

## Installation cooling / liquid subcooling

Min./max. pressure high pressure side (Psh)	: -1,0 / 16,2	barg
Min./max. design temperature high pressure side (Tsh)	: -10 / 92	°C
Min./max. pressure low pressure side (Psl)	: -1,0 / 14,4	barg
Min./max. design temperature low pressure side (Tsl)	: -30 / 80	°C

Type installation	: Cooling / liquid subcooling	
Serial number	: 14KI024	
Year of build	: 2014	
Cooling capacity -10°C/+40°C	: 83,82	kW
Cooling capacity +5°C/+40°C	: 15,50	kW
Type refrigerant	: R134a	
Liquid vessel content monoflow system	: 160	l

## Installation freeze

Min./max. pressure high pressure side (Psh)	: -1,0 / 45,0	barg
Min./max. design temperature high pressure side (Tsh)	: -10 / 92	°C
Min./max. pressure low pressure side (Psl)	: -1,0 / 30,0	barg
Min./max. design temperature low pressure side (Tsl)	: -40 / 30	°C

Type installation	: Freeze	
Serial number	: 14VI024	
Year of build	: 2014	
Cooling capacity -33°C/-5°C	: 10,6	kW
Type refrigerant	: R744	
Liquid vessel content monoflow system	: 60	l

## Installation heat pump

Min./max. pressure high pressure side (Psh)	: -1,0 / 27,6	barg
Min./max. design temperature high pressure side (Tsh)	: -10 / 92	°C
Min./max. pressure low pressure side (Psl)	: -1,0 / 14,4	barg
Min./max. design temperature low pressure side (Tsl)	: -30 / 80	°C

Type installation	: Heat pump	
Serial number	: 14WI024	
Year of build	: 2014	
Cooling capacity -10°C/+40°C	: 56,2	kW
Type refrigerant	: R134a	
Liquid vessel content monoflow system	: 30	l



## Selection: Semi-hermetic Reciprocating Compressors

### Input Values

Compressor model Mode	4FES-3Y Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant Reference temperature Liq. subc. (in condenser)	R134a Dew point temp. 0 K	Power supply Frequency compressor Useful superheat	400V-3-50Hz 70,0 Hz 100%

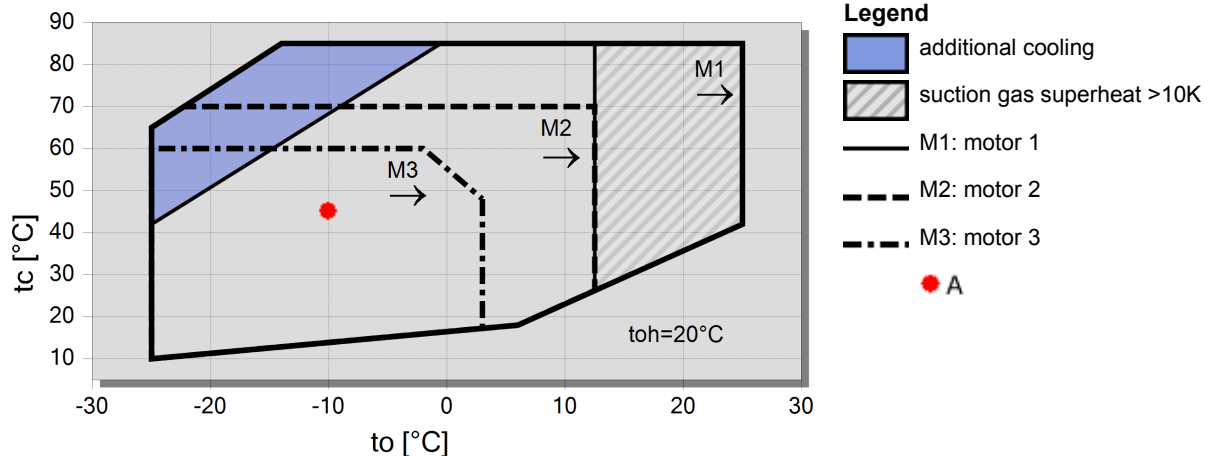
### Result

Q [W]	Cooling capacity	COP [ - ]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	10°C	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C
30°C	Q [W]	21541	17548	14158	11294	8889	6885	5230	3880
	Qu* [W]	21541	17548	14158	11294	8889	6885	5230	3880
	P [kW]	3,27	3,20	3,08	2,90	2,68	2,43	2,16	1,88
	I [A]	5,86	5,77	5,59	5,35	5,05	4,73	4,40	4,07
	Qc [W]	24806	20751	17236	14193	11568	9313	7389	5759
	COP [ - ]	6,60	5,48	4,60	3,90	3,32	2,83	2,42	2,06
	m [kg/h]	452	365	292	232	181,6	140,0	106,0	78,4
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	53,6	60,5	67,8	75,8	84,5	94,2	105,1	117,9
	40°C	Q [W]	18867	15336	12335	9798	7666	5891	4427
Qu* [W]		18867	15336	12335	9798	7666	5891	4427	3233
P [kW]		4,04	3,83	3,57	3,28	2,95	2,60	2,25	1,90
I [A]		7,01	6,69	6,30	5,87	5,41	4,95	4,51	4,10
Qc [W]		22911	19171	15910	13073	10614	8494	6678	5137
COP [ - ]		4,67	4,00	3,45	2,99	2,60	2,26	1,97	1,70
m [kg/h]		433	349	279	220	171,0	130,8	97,9	71,3
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		64,9	71,8	79,2	87,1	95,8	105,5	116,4	129,2
50°C		Q [W]	16182	13111	10497	8284	6425	4877	3601
	Qu* [W]	16182	13111	10497	8284	6425	4877	3601	2563
	P [kW]	4,69	4,34	3,95	3,54	3,11	2,68	2,25	1,84
	I [A]	8,01	7,46	6,86	6,25	5,64	5,05	4,51	4,03
	Qc [W]	20870	17449	14448	11822	9535	7554	5853	4407
	COP [ - ]	3,45	3,02	2,66	2,34	2,07	1,82	1,60	1,39
	m [kg/h]	412	330	262	205	158,4	119,6	87,9	62,4
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	76,1	83,0	90,4	98,3	107,0	116,6	127,6	0

-- No calculation possible (see message in single point selection)

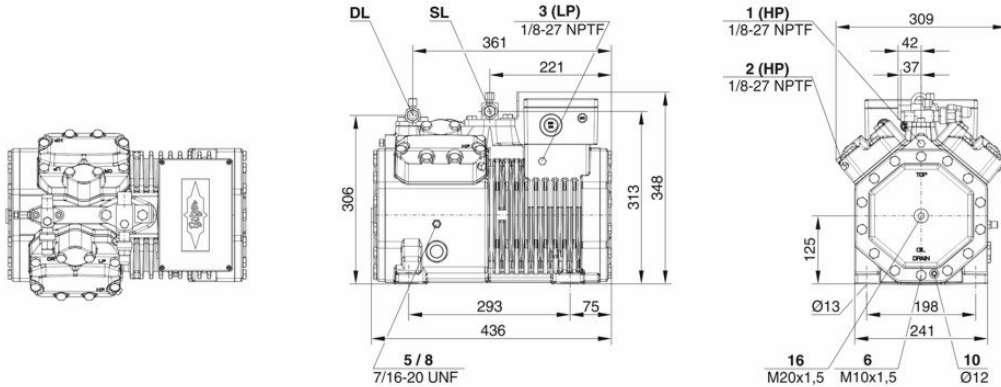
### Application Limits 100% 4FES-3





## Technical Data: 4FES-3Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	18,05 m3/h
Displacement (1750 RPM 60Hz)	21,78 m3/h
No. of cylinder x bore x stroke	4 x 41 mm x 39,3 mm
Weight	82 kg
Max. pressure (LP/HP)	19 / 32bar
Connection suction line	22 mm - 7/8"
Connection discharge line	16 mm - 5/8"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	BSE32(Standard)   R134a tc>70°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2 (Option)
Oil type R1234yf/R1234ze	BSE32 (Standard)   R1234ze tc>70°C & to>0°C: BSE55 (Option)   R1234ze to>15°C: BSE85K (Option)

#### Motor data

Motor version	2
Motor voltage (more on request)	380-420V Y-3-50Hz
Max operating current	9.5 A
Starting current (Rotor locked)	44.2 A
Max. Power input	5,3 kW

#### Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP66
Vibration dampers	Standard
Oil charge	2,00 dm <sup>3</sup>
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

#### Available Options

Discharge gas temperature sensor	Option
Capacity control	100-50% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Crankcase heater	0..120 W PTC (Option)
Oil level monitoring	OLC-K1 (Option)

#### Sound measurement

Sound power level (-10°C / 45°C)	68,6 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	70,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	60,6 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	62,5 dB(A) @ 50Hz



### Selection: Semi-hermetic Reciprocating Compressors

#### Input Values

Compressor model Mode	4HE-15Y Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R134a	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Frequency compressor	70,0 Hz
Liq. subc. (in condenser)	0 K	Useful superheat	100%

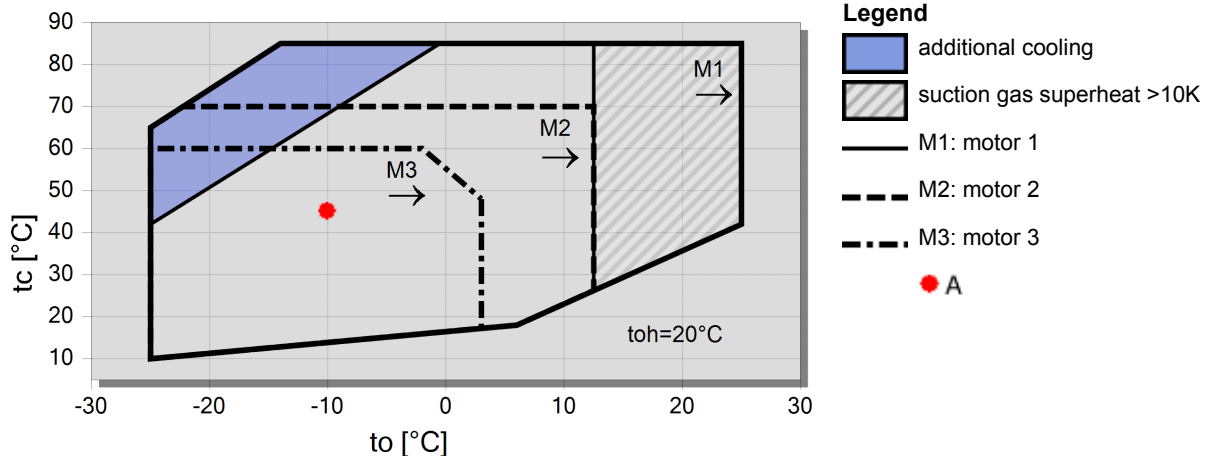
#### Result

Q [W]	Cooling capacity	COP [ - ]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C
30°C	Q [W]	--	59307	48017	38387	30215	23324	17553	--
	Qu* [W]	--	59307	48017	38387	30215	23324	17553	--
	P [kW]	--	12,75	12,05	11,17	10,16	9,07	7,94	--
	I [A]	--	20,9	19,84	18,53	17,05	15,49	13,93	--
	Qc [W]	--	72056	60065	49557	40375	32390	25489	--
	COP [ - ]	--	4,65	3,99	3,44	2,97	2,57	2,21	--
	m [kg/h]	--	1225	986	784	615	473	355	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	67,4	74,8	82,7	91,4	101,1	112,5	--
	40°C	Q [W]	--	52210	42131	33542	26264	20141	15031
Qu* [W]		--	52210	42131	33542	26264	20141	15031	--
P [kW]		--	14,98	13,84	12,57	11,21	9,82	8,45	--
I [A]		--	24,4	22,6	20,6	18,59	16,57	14,64	--
Qc [W]		--	67189	55971	46109	37477	29965	23483	--
COP [ - ]		--	3,49	3,04	2,67	2,34	2,05	1,78	--
m [kg/h]		--	1179	945	748	583	445	331	--
Op.		--	Standard	Standard	Standard	Standard	Standard	Standard	--
th [°C]		--	78,8	86,3	94,4	103,2	113,2	125,2	--
50°C		Q [W]	--	45133	36295	28764	22387	17028	12565
	Qu* [W]	--	45133	36295	28764	22387	17028	12565	--
	P [kW]	--	16,90	15,33	13,69	12,00	10,33	8,73	--
	I [A]	--	27,4	24,9	22,3	19,77	17,30	15,02	--
	Qc [W]	--	62029	51630	42449	34387	27359	21291	--
	COP [ - ]	--	2,67	2,37	2,10	1,87	1,65	1,44	--
	m [kg/h]	--	1127	900	709	549	416	306	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	90,1	97,7	105,9	114,9	125,2	137,6	--

-- No calculation possible (see message in single point selection)

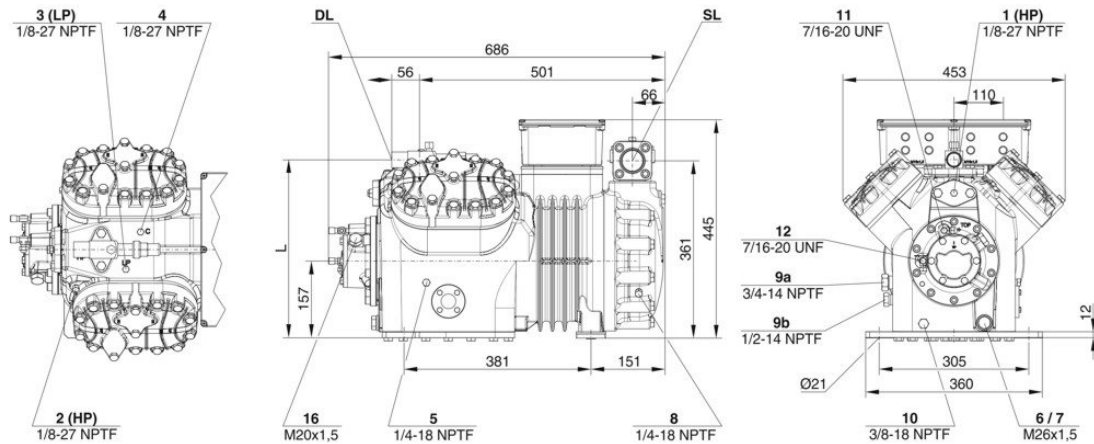
#### Application Limits 100% 4HE-15





## Technical Data: 4HE-15Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	73,7 m <sup>3</sup> /h
Displacement (1750 RPM 60Hz)	88,83 m <sup>3</sup> /h
Frequency range	25..70 Hz
No. of cylinder x bore x stroke	4 x 70 mm x 55 mm
Weight	183 kg
Max. pressure (LP/HP)	19 / 32 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	28 mm - 1 1/8"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	BSE32(Standard)   R134a tc>70°C: BSE55 (Option)
Oil type R1234yf/R1234ze	BSE32 (Standard)   R1234ze tc>70°C & to>0°C: BSE55 (Option)   R1234ze to>15°C: BSE85K (Option)

#### Motor data

Motor version	3
Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	22.5 A
Max operating current 70Hz/400V/FI	32,5 A
Winding ratio	50/50
Starting current (Rotor locked)	81.0 A Y / 132.0 A YY
Max. Power input	13,0 kW

#### Extent of delivery (Standard)

Motor protection	SE-B2, CM-RC-01(Option)
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,00 dm <sup>3</sup>
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

#### Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII

#### Sound measurement

Sound power level (-10°C / 45°C)	76,0 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C)	68 dB(A) @50Hz
Sound pressure level @ 1m (+5°C / 50°C) R134a	



## Selection: Semi-hermetic Reciprocating Compressors

### Input Values

Compressor model Mode	4NES-12Y Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R134a	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Frequency compressor	70,0 Hz
Liq. subc. (in condenser)	0 K	Useful superheat	100%

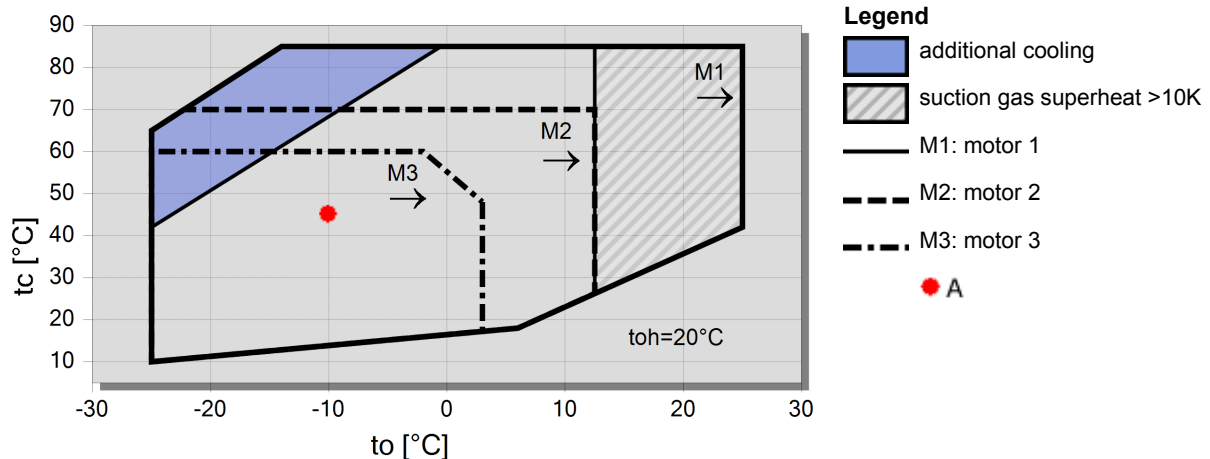
### Result

Q [W]	Cooling capacity	COP [ - ]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C
30°C	Q [W]	--	46172	36965	29191	22673	17255	12799	--
	Qu* [W]	--	46172	36965	29191	22673	17255	12799	--
	P [kW]	--	9,40	8,87	8,18	7,37	6,48	5,54	--
	I [A]	--	15,24	14,45	13,43	12,25	10,98	9,70	--
	Qc [W]	--	55568	45839	37375	30043	23730	18341	--
	COP [ - ]	--	4,91	4,17	3,57	3,08	2,66	2,31	--
	m [kg/h]	--	954	759	596	461	350	259	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	65,5	72,9	80,9	89,5	98,8	109,3	--
40°C	Q [W]	--	40201	32047	25136	19319	14463	10451	--
	Qu* [W]	--	40201	32047	25136	19319	14463	10451	--
	P [kW]	--	10,86	9,97	8,95	7,86	6,74	5,62	--
	I [A]	--	17,49	16,11	14,57	12,96	11,34	9,81	--
	Qc [W]	--	51062	42015	34089	27180	21199	16073	--
	COP [ - ]	--	3,70	3,22	2,81	2,46	2,15	1,86	--
	m [kg/h]	--	908	719	561	429	320	230	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	76,3	83,6	91,6	100,2	109,9	121,5	--
50°C	Q [W]	--	34142	27039	20979	15839	11513	7901	--
	Qu* [W]	--	34142	27039	20979	15839	11513	7901	--
	P [kW]	--	11,99	10,74	9,42	8,07	6,73	5,46	--
	I [A]	--	19,27	17,30	15,28	13,26	11,34	9,59	--
	Qc [W]	--	46131	37781	30400	23910	18247	13358	--
	COP [ - ]	--	2,85	2,52	2,23	1,96	1,71	1,45	--
	m [kg/h]	--	853	671	517	388	281	192,2	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	87,1	94,4	102,4	111,4	122,3	137,1	--

-- No calculation possible (see message in single point selection)

### Application Limits 100% 4NES-12



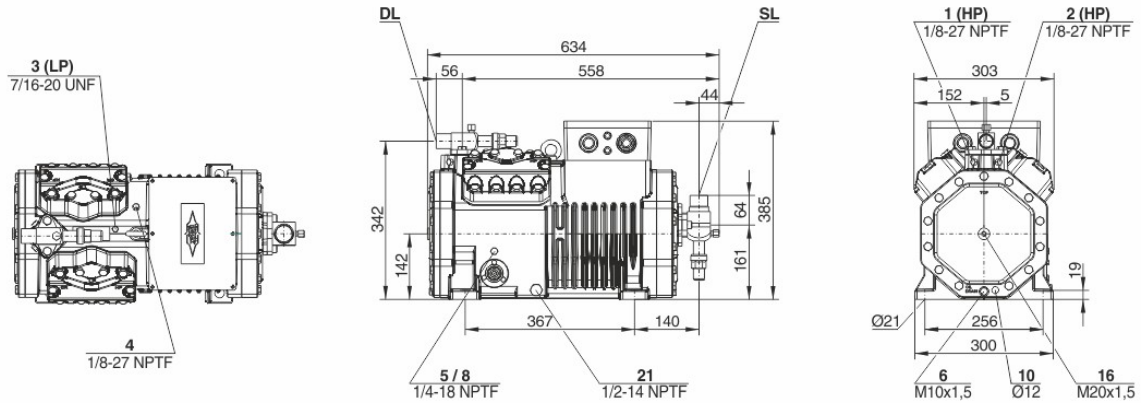
#### Legend

- additional cooling
- suction gas superheat >10K
- M1: motor 1
- - - M2: motor 2
- · - · M3: motor 3
- A



## Technical Data: 4NES-12Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	56,25 m3/h
Displacement (1750 RPM 60Hz)	67,89 m3/h
Frequency range	25..70 Hz
No. of cylinder x bore x stroke	4 x 70 mm x 42 mm
Weight	141 kg
Max. pressure (LP/HP)	19 / 32 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	BSE32(Standard)   R134a tc>70°C: BSE55 (Option)
Oil type R1234yf/R1234ze	BSE32 (Standard)   R1234ze tc>70°C & to>0°C: BSE55 (Option)   R1234ze to>15°C: BSE85K (Option)

#### Motor data

Motor version	3
Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	15,9 A
Max operating current 70Hz/400V/FI	25,2 A
Winding ratio	50/50
Starting current (Rotor locked)	69,0 A Y / 113,0 A YY
Max. Power input	9,0 kW

#### Extent of delivery (Standard)

Motor protection	SE-B1, CM-RC-01(Option)
Enclosure class	IP66
Vibration dampers	Standard
Oil charge	2,60 dm <sup>3</sup>
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

#### Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Oil service valve	Option
Crankcase heater	0..140 W PTC (Option)
Oil level monitoring	OLC-K1 (Option)

#### Sound measurement

Sound power level (-10°C / 45°C)	76,3 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C)	68,3 dB(A) @50Hz



### Selection: Semi-hermetic Reciprocating Compressors

#### Input Values

Compressor model Mode	2KSL-1K Refrigeration and Air conditioning	Suct. gas superheat Operating mode	10,00 K Subcritical
Refrigerant	R744	Power supply	460V-3-60Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

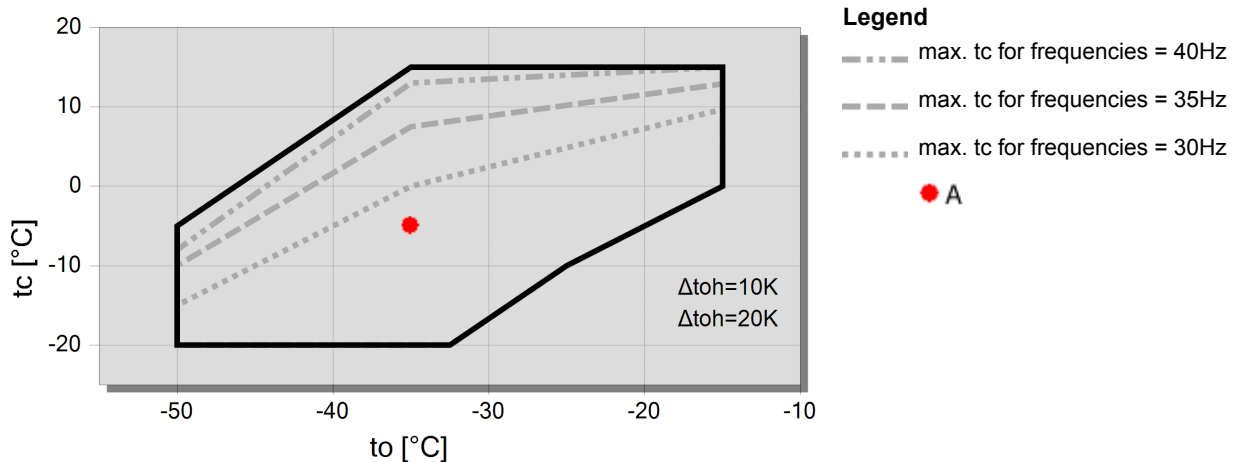
#### Result

Q [W]	Cooling capacity	COP [ - ]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	-20°C	-25°C	-30°C	-35°C	-40°C	-45°C	-50°C	-55°C
<b>-20°C</b>	Q [W]	--	--	--	7041	5469	4148	3067	--
	Qu* [W]	--	--	--	7041	5469	4148	3067	--
	P [kW]	--	--	--	0,93	1,00	1,02	1,00	--
	I [A]	--	--	--	2,56	2,61	2,62	2,61	--
	Qc [W]	--	--	--	7967	6473	5172	4070	--
	COP [ - ]	--	--	--	7,60	5,45	4,05	3,06	--
	m [kg/h]	--	--	--	86,7	67,7	51,6	38,4	--
	Op.	--	--	--	Standard	Standard	Standard	Standard	--
	th [°C]	--	--	--	23,4	36,9	53,4	74,6	--
<b>-10°C</b>	Q [W]	--	9199	7370	5794	4452	3332	2426	--
	Qu* [W]	--	9199	7370	5794	4452	3332	2426	--
	P [kW]	--	1,09	1,22	1,27	1,25	1,20	1,11	--
	I [A]	--	2,66	2,75	2,78	2,78	2,73	2,68	--
	Qc [W]	--	10290	8588	7060	5705	4529	3540	--
	COP [ - ]	--	8,44	6,05	4,58	3,55	2,78	2,18	--
	m [kg/h]	--	121,7	97,8	77,2	59,6	44,9	32,9	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	Standard	--
	th [°C]	--	26,9	37,7	50,1	64,8	83,1	106,9	--
<b>0°C</b>	Q [W]	9410	7615	6051	4701	3549	2585	--	--
	Qu* [W]	9410	7615	6051	4701	3549	2585	--	--
	P [kW]	1,47	1,57	1,59	1,55	1,46	1,34	--	--
	I [A]	2,94	3,03	3,05	3,01	2,93	2,84	--	--
	Qc [W]	10882	9190	7646	6252	5008	3923	--	--
	COP [ - ]	6,39	4,84	3,79	3,03	2,43	1,93	--	--
	m [kg/h]	136,0	110,3	87,9	68,6	52,1	38,2	--	--
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	41,7	52,2	64,0	77,8	94,9	117,6	--	--

-- No calculation possible (see message in single point selection)  
 \*According to EN12900 (10K suction gas superheat, 0K liquid subcooling)

#### Application Limits 2KSL-1K

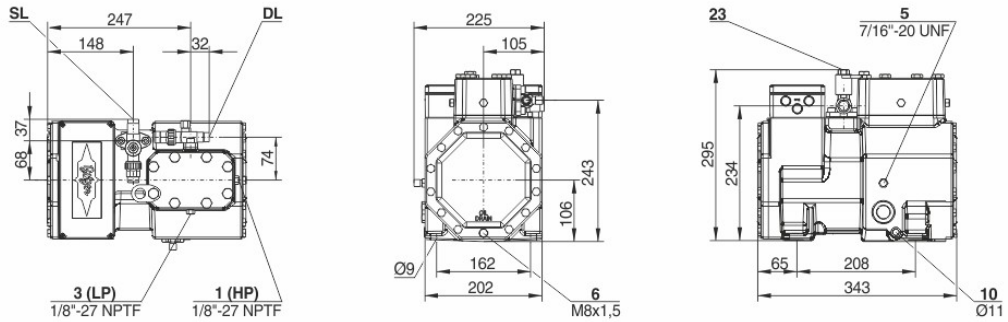






## Technical Data: 2KSL-1K

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	2,71 m <sup>3</sup> /h
Displacement (1750 RPM 60Hz)	3,27 m <sup>3</sup> /h
No. of cylinder x bore x stroke	2 x 30 mm x 22 mm
Weight	47 kg
Max. pressure (LP/HP)	30 / 53 bar
Connection suction line	16 mm - 5/8"
Connection discharge line	12 mm - 1/2"
Oil type R744 (CO <sub>2</sub> )	BSE60K (Standard) BSE85K, BSG68K (Option)

#### Motor data

Motor version	1
Motor voltage (more on request)	440-480V Y-3-60Hz
Max operating current	3.5 A
Starting current (Rotor locked)	22.5 A
Max. Power input	2,2 kW

#### Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	1,00 dm <sup>3</sup>

#### Available Options

Crankcase heater	0..60 W PTC (Option)
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#### Sound measurement



## Selection: Semi-hermetic Reciprocating Compressors

### Input Values

Compressor model Mode	44VES-20Y Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R134a	Power supply	460V-3-60Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

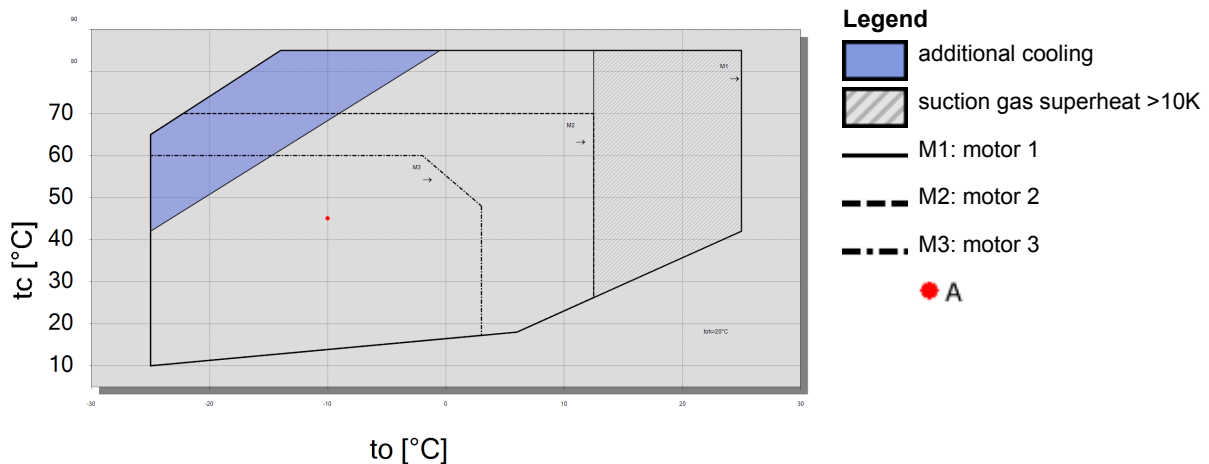
### Result

Q [W]	Cooling capacity	COP [ - ]	COP/EER
Qu* [W]	Evaporator capacity	m [kg/h]	Mass flow
P [kW]	Power input	Op.	Operating mode
I [A]	Current	th [°C]	Discharge gas temp. w/o cooling
Qc [W]	Condenser capacity		

tc	to	10°C	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C
30°C	Q [W]	72592	59376	48076	38452	30298	23435	17706	12969
	Qu* [W]	72592	59376	48076	38452	30298	23435	17706	12969
	P [kW]	9,71	9,83	9,64	9,19	8,54	7,73	6,83	5,89
	I [A]	18,17	18,28	18,10	17,70	17,13	16,46	15,77	15,11
	Qc [W]	82306	69209	57716	47642	38833	31166	24537	18857
	COP [ - ]	7,47	6,04	4,99	4,18	3,55	3,03	2,59	2,20
	m [kg/h]	1523	1235	993	789	619	477	359	262
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	50,7	57,6	65,0	72,8	81,1	90,3	100,6	112,8
	40°C	Q [W]	63603	51806	41737	33181	25958	19904	14879
Qu* [W]		63603	51806	41737	33181	25958	19904	14879	10752
P [kW]		12,25	11,84	11,17	10,31	9,30	8,19	7,05	5,93
I [A]		20,7	20,2	19,56	18,72	17,79	16,84	15,94	15,14
Qc [W]		75849	63642	52908	43489	35255	28099	21933	16683
COP [ - ]		5,19	4,38	3,74	3,22	2,79	2,43	2,11	1,81
m [kg/h]		1461	1179	942	744	579	442	329	237
Op.		Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
th [°C]		61,7	68,6	75,9	83,6	91,9	100,9	111,2	123,6
50°C		Q [W]	54702	44352	35532	28058	21769	16524	12195
	Qu* [W]	54702	44352	35532	28058	21769	16524	12195	8666
	P [kW]	14,31	13,43	12,35	11,12	9,81	8,47	7,15	5,90
	I [A]	22,9	21,9	20,8	19,52	18,26	17,07	16,01	15,12
	Qc [W]	69013	57778	47878	39182	31583	24994	19341	14562
	COP [ - ]	3,82	3,30	2,88	2,52	2,22	1,95	1,71	1,47
	m [kg/h]	1393	1118	888	696	537	405	298	211
	Op.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
	th [°C]	72,6	79,4	86,6	94,3	102,6	111,8	122,4	135,7

-- No calculation possible (see message in single point selection)  
 \*According to EN12900 (20°C suction gas temp., 0K liquid subcooling)

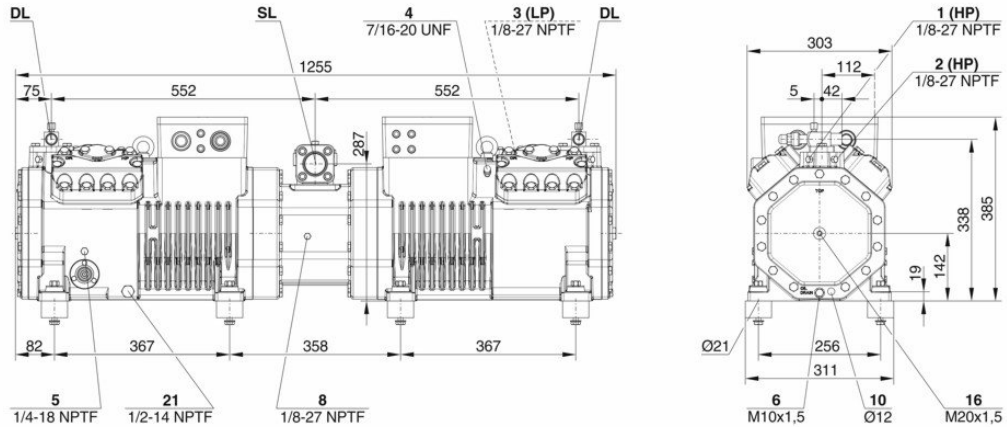
### Application Limits 100% 44VES-20





## Technical Data: 44VES-20Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	69,5 m <sup>3</sup> /h
Displacement (1750 RPM 60Hz)	83,8 m <sup>3</sup> /h
No. of cylinder x bore x stroke	4+4 x 55 mm x 42 mm
Weight	288 kg
Max. pressure (LP/HP)	19 / 32 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	2x22 mm - 7/8"
Oil type R134a/R407C/R404A/R507A/R407A/R407F	BSE32(Standard)   R134a tc>70°C: BSE55 (Option)
Oil type R22 (R12/R502)	B5.2(Option)
Oil type R1234yf/R1234ze	BSE32 (Standard)   R1234ze tc>70°C & to>0°C: BSE55 (Option)   R1234ze to>15°C: BSE85K (Option)

#### Motor data

Motor version	1
Motor voltage (more on request)	440-480V PW-3-60Hz
Max operating current	2x19.9 A
Starting current (Rotor locked)	2x59.0 A Y / 2x99.0 A YY
Max. Power input	2 x 14,5 kW

#### Extent of delivery (Standard)

Motor protection	SE-B1, CM-RC-01(Option)
Enclosure class	IP66
Vibration dampers	Standard
Oil charge	6,10 dm <sup>3</sup>
Discharge shut-off valve	Standard
Suction shut-off valve	Standard

#### Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-75-50-25% (Option)
Capacity Control - infinite	100-10% (Option)
Additional fan	Option
Oil service valve	Option
Crankcase heater	2 x 0..140 W PTC (Option)
Oil level monitoring	OLC-K1 (Option)

#### Sound measurement

Sound power level (+5°C / 50°C)	74 dB(A) @50Hz
Sound power level (-10°C / 45°C)	75,3 dB(A) @50Hz
Sound power level (-35°C / 40°C)	80,4 dB(A) @50Hz
Sound pressure level @ 1m (+5°C / 50°C)	66 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C)	67,3 dB(A) @50Hz
Sound pressure level @ 1m (-35°C / 40°C)	72,4 dB(A) @50Hz
Sound power level (+5°C / 50°C) R134a	72 dB(A) @50Hz
Sound power level (-10°C / 45°C) R134a	73,3 dB(A) @50Hz
Sound pressure level @ 1m (+5°C / 50°C) R134a	64 dB(A) @50Hz
Sound pressure level @ 1m (-10°C / 45°C) R134a	65,3 dB(A) @50Hz