

Series DHG I DHA

R134a | R404A | R507 | R407C | R22

Semi-hermetic duplex compressors

- *At a glance*
- *Scope of supply and accessories*
- *Technical data*
- *Dimensions and connections*

At a glance

Duplex compressors are the simplest version of a parallel installation of two compressors. The capacity can be controlled particularly efficiently by switching one of the compressors on or off.

Further capacity gradation is possible, as desired with additional capacity control (cylinder shut-off).

In combination with Pluscom compressors there is also the possibility of continuously adjustable speed control for a compressor via a frequency converter (option) which has been directly installed and is connected and ready for operation.

Special features:
› Adjacent set up
› Each compressor has its own connection on the suction gas side (shut-off valve)
› No separate oil-gas compensator required
› Emergency operation with one compressor is possible in the event of a breakdown

Available versions:
DHG(DHA)12P
DHG(DHA)22P
DHG(DHA)34P
DHG(DHA)4
DHG(DHA)5
DHG(DHA)6
DHG7



DHG6

Type key

DHGX34P/215-4 S

Series [1]
Ester oil filling [2]
Size
Number of cylinders [3]
Pluscom [3]
Swept volume
Number of poles
Motor variant [4]

[1] DHG = Duplex compressors Hermetic Gas-cooled (suction gas-cooled)
DHA = Duplex compressors Hermetic Air-cooled (for deep-freezing)
[2] X = Ester oil filling (HFC refrigerants e.g. R134a, R404A, R507, R407C)
[3] = Additional declaration for Pluscom compressors
[4] S = More powerful motor e.g. air conditioning applications

Series DHG(DHA)
Duplex compressors

At a glance



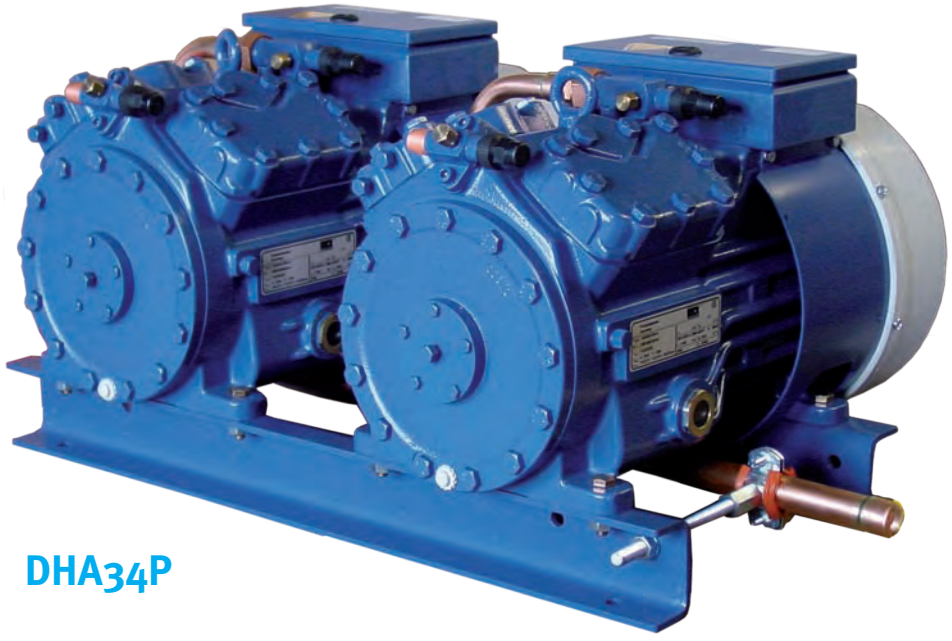
Information on the compressors:
Semi-hermetic compressors from the HG and HA model series are used as the basic compressors for duplex models.
Detailed descriptions and information on the basic compressor can be found in the chapter entitled “Series HG(HA) single-stage compressors“, from page 5 onwards.

Performance data:
Performance data for the various refrigeration equipment can be found in the chapter entitled “Series HG(HA) single-stage compressors“ from page 27 onwards.
(Details for Duplex x 2)

Operating limits:
Operating limits diagrams for the various refrigerants can be found in the chapter entitled “Series HG(HA) single-stage compressors“, from page 26 onwards.

Scope of supply:
› Two HG or HA semi-hermetic reciprocating compressors mounted and fixed on a base frame adjacent to one another.
› Fitted with pipes on the suction side, with shared suction pipe connection
› Rubber plates included as accessories
Further information on the scope of delivery for individual basic compressors can be found in the chapter entitled “Series HG(HA) single-stage compressors“, from page 61 onwards.

Accessory:
Accessories for the various compressors can be found in the chapter entitled “Series HG(HA) single-stage compressors“, from page 63 onwards.



DHA34P

Technical data - DHG

Type	Number of cylinders	Swept volume 50 / 60 Hz (1450/1740 1/min)	Electrical data ③				Weight	Connections ⑦		Oil charge
			Voltage ①	Max. working current ②	Max. power consumption ②	Starting current (rotor locked)		Discharge line DV	Common suction line SL	
		m³/h		A	kW	A	kg	mm I inch	mm I inch	Ltr.
				Δ / Y		Δ / Y				
DHG12P/60-4 S	2 x 2	2 x 5,40 / 6,40	④	2 x 6,8 / 3,9	2 x 2,2	2 x 40 / 23	106	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/75-4	2 x 2	2 x 6,70 / 8,10	④	2 x 7,1 / 4,1	2 x 2,3	2 x 40 / 23	106	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/75-4 S	2 x 2	2 x 6,70 / 8,10	④	2 x 8,0 / 4,6	2 x 2,6	2 x 43 / 25	108	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/90-4	2 x 2	2 x 8,00 / 9,60	④	2 x 8,5 / 4,9	2 x 2,8	2 x 43 / 25	108	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/90-4 S	2 x 2	2 x 8,00 / 9,60	④	2 x 8,8 / 5,1	2 x 2,9	2 x 45 / 26	99	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/110-4	2 x 2	2 x 9,40 / 11,30	④	2 x 9,2 / 5,3	2 x 3,1	2 x 43 / 25	107	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG12P/110-4 S	2 x 2	2 x 9,40 / 11,30	④	2 x 10,6 / 6,1	2 x 3,6	2 x 45 / 26	98	2 x 12 / 1/2	22 / 7/8	2 x 0,9
DHG22P/125-4	2 x 2	2 x 11,10 / 13,30	④	2 x 9,7 / 5,6	2 x 3,2	2 x 53 / 32	158	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG22P/125-4 S	2 x 2	2 x 11,10 / 13,30	④	2 x 10,9 / 6,3	2 x 3,7	2 x 53 / 32	158	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG22P/160-4	2 x 2	2 x 13,70 / 16,40	④	2 x 10,5 / 6,0	2 x 3,5	2 x 53 / 32	159	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG22P/160-4 S	2 x 2	2 x 13,70 / 16,40	④	2 x 12,8 / 7,4	2 x 4,4	2 x 67 / 40	162	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG22P/190-4	2 x 2	2 x 16,50 / 19,80	④	2 x 13,3 / 7,7	2 x 4,6	2 x 53 / 32	157	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG22P/190-4 S	2 x 2	2 x 16,50 / 19,80	④	2 x 16,1 / 9,3	2 x 5,7	2 x 67 / 40	160	2 x 16 / 5/8	28 / 1 1/8	2 x 1,1
DHG34P/215-4	2 x 4	2 x 18,80 / 22,60	④	2 x 14,4 / 8,3	2 x 5,0	2 x 67 / 40	196	2 x 16 / 5/8	35 / 1 3/8	2 x 1,4
DHG34P/215-4 S	2 x 4	2 x 18,80 / 22,60	④	2 x 18,1 / 10,5	2 x 6,1	2 x 96 /57	202	2 x 16 / 5/8	35 / 1 3/8	2 x 1,4
DHG34P/255-4	2 x 4	2 x 22,10 / 26,60	④	2 x 17,3 / 10,0	2 x 6,1	2 x 67 / 40	195	2 x 16 / 5/8	35 / 1 3/8	2 x 1,4
DHG34P/255-4 S	2 x 4	2 x 22,10 / 26,60	④	2 x 21,8 / 12,6	2 x 7,5	2 x 96 / 57	201	2 x 16 / 5/8	35 / 1 3/8	2 x 1,4
DHG34P/315-4	2 x 4	2 x 27,30 / 32,80	④	2 x 21,1 / 12,2	2 x 7,3	2 x 96 / 57	200	2 x 22 / 7/8	35 / 1 3/8	2 x 1,4
DHG34P/315-4 S	2 x 4	2 x 27,30 / 32,80	④	2 x 26,5 / 16,3	2 x 8,9	2 x 134 / 77	206	2 x 22 / 7/8	35 / 1 3/8	2 x 1,4
DHG34P/380-4	2 x 4	2 x 33,10 / 39,70	④	2 x 26,1 / 15,1	2 x 9,1	2 x 96 / 57	199	2 x 22 / 7/8	35 / 1 3/8	2 x 1,4
DHG34P/380-4 S	2 x 4	2 x 33,10 / 39,70	④	2 x 32,4 / 18,7	2 x 11,1	2 x 134 / 77	205	2 x 22 / 7/8	35 / 1 3/8	2 x 1,4
				* PW 1+2		* PW1 / PW 1+2				
DHG4/465-4	2 x 4	2 x 40,50 / 48,60	⑤	2 x 18	2 x 11,0	2 x 57 / 75	335	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG4/465-4 S	2 x 4	2 x 40,50 / 48,60	⑤	2 x 27	2 x 13,0	2 x 82 / 107	341	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG4/555-4	2 x 4	2 x 48,20 / 57,80	⑤	2 x 27	2 x 12,9	2 x 82 / 107	339	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG4/555-4 S	2 x 4	2 x 48,20 / 57,80	⑤	2 x 34	2 x 15,2	2 x 107 / 140	345	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG4/650-4	2 x 4	2 x 56,60 / 67,90	⑤	2 x 27	2 x 15,7	2 x 82 / 107	343	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG4/650-4 S	2 x 4	2 x 56,60 / 67,90	⑤	2 x 34	2 x 18,4	2 x 107 / 140	349	2 x 28 / 1 1/8	54 / 2 1/8	2 x 3,4
DHG5/725-4	2 x 4	2 x 62,90 / 75,50	⑤	2 x 33	2 x 16,5	2 x 82 / 107	434	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHG5/725-4 S	2 x 4	2 x 62,90 / 75,50	⑤	2 x 37	2 x 19,4	2 x 107 / 140	440	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHG5/830-4	2 x 4	2 x 72,20 / 86,70	⑤	2 x 33	2 x 18,9	2 x 82 / 107	431	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHG5/830-4 S	2 x 4	2 x 72,20 / 86,70	⑤	2 x 49	2 x 22,3	2 x 126 / 160	444	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHG5/945-4	2 x 4	2 x 82,20 / 98,60	⑤	2 x 37	2 x 22,6	2 x 107 / 140	440	2 x 35 / 1 3/8	54 / 2 1/8	2 x 4,5
DHG5/945-4 S	2 x 4	2 x 82,20 / 98,60	⑤	2 x 49	2 x 22,8	2 x 126 / 160	447	2 x 35 / 1 3/8	54 / 2 1/8	2 x 4,5
DHG6/1080-4	2 x 4	2 x 93,70 / 112,40	⑤	2 x 47	2 x 26,3	2 x 149 / 189	472	2 x 35 / 1 3/8	76	2 x 4,5
DHG6/1080-4 S	2 x 4	2 x 93,70 / 112,40	⑤	2 x 57	2 x 31,0	2 x 172 / 212	483	2 x 35 / 1 3/8	76	2 x 4,5
DHG6/1240-4	2 x 4	2 x 107,60 / 129,10	⑤	2 x 57	2 x 30,5	2 x 172 / 212	480	2 x 35 / 1 3/8	76	2 x 4,5
DHG6/1240-4 S	2 x 4	2 x 107,60 / 129,10	⑤	2 x 71	2 x 36,0	2 x 204 / 250	486	2 x 35 / 1 3/8	76	2 x 4,5
DHG6/1410-4	2 x 4	2 x 122,40 / 146,90	⑤	2 x 57	2 x 35,6	2 x 172 / 212	476	2 x 35 / 1 3/8	76	2 x 4,5
DHG6/1410-4 S	2 x 4	2 x 122,40 / 146,90	⑤	2 x 71	2 x 42,6	2 x 204 / 250	481	2 x 35 / 1 3/8	76	2 x 4,5
DHG7/1620-4	2 x 6	2 x 140,60 / 168,80	⑥	2 x 76	2 x 38,7	2 x 227 / 340	623	2 x 42 / 1 5/8	76	2 x 4,8
DHG7/1620-4 S	2 x 6	2 x 140,60 / 168,80	⑥	2 x 83	2 x 46,3	2 x 268 / 373	664	2 x 42 / 1 5/8	76	2 x 4,8
DHG7/1860-4	2 x 6	2 x 161,40 / 193,70	⑥	2 x 83	2 x 44,6	2 x 268 / 373	659	2 x 42 / 1 5/8	76	2 x 4,8
DHG7/1860-4 S	2 x 6	2 x 161,40 / 193,70	⑥	2 x 98	2 x 53,3	2 x 343 / 494	649	2 x 42 / 1 5/8	76	2 x 4,8
DHG7/2110-4	2 x 6	2 x 183,60 / 220,30	⑥	2 x 98	2 x 51,2	2 x 343 / 494	645	2 x 42 / 1 5/8	89	2 x 4,8
DHG7/2110-4 S	2 x 6	2 x 183,60 / 220,30	⑥	2 x 115	2 x 60,5	2 x 344 / 500	661	2 x 42 / 1 5/8	89	2 x 4,8

* PW = Part Winding, motors for part winding starting
1 = 1. part winding
2 = 2. part winding

Series DHG(DHA)

Duplex compressors

Technical data - DHA

Type	Number of cylinders	Swept volume 50 / 60 Hz (1450/1740 1/min)	Electrical data ③				Weight	Connections ⑦		Oil charge
			Voltage ①	Max. working current ②	Max. power consumption ②	Starting current (rotor locked)		Discharge line DV	Common suction line SL	
		m³/h		A	kW	A	kg	mm I inch	mm I inch	Ltr.
				Δ / Y		Δ / Y				
DHA12P/60-4	2 x 2	2 x 5,40 / 6,40	④	2 x 5,5 / 3,2	2 x 1,7	2 x 40 / 23	116	2 x 12 / 1/2	16 / 5/8	2 x 0,9
DHA12P/75-4	2 x 2	2 x 6,70 / 8,10	④	2 x 5,9 / 3,4	2 x 1,8	2 x 40 / 23	117	2 x 12 / 1/2	16 / 5/8	2 x 0,9
DHA12P/90-4	2 x 2	2 x 8,00 / 9,60	④	2 x 6,6 / 3,8	2 x 2,0	2 x 43 / 25	118	2 x 12 / 1/2	16 / 5/8	2 x 0,9
DHA12P/110-4	2 x 2	2 x 9,40 / 11,30	④	2 x 6,9 / 4,0	2 x 2,2	2 x 43 / 25	118	2 x 12 / 1/2	16 / 5/8	2 x 0,9
DHA22P/125-4	2 x 2	2 x 11,10 / 13,30	④	2 x 7,1 / 4,1	2 x 3,0	2 x 53 / 32	172	2 x 12 / 1/2	22 / 7/8	2 x 1,1
DHA22P/160-4	2 x 2	2 x 13,70 / 16,40	④	2 x 8,2 / 4,8	2 x 4,0	2 x 67 / 40	164	2 x 12 / 1/2	22 / 7/8	2 x 1,1
DHA22P/190-4	2 x 2	2 x 16,50 / 19,80	④	2 x 9,0 / 5,2	2 x 4,0	2 x 67 / 40	162	2 x 12 / 1/2	22 / 7/8	2 x 1,1
DHA34P/215-4	2 x 4	2 x 18,80 / 22,60	④	2 x 10,9 / 6,3	2 x 3,7	2 x 67 / 40	209	2 x 16 / 5/8	28 / 1 1/8	2 x 1,4
DHA34P/255-4	2 x 4	2 x 22,10 / 26,60	④	2 x 12,5 / 7,2	2 x 4,3	2 x 67 / 40	208	2 x 16 / 5/8	28 / 1 1/8	2 x 1,4
DHA34P/315-4	2 x 4	2 x 27,30 / 32,80	④	2 x 16,2 / 9,4	2 x 5,3	2 x 96 / 57	213	2 x 16 / 5/8	28 / 1 1/8	2 x 1,4
DHA34P/380-4	2 x 4	2 x 33,10 / 39,70	④	2 x 18,9 / 11,0	2 x 6,4	2 x 96 / 57	212	2 x 16 / 5/8	28 / 1 1/8	2 x 1,4
				* PW 1+2		* PW1 / PW 1+2				
DHA4/465-4	2 x 4	2 x 40,50 / 48,60	⑤	2 x 21	2 x 11,2	2 x 82 / 107	350	2 x 28 / 1 1/8	42 / 1 5/8	2 x 3,4
DHA4/555-4	2 x 4	2 x 48,20 / 57,80	⑤	2 x 26	2 x 13,3	2 x 107 / 140	354	2 x 28 / 1 1/8	42 / 1 5/8	2 x 3,4
DHA4/650-4	2 x 4	2 x 56,60 / 67,90	⑤	2 x 26	2 x 15,6	2 x 107 / 140	353	2 x 28 / 1 1/8	42 / 1 5/8	2 x 3,4
DHA5/725-4	2 x 4	2 x 62,90 / 75,50	⑤	2 x 26	2 x 12,5	2 x 107 / 140	449	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHA5/830-4	2 x 4	2 x 72,20 / 86,70	⑤	2 x 26	2 x 12,8	2 x 126 / 160	454	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHA5/945-4	2 x 4	2 x 82,20 / 98,60	⑤	2 x 26	2 x 12,9	2 x 126 / 160	450	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHA6/1080-4	2 x 4	2 x 93,70 / 112,40	⑤	2 x 31	2 x 15,8	2 x 172 / 212	485	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHA6/1240-4	2 x 4	2 x 107,60 / 129,10	⑤	2 x 31	2 x 15,9	2 x 172 / 212	482	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5
DHA6/1410-4	2 x 4	2 x 122,40 / 146,90	⑤	2 x 31	2 x 16,2	2 x 172 / 212	477	2 x 28 / 1 1/8	54 / 2 1/8	2 x 4,5

* PW = Part Winding, motors for part winding starting
1 = 1. part winding
2 = 2. part winding

Oil sump heater 110-240 V - 1 - 50/60 Hz (option)
› DHG(DHA)12P, DHG(DHA)22P, DHG(DHA)34P: 50-120 W
PTC heater, self-regulating, installation in housing bore

Oil sump heater 230 V - 1 - 50/60 Hz (standard)
› DHG(DHA)4: 80 W
› DHG(DHA)5, DHG(DHA)6, DHG7: 140 W
Permanently set version, installation in immersion sleeve

Fan motors for the HA version 230 V - 1 - 50/60 Hz
› DHA12P: 40 W / 0,3 A
› DHA22P, DHA34P: 72 W / 0,53 A
› DHA4, DHA5, DHA6: 140 W / 0,71 A

Explanations:

① Tolerance (± 10%) relates to the mean value of the voltage range. Other voltages and current types on request.

② Take account of the max. operating current / max. power consumption when designing contactors, leads and fuses. Switches: Service category AC3

③ All data are based on the mean value of the voltage range.

④ 220-240 V Δ / 380-420 V Y - 3 - 50 Hz
265-290 V Δ / 440-480 V Y - 3 - 60 Hz

⑤ 380-420 V Y/YY - 3 - 50 Hz PW
440-480 V Y/YY - 3 - 60 Hz PW
PW = Part Winding, motors for part winding starting (no start unloaders required)
› Winding ratios:
DHG(DHA)4, DHG(DHA)5, DHG(DHA)6 = 66% / 33%
› Designs for Y/Δ on request

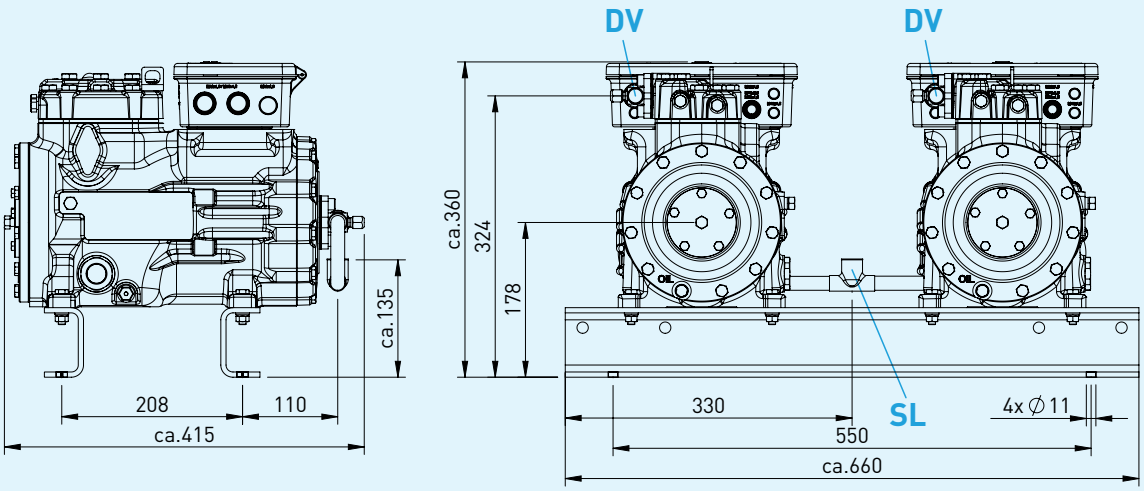
⑥ 380-420 V Δ/ YYY - 3 - 50 Hz PW
440-480 V Δ/ YYY - 3 - 60 Hz PW
PW = Part Winding, motors for part winding starting (no start unloaders required)
› Winding ratios: DHG7 = 60% / 40%
› Designs for Y/Δ on request

⑦ For soldering connections

Dimensions and connections - DHG

DHG12P

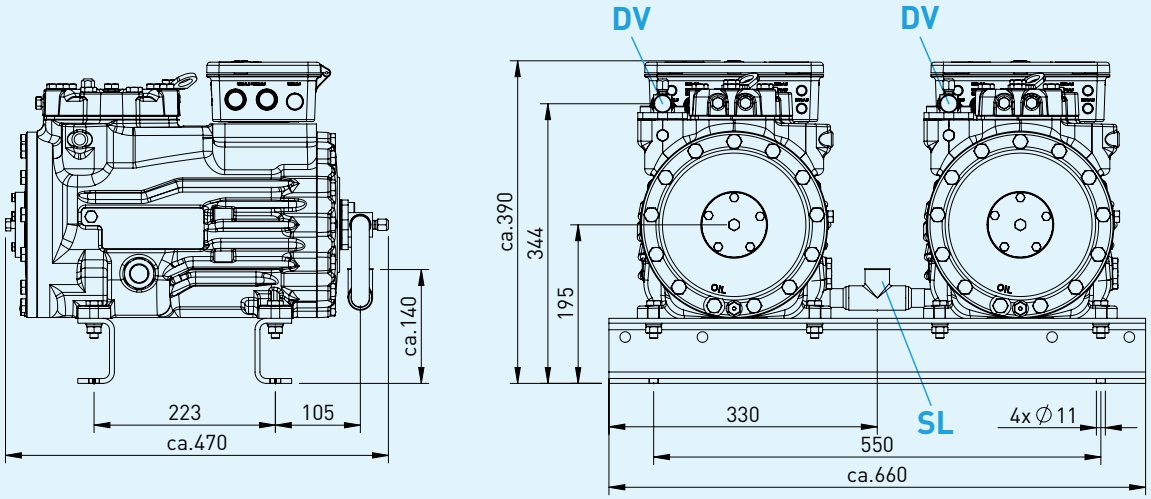
DHG12P/60-4 S **DHG12P/75-4** **DHG12P/75-4 S** **DHG12P/90-4** **DHG12P/90-4 S** **DHG12P/110-4** **DHG12P/110-4 S**



Dimensions in mm

DHG22P

DHG22P/125-4 **DHG22P/160-4** **DHG22P/190-4**
DHG22P/125-4 S **DHG22P/160-4 S** **DHG22P/190-4 S**



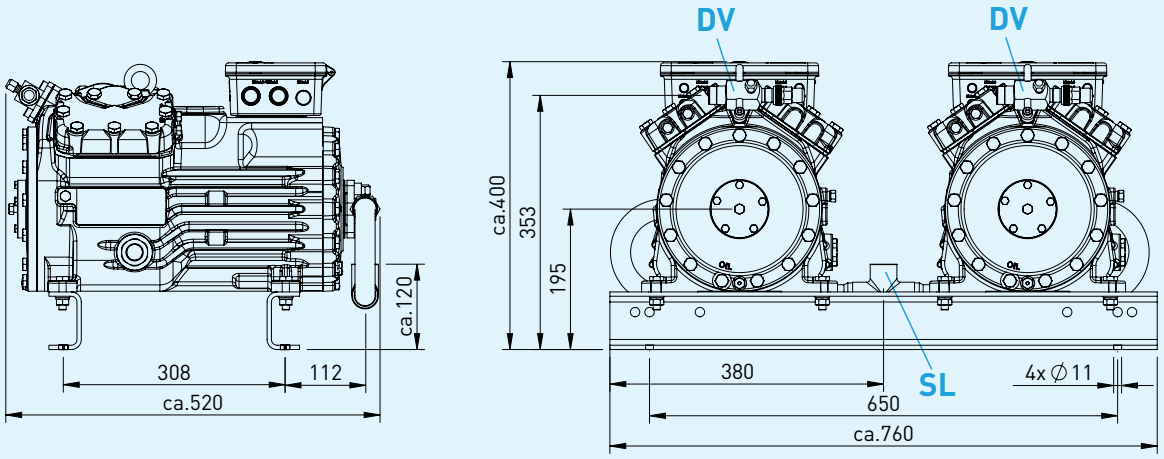
Dimensions in mm

• Connections see page 130
• More compressor connections from page 60 onwards

Dimensions and connections - DHG

DHG34P

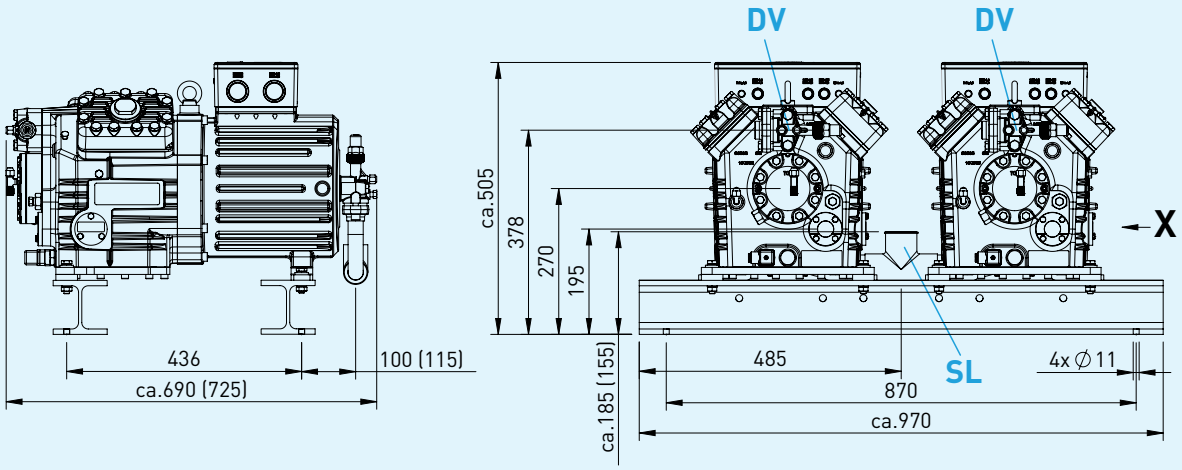
DHG34P/215-4
DHG34P/215-4 S
DHG34P/255-4
DHG34P/255-4 S
DHG34P/315-4
DHG34P/315-4 S
DHG34P/380-4
DHG34P/380-4 S



Dimensions in mm

DHG4

DHG4/465-4
DHG4/465-4 S
DHG4/555-4
DHG4/555-4 S
DHG4/650-4
DHG4/650-4 S



Dimensions in ( ) = DHG4/650-4, DHG4/650-4 S

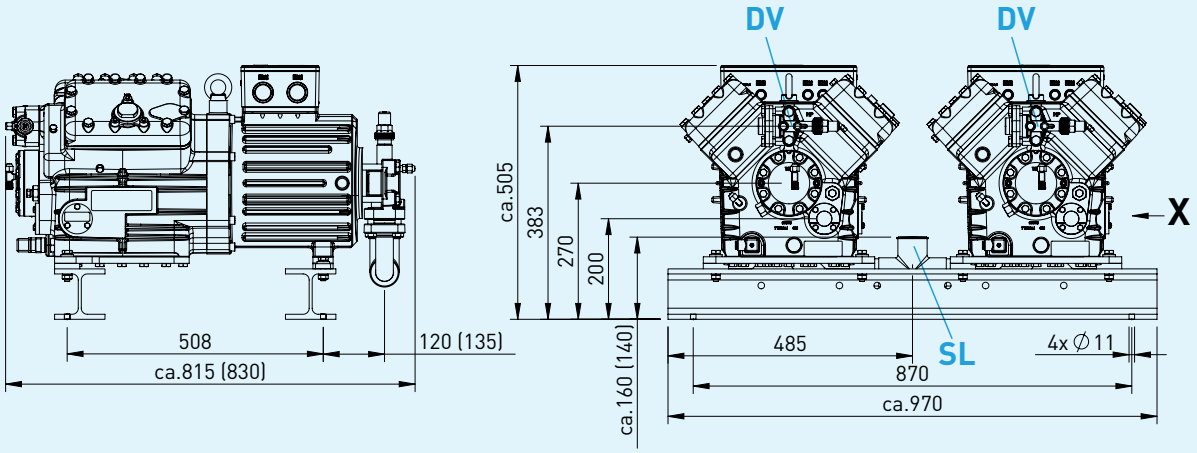
Dimensions in mm

- Connections see page 130
- Dimensions for view X see page 59
- More compressor connections from page 60 onwards

Dimensions and connections - DHG

DHG5

DHG5/725-4 **DHG5/830-4** **DHG5/945-4**
DHG5/725-4 S **DHG5/830-4 S** **DHG5/945-4 S**

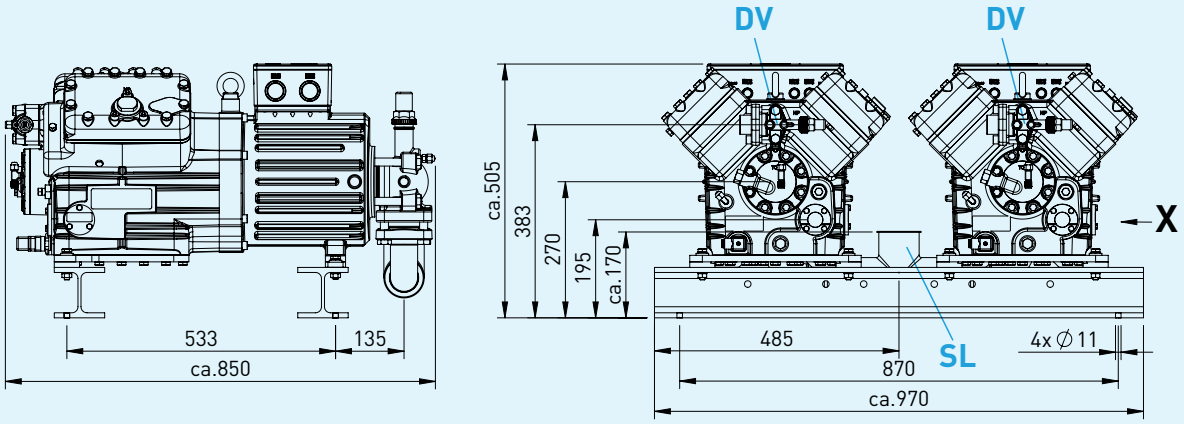


Dimensions in ( ) = DHG5/945-4, DHG5/945-4 S

Dimensions in mm

DHG6

DHG6/1080-4 **DHG6/1240-4** **DHG6/1410-4**
DHG6/1080-4 S **DHG6/1240-4 S** **DHG6/1410-4 S**



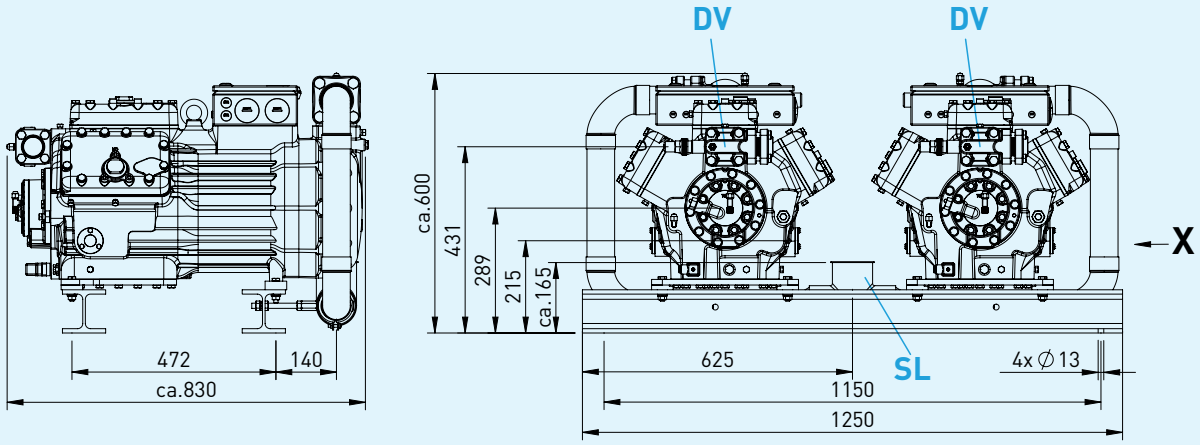
Dimensions in mm

- Connections see page 130
- Dimensions for view X see page 59
- More compressor connections from page 60 onwards

Dimensions and connections - DHG

DHG7

DHG7/1620-4 **DHG7/1860-4** **DHG7/2110-4**
DHG7/1620-4 S **DHG7/1860-4 S** **DHG7/2110-4 S**



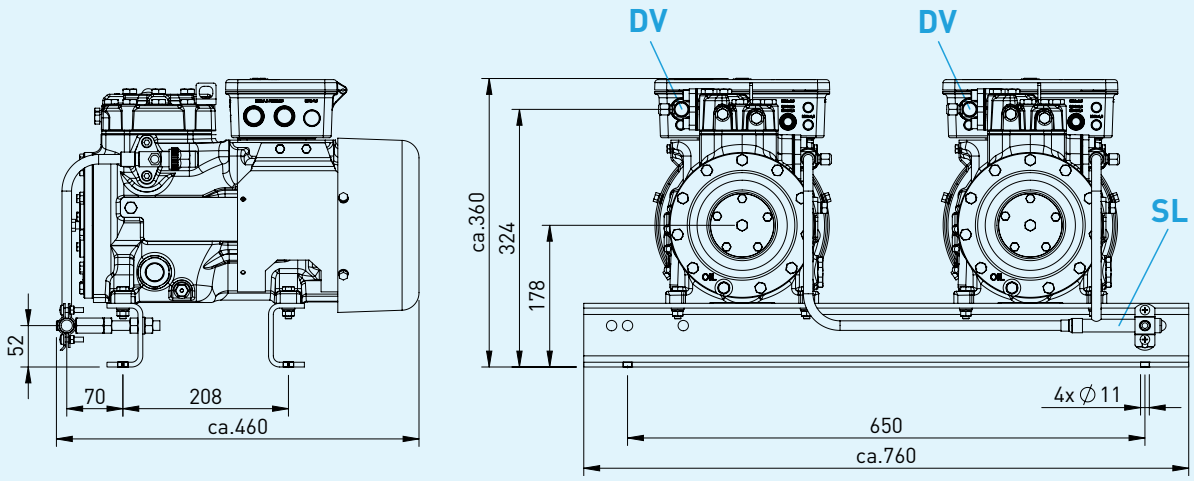
Dimensions in mm

- Connections see page 130
- Dimensions for view X see page 59
- More compressor connections from page 60 onwards

Dimensions and connections - DHA

DHA12P

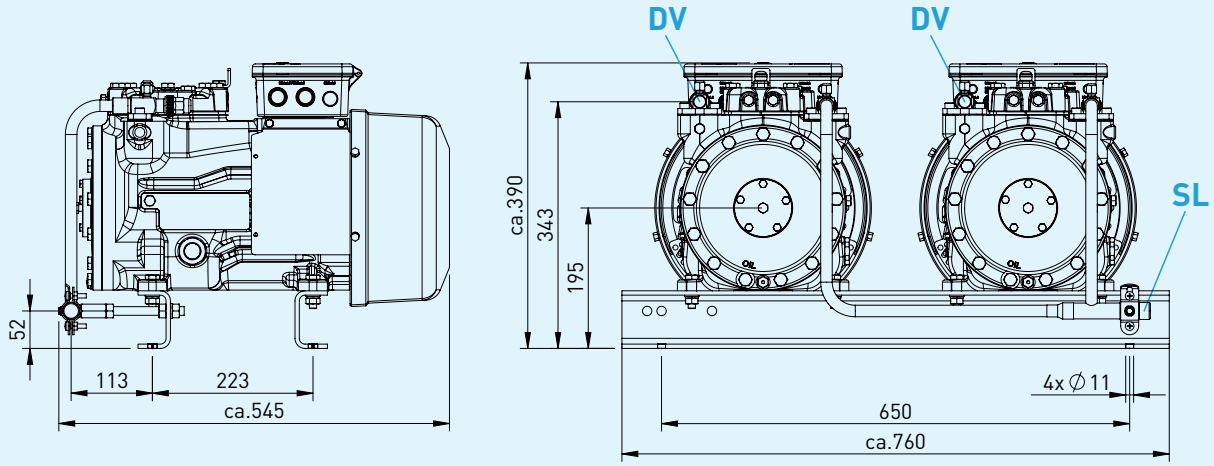
DHA12P/60-4 DHA12P/75-4 DHA12P/90-4 DHA12P/110-4



Dimensions in mm

DHA22P

DHA22P/125-4 DHA22P/160-4 DHA22P/190-4



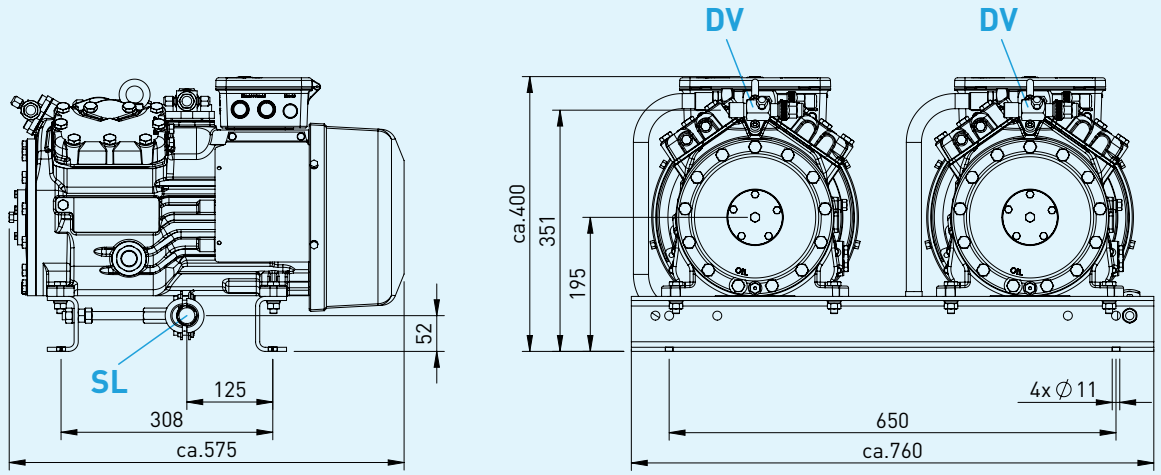
Dimensions in mm

• Connections see page 131
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Dimensions and connections - DHA

DHA34P

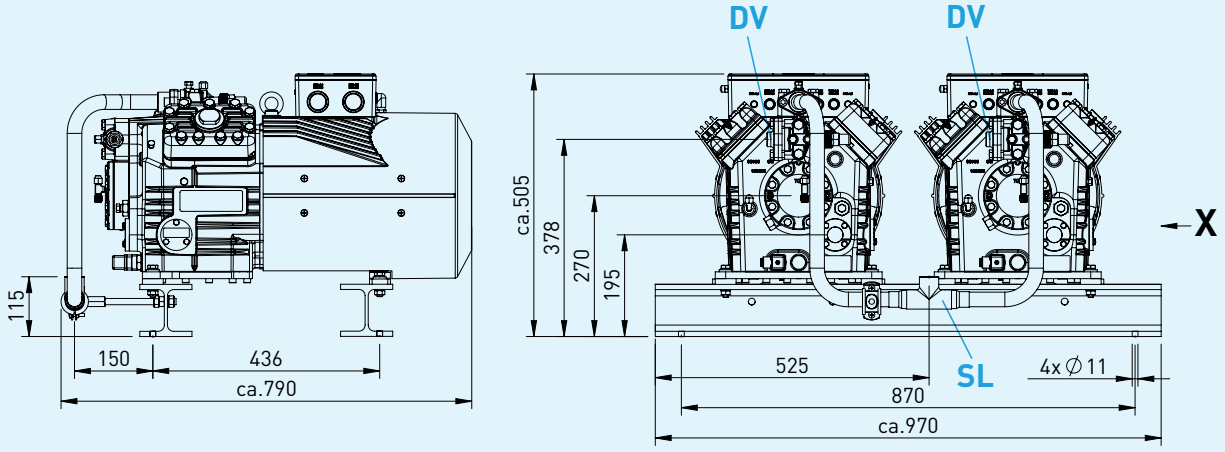
DHA34P/215-4 DHA34P/255-4 DHA34P/315-4 DHA34P/380-4



Dimensions in mm

DHA4

DHA4/465-4 DHA4/555-4 DHA4/650-4



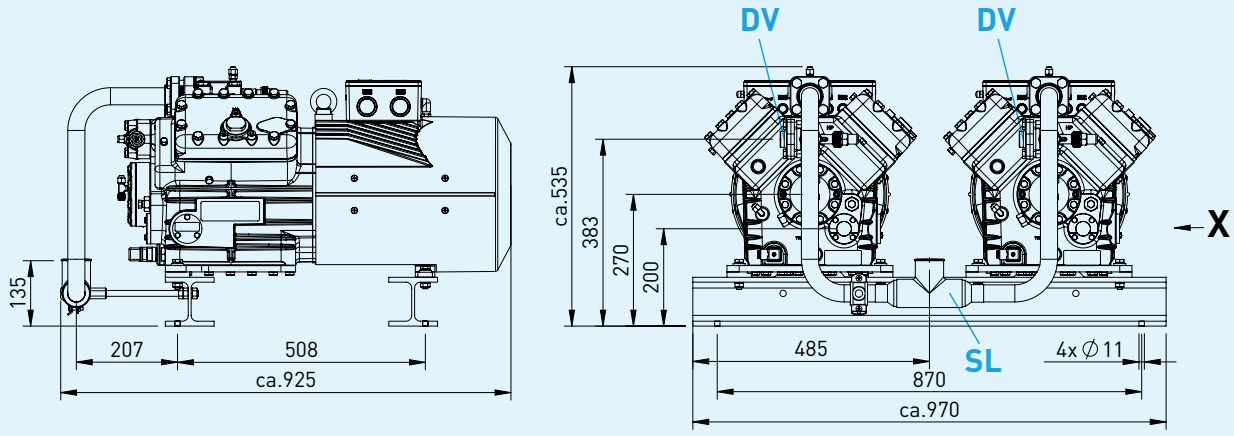
Dimensions in mm

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Dimensions and connections - DHA

DHA5

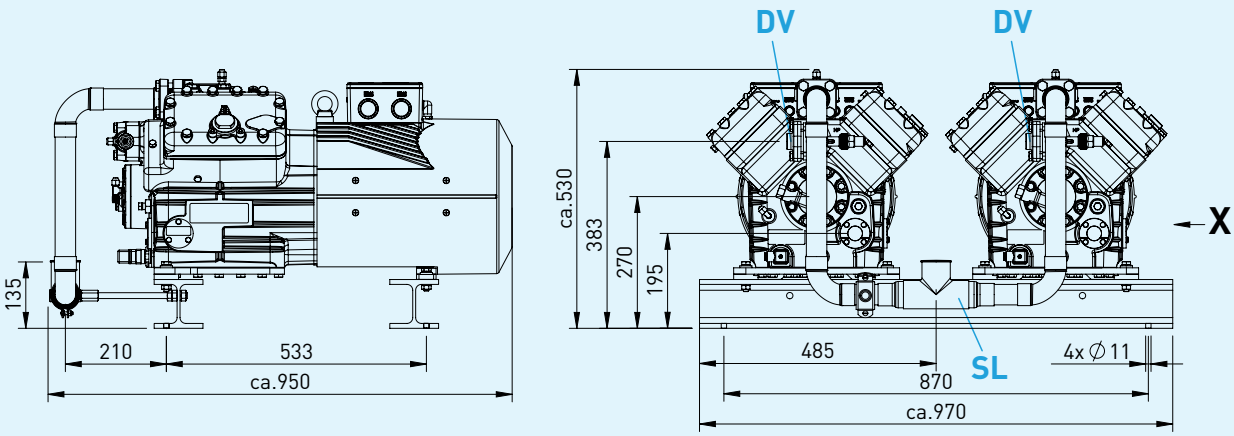
DHA5/725-4 **DHA5/830-4** **DHA5/945-4**



Dimensions in mm

DHA6

DHA6/1080-4 **DHA6/1240-4** **DHA6/1410-4**



Dimensions in mm

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