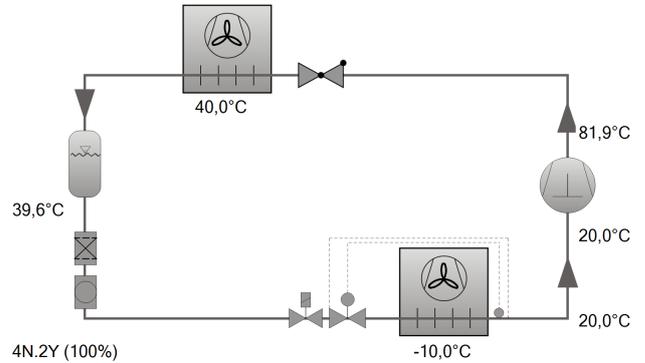




### Selection: Open-Type Reciprocating Compressors

#### Input Values

Compressor model	4N.2Y-K
Refrigerant	R404A
Reference temperature	Dew point temp.
Evaporating SST	-10,00 °C
Condensing SDT	40,0 °C
Liq. subc. (in condenser)	0 K
Suction gas temperature	20,00 °C
Useful superheat	100%
Motor speed	1450 /min
Drive	Coupling (1:1)
Capacity control	100%



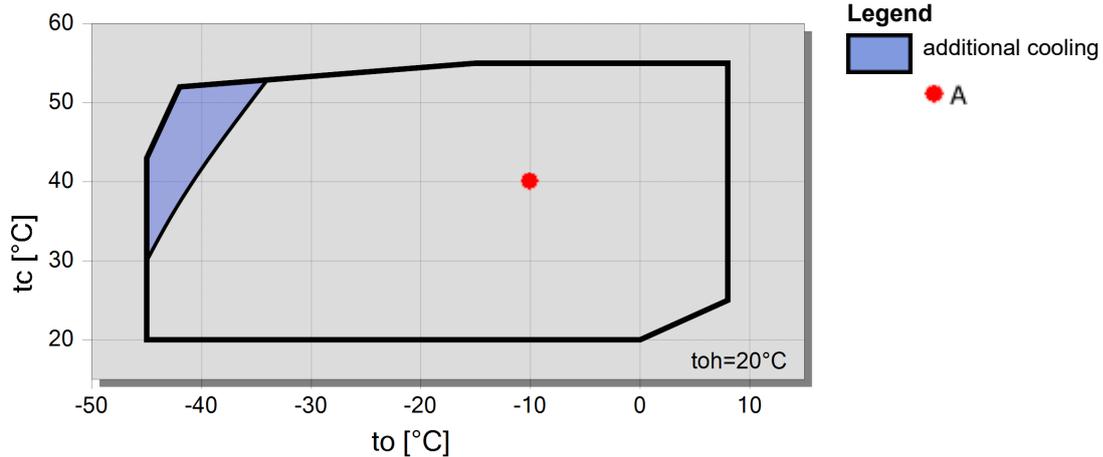
#### Result

<b>Compressor</b>	<b>4N.2Y</b>
Capacity steps	100%
Cooling capacity	32,9 kW
Cooling capacity *	32,9 kW
Evaporator capacity	32,9 kW
Shaft power	11,36 kW
Condenser capacity	44,3 kW
COP/EER	2,90
COP/EER *	2,90
Mass flow	921 kg/h
Operating mode	Coupling (1:1)
Compr. speed	1450 /min
Recommended driving motor	15,00 kW
Discharge gas temp. w/o cooling	81,9 °C

Starting point for motor selection see T. Data/ Notes

\*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

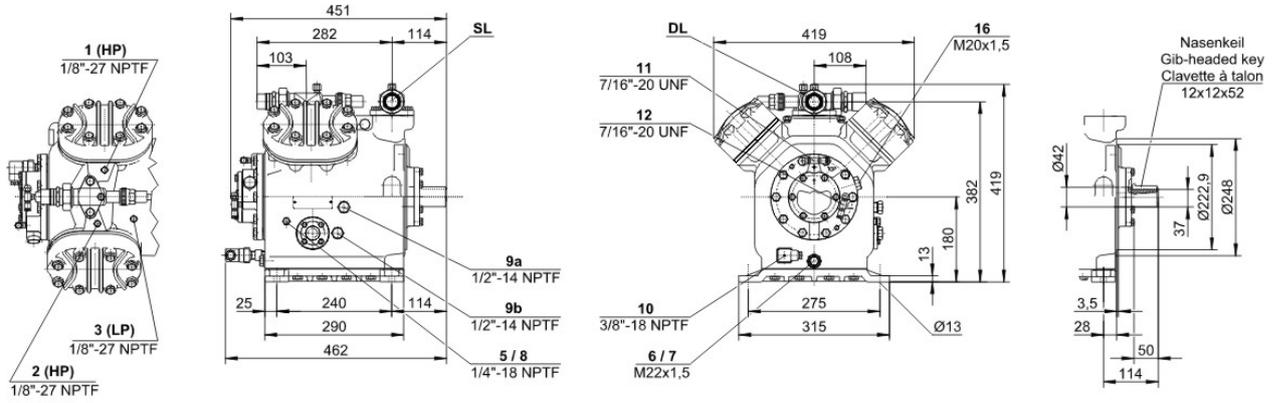
#### Application Limits Standard 4N.2





## Technical Data: 4N.2Y-K

### Dimensions and Connections





## Technical Data

### Technical Data

Displacement (1450rpm 50Hz)	56,1 m <sup>3</sup> /h
Displacement (1750rpm 60Hz)	67,7 m <sup>3</sup> /h
No. of cylinder x bore x stroke	4 x 60 mm x 57 mm
Allowed speed range	750 .. 1750 1/min
Weight	77 kg
Max. pressure (LP/HP)	19 / 25 bar
Connection suction line	35 mm - 1 3/8"
Connection discharge line	28 mm - 1 1/8"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	tc<55°C: BSE32 / tc>55°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2 (Standard)

### Extent of delivery (standard)

Oil charge	4,0 dm <sup>3</sup>
Protective charge	Standard
Suction shut-off valve	Standard
Discharge shut-off valve	Standard

### Available options

Coupling (...K) w. A/C + medium	KK411 [<11kW] / KK420 [<22kW] (Option)
Coupling (...K) w. low temp.	KK415 [<7.5kW] / KK425 [<22kW] (Option)
Coupling housing	Option
Motor pulley (...S)	190, 210, 230 mm (Option)
V-belts	3 x SPA (Option)
Discharge gas temperature sensor	Option (incl. INT69VS)
Start unloading	Option
Connection cooling water	R 1/2" (Option)
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
Oil service valve	Option
Oil heater	100 W (Option)
Oil pressure monitoring	MP54 (Option)
Kit for marine application	Option



## Open-Type Reciprocating Compressors

### Motor Selection

The required driving motor is selected for starting conditions at direct start as well as at star-delta- or PW-start with start unloading (bypass + check valve). The starting conditions refer to the following defined operation points resp. to the maximum application limit of the compressor. Should the evaporation- or the condensing temperature of the plant be higher at the start, an individual motor selection is necessary.

Evaporation temperature for motor selection				
	HH	H	M	L
R134a	+20 °C	+12,5 °C	-5 °C	-20 °C
R404A / R507A		+7,5 °C	-5 °C	-20 °C
R407F / R407A				
R22		+12,5 °C	-5 °C	-20 °C
NH□	+15 °C	+10 °C	-5 °C	

The stated motor data refer to IEC motors at which the pull-up torque does not fall below 90 % of the max. torque. In addition the following starting torques (referring to direct starting torque) must be reached:

- \* 2-cylinder compressors 220 %
- \* 4-cylinder compressors 180 %
- \* 6-cylinder compressors 160 %

Should the motor not fulfil these criteria, an individual selection is also necessary.

### Condenser capacity

The condenser capacity can be calculated with or without heat rejection. This option can be set in the menu Program □ Options. The heat rejection is constantly 5 % of the power consumption. The condensing capacity is to be found in the line cond.cap. (with HR) resp. cond.cap.