



### Selection: Semi-hermetic Reciprocating Compressors

#### Input Values

Compressor model Mode	(4J-13.2Y) Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

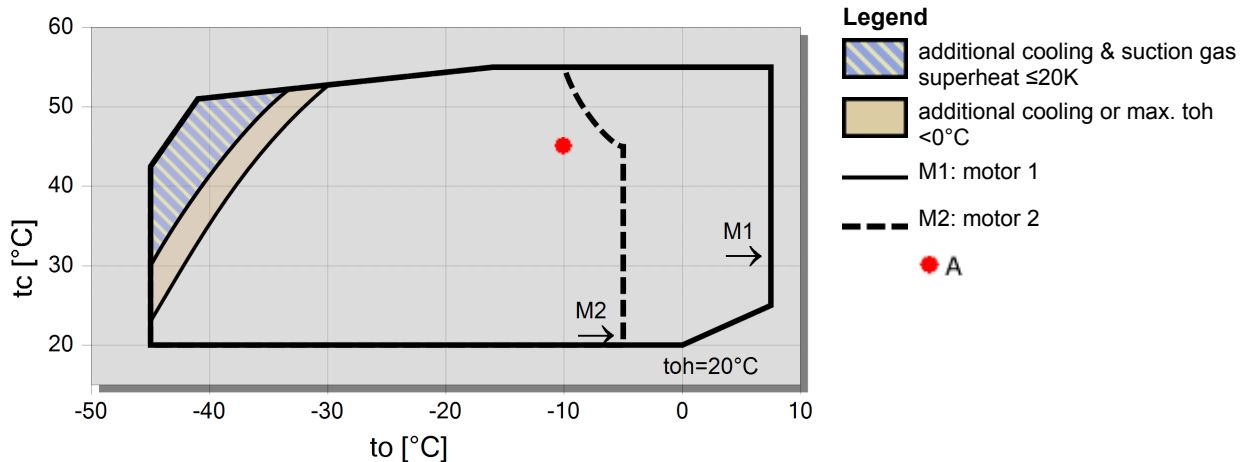
#### Result

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	5°C	-5°C	-15°C	-25°C	-35°C	-45°C	-55°C	-65°C
30°C	Q [W]	--	50306	33909	21720	12840	6547	--	--
	Qu* [W]	--	50306	33909	21720	12840	6547	--	--
	P [kW]	--	13,23	11,63	9,58	7,24	4,76	--	--
	I [A]	--	23,0	20,6	17,75	14,78	12,16	--	--
	Qc [W]	--	63536	45540	31300	20077	11306	--	--
	COP [ - ]	--	3,80	2,92	2,27	1,77	1,38	--	--
	m [kg/h]	--	1264	836	529	310	157,0	--	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	--	70,1	83,9	99,6	118,2	0	--	--
	40°C	Q [W]	--	42791	28679	18150	10466	5019	--
Qu* [W]		--	42791	28679	18150	10466	5019	--	--
P [kW]		--	15,15	12,90	10,27	7,44	4,57	--	--
I [A]		--	25,9	22,5	18,70	15,02	11,99	--	--
Qc [W]		--	57944	41575	28421	17908	9591	--	--
COP [ - ]		--	2,82	2,22	1,77	1,41	1,10	--	--
m [kg/h]		--	1211	795	496	283	134,8	--	--
Op.		--	Standard	Standard	Standard	Standard	Standard	--	--
th [°C]		--	81,2	95,3	111,4	130,5	0	--	--
50°C		Q [W]	--	--	23537	14699	8262	--	--
	Qu* [W]	--	--	23537	14699	8262	--	--	--
	P [kW]	--	--	14,02	10,84	7,53	--	--	--
	I [A]	--	--	24,2	19,49	15,13	--	--	--
	Qc [W]	--	--	37559	25535	15795	--	--	--
	COP [ - ]	--	--	1,68	1,36	1,10	--	--	--
	m [kg/h]	--	--	754	463	257	--	--	--
	Op.	--	--	Standard	Standard	Standard	--	--	--
	th [°C]	--	--	107,1	123,6	0	--	--	--

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

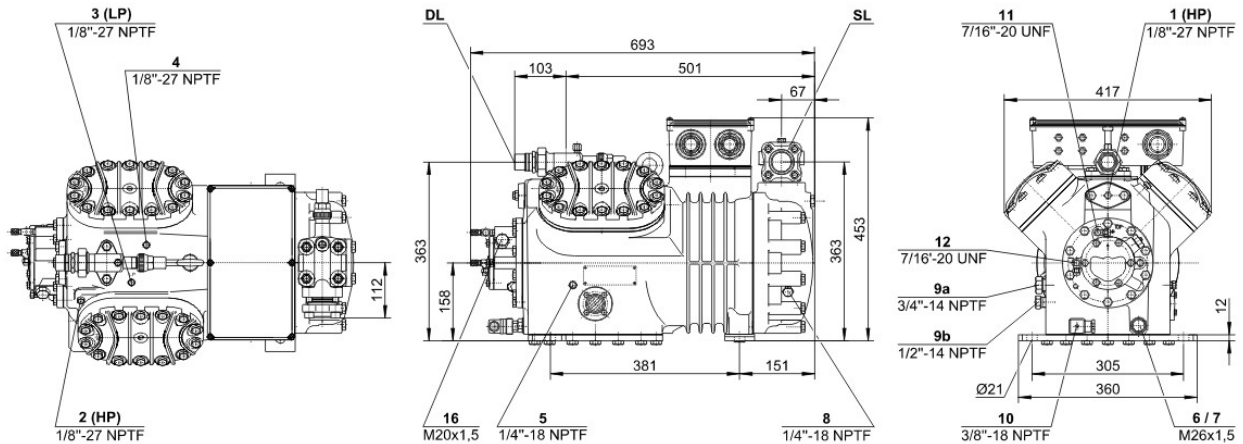
#### Application Limits 100% 4J-13.2





## Technical Data: (4J-13.2Y)

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	63,5 m³/h
Displacement (1750 RPM 60Hz)	76,64 m³/h
No. of cylinder x bore x stroke	4 x 65 mm x 55 mm
Weight	179 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	42 mm - 1 5/8"
Connection discharge line	28 mm - 1 1/8"
Connection cooling water	R 3/4"
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)
Oil type R290/R1270	SHC226E (Standard)

#### Motor data

Motor voltage (more on request)	380-420V PW-3-50Hz
Max operating current	27.0 A
Winding ratio	50/50
Starting current (Rotor locked)	81.0 A Y / 132.0 A YY
Max. Power input	16,3 kW

#### Extent of delivery (Standard)

Motor protection	SE-B2
Enclosure class	IP54 (Standard), IP66 (Option)
Vibration dampers	Standard
Oil charge	4,00 dm³

#### Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Water-cooled cylinder heads	Option
CIC System	Option
Oil service valve	Option
Crankcase heater	140 W (Option)
Oil pressure monitoring	MP54 (Option), Delta-PII (Option, not for R290/R1270)

#### Sound measurement

Sound power level (-10°C / 45°C)	77,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	81,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	69,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	73,0 dB(A) @ 50Hz



## Selection: Semi-hermetic Reciprocating Compressors

### Input Values

Compressor model Mode	(4CC-6.2Y) Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

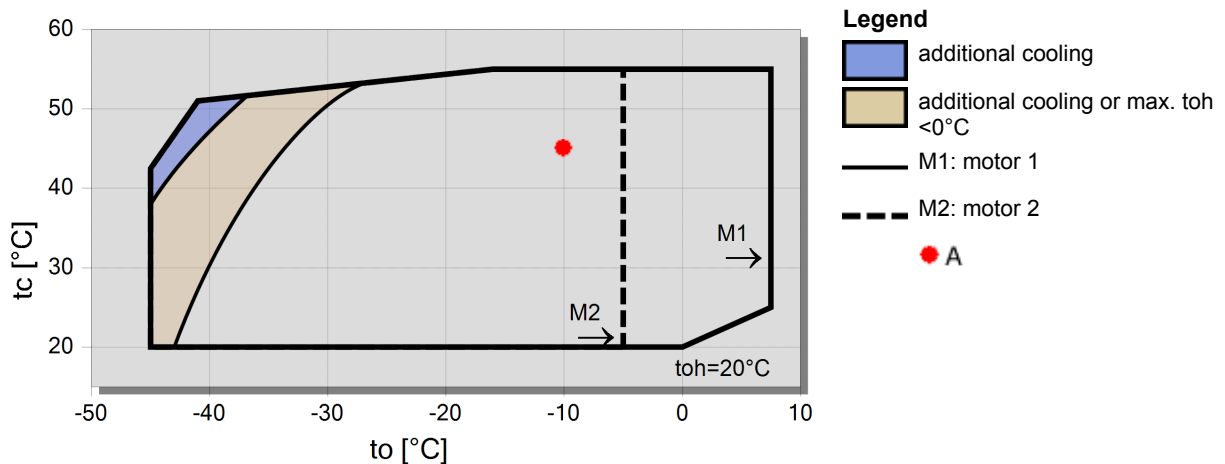
### Result

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	5°C	-5°C	-15°C	-25°C	-35°C	-45°C	-55°C	-65°C
30°C	Q [W]	--	24971	16905	10904	6528	3421	--	--
	Qu* [W]	--	24971	16905	10904	6528	3421	--	--
	P [kW]	--	6,65	5,98	5,01	3,86	2,63	--	--
	I [A]	--	11,73	10,79	9,54	8,20	7,01	--	--
	Qc [W]	--	31625	22881	15915	10391	6056	--	--
	COP [ - ]	--	3,75	2,83	2,18	1,69	1,30	--	--
	m [kg/h]	--	627	417	266	157,5	82,0	--	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	--	70,6	85,3	102,1	122,0	0	--	--
40°C	Q [W]	--	21143	14211	9030	5240	2540	--	--
	Qu* [W]	--	21143	14211	9030	5240	2540	--	--
	P [kW]	--	7,64	6,63	5,37	3,94	2,47	--	--
	I [A]	--	13,14	11,70	9,99	8,29	6,88	--	--
	Qc [W]	--	28780	20844	14398	9184	5007	--	--
	COP [ - ]	--	2,77	2,14	1,68	1,33	1,03	--	--
	m [kg/h]	--	599	394	247	141,7	68,2	--	--
	Op.	--	Standard	Standard	Standard	Standard	Standard	--	--
	th [°C]	--	82,0	97,3	114,8	135,4	0	--	--
50°C	Q [W]	--	17323	11523	7175	3996	--	--	--
	Qu* [W]	--	17323	11523	7175	3996	--	--	--
	P [kW]	--	8,61	7,28	5,71	4,01	--	--	--
	I [A]	--	14,57	12,61	10,43	8,35	--	--	--
	Qc [W]	--	25933	18799	12882	8001	--	--	--
	COP [ - ]	--	2,01	1,58	1,26	1,00	--	--	--
	m [kg/h]	--	568	369	226	124,4	--	--	--
	Op.	--	Standard	Standard	Standard	Standard	--	--	--
	th [°C]	--	94,4	110,5	129,4	0	--	--	--

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

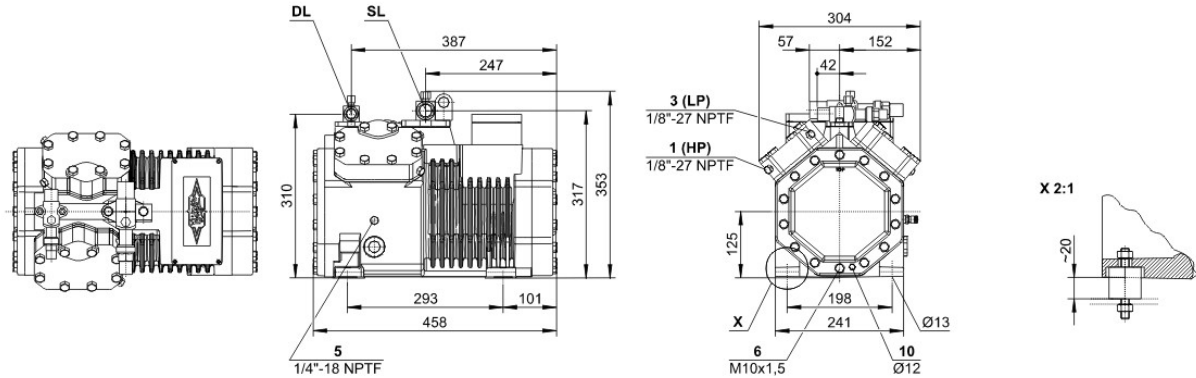
### Application Limits 100% Octagon 4CC-6.2





## Technical Data: (4CC-6.2Y)

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	32,48 m <sup>3</sup> /h
Displacement (1750 RPM 60Hz)	39,20 m <sup>3</sup> /h
No. of cylinder x bore x stroke	4 x 55 mm x 39,3 mm
Weight	90,5 kg
Max. pressure (LP/HP)	19 / 28 bar
Connection suction line	28 mm - 1 1/8"
Connection discharge line	22 mm - 7/8"
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)
Oil type R290/R1270	SHC226E (Standard)

#### Motor data

Motor voltage (more on request)	380-420V Y-3-50Hz
Max operating current	15.9 A
Starting current (Rotor locked)	82.4 A
Max. Power input	9,0 kW

#### Extent of delivery (Standard)

Motor protection	SE-B1
Enclosure class	IP65
Vibration dampers	Standard
Oil charge	2,00 dm <sup>3</sup>

#### Available Options

Discharge gas temperature sensor	Option
Start unloading	Option
Capacity control	100-50% (Option)
Additional fan	Option
Crankcase heater	0..120 W PTC (Option)
Oil level monitoring	OLC-K1 (Option, not for R290/R1270)

#### Sound measurement

Sound power level (-10°C / 45°C)	72,5 dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	76,0 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	64,5 dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	68,0 dB(A) @ 50Hz



### Selection: Semi-hermetic Reciprocating Compressors

#### Input Values

Compressor model Mode	4CES-9Y Refrigeration and Air conditioning	Suction gas temperature Operating mode	20,00 °C Auto
Refrigerant	R404A	Power supply	400V-3-50Hz
Reference temperature	Dew point temp.	Capacity control	100%
Liq. subc. (in condenser)	0 K	Useful superheat	100%

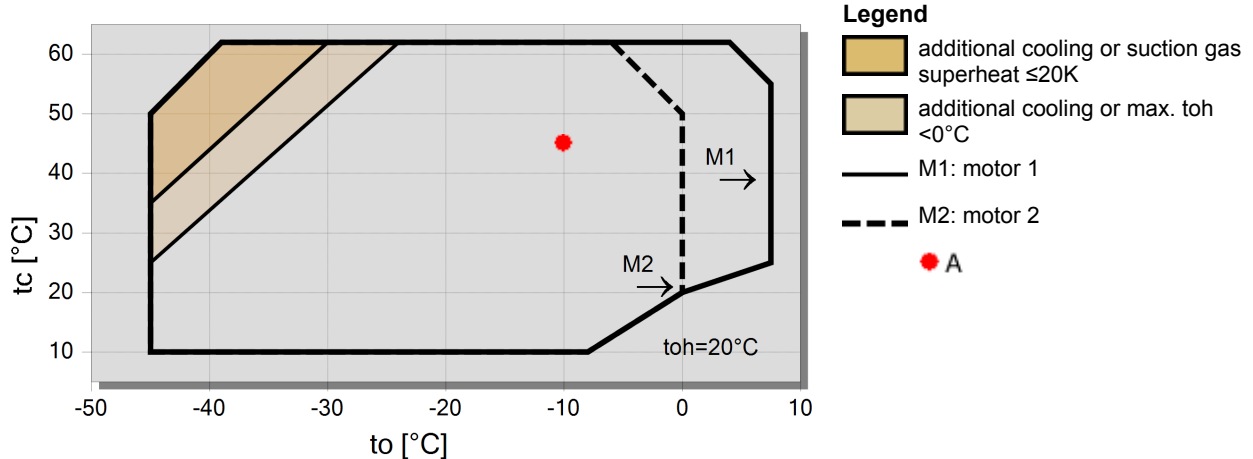
#### Result

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	5°C	-5°C	-15°C	-25°C	-35°C	-45°C	-55°C	-65°C
30°C	Q [W]	38000	26315	17606	11217	6654	3516	--	--
	Qu* [W]	38000	26315	17606	11217	6654	3516		
	P [kW]	6,91	6,61	5,88	4,87	3,74	2,64		
	I [A]	12,08	11,67	10,67	9,36	8,06	7,02		
	Qc [W]	44905	32925	23486	16088	10392	6153		
	COP [ - ]	5,50	3,98	2,99	2,30	1,78	1,33		
	m [kg/h]	980	661	434	273	160,5	84,3		
	Op.	Standard	Standard	Standard	Standard	Standard	Standard		
	th [°C]	55,7	68,6	82,7	98,7	117,9	0		
	40°C	Q [W]	32600	22428	14848	9315	5399	2747	--
Qu* [W]		32600	22428	14848	9315	5399	2747		
P [kW]		8,42	7,66	6,54	5,22	3,86	2,60		
I [A]		14,30	13,17	11,57	9,81	8,19	6,99		
Qc [W]		41025	30091	21393	14539	9257	5349		
COP [ - ]		3,87	2,93	2,27	1,78	1,40	1,06		
m [kg/h]		950	635	412	255	146,0	73,8		
Op.		Standard	Standard	Standard	Standard	Standard	Standard		
th [°C]		66,8	79,9	94,3	110,8	130,9	0		
50°C		Q [W]	27091	18519	12125	7476	4218	2046	--
	Qu* [W]	27091	18519	12125	7476	4218	2046		
	P [kW]	9,75	8,55	7,07	5,47	3,90	2,51		
	I [A]	16,28	14,48	12,31	10,12	8,23	6,91		
	Qc [W]	36836	27065	19193	12942	8113	4557		
	COP [ - ]	2,78	2,17	1,72	1,37	1,08	0,81		
	m [kg/h]	919	607	388	235	131,3	63,1		
	Op.	Standard	Standard	Standard	Standard	Standard	Standard		
	th [°C]	77,9	91,1	105,9	123,0	0	0		

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

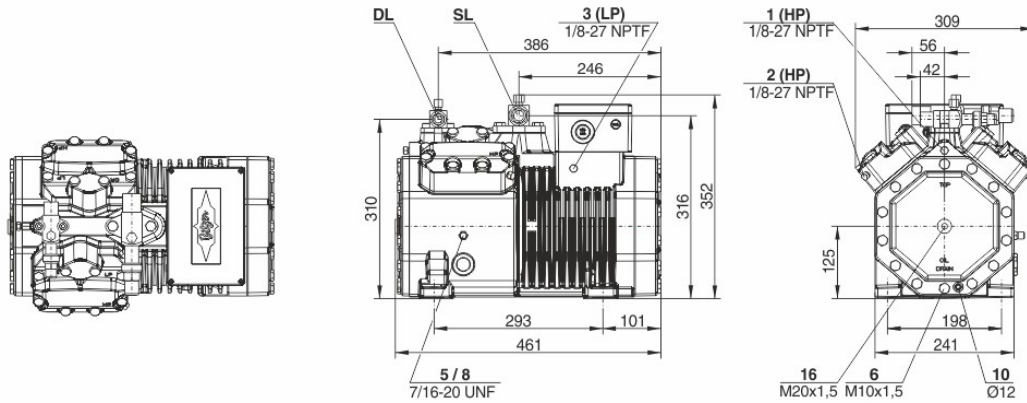
#### Application Limits 100% 4CES-9





## Technical Data: 4CES-9Y

### Dimensions and Connections



### Technical Data

#### Technical Data

Displacement (1450 RPM 50Hz)	32,48 m3/h
Displacement (1750 RPM 60Hz)	39,20 m3/h
No. of cylinder x bore x stroke	4 x 55 mm x 39,3 mm
Weight	90,5 kg
Max. pressure (LP/HP)	19 / 32bar
Connection suction line	28 mm - 1 1/8"
Connection discharge line	22 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)
Ölfüllung R454C/R455A	BSE32 (Standard)

#### Motor data

Motor version	1
Motor voltage (more on request)	380-420V Y-3-50Hz
Max operating current	20.2 A
Starting current (Rotor locked)	82.4 A
Max. Power input	11,3 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 (+5°C / 50°C)	73,2 dB(A) @ 50Hz
Sound power level (-10°C / 45°C)	74,1dB(A) @ 50Hz
Sound power level (-35°C / 40°C)	76,5 dB(A) @ 50Hz
Sound pressure level @ 1m (+5°C / 50°C)	65,2 dB(A) @ 50Hz
Sound pressure level @ 1m (-10°C / 45°C)	66,11dB(A) @ 50Hz
Sound pressure level @ 1m (-35°C / 40°C)	68,5 dB(A) @ 50Hz