

Type: Semi-hermetic twin screw compressors

Producer: Frascold

Series: R-TSL

Model: R-TSL1-50 186 Y ECO

Technical data

Nominal motor power [kW/HP]:	37 / 50
Displacement [m ³ /h]:	186
Capacity control [%]:	100 - 50
RPM [min ⁻¹]:	2960
Weight net [kg]:	244
Weight gross [kg]:	269

Electrical data

	<u>PWS</u>
Power supply [V/~/Hz]:	400/3/50
Locked rotor current [A]:	212
Locked rotor current (D.O.L. - ΔΔ) [A]:	348
Max. operating current [A]:	89
Max. power input [kW]:	56

Connections

	<u>milimeters</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	91 160	75 120	61 190	49 120	38 690	29 800	22 270
40	88 330	72 490	58 690	46 720	36 360	27 490	-
50	82 330	67 000	53 620	41 970	31 860	-	-
55	79 950	64 840	51 620	40 100	30 100	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	32.84	30.73	28.55	26.40	24.34	22.50	21.00
40	39.84	36.59	33.56	31.04	28.96	27.71	-
50	45.68	41.98	38.73	36.12	34.50	-	-
55	50.99	46.77	43.21	40.62	39.60	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	56.90	53.60	50.40	47.50	44.90	42.70	41.00
40	67.80	62.70	58.10	54.10	51.00	49.30	-
50	76.70	71.30	66.00	62.00	59.50	-	-
55	83.80	78.20	73.20	69.10	67.40	-	-

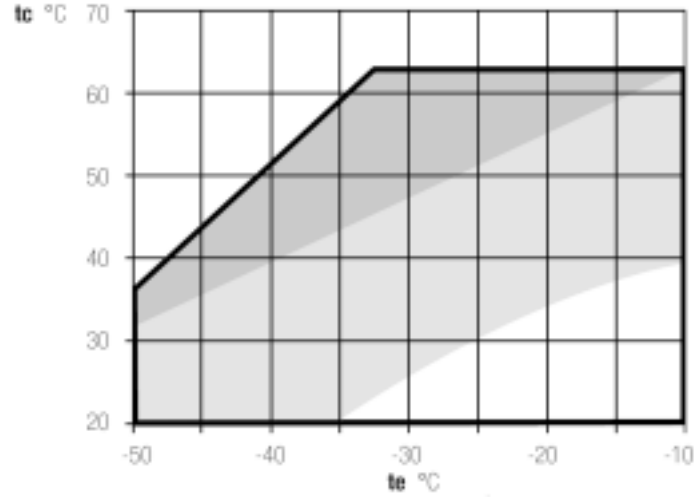
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45	-50
30	1 734	1 420	1 149	916	717	549	407
40	1 725	1 405	1 129	892	689	517	-
50	1 650	1 332	1 056	820	617	-	-
55	1 624	1 305	1 029	793	590	-	-

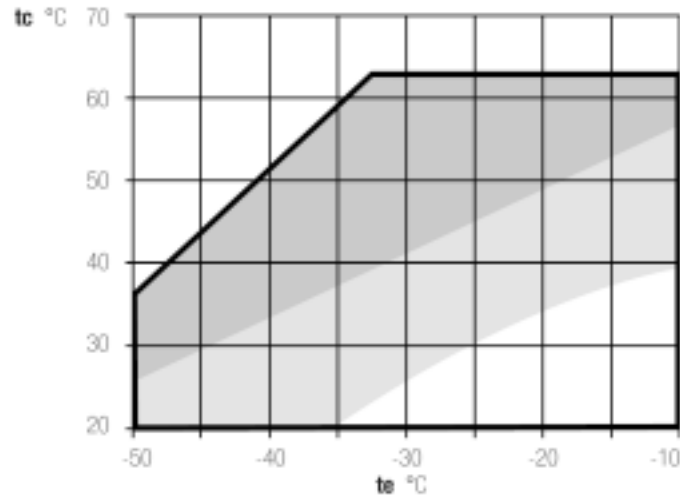
Operating conditions: suction gas overheating 10K, 10K subcooling

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	101 290	84 010	69 320	56 280	45 160	34 890
40	92 800	76 520	62 490	50 080	39 480	29 560
50	82 380	67 410	54 490	42 920	-	-
55	80 390	65 420	52 560	-	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	38.00	36.11	34.22	32.27	30.44	28.54
40	51.71	48.17	44.89	41.67	38.87	36.32
50	55.43	51.94	48.68	45.24	-	-
55	61.96	57.77	53.82	-	-	-

Current [A]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	64.90	61.90	59.10	56.00	53.20	50.40
40	84.70	80.10	75.60	70.80	66.30	62.30
50	90.70	85.10	80.70	76.10	-	-
55	100.90	93.60	87.30	-	-	-

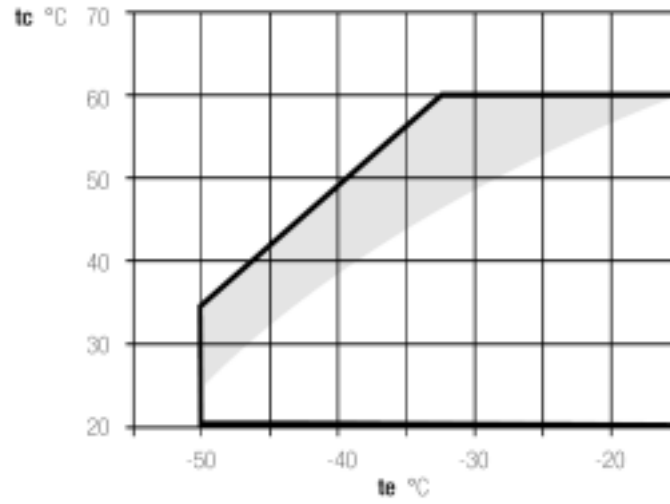
Mass flow [kg/h]

$t_c \setminus t_e$	-20	-25	-30	-35	-40	-45
30	2 493	2 057	1 688	1 363	1 089	831
40	2 379	1 946	1 580	1 257	984	726
50	2 205	1 786	1 431	1 117	-	-
55	2 164	1 745	1 389	-	-	-

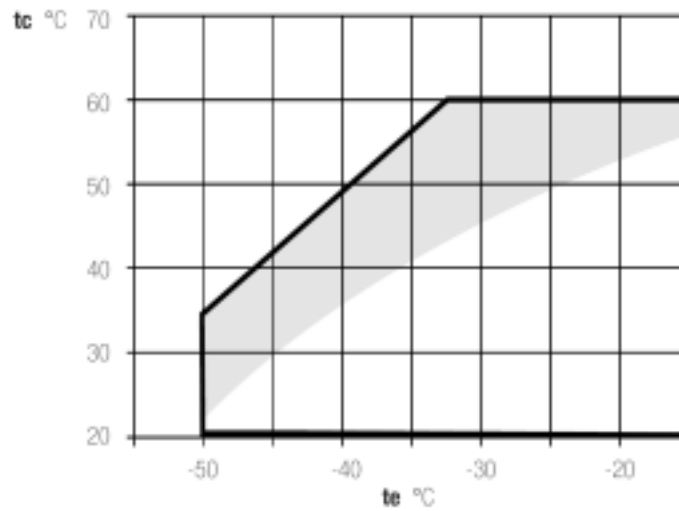
Operating conditions: suction gas overheating 10K, 10K subcooling

Application limits

Full load operation



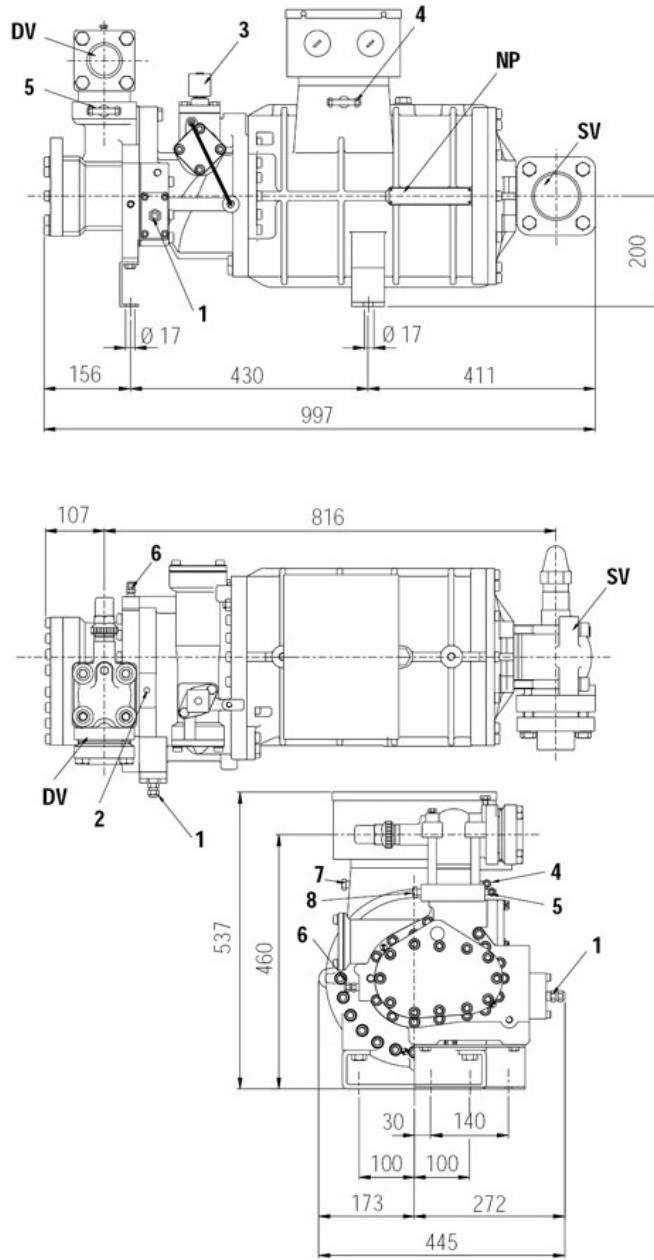
Capacity control



- With oil cooler
- With liquid injection and oil cooler

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]



- | | | | |
|-----|----------------------------------|-----|-----------------------------------|
| 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 | | |

