

Type: Semi-hermetic twin screw compressors

Producer: Frascold

Series: R-TSL

## Model: R-TSL1-80 270 Y

### Technical data

Nominal motor power [kW/HP]:	60 / 80
Displacement [m <sup>3</sup> /h]:	270
Capacity control [%]:	100 - 75 - 50
RPM [min <sup>-1</sup> ]:	2960
Weight net [kg]:	317
Weight gross [kg]:	350

### Electrical data

	<u>PWS</u>
Power supply [V/~/Hz]:	400/3/50
Locked rotor current [A]:	333
Locked rotor current (D.O.L. - $\Delta\Delta$ ) [A]:	546
Max. operating current [A]:	148
Max. power input [kW]:	90

### 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 <sub>c</sub> \ t <sub>e</sub>	-10	-15	-20	-25	-30	-35	-40	-45	-50
30	168 850	139 080	113 440	91 500	72 890	57 190	43 990	33 040	24 050
40	152 440	125 010	101 410	81 240	64 150	49 750	37 670	27 660	-
50	135 340	110 290	88 760	70 390	54 850	41 780	30 850	-	-
55	127 310	103 410	82 900	65 410	50 630	38 210	27 840	-	-

### Power input [kW]

t <sub>c</sub> \ t <sub>e</sub>	-10	-15	-20	-25	-30	-35	-40	-45	-50
30	53.84	50.07	46.13	42.15	38.35	34.97	32.20	30.47	30.86
40	60.57	56.23	51.90	47.68	43.84	40.61	38.33	37.94	-
50	69.01	63.85	59.00	54.52	50.73	48.06	47.41	-	-
55	77.41	71.07	65.40	60.51	56.65	54.51	55.80	-	-

### Current [A]

t <sub>c</sub> \ t <sub>e</sub>	-10	-15	-20	-25	-30	-35	-40	-45	-50
30	90.50	84.90	79.20	73.60	67.70	62.70	58.80	56.60	57.10
40	100.80	94.10	87.60	81.50	76.00	71.20	67.70	67.10	-
50	114.20	106.00	98.40	91.50	85.90	82.00	81.10	-	-
55	127.60	117.40	108.40	100.70	94.80	91.50	93.50	-	-

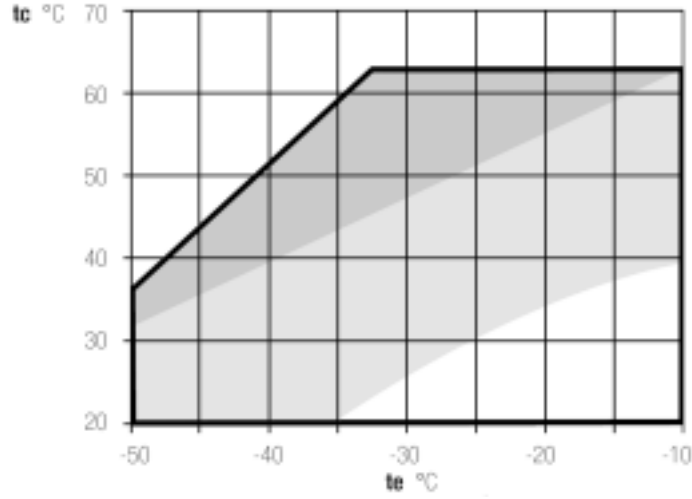
### Mass flow [kg/h]

t <sub>c</sub> \ t <sub>e</sub>	-10	-15	-20	-25	-30	-35	-40	-45	-50
30	3 527	2 944	2 434	1 992	1 611	1 283	1 003	765	567
40	3 443	2 865	2 359	1 919	1 540	1 215	936	699	-
50	3 344	2 768	2 265	1 827	1 449	1 124	846	-	-
55	3 308	2 732	2 228	1 790	1 412	1 086	807	-	-

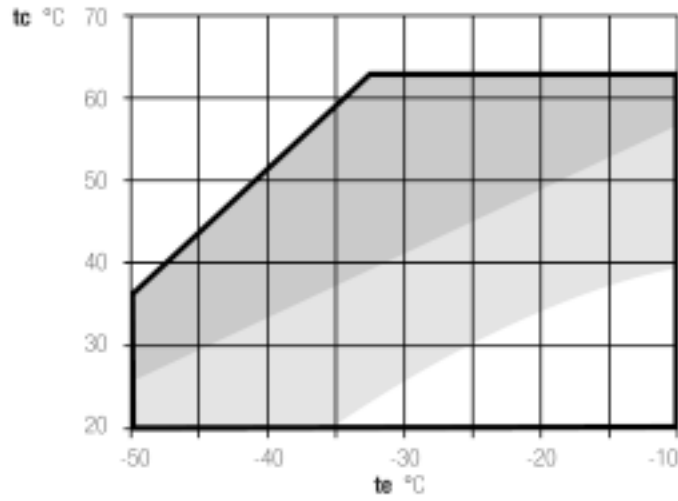
Operating conditions: suction gas overheating 10K, 0K subcooling

## Application limits

### Full load operation



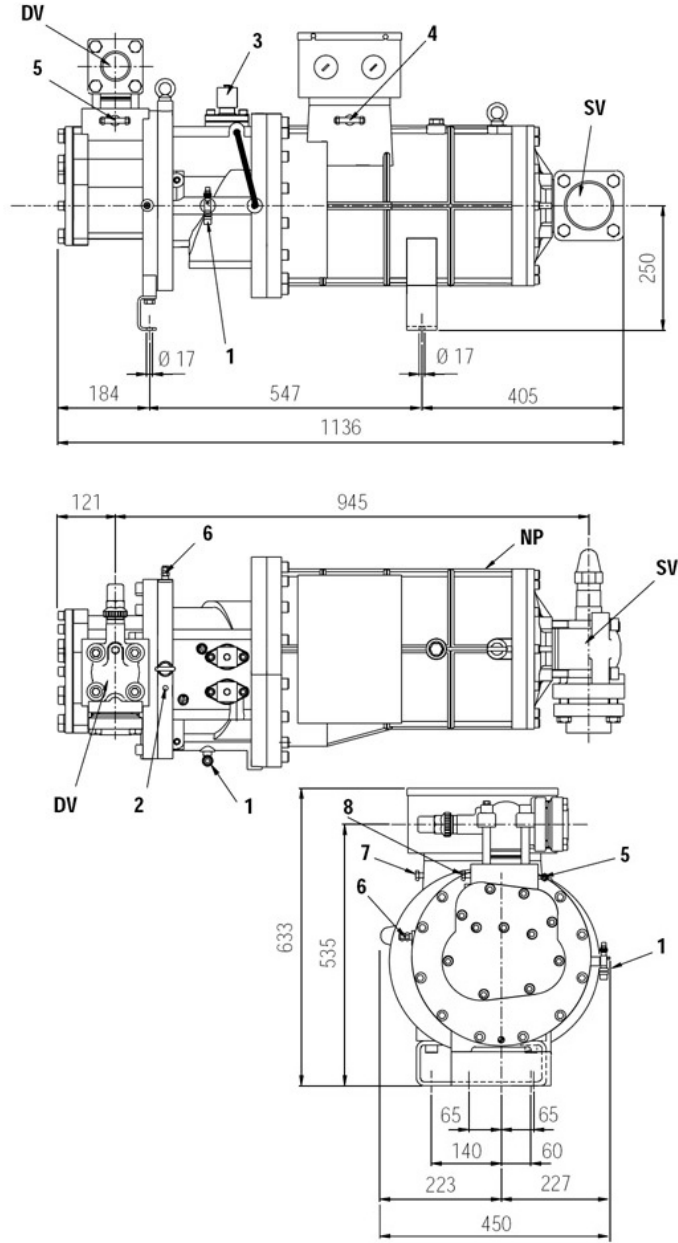
### Capacity control



- 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                   |                                      |

