



THE HEART OF FRESHNESS

R410A // HERMETIC

SCROLL COMPRESSORS

ORBIT SERIES



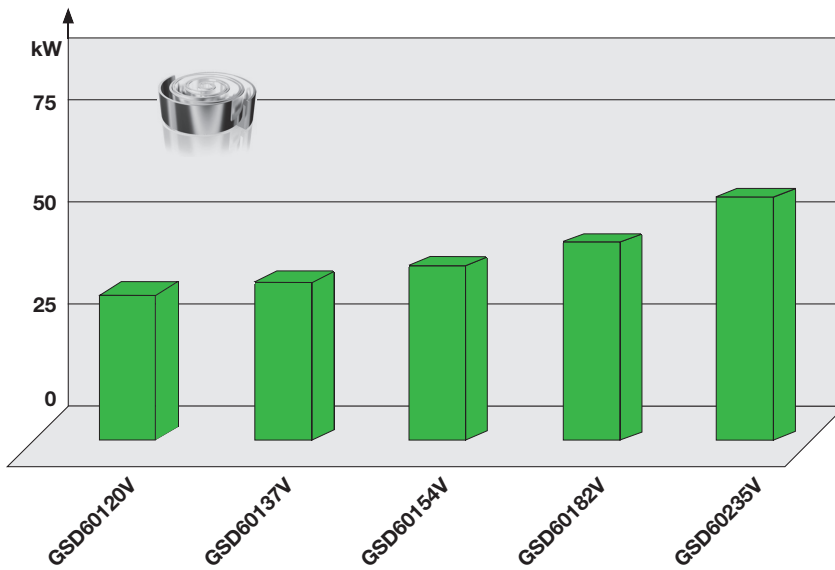
50 Hz // ESP-130-6

The ORBIT Series

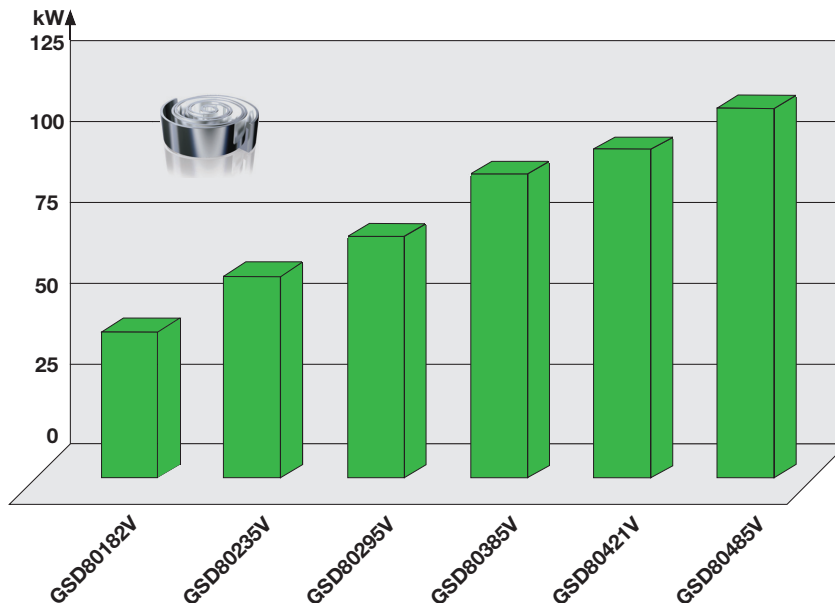
The scroll compressors of the ORBIT series for R410A have been developed especially for both air conditioning and reversible heat pumps. They are characterized by high efficiency, smooth running and reliability. With respect to the typical seasonal operating mode of A/C applications – primarily in part load operation – special focus has been put on low energy consumption also at reduced condensing temperatures.

Moreover the compressor design has been optimized for low sound emissions, achieving the lowest level in its class. The ORBIT series also weighs less than the competitive models, as the diameter is more than 2 cm less. Nevertheless, the ORBIT series geometry, as it relates to fitting locations and mounting configuration, matches the competitors' layout.

The ORBIT 6 capacity range*



The ORBIT 8 capacity range*



* based on EN 12900 conditions (+5/50°C)

Energy efficiency and part load behaviour

With respect to the efficiency requirements of different applications, two compressor families with identical displacements have been developed:

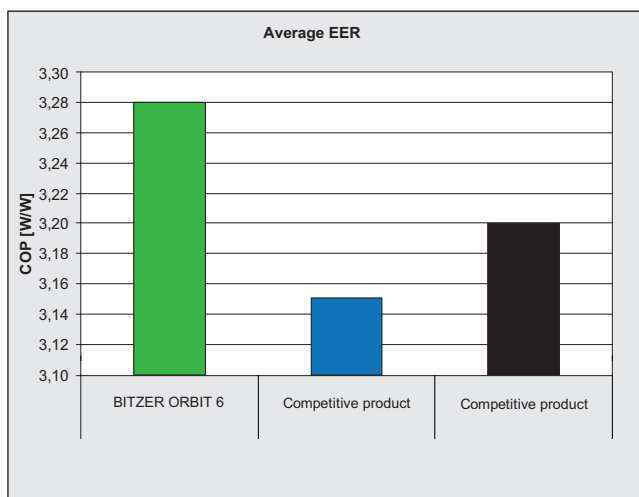
“BITZER ORBIT 8” standard series – optimized for operation at medium to high condensing temperatures, e. g. for systems with air-cooled condenser and for heat pumps.

“BITZER ORBIT 8 Boreal” series – optimized for operation at low to medium condensing temperatures. This generally affects systems with water-cooled condenser or evaporatively cooled, and air-cooled systems in cooler climates.

BITZER sets a new standard in scroll compressors with optimization technology that results in superior ESEER in both air-cooled and water-cooled applications. Up to 15% better than competitive models.

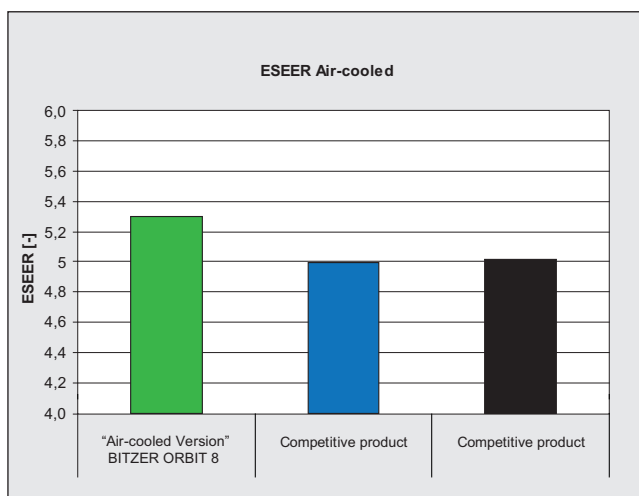
“BITZER ORBIT 6” series – optimized for smaller capacity systems at medium to high condensing temperatures. Ideal for unitary heat pumps and air conditioning, or as part of an uneven tandem with larger ORBIT 8 compressors in chillers and/or reversible systems.

ORBIT 6: Up to 3% higher full-load efficiency



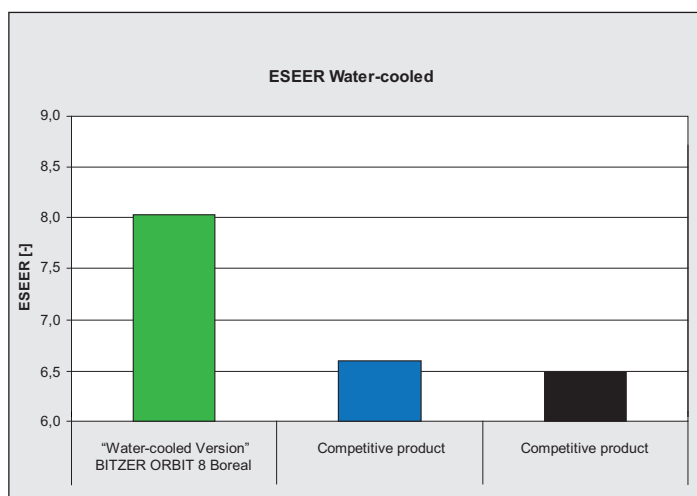
According to EN 12900

ORBIT 8: Up to 5% better ESEER



ESEER: European Seasonal Energy Efficiency Ratio

ORBIT 8 Boreal: Up to 15% better ESEER



ESEER: European Seasonal Energy Efficiency Ratio

Calculation based on multi compressor compound



The unique technical features

- ❑ Large standard application diagram
Ideally suited to both air conditioning and heat-pumps
- ❑ High energy efficiency at part and full load
 - Optimized for lowest annual operating costs
 - Especially high EER, ESEER/ IPLV and SCOP values
- ❑ Low sound levels
 - Optimized design for lowest sound levels in its capacity class
- ❑ Even temperature distribution across scroll wraps achieved by patented design
- ❑ Especially low oil carry over rate
- ❑ Very efficient high power factor motors
Significantly lower operating amps than with common motor design
- ❑ Integrated PTC motor protection
- ❑ Expanded capability
 - Direct rail mounting (no spacers required)
 - Even and uneven Tandems with common piping (no restrictor washers required)*
- ❑ Operation with frequency inverter from 35 to 75 Hz**

Scope of standard delivery

Built-in motor (for voltages see "Technical data"), electronic motor protection, stub tubes for brazed connections (or threaded connections for Rotalock valves and adaptors for GSD8 series), integrated discharge check valve, oil sight glass, oil service port, terminal box with enclosure class IP54, polyvinyl ether oil charge, holding gas charge.

Accessories (optional)

Band type crankcase heater, discharge gas temperature sensor, anti-vibration mountings with sleeves, Rotalock adaptors, Rotalock shut-off valves, Rotalock pipe adaptors, BITZER Advanced Header Technology piping packages.

Maximum Applied Pressure Limits

ORBIT 6:

Low pressure side: 33.3 bar
High pressure side: 45 bar

ORBIT 8:

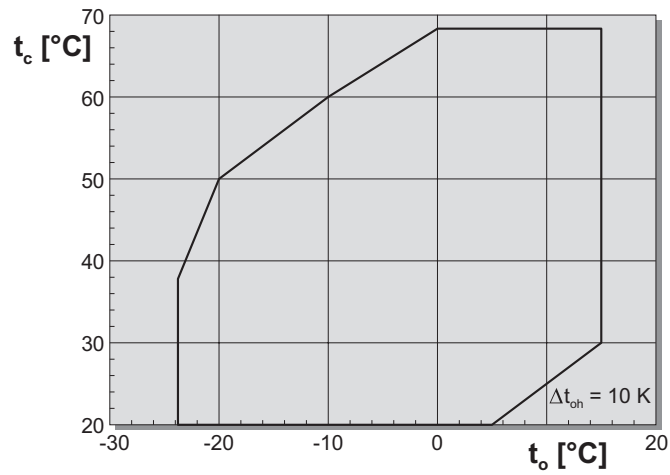
Low pressure side: 31 bar
High pressure side: 45 bar

* when used with BITZER Advanced Header Technology

** varies by size, contact BITZER for application guidance

Application limits

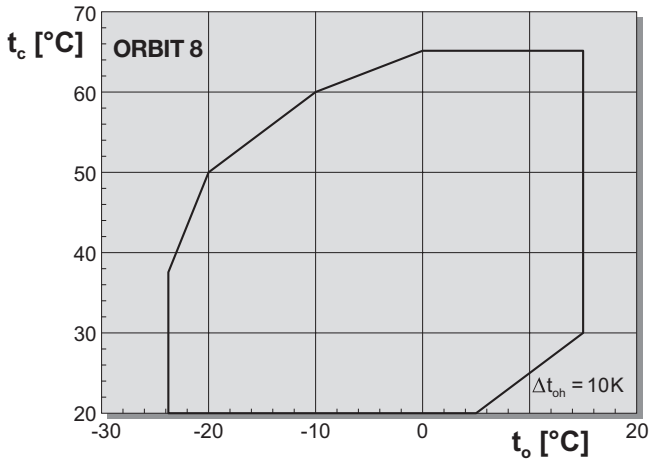
ORBIT 6: GSD60120..GSD60182



ORBIT 6: GSD60235

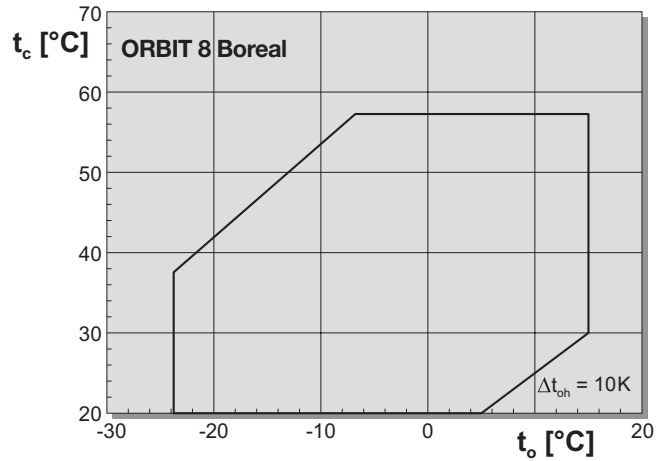
ORBIT 8

for air-cooled systems and reversible chillers



ORBIT 8

Boreal for systems with low condensing temperature



t_o Evaporating temperature [°C]
 t_c Condensing temperature [°C]
 Δt_{oh} Suction gas superheat [K]



Explanation of model designation

Example

G S D 8 0 1 8 2 V A B 4

Scroll series

G S D 8 0 1 8 2 V A B 4

D for R410A

G S D 8 0 1 8 2 V A B 4

Family

G S D 8 0 1 8 2 V A B 4

Cooling capacity in kBtu/h according to ARI 540

G S D 8 0 1 8 2 V A B 4

Polyvinyl ether oil charge

G S D 8 0 1 8 2 V A B 4

A = for air-cooled systems

W = for water-cooled systems

G S D 8 0 1 8 2 V A B 4

B = Direct brazing connections

R = Rotalock connections

G S D 8 0 1 8 2 V A B 4

Motorkennung

2 = 200 V/3/50 Hz, 208/230 V/3/60 Hz

3 = 380 V/3/60 Hz

4 = 400 V/3/50 Hz, 460 V/3/60 Hz

5 = 500 V/3/50 Hz, 575 V/3/60 Hz

6 = 380 V/3/50 Hz

Performance data

Performance data are based on the European Standard EN 12900 and 50 Hz operation – running-in period 72 hours.

All data do **not** include liquid subcooling. Based on EN 12900 the rated cooling capacity and efficiency (COP) show therefore lower values in comparison to data based on 5 or 8.3 K subcooling. For further information see Refrigerant Report (A-501).

ORBIT 6

Performance data 50 Hz

based on 10 K suction gas superheat, without liquid subcooling.

| Compressor type | Cond. temp. | ↓ | Cooling capacity Q_0 [Watt] | | | | | | | | | | Power consumption P_e [kW] | | | | |
|-----------------|-------------|----|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------------|-------|-------|--|--|
| | | | Saturated suction temperature °C | | | | | | | | | | | | | | |
| | | | 15,0 | 12,5 | 10,0 | 7,5 | 5,0 | 2,5 | 0,0 | -5,0 | -10,0 | -15,0 | -20,0 | | | | |
| GSD60120VAB | 20 | Q | | | | | | 36300 | 33400 | 30700 | 25750 | 21400 | 17610 | 14270 | | | |
| | | P | | | | | | 4,58 | 4,49 | 4,42 | 4,33 | 4,29 | 4,27 | 4,24 | | | |
| | 30 | Q | 46850 | 43250 | 39900 | 36800 | 33800 | 31050 | 28450 | 23750 | 19610 | 15970 | 12750 | | | | |
| | | P | 6,09 | 5,90 | 5,75 | 5,62 | 5,52 | 5,45 | 5,39 | 5,33 | 5,30 | 5,28 | 5,24 | | | | |
| | 40 | Q | 42600 | 39350 | 36250 | 33300 | 30600 | 28050 | 25650 | 21250 | 17420 | 14030 | 11030 | | | | |
| | | P | 7,18 | 7,02 | 6,88 | 6,78 | 6,70 | 6,64 | 6,59 | 6,54 | 6,52 | 6,49 | 6,42 | | | | |
| | 50 | Q | 37500 | 34550 | 31800 | 29200 | 26750 | 24450 | 22300 | 18390 | 14950 | 11910 | 9230 | | | | |
| | | P | 8,61 | 8,47 | 8,36 | 8,27 | 8,20 | 8,15 | 8,11 | 8,07 | 8,03 | 7,98 | 7,89 | | | | |
| | 60 | Q | 31400 | 28850 | 26500 | 24300 | 22200 | 20300 | 18450 | 15130 | 12210 | | | | | | |
| | | P | 10,49 | 10,37 | 10,27 | 10,19 | 10,13 | 10,08 | 10,05 | 10,00 | 9,95 | | | | | | |
| | GSD60137VAB | 20 | Q | | | | | | 41750 | 38400 | 35250 | 29600 | 24650 | 20300 | 16550 | | |
| | | | P | | | | | | 5,32 | 5,23 | 5,15 | 5,02 | 4,92 | 4,84 | 4,74 | | |
| 30 | | Q | 52900 | 48900 | 45100 | 41600 | 38250 | 35150 | 32250 | 27000 | 22400 | 18390 | 14900 | | | | |
| | | P | 6,81 | 6,65 | 6,50 | 6,38 | 6,28 | 6,19 | 6,12 | 6,01 | 5,93 | 5,85 | 5,76 | | | | |
| 40 | | Q | 47700 | 44050 | 40600 | 37400 | 34350 | 31550 | 28900 | 24100 | 19910 | 16270 | 13120 | | | | |
| | | P | 8,02 | 7,87 | 7,74 | 7,63 | 7,54 | 7,47 | 7,41 | 7,32 | 7,25 | 7,19 | 7,12 | | | | |
| 50 | | Q | 41900 | 38600 | 35550 | 32700 | 30000 | 27500 | 25150 | 20900 | 17190 | 13980 | 11210 | | | | |
| | | P | 9,61 | 9,48 | 9,37 | 9,28 | 9,20 | 9,14 | 9,09 | 9,03 | 8,98 | 8,94 | 8,89 | | | | |
| 60 | | Q | 35150 | 32350 | 29750 | 27300 | 25000 | 22850 | 20850 | 17250 | 14120 | | | | | | |
| | | P | 11,68 | 11,56 | 11,47 | 11,40 | 11,34 | 11,30 | 11,27 | 11,23 | 11,21 | | | | | | |
| GSD60154VAB | | 20 | Q | | | | | | 46950 | 43150 | 39600 | 33200 | 27600 | 22750 | 18560 | | |
| | | | P | | | | | | 5,95 | 5,84 | 5,75 | 5,60 | 5,49 | 5,40 | 5,30 | | |
| | 30 | Q | 59800 | 55200 | 50900 | 46900 | 43100 | 39600 | 36300 | 30300 | 25100 | 20600 | 16740 | | | | |
| | | P | 7,66 | 7,46 | 7,29 | 7,14 | 7,02 | 6,92 | 6,84 | 6,71 | 6,62 | 6,54 | 6,44 | | | | |
| | 40 | Q | 54000 | 49850 | 45900 | 42200 | 38800 | 35550 | 32550 | 27100 | 22400 | 18290 | 14770 | | | | |
| | | P | 8,99 | 8,81 | 8,66 | 8,53 | 8,43 | 8,34 | 8,27 | 8,18 | 8,10 | 8,04 | 7,95 | | | | |
| | 50 | Q | 47550 | 43800 | 40300 | 37000 | 33950 | 31100 | 28400 | 23600 | 19400 | 15790 | 12690 | | | | |
| | | P | 10,76 | 10,60 | 10,47 | 10,36 | 10,27 | 10,21 | 10,16 | 10,08 | 10,04 | 9,99 | 9,92 | | | | |
| | 60 | Q | 40050 | 36850 | 33850 | 31050 | 28450 | 26000 | 23700 | 19630 | 16090 | | | | | | |
| | | P | 13,05 | 12,92 | 12,81 | 12,73 | 12,66 | 12,61 | 12,58 | 12,54 | 12,52 | | | | | | |
| | GSD60182VAB | 20 | Q | | | | | | 55400 | 50900 | 46800 | 39250 | 32650 | 26850 | 21750 | | |
| | | | P | | | | | | 6,71 | 6,58 | 6,48 | 6,34 | 6,26 | 6,20 | 6,13 | | |
| 30 | | Q | 69900 | 64600 | 59700 | 55000 | 50600 | 46550 | 42700 | 35750 | 29600 | 24200 | 19400 | | | | |
| | | P | 8,84 | 8,60 | 8,39 | 8,22 | 8,09 | 7,98 | 7,89 | 7,77 | 7,69 | 7,62 | 7,52 | | | | |
| 40 | | Q | 63000 | 58200 | 53700 | 49500 | 45500 | 41800 | 38300 | 32000 | 26400 | 21500 | 17080 | | | | |
| | | P | 10,42 | 10,22 | 10,05 | 9,91 | 9,80 | 9,71 | 9,64 | 9,55 | 9,48 | 9,40 | 9,27 | | | | |
| 50 | | Q | 55300 | 51100 | 47050 | 43300 | 39800 | 36500 | 33400 | 27750 | 22800 | 18380 | 14440 | | | | |
| | | P | 12,46 | 12,30 | 12,17 | 12,06 | 11,98 | 11,92 | 11,87 | 11,80 | 11,75 | 11,67 | 11,52 | | | | |
| 60 | | Q | 46350 | 42700 | 39300 | 36050 | 33050 | 30200 | 27550 | 22700 | 18430 | | | | | | |
| | | P | 15,11 | 14,98 | 14,89 | 14,82 | 14,77 | 14,74 | 14,71 | 14,68 | 14,65 | | | | | | |
| GSD60235VAB | | 20 | Q | | | | | | 71100 | 65400 | 60100 | 50500 | 42050 | 34700 | 28300 | | |
| | | | P | | | | | | 9,32 | 9,08 | 8,89 | 8,64 | 8,49 | 8,38 | 8,22 | | |
| | 30 | Q | 90300 | 83400 | 77000 | 71000 | 65300 | 60000 | 55100 | 46100 | 38300 | 31450 | 25500 | | | | |
| | | P | 12,38 | 11,91 | 11,51 | 11,19 | 10,94 | 10,75 | 10,60 | 10,41 | 10,31 | 10,21 | 10,05 | | | | |
| | 40 | Q | 81500 | 75300 | 69400 | 63900 | 58700 | 53900 | 49400 | 41200 | 34050 | 27850 | 22450 | | | | |
| | | P | 14,27 | 13,86 | 13,53 | 13,27 | 13,07 | 12,92 | 12,81 | 12,68 | 12,61 | 12,52 | 12,34 | | | | |
| | 50 | Q | 71600 | 66000 | 60800 | 55900 | 51300 | 47000 | 42950 | 35700 | 29400 | 23900 | 19170 | | | | |
| | | P | 16,85 | 16,51 | 16,24 | 16,03 | 15,88 | 15,76 | 15,69 | 15,61 | 15,56 | 15,47 | 15,26 | | | | |
| | 60 | Q | 60100 | 55300 | 50800 | 46600 | 42700 | 39050 | 35650 | 29500 | 24150 | | | | | | |
| | | P | 20,29 | 20,01 | 19,79 | 19,63 | 19,52 | 19,45 | 19,40 | 19,36 | 19,32 | | | | | | |

Tentative data

Part load performance data and performance data for individual input data and 60 Hz operation see BITZER Software.



ORBIT 8 ①

Performance data 50 Hz

based on 10 K suction gas superheat, without liquid subcooling.

| Compressor type | Cond. temp. | | Cooling capacity Q_o [Watt] | | | | Power consumption P_e [kW] | | | |
|-----------------|-------------|---|--|--------|--------|--------|------------------------------|--------|-------|-------|
| | | | Saturated suction temperature °C | | | | | | | |
| | | | 12,5 | 10 | 7,5 | 5 | 2,5 | 0 | -5 | -10 |
| R410A | | | optimized for air-cooled systems and reversible chillers | | | | | | | |
| GSD80182VA | 30 | Q | 65100 | 59900 | 55100 | 50600 | 46300 | 42400 | 35300 | 29200 |
| | | P | 7,86 | 7,91 | 7,97 | 8,01 | 8,06 | 8,10 | 8,16 | 8,22 |
| | 40 | Q | 57000 | 52700 | 48600 | 44800 | 41200 | 37850 | 31700 | 26200 |
| | | P | 10,00 | 10,08 | 10,16 | 10,22 | 10,28 | 10,33 | 10,41 | 10,47 |
| | 50 | Q | 49300 | 45700 | 42300 | 39000 | 35900 | 32900 | 27300 | 21950 |
| | | P | 12,84 | 12,93 | 13,01 | 13,08 | 13,14 | 13,18 | 13,25 | 13,27 |
| GSD80235VA | 30 | Q | 86700 | 79800 | 73300 | 67300 | 61700 | 56400 | 47000 | 38900 |
| | | P | 10,46 | 10,53 | 10,60 | 10,67 | 10,72 | 10,78 | 10,87 | 10,94 |
| | 40 | Q | 75900 | 70100 | 64700 | 59700 | 54900 | 50400 | 42200 | 34900 |
| | | P | 13,31 | 13,42 | 13,52 | 13,61 | 13,69 | 13,75 | 13,86 | 13,93 |
| | 50 | Q | 65600 | 60800 | 56300 | 52000 | 47800 | 43800 | 36300 | 29200 |
| | | P | 17,08 | 17,21 | 17,31 | 17,41 | 17,49 | 17,55 | 17,64 | 17,67 |
| GSD80295VA | 30 | Q | 108400 | 99900 | 91900 | 84500 | 77500 | 71000 | 59200 | 49000 |
| | | P | 12,75 | 12,80 | 12,85 | 12,90 | 12,94 | 12,97 | 13,03 | 13,06 |
| | 40 | Q | 96400 | 88800 | 81600 | 74900 | 68600 | 62800 | 52200 | 43050 |
| | | P | 16,44 | 16,46 | 16,48 | 16,50 | 16,52 | 16,55 | 16,59 | 16,65 |
| | 50 | Q | 83700 | 76900 | 70600 | 64700 | 59200 | 54100 | 44750 | 36650 |
| | | P | 20,99 | 21,01 | 21,04 | 21,08 | 21,12 | 21,17 | 21,29 | 21,44 |
| GSD80385VA | 30 | Q | 138500 | 127700 | 117500 | 108000 | 99200 | 90800 | 75800 | 62700 |
| | | P | 17,28 | 17,14 | 17,03 | 16,94 | 16,88 | 16,83 | 16,79 | 16,77 |
| | 40 | Q | 123800 | 114000 | 104800 | 96200 | 88200 | 80700 | 67100 | 55200 |
| | | P | 21,21 | 21,15 | 21,11 | 21,09 | 21,09 | 21,10 | 21,13 | 21,16 |
| | 50 | Q | 107700 | 99100 | 90900 | 83300 | 76200 | 69600 | 57500 | 47100 |
| | | P | 26,60 | 26,61 | 26,63 | 26,65 | 26,68 | 26,72 | 26,78 | 26,81 |
| GSD80421VA | 30 | Q | 151500 | 139700 | 128700 | 118300 | 108600 | 99500 | 83200 | 68900 |
| | | P | 18,76 | 18,72 | 18,69 | 18,68 | 18,67 | 18,68 | 18,71 | 18,75 |
| | 40 | Q | 135300 | 124600 | 114600 | 105200 | 96500 | 88300 | 73500 | 60600 |
| | | P | 23,40 | 23,41 | 23,43 | 23,46 | 23,49 | 23,52 | 23,59 | 23,65 |
| | 50 | Q | 117600 | 108200 | 99300 | 91000 | 83200 | 76000 | 62900 | 51500 |
| | | P | 29,58 | 29,63 | 29,69 | 29,74 | 29,80 | 29,86 | 29,95 | 30,01 |
| GSD80485VA | 30 | Q | 171500 | 158200 | 145800 | 134200 | 123300 | 113100 | 94700 | 78700 |
| | | P | 20,96 | 20,98 | 20,99 | 20,97 | 20,95 | 20,91 | 20,81 | 20,69 |
| | 40 | Q | 153400 | 141400 | 130100 | 119600 | 109700 | 100500 | 83800 | 69400 |
| | | P | 26,26 | 26,23 | 26,18 | 26,13 | 26,08 | 26,02 | 25,91 | 25,82 |
| | 50 | Q | 132500 | 122000 | 112100 | 102800 | 94100 | 86000 | 71500 | 58800 |
| | | P | 32,86 | 32,80 | 32,75 | 32,70 | 32,65 | 32,61 | 32,55 | 32,56 |

① optimized for air-cooled systems and reversible chillers

Part load performance data and performance data for individual input data and 60 Hz operation see BITZER Software.

ORBIT 8 Boreal ②

Performance data 50 Hz

based on 10 K suction gas superheat, without liquid subcooling.

| Compressor type | Cond. temp. | | Cooling capacity Q_o [Watt] | | | | Power consumption P_e [kW] | | | |
|-------------------|-------------|---|--|--------|--------|--------|------------------------------|--------|-------|-------|
| | | | Saturated suction temperature °C | | | | | | | |
| | | | 12,5 | 10 | 7,5 | 5 | 2,5 | 0 | -5 | -10 |
| R410A | | | optimized for systems with low condensing temperature | | | | | | | |
| GSD80235VW | 30 | Q | 88800 | 81900 | 75400 | 69300 | 63600 | 58300 | 48600 | 40150 |
| | | P | 9,65 | 9,82 | 9,99 | 10,16 | 10,32 | 10,48 | 10,77 | 11,04 |
| | 40 | Q | 79300 | 73000 | 67100 | 61500 | 56400 | 51500 | 42750 | 35100 |
| | | P | 12,88 | 13,08 | 13,27 | 13,46 | 13,64 | 13,82 | 14,14 | 14,42 |
| | 50 | Q | 68800 | 63200 | 57900 | 53000 | 48450 | 44200 | 36400 | 29700 |
| | | P | 17,05 | 17,28 | 17,50 | 17,72 | 17,92 | 18,12 | 18,47 | 18,78 |
| GSD80295VW | 30 | Q | 107600 | 99100 | 91100 | 83700 | 76700 | 70200 | 58500 | 48400 |
| | | P | 11,48 | 11,68 | 11,89 | 12,09 | 12,30 | 12,50 | 12,88 | 13,22 |
| | 40 | Q | 96000 | 88200 | 81000 | 74200 | 67800 | 61900 | 51300 | 42100 |
| | | P | 15,47 | 15,73 | 15,99 | 16,24 | 16,49 | 16,72 | 17,15 | 17,51 |
| | 50 | Q | 82800 | 75900 | 69500 | 63400 | 57800 | 52500 | 43150 | 35000 |
| | | P | 20,75 | 21,06 | 21,36 | 21,65 | 21,93 | 22,19 | 22,65 | 23,02 |
| GSD80385VW | 30 | Q | 137300 | 126600 | 116600 | 107200 | 98400 | 90200 | 75300 | 62200 |
| | | P | 15,12 | 15,32 | 15,51 | 15,71 | 15,91 | 16,10 | 16,49 | 16,85 |
| | 40 | Q | 122000 | 112400 | 103300 | 94800 | 86900 | 79500 | 66000 | 54300 |
| | | P | 20,08 | 20,33 | 20,58 | 20,82 | 21,05 | 21,28 | 21,70 | 22,07 |
| | 50 | Q | 105200 | 96700 | 88800 | 81300 | 74300 | 67800 | 55900 | 45600 |
| | | P | 26,53 | 26,84 | 27,14 | 27,43 | 27,70 | 27,96 | 28,43 | 28,82 |
| GSD80421VW | 30 | Q | 151700 | 139900 | 128800 | 118400 | 108700 | 99600 | 83100 | 68600 |
| | | P | 17,17 | 17,39 | 17,61 | 17,83 | 18,04 | 18,25 | 18,65 | 19,00 |
| | 40 | Q | 134800 | 124200 | 114200 | 104900 | 96200 | 88000 | 73100 | 60100 |
| | | P | 22,53 | 22,79 | 23,05 | 23,31 | 23,55 | 23,79 | 24,25 | 24,66 |
| | 50 | Q | 116900 | 107500 | 98700 | 90400 | 82600 | 75400 | 62200 | 50500 |
| | | P | 29,44 | 29,77 | 30,09 | 30,40 | 30,71 | 31,01 | 31,58 | 32,09 |
| GSD80485VW | 30 | Q | 173300 | 159800 | 147100 | 135300 | 124100 | 113700 | 94900 | 78400 |
| | | P | 19,60 | 19,86 | 20,11 | 20,36 | 20,60 | 20,84 | 21,29 | 21,70 |
| | 40 | Q | 153900 | 141800 | 130500 | 119800 | 109800 | 100500 | 83500 | 68600 |
| | | P | 25,73 | 26,03 | 26,33 | 26,61 | 26,90 | 27,17 | 27,69 | 28,16 |
| | 50 | Q | 133500 | 122700 | 112700 | 103200 | 94400 | 86100 | 71000 | 57700 |
| | | P | 33,62 | 33,99 | 34,36 | 34,72 | 35,07 | 35,41 | 36,06 | 36,65 |

② optimized for systems with low condensing temperature

Part load performance data and performance data for individual input data and 60 Hz operation see BITZER Software.



ORBIT 6 Technical data

| Compressor type | Displacement 50 Hz m ³ /h | Oil charge ① dm ³ | Weight kg | Pipe connections | | | | Motor connection ② | Electrical data | | |
|--------------------|--|------------------------------------|--------------|----------------------|------|--------------------|-------|--|---|-----------------------------------|--------------------------------------|
| | | | | DL Discharge line | | SL Suction line | | | max. operat. amps (MOA) Amp. ③ | max. power consumption kW ③ | Starting current LRA Amp. ④ |
| | | | | mm | inch | mm | inch | | | | |
| GSD60120VAB | 19,8 | 2,7 | 88,5 | 22 | 7/8 | 35 | 1 3/8 | 380..420 V/3/50 Hz 440..480 V/3/60 Hz | 21,3 | 12,3 | 123 |
| GSD60137VAB | 22,2 | 2,7 | 88,5 | 22 | 7/8 | 35 | 1 3/8 | | 24,1 | 13,9 | 138 |
| GSD60154VAB | 24,8 | 2,7 | 88,5 | 22 | 7/8 | 35 | 1 3/8 | | 25,7 | 15,5 | 145 |
| GSD60182VAB | 29,2 | 2,7 | 88,5 | 22 | 7/8 | 35 | 1 3/8 | | 30,2 | 17,9 | 172 |
| GSD60235VAB | 37,6 | 2,7 | 89,8 | 22 | 7/8 | 35 | 1 3/8 | | 39,9 | 24,0 | 202 |

① Charged with polyvinyl ether BVC32.

② Other voltages and electrical supplies upon request.

③ For the selection of contactors, cables and fuses the max. operating amps (MOA) and the max. power consumption must be considered ("Electrical data").
Contactors: operational category AC3.

④ Data based on mean value
400 V/3/50 Hz.
Conversion factors:
380 V = 0,95x 420 V = 1,05x
See also ③.

GSD60120VAB..GSD60235VAB:
Oil heater (option)
90 W, 115 V/230 V/460 V/575 V.

ORBIT 8 Technical data

| Compressor type ③ | Displacement 50 Hz m³/h | Oil charge ① dm³ | Weight ② kg | Pipe connections ODS Version "B" ③ | | | | Connection thread Version "R" ③ | | Motor connection ④ | Electrical data | | |
|--------------------------|-----------------------------------|----------------------------|-----------------------|---------------------------------------|------|--------------------|------|------------------------------------|--------------------|---------------------------|--------------------------------|-----------------------------|-----------------------------|
| | | | | DL Discharge line | | SL Suction line | | DL Discharge line | SL Suction line | | max. operat. amps (MOA) Amp. ⑤ | max. power consumption kW ⑤ | Starting current LRA Amp. ⑥ |
| | | | | mm | inch | mm | inch | inch | inch | | | | |

optimized for air-cooled systems and reversible chillers

| Compressor type | Displacement | Oil charge | Weight | DL Discharge line | SL Suction line | DL Discharge line | SL Suction line | DL Discharge line | SL Suction line | Motor connection | max. operat. amps (MOA) Amp. ⑤ | max. power consumption kW ⑤ | Starting current LRA Amp. ⑥ |
|------------------------|--------------|------------|--------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|--|--------------------------------|-----------------------------|-----------------------------|
| GSD80182VA(B/R) | 29,0 | 5,5 | 145 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | 380..420 V/3/50 Hz 440..480 V/3/60 Hz | 33 | 20 | 154 |
| GSD80235VA(B/R) | 38,6 | 5,5 | 148 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 44 | 26 | 210 |
| GSD80295VA(B/R) | 48,3 | 5,5 | 151 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 53 | 32 | 210 |
| GSD80385VA(B/R) | 61,8 | 5,5 | 153 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 66 | 39 | 287 |
| GSD80421VA(B/R) | 67,6 | 5,5 | 152 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 76 | 44 | 267 |
| GSD80485VA(B/R) | 77,2 | 5,5 | 169 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 81 | 49 | 299 |

optimized for systems with low condensing temperature

| Compressor type | Displacement | Oil charge | Weight | DL Discharge line | SL Suction line | DL Discharge line | SL Suction line | DL Discharge line | SL Suction line | Motor connection | max. operat. amps (MOA) Amp. ⑤ | max. power consumption kW ⑤ | Starting current LRA Amp. ⑥ |
|------------------------|--------------|------------|--------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|--|--------------------------------|-----------------------------|-----------------------------|
| GSD80235VW(B/R) | 38,6 | 5,5 | 148 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | 380..420 V/3/50 Hz 440..480 V/3/60 Hz | 38 | 22 | 210 |
| GSD80295VW(B/R) | 48,3 | 5,5 | 151 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 46 | 28 | 210 |
| GSD80385VW(B/R) | 61,8 | 5,5 | 153 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 58 | 34 | 230 |
| GSD80421VW(B/R) | 67,6 | 5,5 | 152 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 67 | 39 | 267 |
| GSD80485VW(B/R) | 77,2 | 5,5 | 153 | 35 | 1 3/8 | 42 | 1 5/8 | 1 3/4 - 12 UNF | 2 1/4 - 12 UNF | | 75 | 44 | 287 |

① Charged with polyvinyl ether BVC32.

② Weight without shut-off valves.

③ B = Direct brazing connections
R = Rotalock connections

④ Other voltages and electrical supplies upon request.

⑤ For the selection of contactors, cables and fuses the max. operating amps (MOA) and the max. power consumption must be considered ("Electrical data").
Contactors: operational category AC3.

⑥ Data based on mean value

400 V/3/50 Hz.

Conversion factors:

380 V = 0.95x 420 V = 1.05x

See also ⑤.

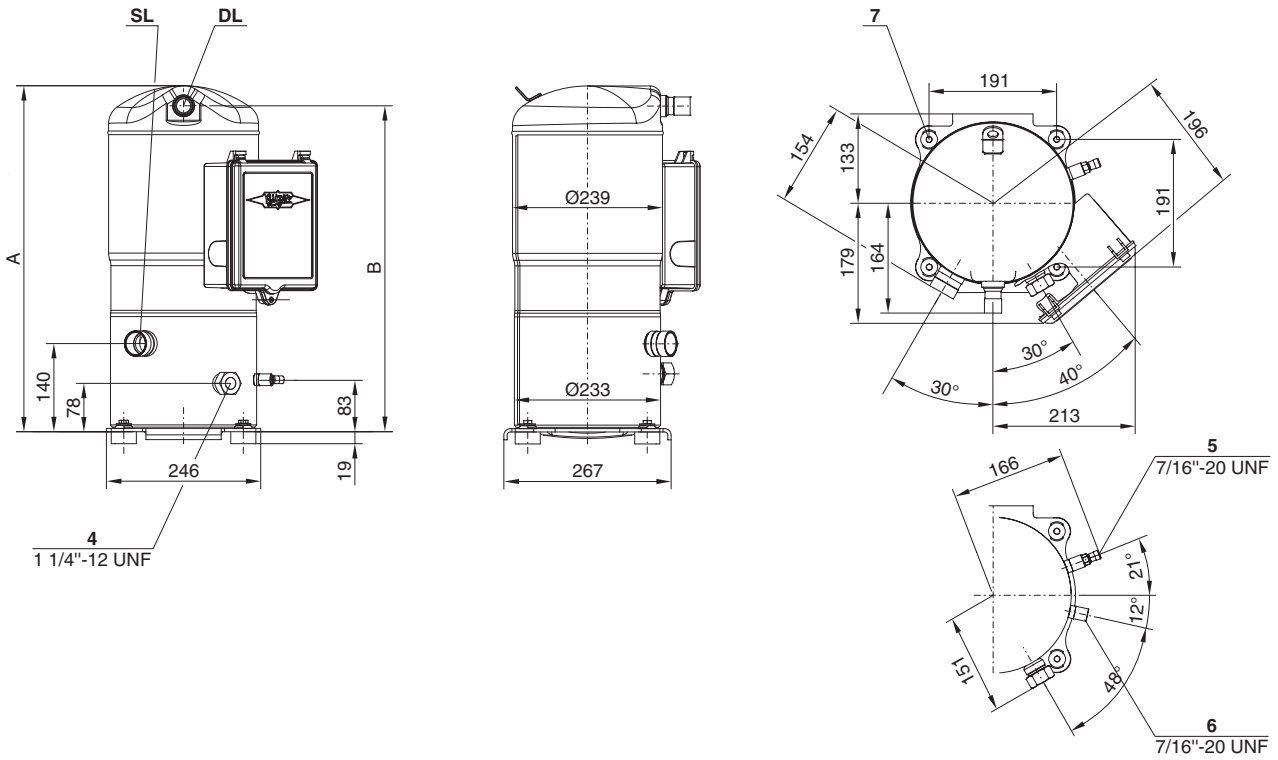
GSD80182V..GSD80485V:

Oil heater (option)

140 W, 115 V/230 V/460 V/575 V.

Dimensional drawings

ORBIT 6



Connection positions

- 4 Sight glass
- 5 Oil service connection (Schrader)
- 6 Connection for oil equalisation (parallel operation)
- 7 Mounting position for vibration dampers

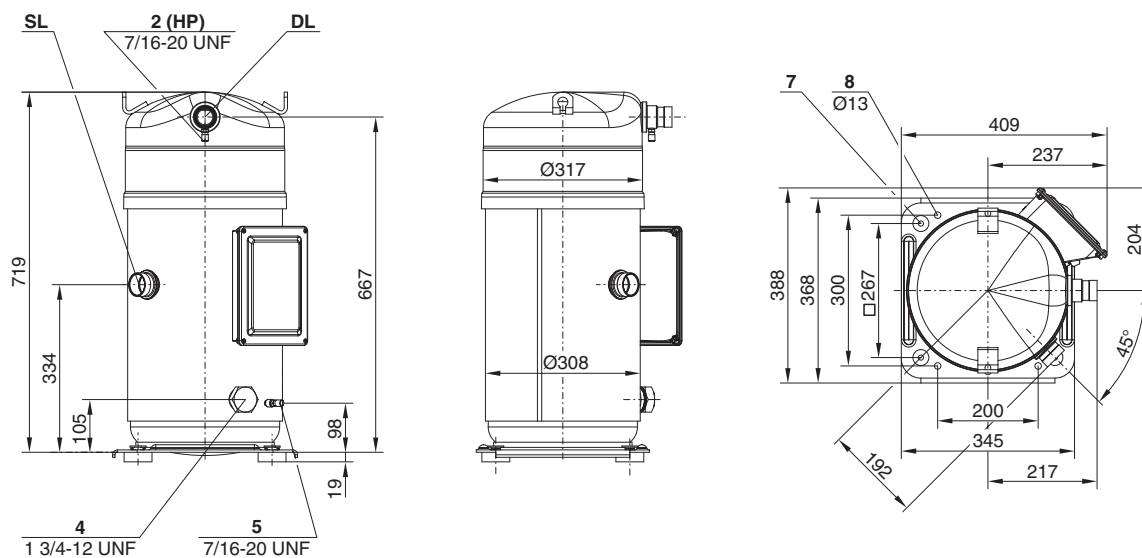
SL Suction gas line
DL Discharge gas line

| | A mm | B mm |
|--------------------------|---------|---------|
| GSD60120VAB..GSD60182VAB | 552 | 520 |
| GSD60235VAB | 558 | 526 |

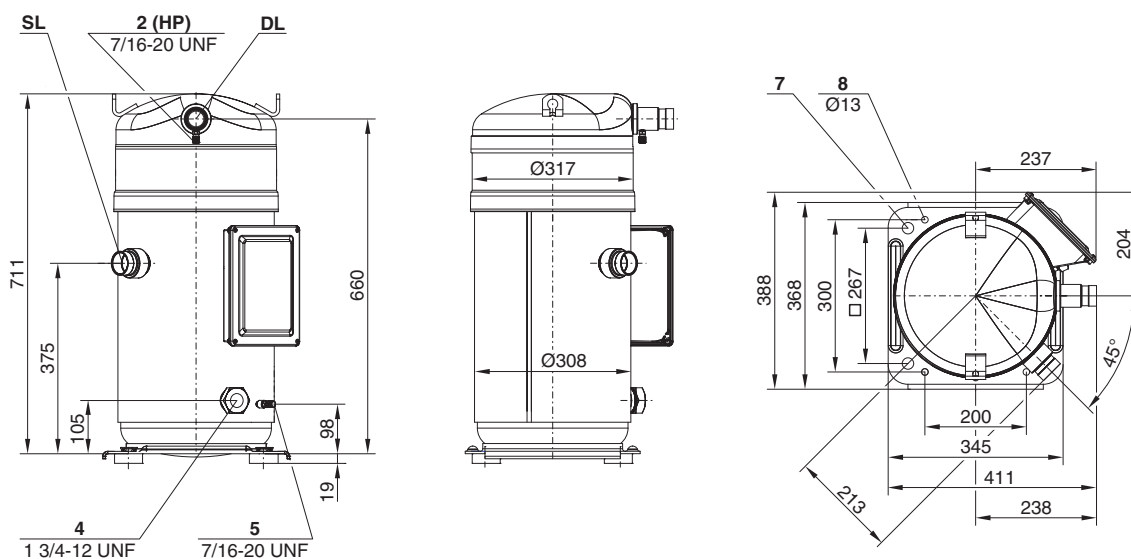
Dimensional drawings

ORBIT 8 with Rotalock connections

GSD80182V(A/W)B & GSD80235V(A/W)B



GSD80295V(A/W)B.. GSD80485V(A/W)B



Connection positions

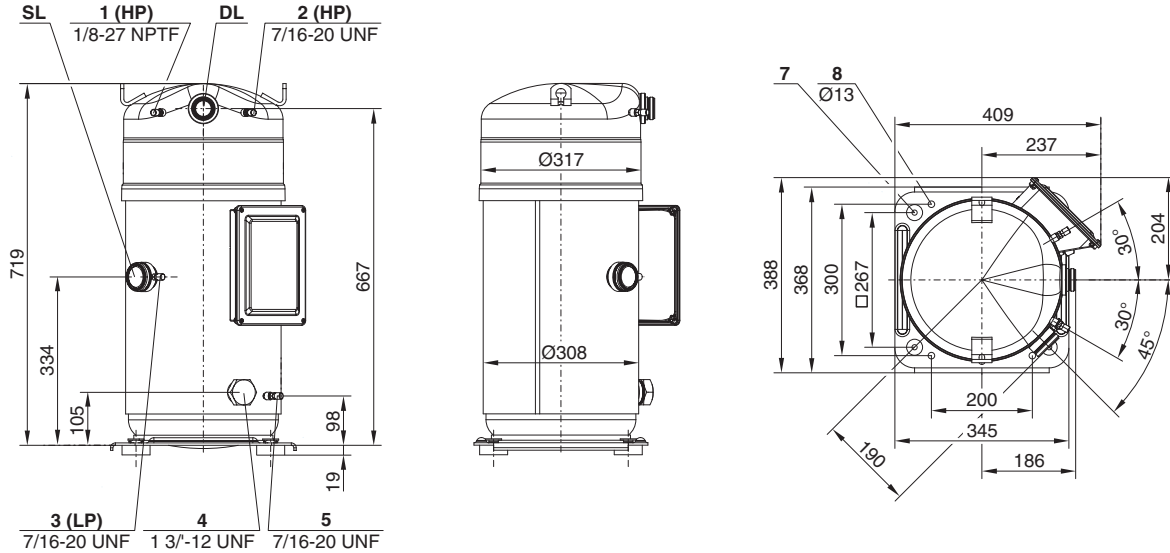
- 1 –
- 2 High pressure (HP) or discharge gas temperature sensor (Schrader)
- 3 –
- 4 Sight glass
- 5 Oil fill port (Schrader)
- 7 Mounting position for vibration dampers
- 8 Mounting position for Tandem and Trio fixing rails

SL Suction gas line
DL Discharge gas line

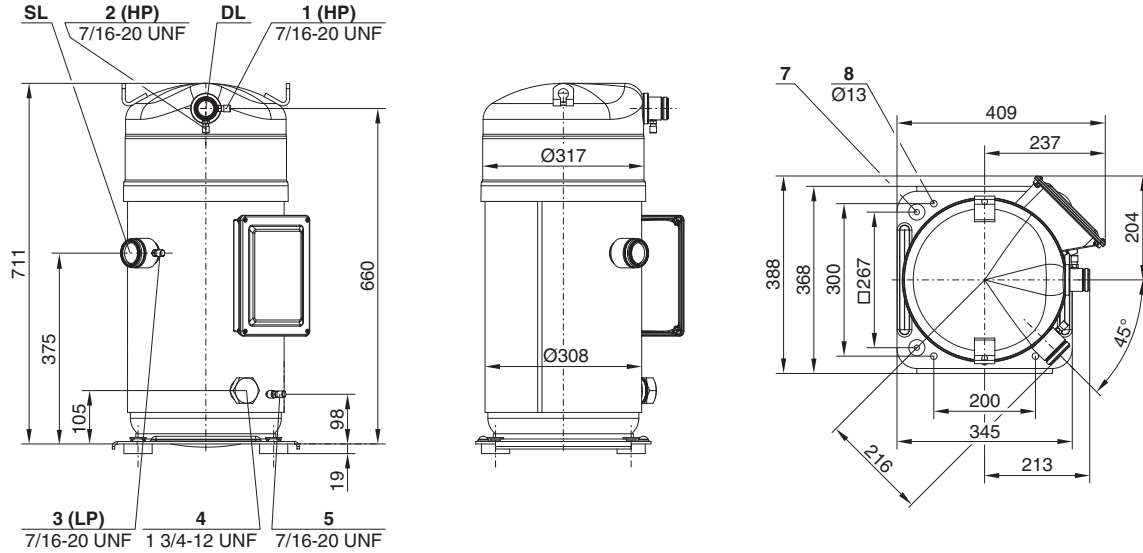
Dimensional drawings

ORBIT 8 with Rotalock connections

GSD80182V(A/W)R & GSD80235V(A/W)R



GSD80295V(A/W)R .. GSD80485V(A/W)R



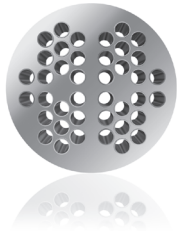
Connection positions

- 1 High pressure connection (HP)
- 2 Discharge gas temperature sensor connection (Schrader)
- 3 Low pressure connection (LP)
- 4 Sight glass
- 5 Oil service connection (Schrader)
- 7 Mounting position for vibration dampers
- 8 Mounting position for Tandem and Trio fixing rails

SL Suction gas line
DL Discharge gas line

Notes

A large grid of green dots for taking notes, consisting of 20 columns and 30 rows.





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