

DA range

Dual compressor units for medium and low temperature applications



Summary:

Units for medium temperature applications (908...2092 kW @ -10 / 35 °C)	
Compressor units with mechanical capacity regulation.....	2
Compressor units for VSD operation.....	3
Units for low temperature applications (314...706 kW @ -35 / 35 °C)	
Compressor units with mechanical capacity regulation.....	4
Compressor units for VSD operation.....	5
Notes.....	6

Units for medium temperature applications

Compressor units with mechanical capacity regulation (908...1516 kW @ -10 / 35 °C)

Model		D-KA73-80		D-KA83-80		D-KA93-80		D-KA103-80	
Refrigerant		R717		R717		R717		R717	
Number of compressors		2		2		2		2	
Compressor manufacturer		Bitzer		Bitzer		Bitzer		Bitzer	
Capacity regulation method		Mechanical 13...100%		Mechanical 13...100%		Mechanical 13...100%		Mechanical 13...100%	
Compressor speed		2900 1/min		2900 1/min		2900 1/min		2900 1/min	
Total swept volume		1400 m ³ /h		1610 m ³ /h		1820 m ³ /h		2030 m ³ /h	
Rated motor power per compressor		160 kW		200 kW		200 kW		250 kW	
Motors efficiency class		IE3		IE3		IE3		IE3	
Power supply voltage		380...415 V		380...415 V		380...415 V		380...415 V	
Power grid frequency		50 Hz		50 Hz		50 Hz		50 Hz	
Number of combined oil separators		1		1		1		1	
Combined oil separator manufacturer		Bitzer		Bitzer		Bitzer		Bitzer	
Oil cooling method		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon	
Oil cooler heat exchanger manufacturer		Vahterus		Vahterus		Vahterus		Vahterus	
Compressor oil type		Arctic SHC226E		Arctic SHC226E		Arctic SHC226E		Arctic SHC226E	
Oil charge ⁽¹⁾		200 L		200 L		220 L		220 L	
Design pressure LP / HP		19 bar / 25 bar		19 bar / 25 bar		19 bar / 25 bar		19 bar / 25 bar	
Dimensions (Length [mm] x Width [mm] x Height [mm]) ⁽¹⁾		2750 x 2270 x 2520		2750 x 2270 x 2520		2750 x 2270 x 2550		2750 x 2270 x 2550	
Empty weight ⁽¹⁾		6100 kg		6250 kg		6350 kg		7800 kg	
Performance at -10 / 35 °C ^{(1), (2)}	Operation	standard	with ECO	standard	with ECO	standard	with ECO	standard	with ECO
	Total cooling capacity	908 kW	1042 kW	1058 kW	1212 kW	1194 kW	1366 kW	1338 kW	1516 kW
	Total shaft power	238 kW	254 kW	268 kW	286 kW	308 kW	326 kW	338 kW	356 kW
	Compressor COP (cooling capacity / shaft power)	3,82	4,19	3,94	4,24	3,89	4,19	3,96	4,27
	Total condenser capacity	1046 kW	1196 kW	1216 kW	1388 kW	1374 kW	1566 kW	1538 kW	1736 kW
	Oil cooling capacity	102 kW	102 kW	110 kW	110 kW	128 kW	128 kW	136 kW	134 kW

(1) - Tentative data

(2) - Performance data is calculated with 1K liquid subcooling, 1K suction superheat and 80 °C discharge gas temperature

(3) - Glycol / water oil cooling can be used as heat recovery

Compressor units for VSD operation (626...1046 kW @ -10 / 35 °C)

Model		D-KA73-80F		D-KA83-80F		D-KA93-80F		D-KA103-80F	
Refrigerant		R717		R717		R717		R717	
Number of compressors		2		2		2		2	
Compressor manufacturer		Bitzer		Bitzer		Bitzer		Bitzer	
Capacity regulation method		VSD		VSD		VSD		VSD	
Compressor speed		1500...4000 1/min		1500...4000 1/min		1500...4000 1/min		1500...4000 1/min	
Total swept volume at maximum speed		1932 m ³ /h		2220 m ³ /h		2510 m ³ /h		2800 m ³ /h	
Rated motor power per compressor		200 kW		250 kW		250 kW		315 kW	
Motors efficiency class		IE3		IE3		IE3		IE3	
Power supply voltage		380...415 V		380...415 V		380...415 V		380...415 V	
Power grid frequency		50 Hz		50 Hz		50 Hz		50 Hz	
Number of combined oil separators		1		1		1		1	
Combined oil separator manufacturer		Bitzer		Bitzer		Bitzer		Bitzer	
Oil cooling method		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon	
Oil cooler heat exchanger manufacturer		Vahterus		Vahterus		Vahterus		Vahterus	
Compressor oil type		Arctic SHC226E		Arctic SHC226E		Arctic SHC226E		Arctic SHC226E	
Oil charge ⁽¹⁾		200 L		200 L		220 L		220 L	
Design pressure LP / HP		19 bar / 25 bar		19 bar / 25 bar		19 bar / 25 bar		19 bar / 25 bar	
Dimensions (Length [mm] x Width [mm] x Height [mm]) ⁽¹⁾		2750 x 2270 x 2520		2750 x 2270 x 2520		2750 x 2270 x 2550		2750 x 2270 x 2550	
Empty weight ⁽¹⁾		6200 kg		7550 kg		7650 kg		7800 kg	
Performance at -10 / 35 °C ^{(1), (2)}	Operation	standard	with ECO	standard	with ECO	standard	with ECO	standard	with ECO
	Total cooling capacity at maximum speed	1252	1438	1460	1672	1646	1884	1846	2092
	Total shaft power at maximum speed	328	350	370	394	424	448	466	492
	Compressor COP (cooling capacity / shaft power)	3,82	4,12	3,94	4,24	3,89	4,20	3,96	4,27
	Total condenser capacity	1442	1650	1678	1914	1896	1566	2122	2394
	Oil cooling capacity	140	140	152	152	178	128	188	184

(1) - Tentative data

(2) - Performance data is calculated with 1K liquid subcooling, 1K suction superheat and 80 °C discharge gas temperature

(3) - Glycol / water oil cooling can be used as heat recovery

Units for low temperature applications

Compressor units with mechanical capacity regulation (314...512 kW @ -35 / 35 °C)

Model		D-NA83-80		D-NA103-80	
Refrigerant		R717		R717	
Number of compressors		2		2	
Compressor manufacturer		Bitzer		Bitzer	
Capacity regulation method		Mechanical 13...100%		Mechanical 13...100%	
Compressor speed		2900 1/min		2900 1/min	
Total swept volume		1610 m ³ /h		2030 m ³ /h	
Rated motor power per compressor		160 kW		200 kW	
Motors efficiency class		IE3		IE3	
Power supply voltage		380...415 V		380...415 V	
Power grid frequency		50 Hz		50 Hz	
Number of combined oil separators		1		1	
Combined oil separator manufacturer		Bitzer		Bitzer	
Oil cooling method		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon	
Oil cooler heat exchanger manufacturer		Vahterus		Vahterus	
Compressor oil type		Arctic SHC226E		Arctic SHC226E	
Oil charge ⁽¹⁾		200 L		220 L	
Design pressure LP / HP		19 bar / 25 bar		19 bar / 25 bar	
Dimensions (Length [mm] x Width [mm] x Height [mm]) ⁽¹⁾		2750 x 2270 x 2520		2750 x 2270 x 2550	
Empty weight ⁽¹⁾		6250 kg		6350 kg	
Performance at -35 / 35 °C ^{(1), (2)}	Operation	standard	with ECO	standard	with ECO
	Total cooling capacity	314 kW	400 kW	408 kW	512 kW
	Total shaft power	190 kW	212 kW	244 kW	270 kW
	Compressor COP (cooling capacity / shaft power)	1,66	1,89	1,67	1,9
	Total condenser capacity	378 kW	472 kW	486 kW	606 kW
	Oil cooling capacity	132 kW	138 kW	168 kW	176 kW

(1) - Tentative data

(2) - Performance data is calculated with 1K liquid subcooling, 1K suction superheat and 80 °C discharge gas temperature

(3) - Glycol / water oil cooling can be used as heat recovery

Compressor units for VSD operation (434...706 kW @ -35 / 35 °C)

Model		D-NA83-80F		D-NA103-80F	
Refrigerant		R717		R717	
Number of compressors		2		2	
Compressor manufacturer		Bitzer		Bitzer	
Capacity regulation method		VSD		VSD	
Compressor speed		1500...4000 1/min		1500...4000 1/min	
Total swept volume at maximum speed		2220 m ³ /h		2800 m ³ /h	
Rated motor power per compressor		200 kW		250 kW	
Motors efficiency class		IE3		IE3	
Power supply voltage		380...415 V		380...415 V	
Power grid frequency		50 Hz		50 Hz	
Number of combined oil separators		1		1	
Combined oil separator manufacturer		Bitzer		Bitzer	
Oil cooling method		Glycol/water ⁽³⁾ or thermosyphon		Glycol/water ⁽³⁾ or thermosyphon	
Oil cooler heat exchanger manufacturer		Vahterus		Vahterus	
Compressor oil type		Arctic SHC226E		Arctic SHC226E	
Oil charge ⁽¹⁾		200 L		220 L	
Design pressure LP / HP		19 bar / 25 bar		19 bar / 25 bar	
Dimensions (Length [mm] x Width [mm] x Height [mm]) ⁽¹⁾		2750 x 2270 x 2520		2750 x 2270 x 2550	
Empty weight ⁽¹⁾		6300 kg		7650 kg	
Performance at -35 / 35 °C ^{(1), (2)}	Operation	standard	with ECO	standard	with ECO
	Total cooling capacity at maximum speed	434 kW	552 kW	562 kW	706 kW
	Total shaft power at maximum speed	262 kW	292 kW	336 kW	372,4 kW
	Compressor COP (cooling capacity / shaft power)	1,66	1,89	1,67	1,91
	Total condenser capacity	522 kW	652 kW	670 kW	836 kW
	Oil cooling capacity	182 kW	190 kW	232 kW	242 kW

(1) - Tentative data

(2) - Performance data is calculated with 1K liquid subcooling, 1K suction superheat and 80 °C discharge gas temperature

(3) - Glycol / water oil cooling can be used as heat recovery

Notes:

Specification shown in this document is subject to change without notification

For further details please contact us.

Customized solutions for different temperatures, configurations are possible, please contact us with your request.

