

Type: Semi-hermetic twin screw compressors

Producer: Frascold

Series: R-TSL

Model: R-TSL1-40 150 Y ECO

Technical data

Nominal motor power [kW/HP]:	30 / 40
Displacement [m ³ /h]:	150
Capacity control [%]:	100 - 50
RPM [min ⁻¹]:	2960
Weight net [kg]:	226
Weight gross [kg]:	249

Electrical data

	<u>PWS</u>
Power supply [V/~/Hz]:	400/3/50
Locked rotor current [A]:	194
Locked rotor current (D.O.L. - $\Delta\Delta$) [A]:	322
Max. operating current [A]:	68
Max. power input [kW]:	43

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:	54	2 1/8
Discharge line:	42	1 5/8

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Cooling capacity [W]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	61 880	50 820	41 200	32 870	25 670	19 530	14 320
40	57 680	47 150	37 980	30 020	23 120	17 220	-
50	52 960	42 950	34 190	26 570	19 960	-	-
55	51 330	41 450	32 800	25 270	18 710	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	23.00	20.95	19.01	17.28	15.85	14.90	14.91
40	25.93	23.77	21.77	20.04	18.70	18.08	-
50	29.24	26.84	24.69	22.90	21.68	-	-
55	32.49	29.81	27.45	25.64	24.72	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	35.20	32.20	29.50	27.10	25.10	23.80	23.80
40	39.50	36.30	33.40	30.90	29.00	28.20	-
50	44.60	40.90	37.70	35.00	33.30	-	-
55	49.70	45.50	41.80	39.10	37.70	-	-

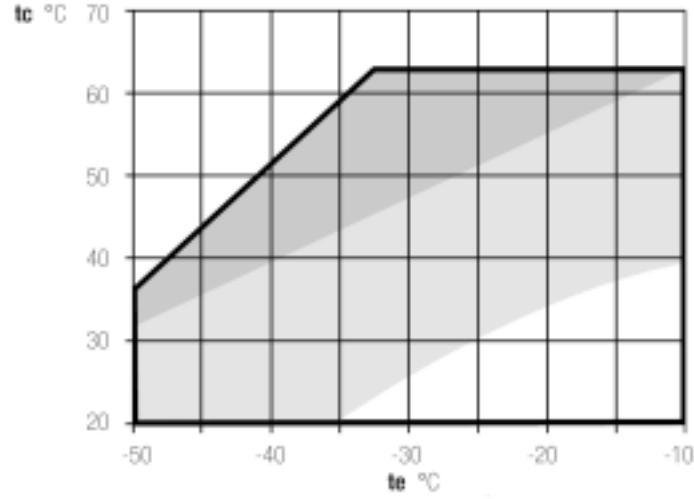
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	1 177	960	774	613	476	360	262
40	1 126	914	731	573	438	324	-
50	1 062	853	674	519	387	-	-
55	1 043	834	654	499	367	-	-

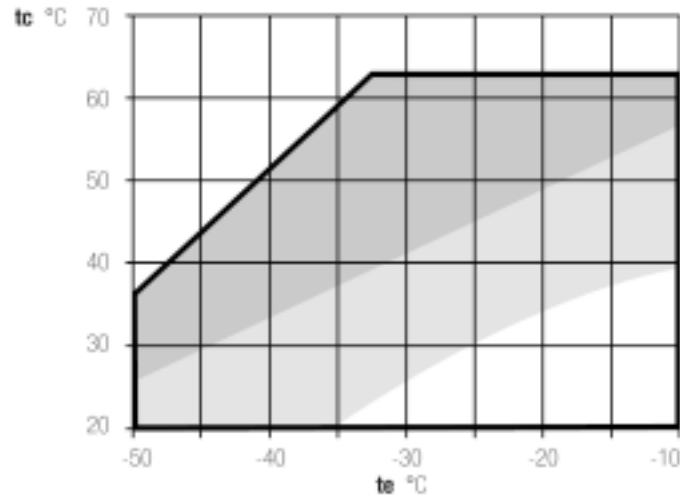
Operating conditions: suction gas overheating 10K, 10K subcooling

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	81 420	67 260	55 210	44 520	35 390	26 950
40	74 210	60 890	49 400	39 220	30 520	22 360
50	65 070	53 110	42 780	33 530	-	-
55	62 420	50 700	40 620	-	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	30.73	29.26	27.78	26.20	24.70	23.12
40	37.34	35.13	33.09	31.06	29.09	26.87
50	44.60	42.08	39.65	37.08	-	-
55	49.42	46.49	43.70	-	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	48.10	45.70	43.20	40.70	38.30	36.00
40	58.80	55.50	52.30	48.70	45.40	41.80
50	69.40	65.60	62.10	58.40	-	-
55	76.60	72.20	68.00	-	-	-

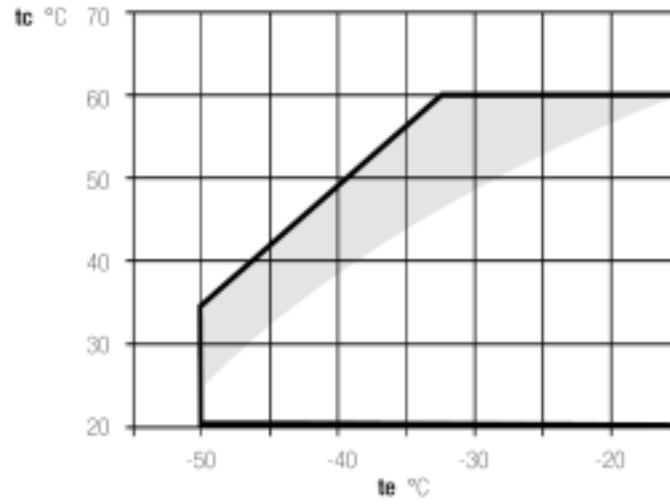
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	2 004	1 647	1 345	1 078	854	642
40	1 903	1 549	1 249	984	761	550
50	1 741	1 407	1 123	873	-	-
55	1 706	1 372	1 088	-	-	-

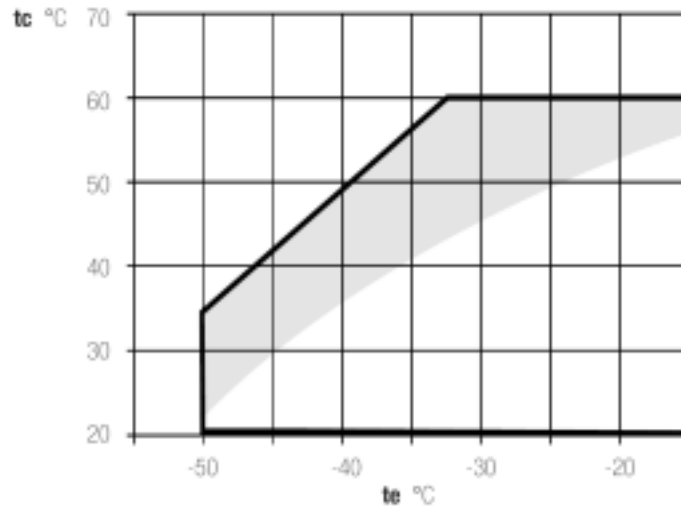
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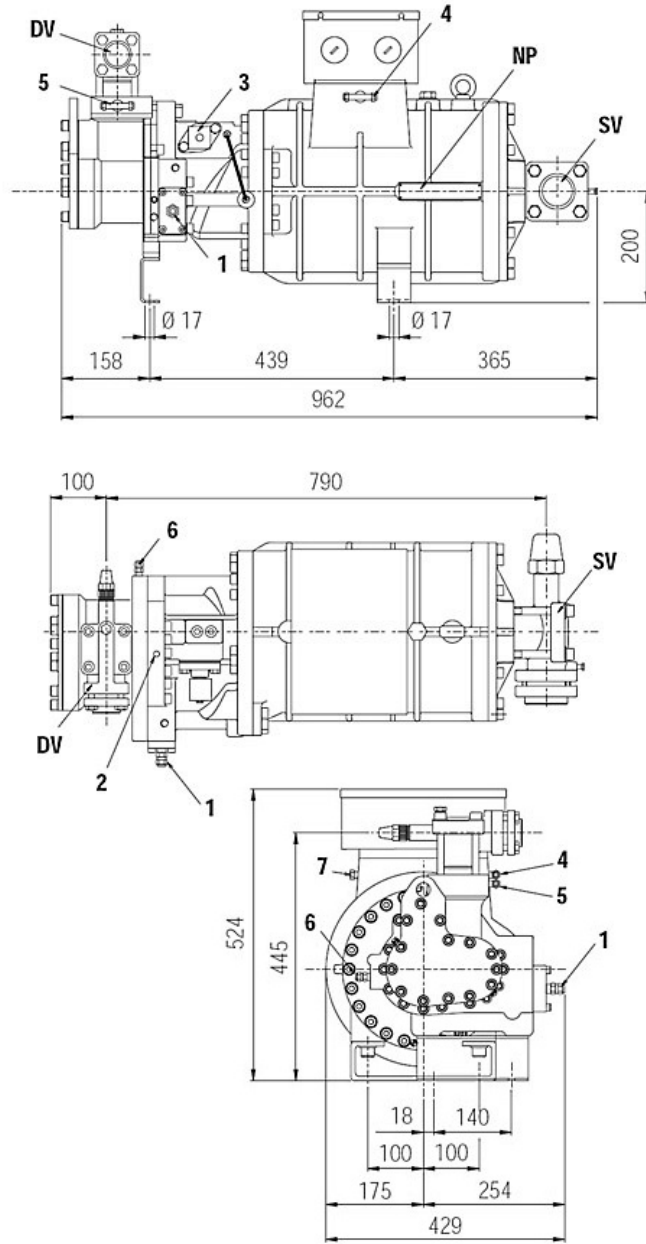
Capacity control



- With oil cooler
- With liquid injection and oil cooler

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]



- 1: connection of oil return valve
 3: capacity control valve
 5: high pressure plug
 7: plug for low pressure connection
 DV: discharge valve
 SV: suction valve

- 2: max. discharge temperature sensor
 4: low pressure plug
 6: liquid injection/economizer conn.
 8: plug for high pressure connection
 NP: name plate

