

Type: Semi-hermetic twin screw compressors

Producer: Frascold

Series: R-TSL

Model: R-TSL1-60 210 Y ECO

Technical data

Nominal motor power [kW/HP]:	44,5 / 60
Displacement [m ³ /h]:	210
Capacity control [%]:	100 - 50
RPM [min ⁻¹]:	2960
Weight net [kg]:	290
Weight gross [kg]:	320

Electrical data

	<u>PWS</u>
Power supply [V/~/Hz]:	400/3/50
Locked rotor current [A]:	243
Locked rotor current (D.O.L. - $\Delta\Delta$) [A]:	399
Max. operating current [A]:	108
Max. power input [kW]:	65

Connections

	<u>millimeters</u>	<u>inches</u>
Suction line:	80	3 1/8
Discharge line:	54	2 1/8

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Cooling capacity [W]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	105 670	87 080	70 920	56 930	44 840	34 530	25 800
40	99 830	81 930	66 320	52 790	41 070	31 050	-
50	92 980	75 660	60 540	47 370	35 950	-	-
55	90 290	73 210	58 270	45 260	33 950	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	40.34	36.88	33.55	30.51	27.88	25.94	25.09
40	45.38	41.35	37.55	34.11	31.11	28.79	-
50	51.23	47.44	43.86	40.94	39.01	-	-
55	56.94	52.71	49.03	46.15	44.75	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	70.70	66.00	61.50	57.50	54.10	51.30	50.00
40	77.70	72.10	66.90	62.30	58.30	55.30	-
50	86.30	80.60	75.60	71.60	68.90	-	-
55	95.30	88.60	83.00	78.80	76.80	-	-

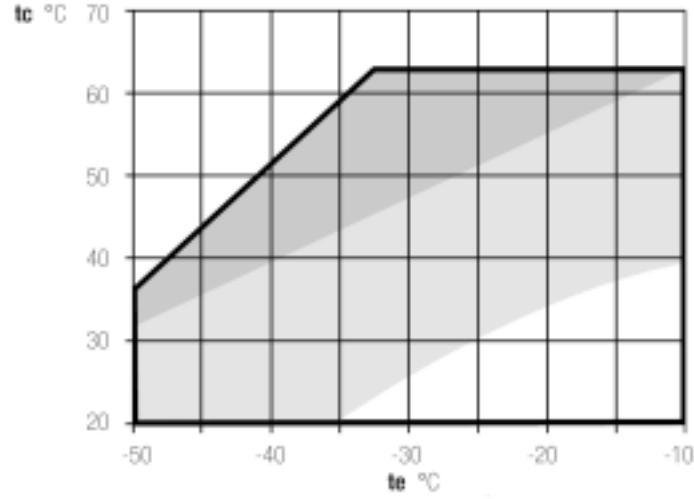
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	2 010	1 646	1 332	1 062	831	636	472
40	1 949	1 588	1 276	1 008	778	584	-
50	1 864	1 504	1 193	926	696	-	-
55	1 834	1 473	1 162	895	665	-	-

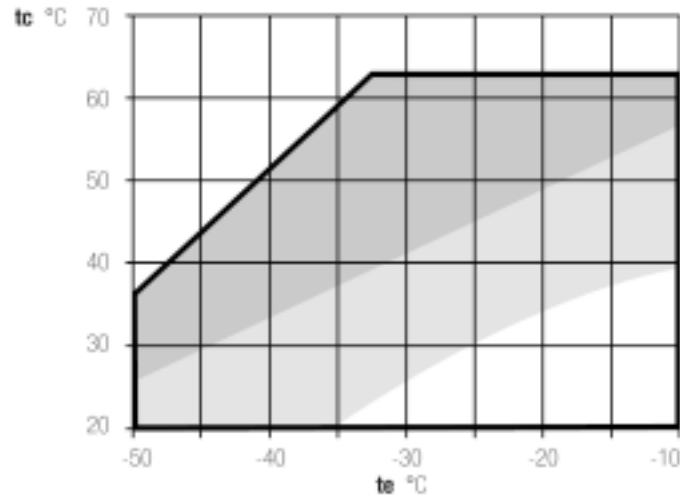
Operating conditions: suction gas overheating 10K, 10K subcooling

Application limits

Full load operation



Capacity control



- With oil cooler
- With liquid injection and oil cooler

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

R404A/R507

Cooling capacity [W]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	112 340	92 850	76 270	61 550	48 990	37 380
40	102 120	83 840	68 070	54 110	42 180	30 990
50	89 340	73 000	58 900	46 270	-	-
55	87 110	70 770	56 730	-	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	42.70	40.63	38.56	36.35	34.29	32.21
40	51.56	48.74	45.93	42.99	40.26	37.39
50	61.56	58.06	54.78	51.41	-	-
55	68.49	64.11	60.25	-	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	74.00	71.10	68.30	65.30	62.50	59.80
40	86.80	82.50	78.50	74.40	70.60	66.70
50	102.90	97.10	91.90	86.60	-	-
55	113.40	106.10	99.90	-	-	-

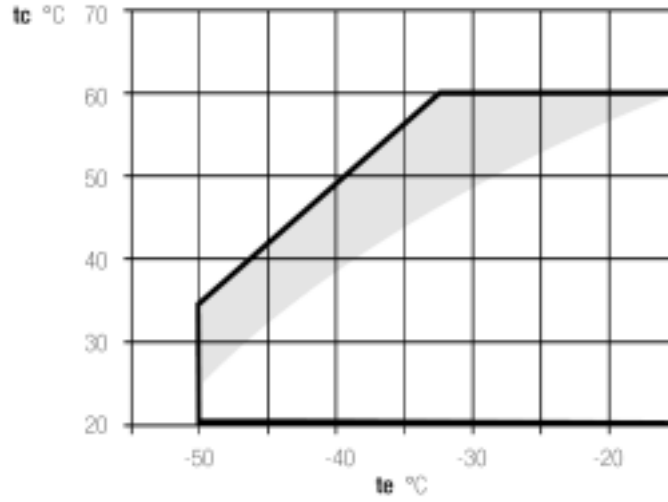
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	2 765	2 274	1 857	1 491	1 182	890
40	2 618	2 132	1 721	1 358	1 051	762
50	2 391	1 934	1 546	1 204	-	-
55	2 345	1 887	1 499	-	-	-

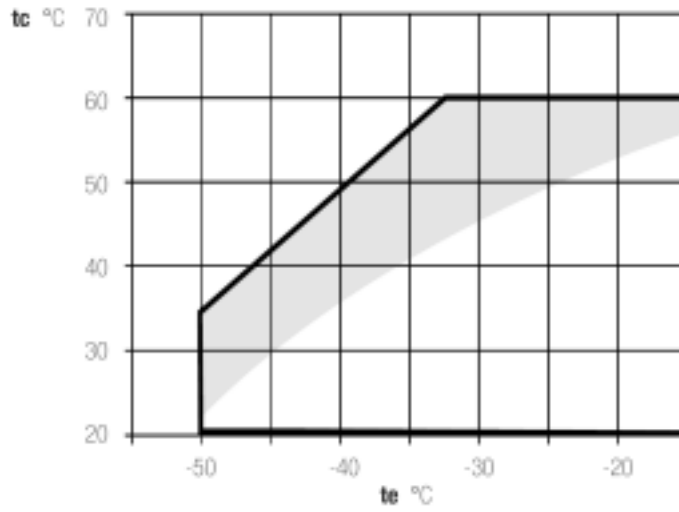
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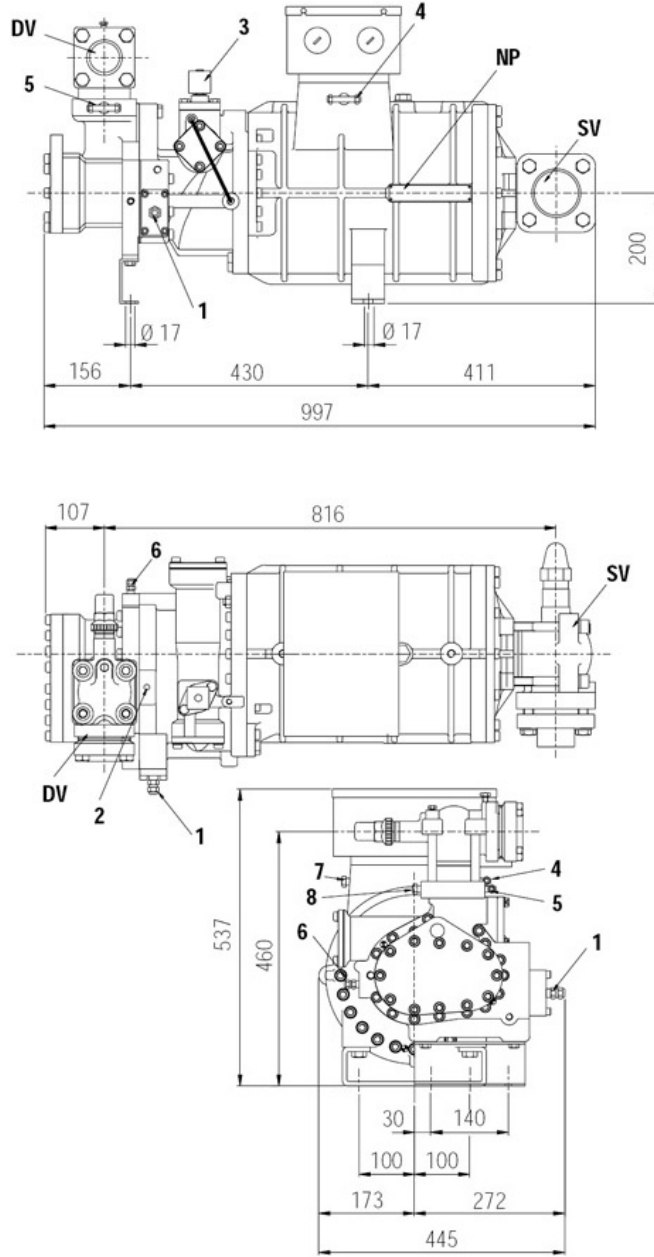
Capacity control



- With oil cooler
- With liquid injection and oil cooler

t_c - Condensing temperature [$^{\circ}\text{C}$]

t_e - Evaporating temperature [$^{\circ}\text{C}$]



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|-----|----------------------------------|-----|-----------------------------------|
| 1: | connection of oil return valve | 2: | max. discharge temperature sensor |
| 3: | capacity control valve | 4: | low pressure plug |
| 5: | high pressure plug | 6: | liquid injection/economizer conn. |
| 7: | plug for low pressure connection | 8: | plug for high pressure connection |
| DV: | discharge valve | NP: | name plate |
| SV: | suction valve | | |

