
AP 430 2/E three-phase

3RAP432.1



## SPARE PARTS

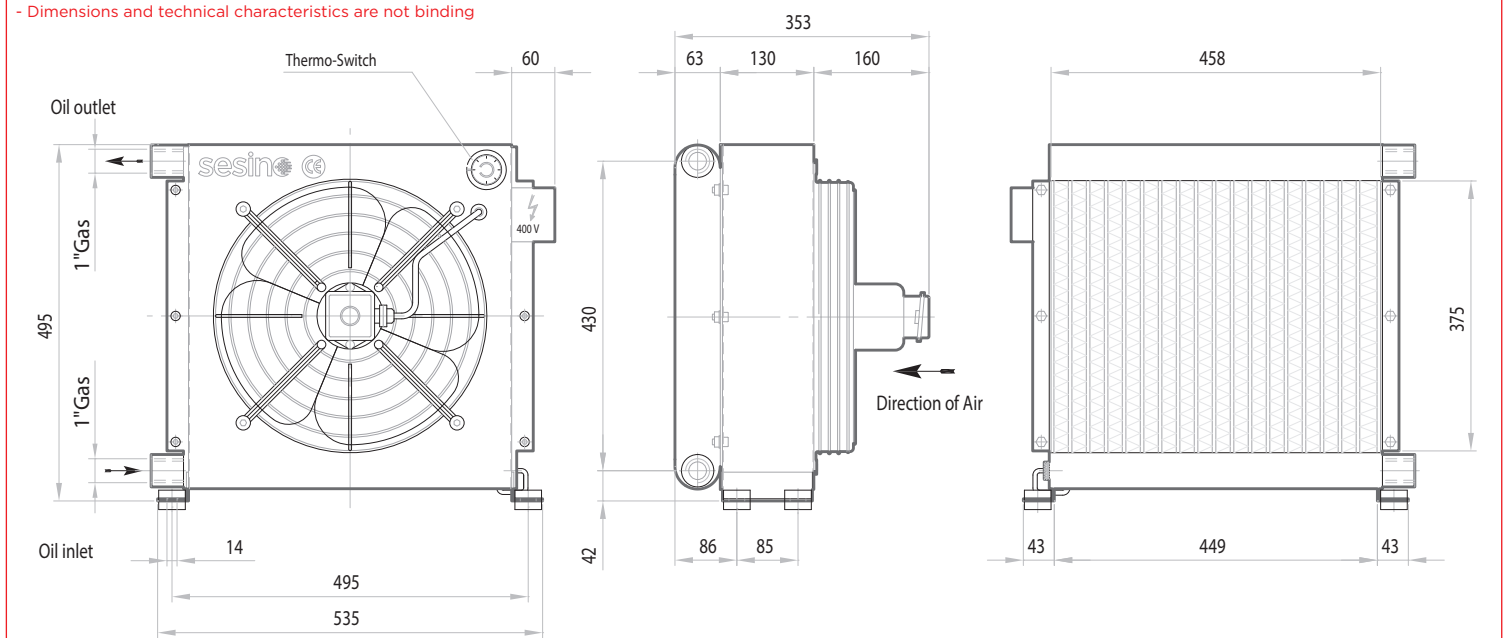
Cooling element	3RNAP432E
Frame	1432CNV
Adjustable thermo-switch	1TRMO-90
Shock isolating mounting (4 pcs)	3KIT4511
Electric Fan for 3RAP432.1	1VNELCO43238DV1
Electric junction box for 3RAP432.1	1CSSDSAREL



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
30-180	5,5	Δ 230 Y 400	50	110/180	0,57/0,33	2.700	55	72	24	400
30-180	5,5	Δ 265 Y 460	60	145/260	0,68/0,39	3.500	55	72	24	400

# AP 494 EB



## PURCHASE CODES

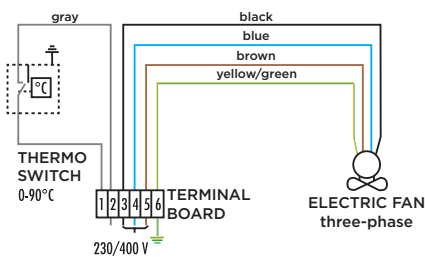
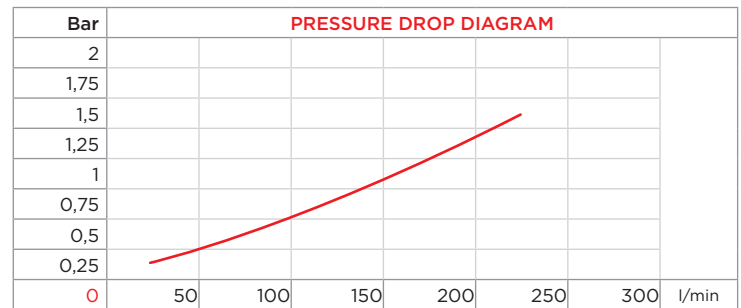
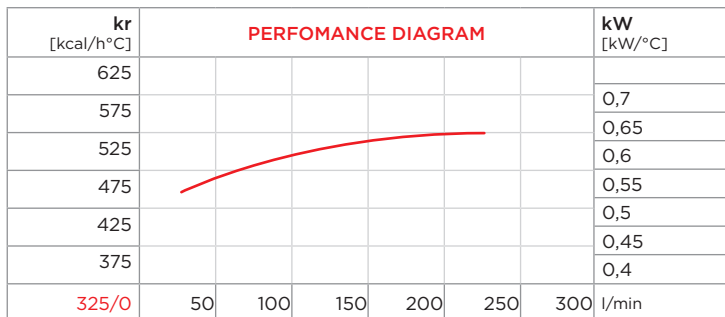
AP 494 EB three-phase

**3RAP494EB**



## SPARE PARTS

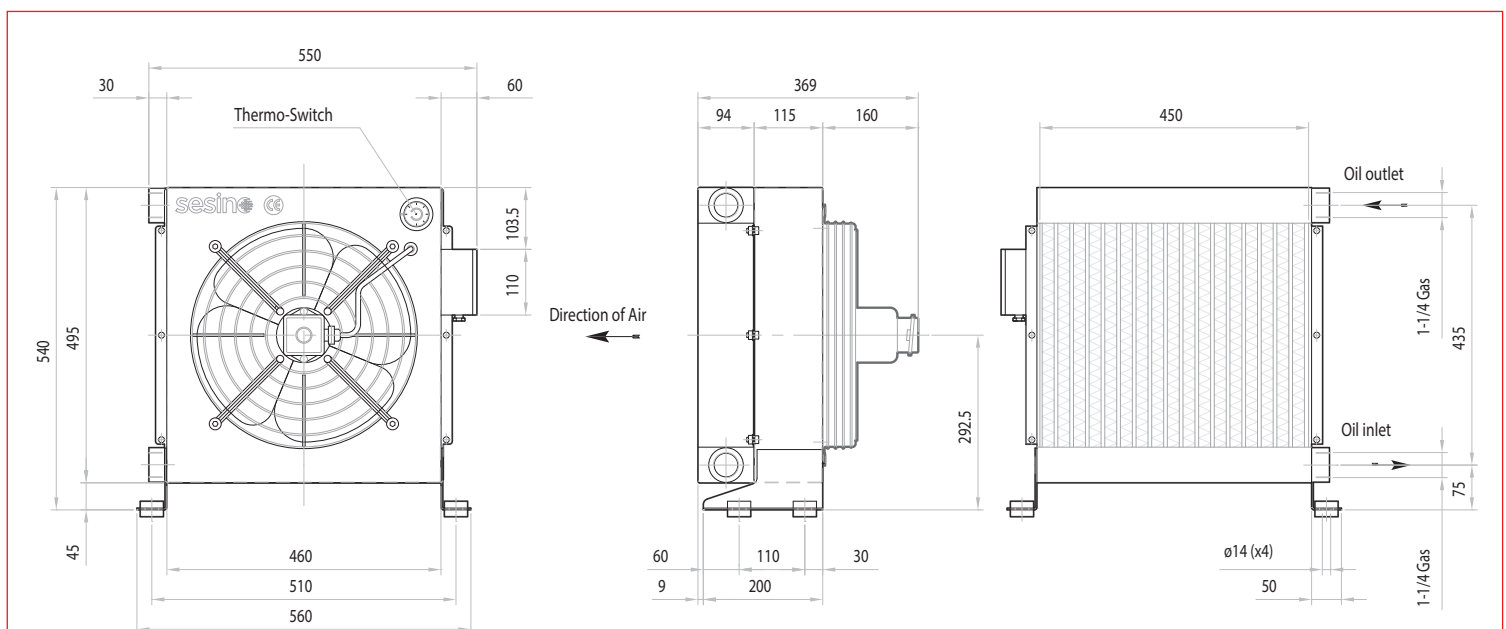
Adjustable thermo-switch	1TRMO-90
Shock isolating mounting (4 pcs)	3KIT4135
Electric junction box	1CSSDSAREL
Frame	3CNAP494EB.1
Cooling element	1RO99332
Electric fan	1VNELCO43238DV1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m³/h	IP	dB(A)	kg	mm
30-240	8	Δ 230 Y 400	50	110/180	0,57/0,33	2.750	55	72	28	400
30-240	8	Δ 265 Y 460	60	145/260	0,68/0,39	3.300	55	73	28	400

# AP 580 EB



## PURCHASE CODES

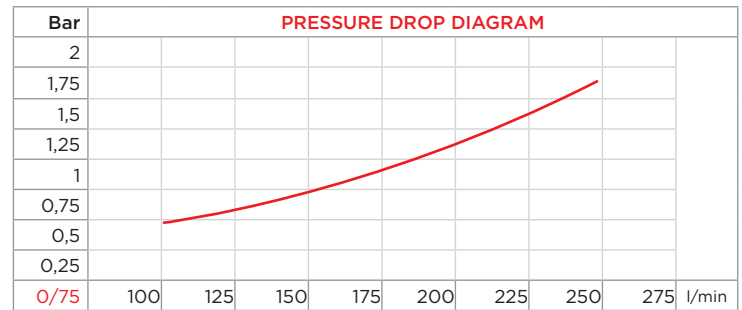
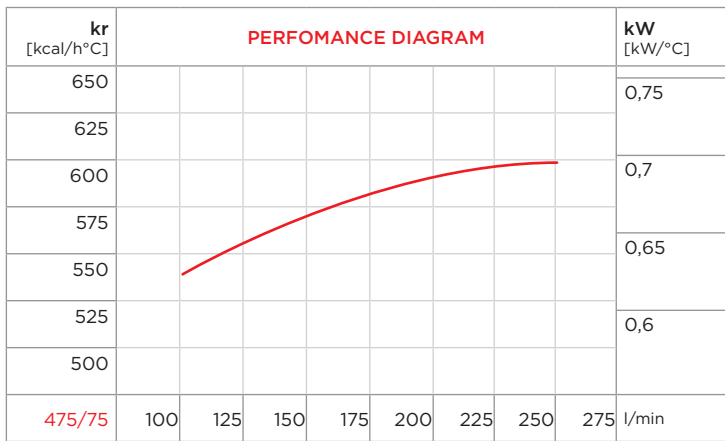
AP 580 EB three-phase

**3RAP580EB**



## SPARE PARTS

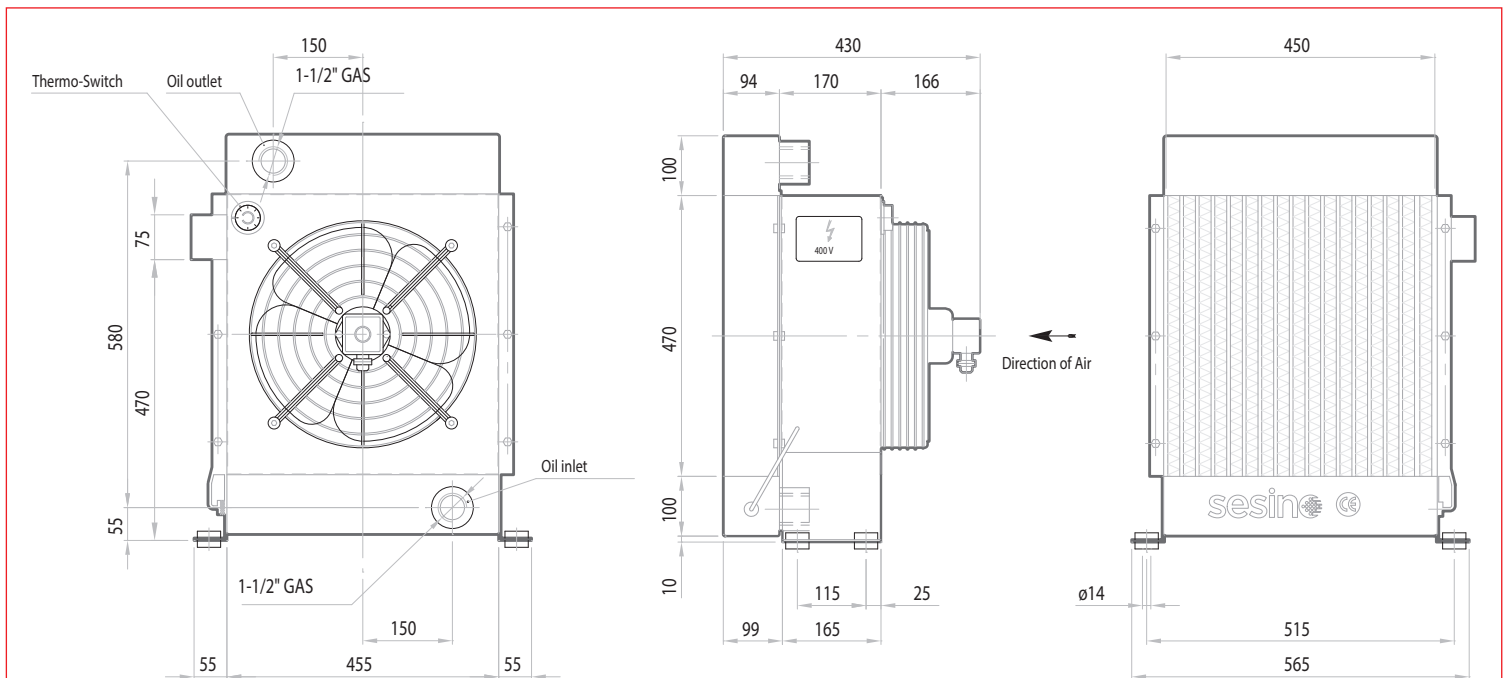
Adjustable thermo-switch	1TRMO-90
Shock isolating mounting (4 pcs)	3KIT4135
Electric junction box	1CSSDSAREL
Cooling element	3RNAP580E
Electric fan	1VNELCO43238DV1
Frame	3CNAP580EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
100-250	11,5	Δ 230 Y 400	50	110/180	0,57/0,33	3.500	55	72	40	400
100-250	11,5	Δ 265 Y 460	60	145/260	0,68/0,39	4.800	55	72	40	400

# AP 680 EB



## PURCHASE CODES

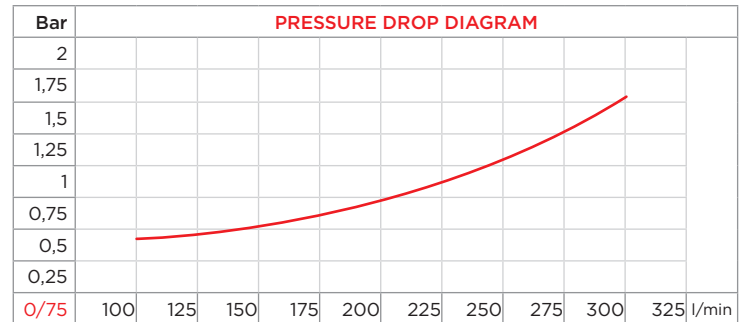
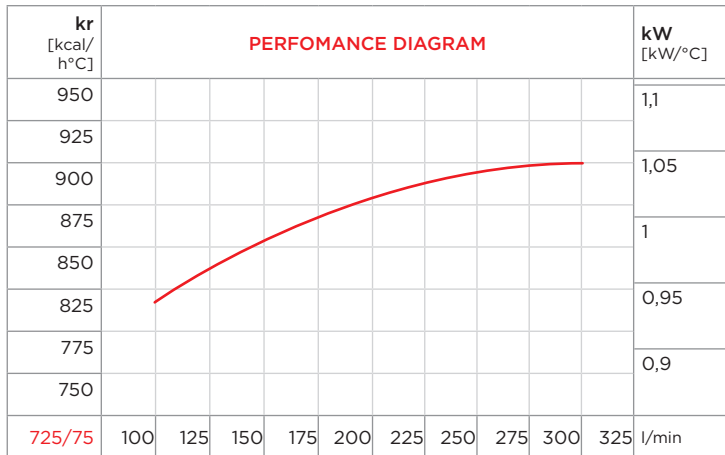
AP 680 EB three-phase

**3RAP680EB**



## SPARE PARTS

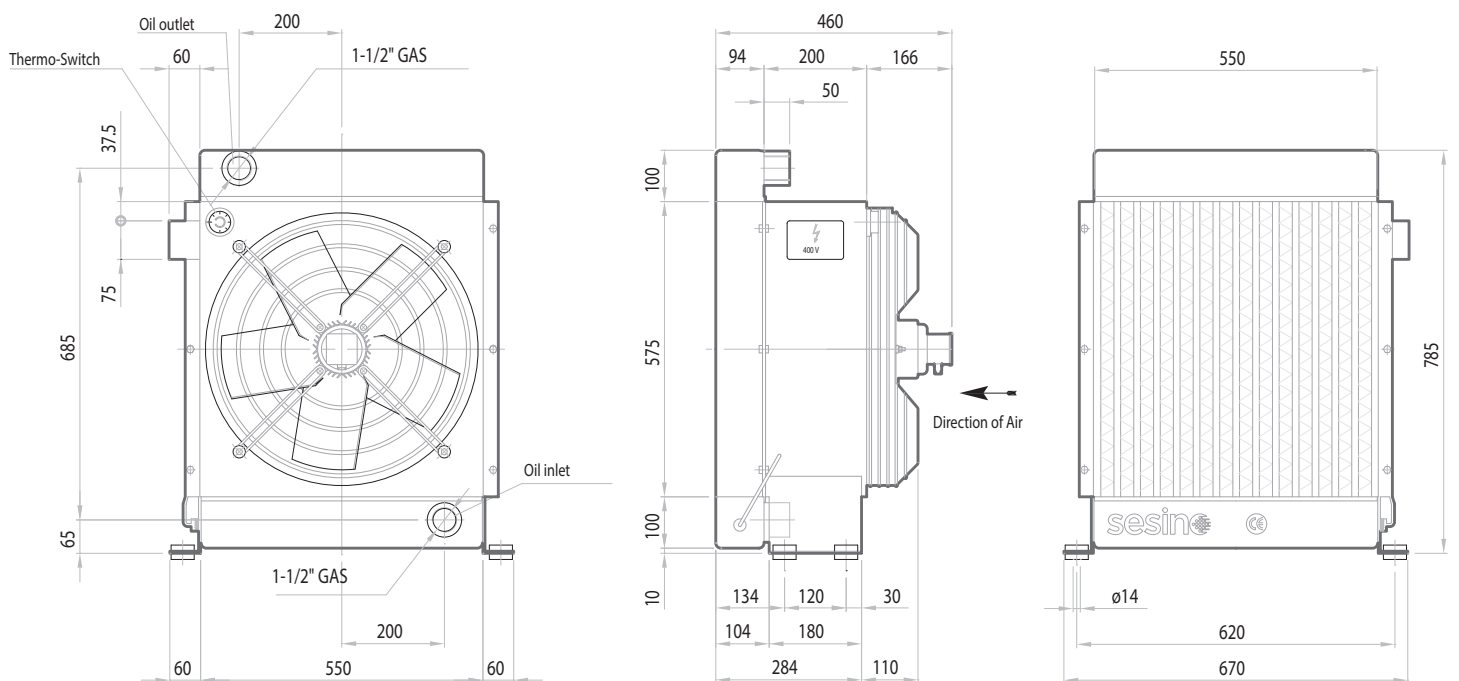
Adjustable thermo-switch	1TRMO-90
Shock isolating mounting (4 pcs)	3KIT4135
Electric junction box	1CSSDSAREL
Cooling element	3RNAP680E
Electric fan	1VNA4D500DV
Frame	3CNAP680EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
100-300	15	230/400	50	690	2,34	6.300	54	72	62	500
100-300	15	277/480	60	1050	2,72	8.800	54	75	62	500

# AP 730 EB



## PURCHASE CODES

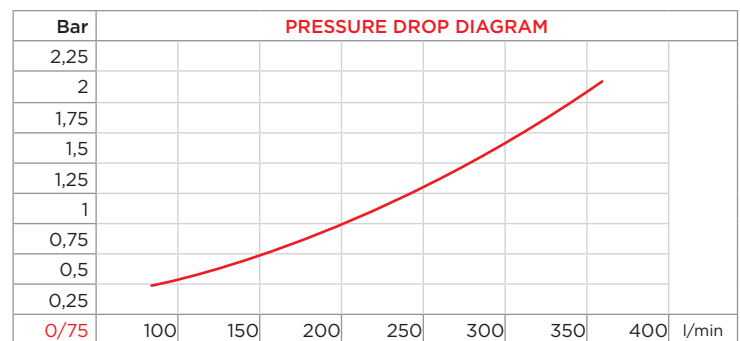
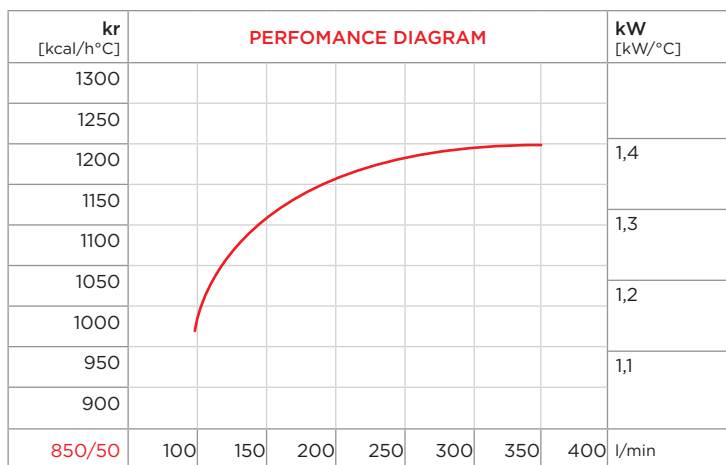
AP 730 EB three-phase

**3RAP730EB**



## SPARE PARTS

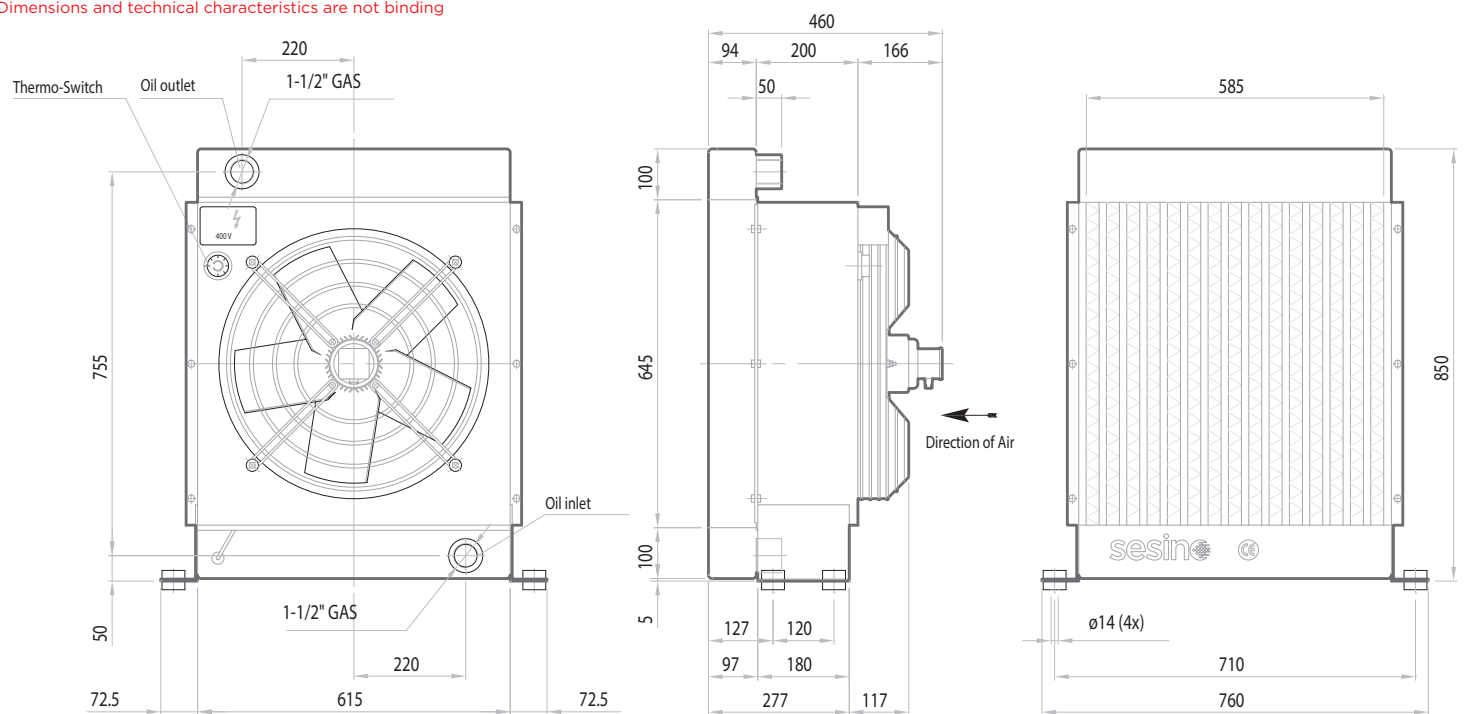
Adjustable thermo-switch	1TRMO-90
Shock isolating mounting (4 pcs)	3KIT4232
Electric junction box	1CSSDSAREL
Cooling element	3RNAP730E
Electric fan	1VNA4D500DV
Frame	3CNAP730EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
100-300	15	230/400	50	690	2,34	6.300	54	72	62	500
100-300	15	277/480	60	1050	2,72	8.800	54	75	62	500

# AP 830 EB



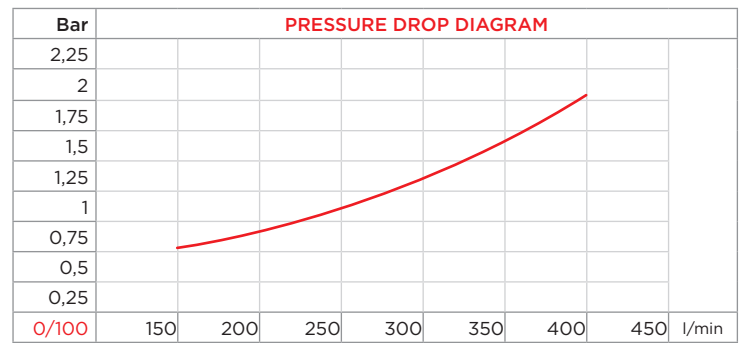
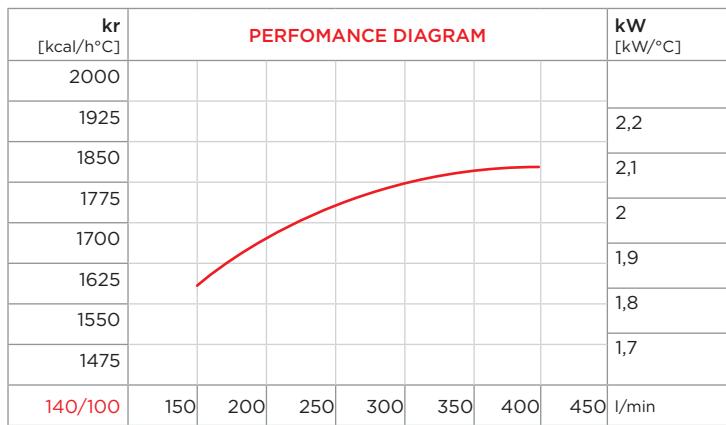
## PURCHASE CODES

AP 830 EB three-phase

**3RAP830EB**

## SPARE PARTS

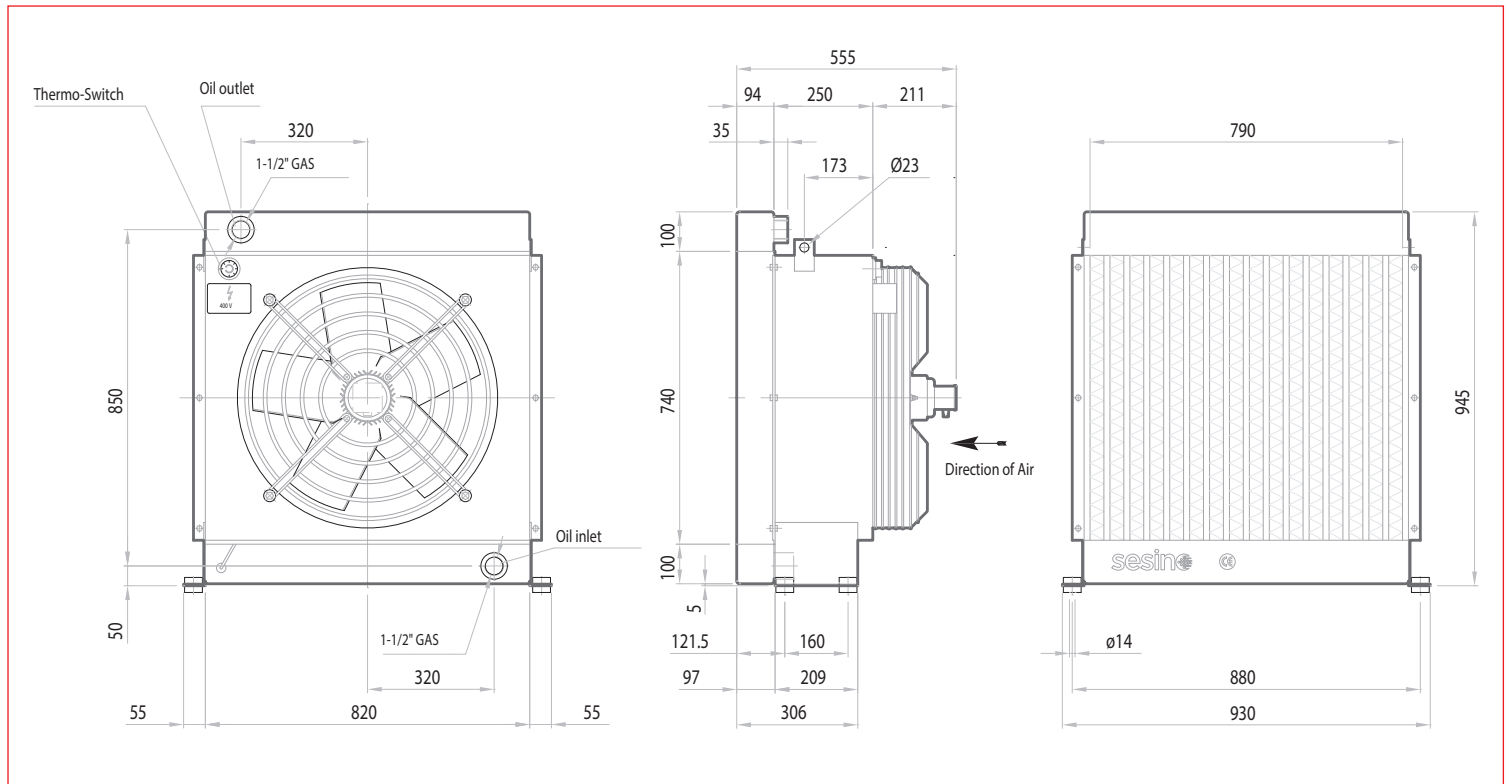
Adjustable thermo-switch	1TRM0-90
Shock isolating mounting (4 pcs)	3KIT4232
Electric junction box	1CSSDSAREL
Cooling element	3RNAP830E
Electric fan	1VNA4D560DV
Frame	3CNAP830EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
150-400	20	400	50	810	1,54	9.500	54	73	83	560
150-400	20	480	60	1300	1,94	11.500	54	75	83	560

# AP 1200 EB



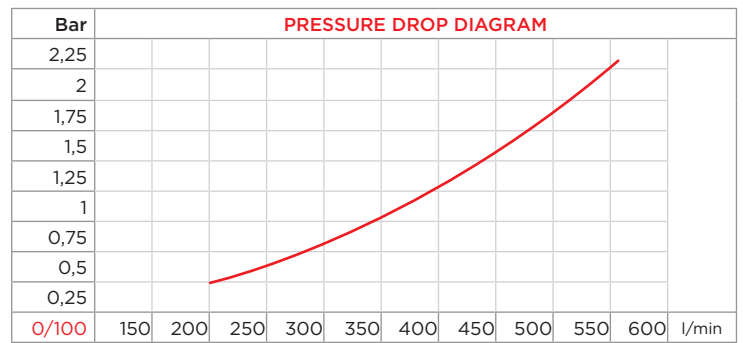
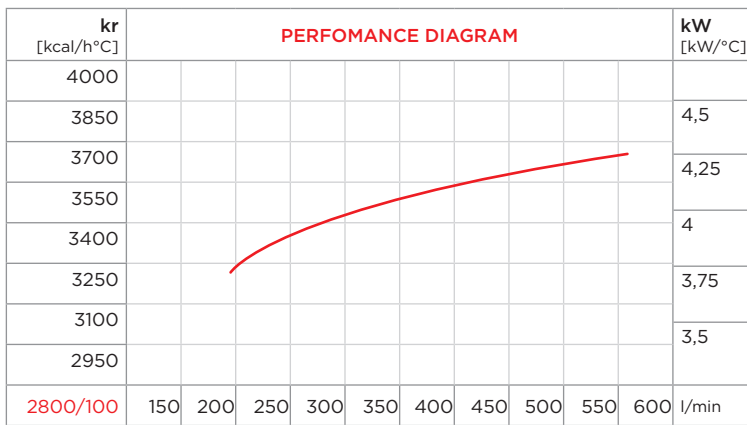
## PURCHASE CODES

AP 1200 EB three-phase

**3RAP1200EB**

## SPARE PARTS

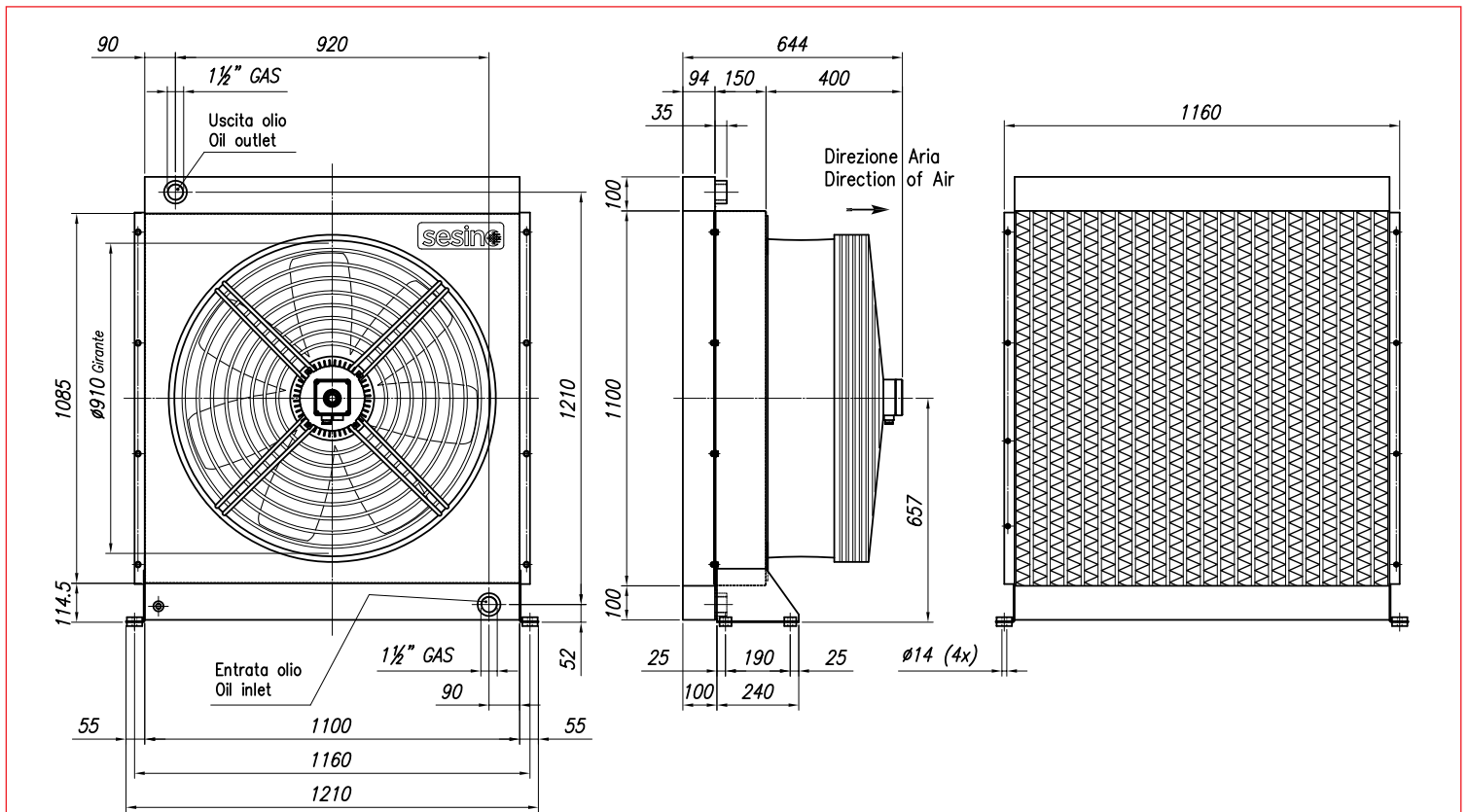
Frame	3CNEO08586.1
Shock isolating mounting (4 pcs)	3KIT4232
Cooling element	1RO08423
Electric fan	1VNEO08586



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	Ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
200-550	35	400	50	2100	5,2	20.000	54	76	135	910

# AP 2/680 EB

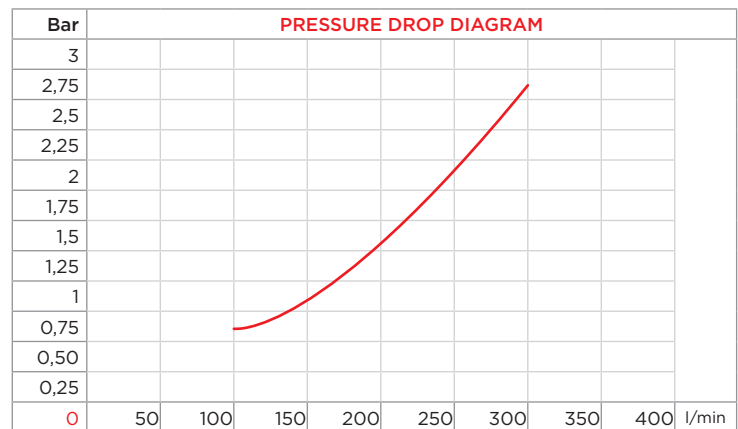
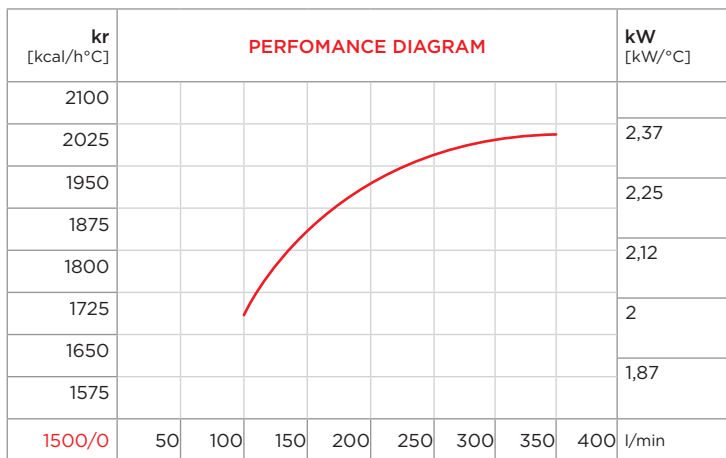
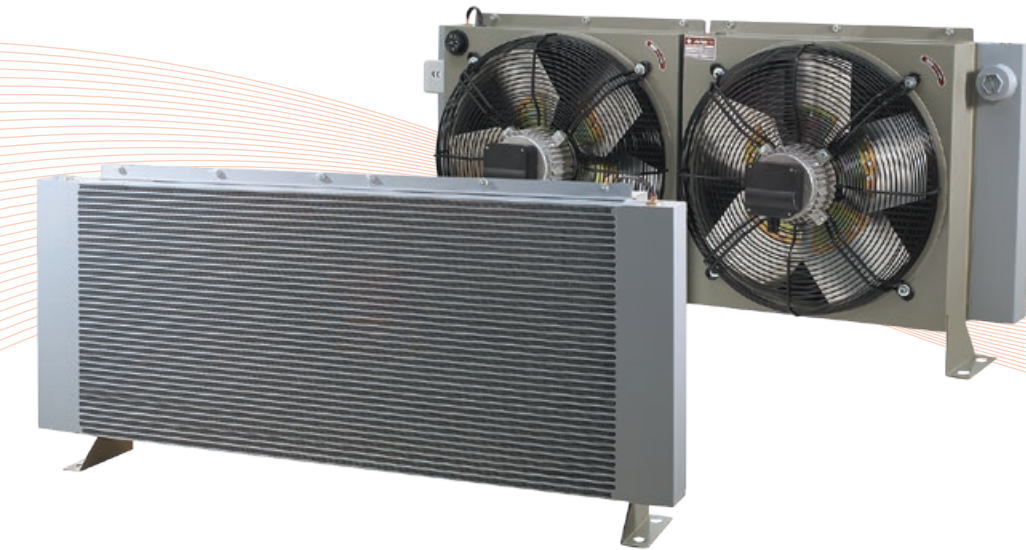


## PURCHASE CODES

AP 2/680 EB three-phase **3RAP2/680EB**

## SPARE PARTS

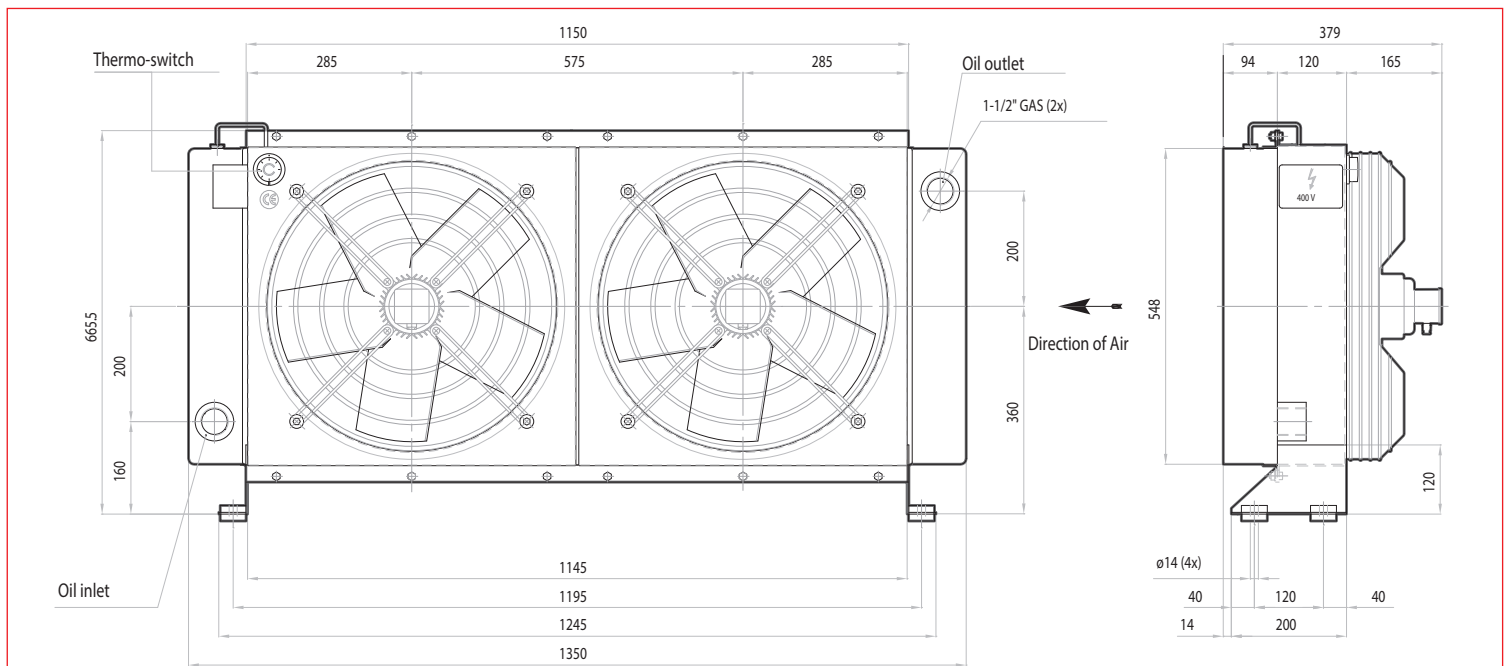
Thermo-switch	1TRM0-90
Shock isolating mounting (4 pcs)	3KIT4232
Electric junction box	1CSSDSAREL
Cooling element	1RO01339
Electric fan	1VNA4D500DV
Frame	3CNAP2/680EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
100-300	28	230/400	50	2x 690	2x 2,34	2x 6.300	54	75	120	500
100-300	28	277/480	60	2x 1050	2x 2,72	2x 8.800	54	77	120	500

# AP 2/730 EB



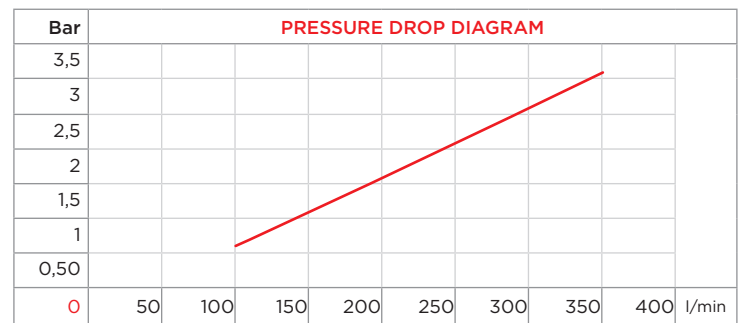
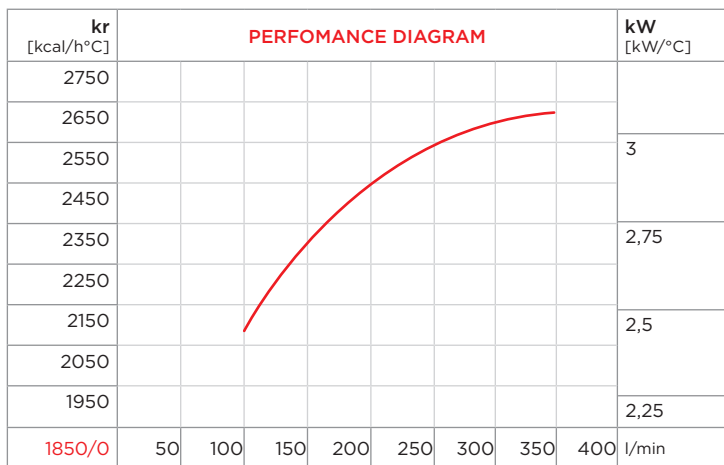
## PURCHASE CODES

AP 2/730 EB three-phase **3RAP2/730EB**



## SPARE PARTS

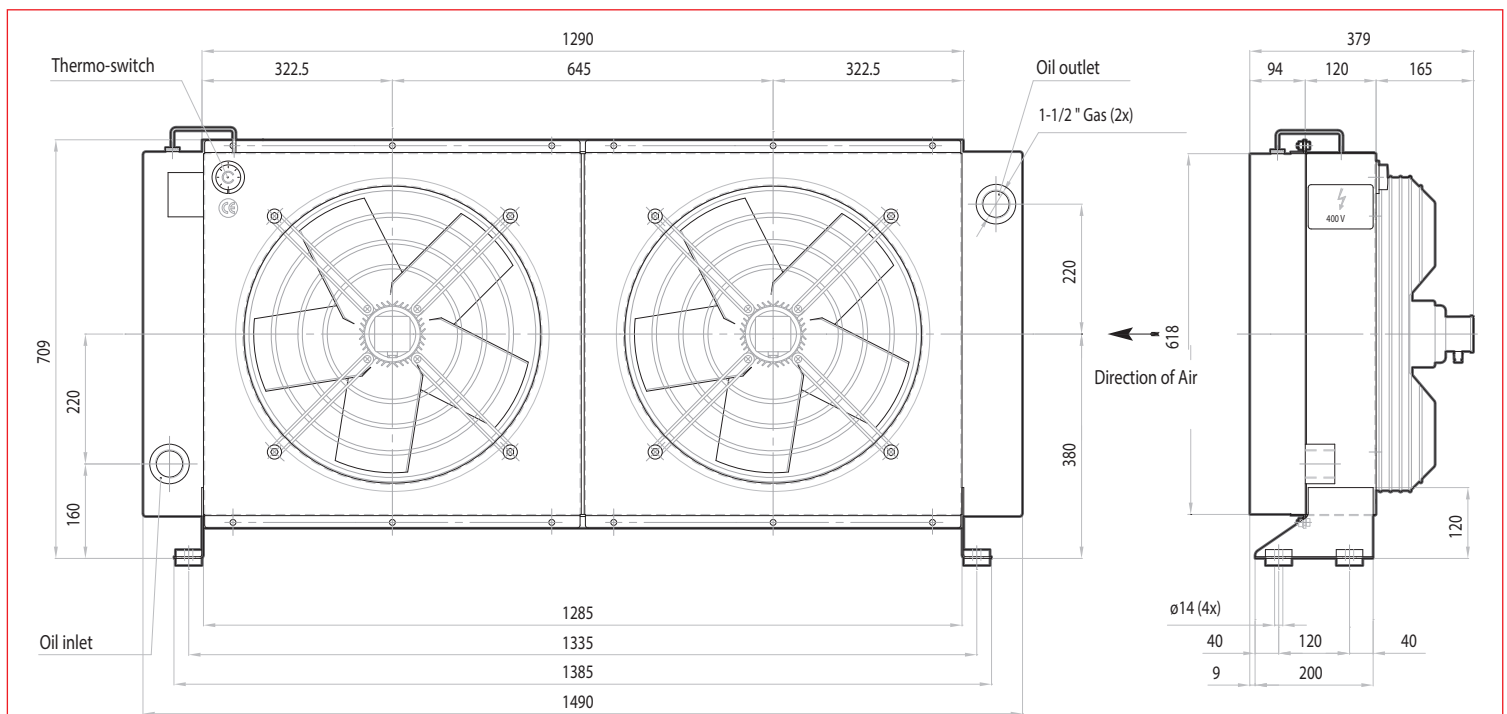
Thermo-switch	1TRM0-90
Shock isolating mounting (4 pcs)	3KIT4232
Electric junction box	1CSSDSAREL
Cooling element	1RO02357
Electric fan	1VNA4D500DV
Frame	3CNAP2/730EB.1



**CORRECTION FACTOR**

cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
100-350	30	230/400	50	2x 690	2x 2,34	2x 6.300	54	75	140	500
100-350	30	277/480	60	2x 1050	2x 2,72	2x 8.800	54	77	140	500

# AP 2/830 EB

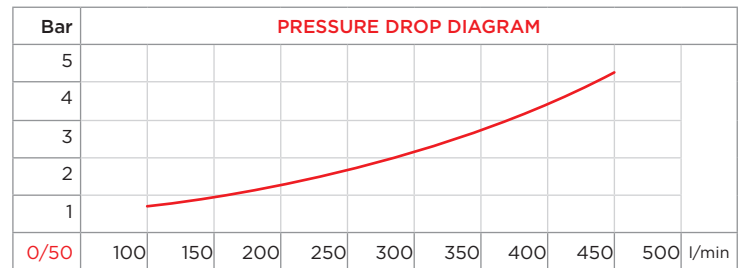
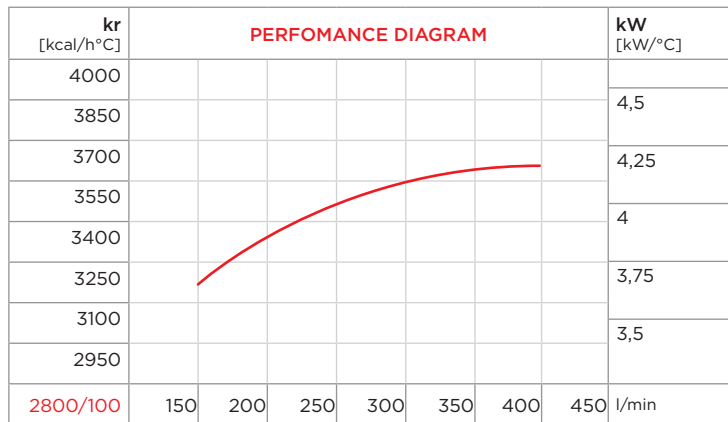


## PURCHASE CODES

AP 2/830 EB three-phase **3REO91247**

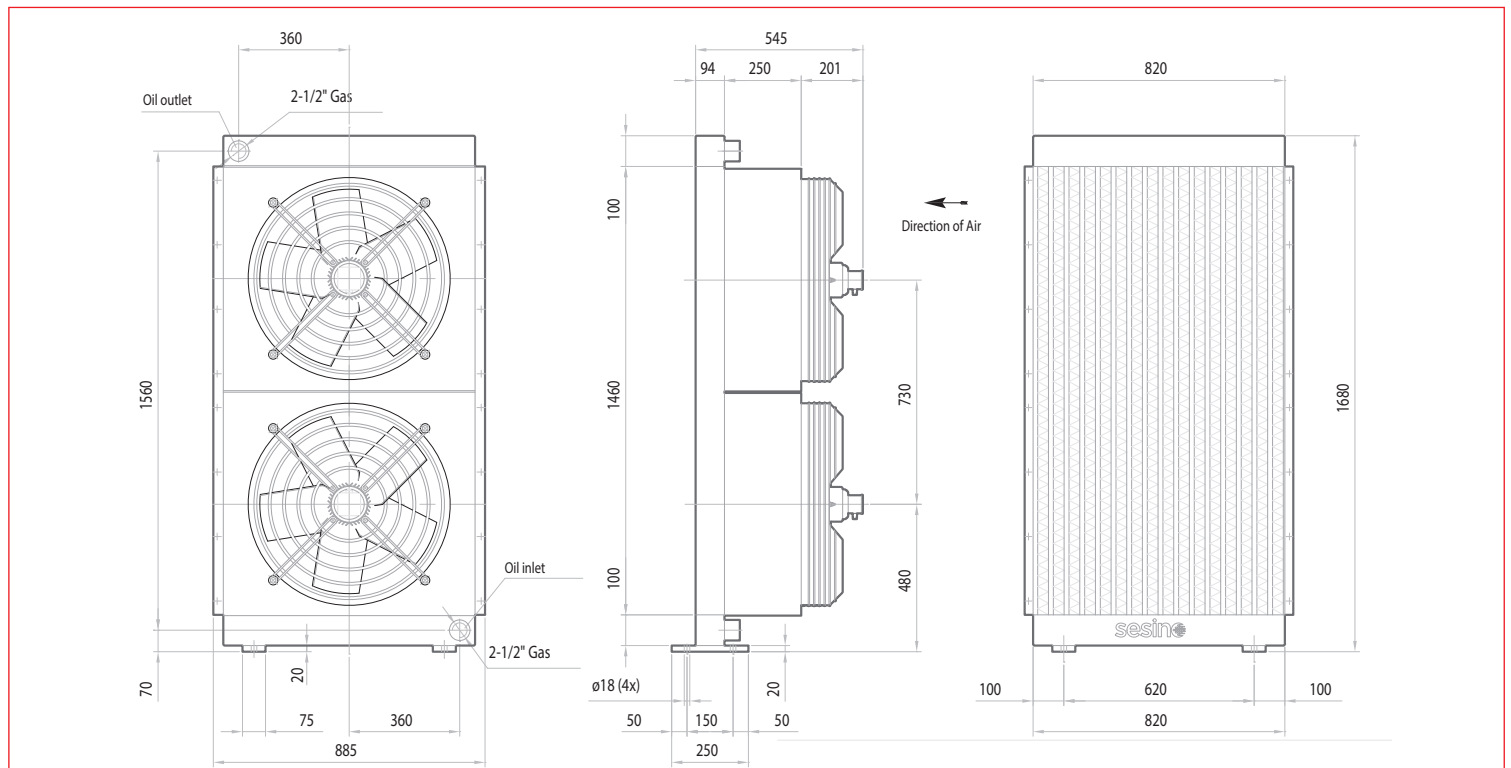
## SPARE PARTS

Frame	3CNE091247.1
Cooling element	3RNE091247
Electric fan for 3REO91247	1VNA4D560DV



CORRECTION FACTOR							
cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
150-400	40	400	50	2x 810	2x 1,54	2x 9.500	54	73	180	560
150-400	40	480	60	2x 1300	2x 1,94	2x 11.500	54	75	180	560

# AP 3/830 EB



## PURCHASE CODES

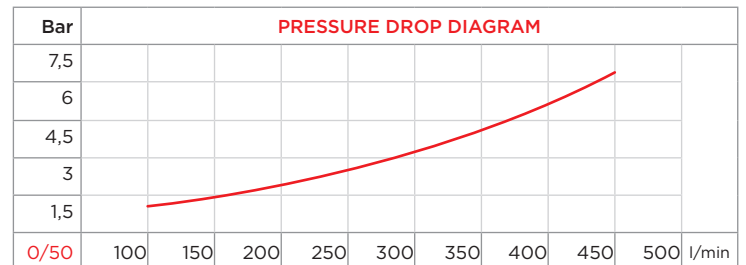
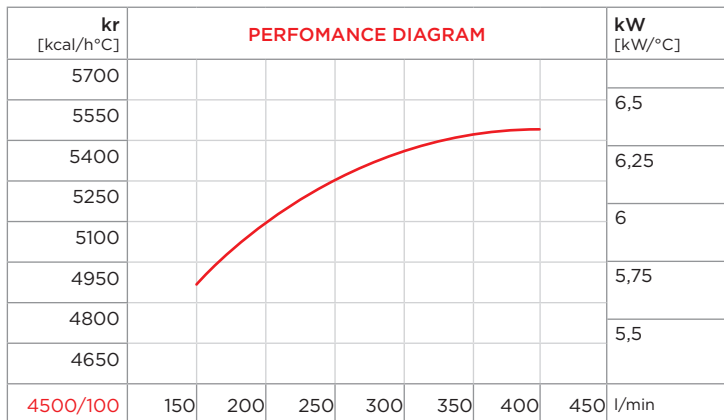
AP 3/830 EB three-phase

**3RE091278**



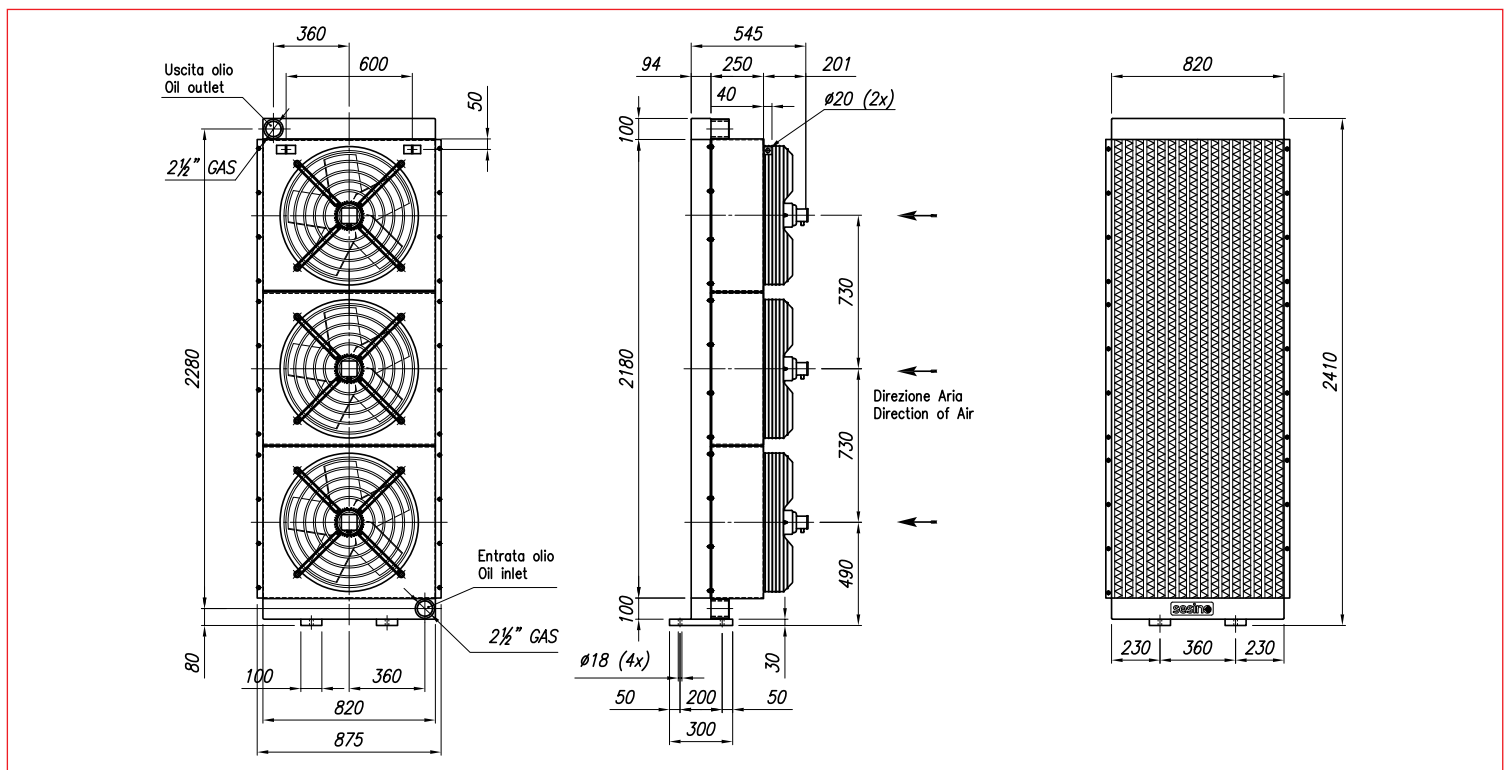
## SPARE PARTS

Frame	3CNE0912471 3CNE091278.1
Cooling element	3RNE091278
Electric fan	1VNA4D560DV

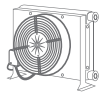


	CORRECTION FACTOR						
cSt	22	30	46	68	100	150	220
f	0,6	1	1,5	2,3	3,5	5	7

- Dimensions and technical characteristics are not binding



OIL FLOW	CAPACITY	VOLTAGE	FREQUENCY	POWER	CURRENT	AIR FLOW	PROTECTION	NOISE LEVEL	WEIGHT	ø FAN
l/min	l	V	hz	W	A	m <sup>3</sup> /h	IP	dB(A)	kg	mm
150-400	60	400	50	3x 810	3x 1,54	3x 9.500	54	78	260	560
150-400	60	480	60	3x 1300	3x 1,94	3x 11.500	54	78	260	560



## ASSEMBLING AND MAINTENANCE INSTRUCTIONS OF THE AIR-OIL HEAT EXCHANGERS

### Assembling

The exchanger must be assembled so that the airflow is not obstructed.

To obtain a better efficiency it is important to avoid any recycling of warm air between outlet and inlet.

In case of long downtime at cold temperatures, the oil temperature becomes very low and its viscosity increases.

When the machine starts again, the pressure drop can become superior to the maximum allowable pressure; in this case, the exchanger must be equipped with a by-pass valve with proper calibration.

Sesino Air-oil heat exchangers are generally installed in the return circuit.

It is also possible to realize a separate circuit with an autonomous pump and this is recommended when the outlet oil flows are variable. In this way, it is possible to obtain a better heating performance. Oil must flow in from the bottom.

The inlet and outlet fittings must be connected without any tension and must not transmit any vibration to the exchanger.

The pressure peaks must never exceed the maximum allowable dynamic pressure of the exchanger.

### Operating

As first check that the tension correspond to the one on the heat exchanger nameplate.

The oil temperature can be adjusted by stopping or starting the electric fan and to do that, the thermo-switch must be adjusted on the required temperature.

If there is a need of a continuous working of the fan, turn the thermo switch knob on the minimum.

In the hydraulic systems, some pressure peaks can occur; they could approach or exceed the maximum allowable pressure of the exchanger.

These pulsations move inside the oil at the sound velocity and therefore they cannot be gauged with standard manometers, but only with a proper electronical instrumentation.

If these peaks exceed the value of 20 bar, it is necessary to supply the exchanger with a self-contained pump.

**The maximum allowable static pressure is of 2 bar.**

## MAINTENANCE

### Oil side cleaning

For this kind of cleaning, the heat exchanger must be disconnected. In order to remove the dirt, let a detergent circulate from 10 to 30 minutes, then proceed removing the detergent with compressed air.

### Air side cleaning

It can be carried with compressed air or water. The direction of the stream must be parallel to the fins to avoid damaging them. It is possible to use some detergent but only if it does not deteriorate the aluminum. If the dirt consists of oil or grease, it is possible to use a stream of steam or hot water. During the cleaning the electric motor has to be adequately protected.