

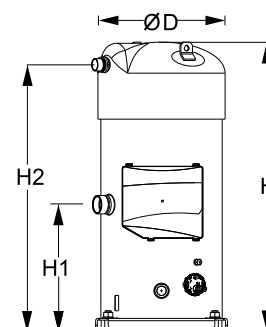
Datasheets

Danfoss scroll compressors **SM / SY / SZ / SH / WSH**



General Characteristics

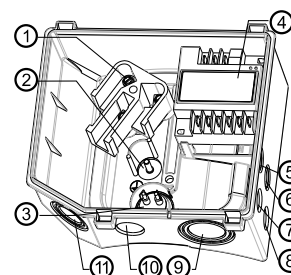
| | | |
|---|---|-------------------|
| Model number (on compressor nameplate) | | SH485A4ABA |
| Code number for Singlepack* | | 120H1064 |
| Code number for Industrial pack** | | 120H1065 |
| Drawing number | | 8556133d |
| Suction and discharge connections | | Brazed |
| Suction connection | | 1-5/8" ODF |
| Discharge connection | | 1-3/8" ODF |
| Oil sight glass | | Threaded |
| Oil equalisation connection | | 2-1/4" Rotolock |
| Oil drain connection | | 1/4" flare |
| LP gauge port | | Schrader |
| IPR valve | | Yes |
| Reverse rotation protection | | Electronic module |
| Swept volume | 442.6 cm ³ /rev | |
| Displacement @ Nominal speed | 77.0 m ³ /h @ 2900 rpm - 93.0 m ³ /h @ 3500 rpm | |
| Net weight | 175 kg | |
| Oil charge | 6.7 litre, POE - 160SZ | |
| Maximum system test pressure Low Side / High side | 34.3 bar(g) / 48.7 bar(g) | |
| Maximum differential test pressure | 37 bar | |
| Maximum number of starts per hour | 12 | |
| Refrigerant charge limit | 17 kg | |
| Approved refrigerants | R410A | |

Dimensions


D=333.2 mm
H=755.3 mm
H1=331 mm
H2=696.5 mm
H3=- mm

Electrical Characteristics

| | |
|--|---|
| Nominal voltage | 380-415V/3/50Hz - 460V/3/60Hz |
| Voltage range | 340-457 V @ 50Hz - 414-506 V @ 60Hz |
| Winding resistance (between phases) +/- 7% at 25°C | 0.231 Ω |
| Rated Load Amps (RLA) | 72.9 A |
| Maximum Continuous Current (MCC) | 90 A |
| Locked Rotor Amps (LRA) | 413 A |
| Motor protection | Electronic protection module, 110-240 V |

Terminal box


IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M5
- 3: Thermistor connector
- 4: Electronic protection module
- 5: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 6: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 7: Knock-out Ø 20.7 mm (0.81")
- 8: Knock-out Ø 20.7 mm (0.81")
- 9: Triple knock-out Ø 50.8 mm (2") & Ø 43.7 mm (1.72") & Ø 34.5 mm (1.35")
- 10: Knock-out Ø 25.5 mm (1.00")
- 11: Triple knock-out Ø 40.5 mm (1.59") & Ø 32.2 mm (1.27") & Ø 25.5 mm (1")

Recommended Installation torques

| | |
|--------------------------------------|-------------|
| Oil sight glass | 50 Nm |
| Power connections / Earth connection | 3 Nm / 2 Nm |
| Mounting bolts | 21 Nm |

Parts shipped with compressor

| |
|--|
| Mounting kit with rigid grommets, bolts, nuts, sleeves and washers |
| Electronic protection module mounted in terminal box |
| Initial oil charge |
| Installation instructions |

Approvals : CE certified, UL certified (file SA6873), -

*Singlepack: Compressor in cardboard box

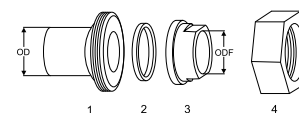
**Industrial pack: 4 Unboxed compressors on pallet (order per multiples of 4)

Rotolock accessories, suction side
Code no.

| | |
|---|----------|
| Solder sleeve, P03 (2-1/4" Rotolock, 1-5/8" ODF) | 8153006 |
| Rotolock valve, V03 (2-1/4" Rotolock, 1-5/8" ODF) | 8168026 |
| Rotolock adapter (2"1/4 Rotolock, 1"5/8 ODF) | 12020432 |
| Gasket, 2-1/4" | 8156133 |

Rotolock accessories, discharge side
Code no.

| | |
|---|----------|
| Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF) | 8153004 |
| Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF) | 8168005 |
| Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF) | 8168028 |
| Rotolock adapter (1-3/4" Rotolock, 1-1/8" ODF) | 12020364 |
| Gasket, 1-3/4" | 8156132 |

Solder sleeve adapter set


- 1: Rotolock adapter (Suc & Dis)
- 2: Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- 4: Rotolock nut (Suc & Dis)

Rotolock accessories, sets
Code no.

| | |
|--|---------|
| Solder sleeve adapter set, (2-1/4" Rotolock, 1-5/8" ODF), (1-3/4" Rotolock, 1"1/8 ODF) | 7765028 |
| Valve set, V03 (2-1/4"~1-5/8"), V02 (1-3/4"~1-1/8") | 7703383 |
| Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white | 8156013 |

Oil / lubricants
Code no.

| | |
|-------------------------------------|----------|
| POE lubricant, 160SZ, 1 litre can | 7754023 |
| POE lubricant, 160SZ, 2.5 litre can | 12020571 |

Crankcase heaters
Code no.

| | |
|---|----------|
| Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL | 12020360 |
| Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL | 12020376 |
| Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL | 12020377 |
| Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL | 12020378 |

Miscellaneous accessories
Code no.

| | |
|---|----------|
| Electronic soft start kit MCD201-055-T6-CV1 | 175G5205 |
| Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers | 8156138 |
| Acoustic hood for scroll compressor | 12020022 |
| Acoustic bottom insulation for scroll compressor | 12020353 |
| Mounting for 1 scroll compressor including 4 triangle rigid spacer, 4 sleeves, 4 bolts, 4 washers | 12020495 |

Spare parts
Code no.

| | |
|--|----------|
| Electronic motor protection module, 110-240 V | 12020585 |
| Mounting kit for 1 scroll compressor including 4 hexagon rigid grommets, 4 sleeves, 4 bolts, 4 washers | 7777045 |
| Oil sight glass with gaskets (black & white) | 8156019 |
| Gasket for oil sight glass (white teflon) | 8156129 |
| Terminal box 210 x 190 incl. cover | 12020458 |
| T block connector 80 x 80 mm | 8173331 |

Performance data at 50 Hz, EN 12900 rating conditions

R410A

| Cond. temp. in °C (tc) | Evaporating temperature in °C (to) | | | | | | | |
|------------------------|------------------------------------|-----|-----|-----|----|---|---|----|
| | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 |

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 30 | 41 369 | 51 379 | 63 164 | 76 971 | 93 049 | 111 646 | 133 008 | 157 383 | 185 020 |
| 35 | 38 829 | 48 454 | 59 718 | 72 868 | 88 153 | 105 819 | 126 115 | 149 289 | 175 588 |
| 40 | - | 45 434 | 56 137 | 68 591 | 83 043 | 99 741 | 118 932 | 140 864 | 165 785 |
| 45 | - | - | 52 357 | 64 075 | 77 655 | 93 344 | 111 391 | 132 042 | 155 547 |
| 50 | - | - | 48 311 | 59 254 | 71 923 | 86 565 | 103 428 | 122 760 | 144 808 |
| 55 | - | - | - | 54 064 | 65 782 | 79 338 | 94 978 | 112 950 | 133 503 |
| 60 | - | - | - | - | 59 167 | 71 597 | 85 975 | 102 549 | 121 568 |
| 65 | - | - | - | - | - | - | 76 354 | 91 491 | 108 936 |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 20 536 | 20 975 | 21 365 | 21 647 | 21 765 | 21 662 | 21 279 | 20 559 | 19 446 |
| 35 | 22 604 | 23 044 | 23 472 | 23 830 | 24 061 | 24 108 | 23 914 | 23 421 | 22 571 |
| 40 | - | 25 354 | 25 790 | 26 193 | 26 507 | 26 674 | 26 638 | 26 340 | 25 723 |
| 45 | - | - | 28 385 | 28 803 | 29 169 | 29 426 | 29 517 | 29 384 | 28 970 |
| 50 | - | - | 31 325 | 31 727 | 32 115 | 32 431 | 32 619 | 32 620 | 32 378 |
| 55 | - | - | - | 35 031 | 35 410 | 35 755 | 36 009 | 36 114 | 36 013 |
| 60 | - | - | - | - | 39 122 | 39 465 | 39 754 | 39 932 | 39 942 |
| 65 | - | - | - | - | - | - | 43 922 | 44 143 | 44 233 |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 39.79 | 40.48 | 41.01 | 41.33 | 41.40 | 41.18 | 40.63 | 39.72 | 38.40 |
| 35 | 42.38 | 43.06 | 43.63 | 44.05 | 44.28 | 44.27 | 43.98 | 43.39 | 42.43 |
| 40 | - | 46.06 | 46.63 | 47.11 | 47.45 | 47.60 | 47.54 | 47.21 | 46.58 |
| 45 | - | - | 50.13 | 50.62 | 51.02 | 51.30 | 51.41 | 51.31 | 50.96 |
| 50 | - | - | 54.25 | 54.70 | 55.12 | 55.47 | 55.71 | 55.79 | 55.68 |
| 55 | - | - | - | 59.46 | 59.86 | 60.24 | 60.56 | 60.78 | 60.86 |
| 60 | - | - | - | - | 65.35 | 65.72 | 66.08 | 66.39 | 66.62 |
| 65 | - | - | - | - | - | - | 72.37 | 72.74 | 73.06 |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 863 | 1 059 | 1 285 | 1 545 | 1 844 | 2 188 | 2 581 | 3 028 | 3 535 |
| 35 | 854 | 1 051 | 1 276 | 1 535 | 1 834 | 2 176 | 2 567 | 3 012 | 3 516 |
| 40 | - | 1 040 | 1 265 | 1 524 | 1 821 | 2 162 | 2 551 | 2 994 | 3 495 |
| 45 | - | - | 1 252 | 1 510 | 1 807 | 2 146 | 2 533 | 2 973 | 3 472 |
| 50 | - | - | 1 237 | 1 495 | 1 790 | 2 127 | 2 513 | 2 951 | 3 446 |
| 55 | - | - | - | 1 476 | 1 770 | 2 106 | 2 490 | 2 925 | 3 418 |
| 60 | - | - | - | - | 1 748 | 2 082 | 2 464 | 2 897 | 3 387 |
| 65 | - | - | - | - | - | - | 2 435 | 2 865 | 3 352 |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|------|
| 30 | 2.01 | 2.45 | 2.96 | 3.56 | 4.28 | 5.15 | 6.25 | 7.66 | 9.51 |
| 35 | 1.72 | 2.10 | 2.54 | 3.06 | 3.66 | 4.39 | 5.27 | 6.37 | 7.78 |
| 40 | - | 1.79 | 2.18 | 2.62 | 3.13 | 3.74 | 4.46 | 5.35 | 6.44 |
| 45 | - | - | 1.84 | 2.22 | 2.66 | 3.17 | 3.77 | 4.49 | 5.37 |
| 50 | - | - | 1.54 | 1.87 | 2.24 | 2.67 | 3.17 | 3.76 | 4.47 |
| 55 | - | - | - | 1.54 | 1.86 | 2.22 | 2.64 | 3.13 | 3.71 |
| 60 | - | - | - | - | 1.51 | 1.81 | 2.16 | 2.57 | 3.04 |
| 65 | - | - | - | - | - | - | 1.74 | 2.07 | 2.46 |

Nominal performance at to = 5 °C, tc = 50 °C

| | | |
|---------------------|---------|------|
| Cooling capacity | 103 428 | W |
| Power input | 32 619 | W |
| Current consumption | 55.71 | A |
| Mass flow | 2 513 | kg/h |
| C.O.P. | 3.17 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 46.1 | bar(g) |
| Minimum LP switch setting | 1.5 | bar(g) |
| LP pump down setting | 1.7 | bar(g) |

Sound power data

| | | |
|--------------------|----|-------|
| Sound power level | 89 | dB(A) |
| With acoustic hood | 85 | dB(A) |

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 50 Hz, ARI rating conditions

R410A

| Cond. temp. in °C (tc) | Evaporating temperature in °C (to) | | | | | | | |
|------------------------|------------------------------------|-----|-----|-----|----|---|---|----|
| | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 |

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 30 | 44 676 | 55 427 | 68 072 | 82 874 | 100 094 | 119 995 | 142 838 | 168 884 | 198 395 |
| 35 | 42 205 | 52 605 | 64 760 | 78 936 | 95 397 | 114 407 | 136 227 | 161 122 | 189 353 |
| 40 | - | 49 703 | 61 333 | 74 849 | 90 516 | 108 600 | 129 365 | 153 077 | 179 999 |
| 45 | - | - | 57 731 | 70 553 | 85 394 | 102 521 | 122 202 | 144 704 | 170 294 |
| 50 | - | - | - | 65 999 | 79 986 | 96 132 | 114 707 | 135 980 | 160 221 |
| 55 | - | - | - | 61 157 | 74 274 | 89 426 | 106 885 | 126 926 | 149 822 |
| 60 | - | - | - | - | 68 304 | 82 473 | 98 839 | 117 679 | 139 275 |
| 65 | - | - | - | - | - | - | 90 949 | 108 712 | 129 156 |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 20 536 | 20 975 | 21 365 | 21 647 | 21 765 | 21 662 | 21 279 | 20 559 | 19 446 |
| 35 | 22 604 | 23 044 | 23 472 | 23 830 | 24 061 | 24 108 | 23 914 | 23 421 | 22 571 |
| 40 | - | 25 354 | 25 790 | 26 193 | 26 507 | 26 674 | 26 638 | 26 340 | 25 723 |
| 45 | - | - | 28 385 | 28 803 | 29 169 | 29 426 | 29 517 | 29 384 | 28 970 |
| 50 | - | - | - | 31 727 | 32 115 | 32 431 | 32 619 | 32 620 | 32 378 |
| 55 | - | - | - | 35 031 | 35 410 | 35 755 | 36 009 | 36 114 | 36 013 |
| 60 | - | - | - | - | 39 122 | 39 465 | 39 754 | 39 932 | 39 942 |
| 65 | - | - | - | - | - | - | 43 922 | 44 143 | 44 233 |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 39.79 | 40.48 | 41.01 | 41.33 | 41.40 | 41.18 | 40.63 | 39.72 | 38.40 |
| 35 | 42.38 | 43.06 | 43.63 | 44.05 | 44.28 | 44.27 | 43.98 | 43.39 | 42.43 |
| 40 | - | 46.06 | 46.63 | 47.11 | 47.45 | 47.60 | 47.54 | 47.21 | 46.58 |
| 45 | - | - | 50.13 | 50.62 | 51.02 | 51.30 | 51.41 | 51.31 | 50.96 |
| 50 | - | - | - | 54.70 | 55.12 | 55.47 | 55.71 | 55.79 | 55.68 |
| 55 | - | - | - | 59.46 | 59.86 | 60.24 | 60.56 | 60.78 | 60.86 |
| 60 | - | - | - | - | 65.35 | 65.72 | 66.08 | 66.39 | 66.62 |
| 65 | - | - | - | - | - | - | 72.37 | 72.74 | 73.06 |

Mass flow in kg/h

| | | | | | | | | | |
|----|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 858 | 1 053 | 1 277 | 1 535 | 1 832 | 2 173 | 2 563 | 3 007 | 3 508 |
| 35 | 849 | 1 044 | 1 268 | 1 526 | 1 822 | 2 161 | 2 549 | 2 990 | 3 489 |
| 40 | - | 1 034 | 1 257 | 1 514 | 1 809 | 2 148 | 2 534 | 2 972 | 3 468 |
| 45 | - | - | 1 245 | 1 501 | 1 795 | 2 132 | 2 516 | 2 952 | 3 445 |
| 50 | - | - | - | 1 485 | 1 778 | 2 113 | 2 495 | 2 929 | 3 420 |
| 55 | - | - | - | 1 467 | 1 759 | 2 092 | 2 473 | 2 904 | 3 392 |
| 60 | - | - | - | - | 1 737 | 2 069 | 2 447 | 2 876 | 3 361 |
| 65 | - | - | - | - | - | - | 2 418 | 2 845 | 3 327 |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|-------|
| 30 | 2.18 | 2.64 | 3.19 | 3.83 | 4.60 | 5.54 | 6.71 | 8.21 | 10.20 |
| 35 | 1.87 | 2.28 | 2.76 | 3.31 | 3.96 | 4.75 | 5.70 | 6.88 | 8.39 |
| 40 | - | 1.96 | 2.38 | 2.86 | 3.41 | 4.07 | 4.86 | 5.81 | 7.00 |
| 45 | - | - | 2.03 | 2.45 | 2.93 | 3.48 | 4.14 | 4.92 | 5.88 |
| 50 | - | - | - | 2.08 | 2.49 | 2.96 | 3.52 | 4.17 | 4.95 |
| 55 | - | - | - | 1.75 | 2.10 | 2.50 | 2.97 | 3.51 | 4.16 |
| 60 | - | - | - | - | 1.75 | 2.09 | 2.49 | 2.95 | 3.49 |
| 65 | - | - | - | - | - | - | 2.07 | 2.46 | 2.92 |

Nominal performance at to = 7.2 °C, tc = 54.4 °C

| | | |
|---------------------|---------|------|
| Cooling capacity | 116 386 | W |
| Power input | 35 648 | W |
| Current consumption | 60.05 | A |
| Mass flow | 2 659 | kg/h |
| C.O.P. | 3.26 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 46.1 | bar(g) |
| Minimum LP switch setting | 1.5 | bar(g) |
| LP pump down setting | 1.7 | bar(g) |

Sound power data

| | | |
|--------------------|----|-------|
| Sound power level | 89 | dB(A) |
| With acoustic hood | 85 | dB(A) |

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions

R410A

| Cond. temp. in °C (tc) | Evaporating temperature in °C (to) | | | | | | | |
|------------------------|------------------------------------|-----|-----|-----|----|---|---|----|
| | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 |

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 30 | 49 675 | 61 736 | 75 890 | 92 457 | 111 752 | 134 097 | 159 809 | 189 209 | 222 617 |
| 35 | 46 605 | 58 158 | 71 669 | 87 454 | 105 829 | 127 111 | 151 617 | 179 666 | 211 576 |
| 40 | - | 54 442 | 67 264 | 82 221 | 99 628 | 119 798 | 143 049 | 169 694 | 200 051 |
| 45 | - | - | 62 651 | 76 731 | 93 119 | 112 126 | 134 066 | 159 251 | 187 995 |
| 50 | - | - | 57 797 | 70 947 | 86 260 | 104 045 | 124 612 | 148 270 | 175 330 |
| 55 | - | - | - | 64 805 | 78 977 | 95 469 | 114 586 | 136 634 | 161 919 |
| 60 | - | - | - | - | 71 128 | 86 228 | 103 786 | 124 103 | 147 478 |
| 65 | - | - | - | - | - | - | 91 742 | 110 118 | 131 344 |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 25 120 | 25 443 | 25 851 | 26 253 | 26 561 | 26 687 | 26 543 | 26 038 | 25 086 |
| 35 | 27 759 | 27 996 | 28 378 | 28 814 | 29 216 | 29 496 | 29 564 | 29 333 | 28 714 |
| 40 | - | 30 900 | 31 210 | 31 635 | 32 085 | 32 473 | 32 710 | 32 706 | 32 373 |
| 45 | - | - | 34 418 | 34 786 | 35 239 | 35 689 | 36 048 | 36 226 | 36 135 |
| 50 | - | - | 38 071 | 38 336 | 38 746 | 39 213 | 39 648 | 39 963 | 40 068 |
| 55 | - | - | - | 42 354 | 42 676 | 43 115 | 43 581 | 43 987 | 44 243 |
| 60 | - | - | - | - | 47 099 | 47 463 | 47 915 | 48 366 | 48 727 |
| 65 | - | - | - | - | - | - | 52 721 | 53 171 | 53 592 |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 39.23 | 40.03 | 40.62 | 41.01 | 41.19 | 41.18 | 40.99 | 40.62 | 40.07 |
| 35 | 42.20 | 42.99 | 43.61 | 44.06 | 44.35 | 44.49 | 44.49 | 44.35 | 44.08 |
| 40 | - | 46.33 | 46.95 | 47.45 | 47.83 | 48.10 | 48.27 | 48.34 | 48.33 |
| 45 | - | - | 50.74 | 51.27 | 51.72 | 52.10 | 52.42 | 52.69 | 52.91 |
| 50 | - | - | 55.05 | 55.59 | 56.10 | 56.57 | 57.03 | 57.47 | 57.91 |
| 55 | - | - | - | 60.50 | 61.04 | 61.60 | 62.17 | 62.77 | 63.41 |
| 60 | - | - | - | - | 66.65 | 67.26 | 67.93 | 68.67 | 69.48 |
| 65 | - | - | - | - | - | - | 74.39 | 75.25 | 76.23 |

Mass flow in kg/h

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 1 036 | 1 271 | 1 542 | 1 854 | 2 215 | 2 629 | 3 103 | 3 642 | 4 254 |
| 35 | 1 024 | 1 259 | 1 530 | 1 843 | 2 202 | 2 616 | 3 089 | 3 627 | 4 238 |
| 40 | - | 1 246 | 1 517 | 1 828 | 2 187 | 2 600 | 3 072 | 3 609 | 4 217 |
| 45 | - | - | 1 500 | 1 811 | 2 170 | 2 581 | 3 051 | 3 586 | 4 193 |
| 50 | - | - | 1 482 | 1 792 | 2 148 | 2 558 | 3 027 | 3 560 | 4 165 |
| 55 | - | - | - | 1 769 | 2 124 | 2 532 | 2 999 | 3 530 | 4 132 |
| 60 | - | - | - | - | 2 097 | 2 503 | 2 967 | 3 496 | 4 096 |
| 65 | - | - | - | - | - | - | 2 932 | 3 458 | 4 054 |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|------|
| 30 | 1.98 | 2.43 | 2.94 | 3.52 | 4.21 | 5.02 | 6.02 | 7.27 | 8.87 |
| 35 | 1.68 | 2.08 | 2.53 | 3.04 | 3.62 | 4.31 | 5.13 | 6.13 | 7.37 |
| 40 | - | 1.76 | 2.16 | 2.60 | 3.11 | 3.69 | 4.37 | 5.19 | 6.18 |
| 45 | - | - | 1.82 | 2.21 | 2.64 | 3.14 | 3.72 | 4.40 | 5.20 |
| 50 | - | - | 1.52 | 1.85 | 2.23 | 2.65 | 3.14 | 3.71 | 4.38 |
| 55 | - | - | - | 1.53 | 1.85 | 2.21 | 2.63 | 3.11 | 3.66 |
| 60 | - | - | - | - | 1.51 | 1.82 | 2.17 | 2.57 | 3.03 |
| 65 | - | - | - | - | - | - | 1.74 | 2.07 | 2.45 |

Nominal performance at to = 5 °C, tc = 50 °C

| | | |
|---------------------|---------|------|
| Cooling capacity | 124 612 | W |
| Power input | 39 648 | W |
| Current consumption | 57.03 | A |
| Mass flow | 3 027 | kg/h |
| C.O.P. | 3.14 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 46.1 | bar(g) |
| Minimum LP switch setting | 1.5 | bar(g) |
| LP pump down setting | 1.7 | bar(g) |

Sound power data

| | | |
|--------------------|----|-------|
| Sound power level | 91 | dB(A) |
| With acoustic hood | 87 | dB(A) |

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 60 Hz, ARI rating conditions
R410A

| Cond. temp. in °C (tc) | Evaporating temperature in °C (to) | | | | | | | |
|---------------------------|------------------------------------|-----|-----|-----|----|---|---|----|
| | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 |

Cooling capacity in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 30 | 53 645 | 66 600 | 81 788 | 99 546 | 120 213 | 144 125 | 171 620 | 203 036 | 238 709 |
| 35 | 50 657 | 63 140 | 77 721 | 94 737 | 114 526 | 137 426 | 163 773 | 193 907 | 228 163 |
| 40 | - | 59 558 | 73 490 | 89 722 | 108 593 | 130 439 | 155 598 | 184 407 | 217 204 |
| 45 | - | - | 69 082 | 84 489 | 102 399 | 123 150 | 147 078 | 174 522 | 205 818 |
| 50 | - | - | - | 79 022 | 95 930 | 115 544 | 138 201 | 164 238 | 193 992 |
| 55 | - | - | - | 73 308 | 89 173 | 107 608 | 128 951 | 153 540 | 181 711 |
| 60 | - | - | - | - | 82 111 | 99 327 | 119 315 | 142 414 | 168 960 |
| 65 | - | - | - | - | - | - | 109 279 | 130 846 | 155 725 |

Power input in W

| | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 30 | 25 120 | 25 443 | 25 851 | 26 253 | 26 561 | 26 687 | 26 543 | 26 038 | 25 086 |
| 35 | 27 759 | 27 996 | 28 378 | 28 814 | 29 216 | 29 496 | 29 564 | 29 333 | 28 714 |
| 40 | - | 30 900 | 31 210 | 31 635 | 32 085 | 32 473 | 32 710 | 32 706 | 32 373 |
| 45 | - | - | 34 418 | 34 786 | 35 239 | 35 689 | 36 048 | 36 226 | 36 135 |
| 50 | - | - | - | 38 336 | 38 746 | 39 213 | 39 648 | 39 963 | 40 068 |
| 55 | - | - | - | 42 354 | 42 676 | 43 115 | 43 581 | 43 987 | 44 243 |
| 60 | - | - | - | - | 47 099 | 47 463 | 47 915 | 48 366 | 48 727 |
| 65 | - | - | - | - | - | - | 52 721 | 53 171 | 53 592 |

Current consumption in A

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 39.23 | 40.03 | 40.62 | 41.01 | 41.19 | 41.18 | 40.99 | 40.62 | 40.07 |
| 35 | 42.20 | 42.99 | 43.61 | 44.06 | 44.35 | 44.49 | 44.49 | 44.35 | 44.08 |
| 40 | - | 46.33 | 46.95 | 47.45 | 47.83 | 48.10 | 48.27 | 48.34 | 48.33 |
| 45 | - | - | 50.74 | 51.27 | 51.72 | 52.10 | 52.42 | 52.69 | 52.91 |
| 50 | - | - | - | 55.59 | 56.10 | 56.57 | 57.03 | 57.47 | 57.91 |
| 55 | - | - | - | 60.50 | 61.04 | 61.60 | 62.17 | 62.77 | 63.41 |
| 60 | - | - | - | - | 66.65 | 67.26 | 67.93 | 68.67 | 69.48 |
| 65 | - | - | - | - | - | - | 74.39 | 75.25 | 76.23 |

Mass flow in kg/h

| | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 30 | 1 030 | 1 263 | 1 532 | 1 843 | 2 200 | 2 611 | 3 081 | 3 616 | 4 222 |
| 35 | 1 018 | 1 252 | 1 521 | 1 831 | 2 188 | 2 599 | 3 068 | 3 601 | 4 205 |
| 40 | - | 1 239 | 1 507 | 1 817 | 2 173 | 2 583 | 3 050 | 3 583 | 4 185 |
| 45 | - | - | 1 491 | 1 800 | 2 156 | 2 564 | 3 030 | 3 561 | 4 161 |
| 50 | - | - | - | 1 780 | 2 135 | 2 541 | 3 006 | 3 535 | 4 133 |
| 55 | - | - | - | 1 758 | 2 111 | 2 515 | 2 978 | 3 505 | 4 101 |
| 60 | - | - | - | - | 2 083 | 2 486 | 2 947 | 3 471 | 4 065 |
| 65 | - | - | - | - | - | - | 2 911 | 3 433 | 4 024 |

Coefficient of performance (C.O.P.)

| | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|------|
| 30 | 2.14 | 2.62 | 3.16 | 3.79 | 4.53 | 5.40 | 6.47 | 7.80 | 9.52 |
| 35 | 1.82 | 2.26 | 2.74 | 3.29 | 3.92 | 4.66 | 5.54 | 6.61 | 7.95 |
| 40 | - | 1.93 | 2.35 | 2.84 | 3.38 | 4.02 | 4.76 | 5.64 | 6.71 |
| 45 | - | - | 2.01 | 2.43 | 2.91 | 3.45 | 4.08 | 4.82 | 5.70 |
| 50 | - | - | - | 2.06 | 2.48 | 2.95 | 3.49 | 4.11 | 4.84 |
| 55 | - | - | - | 1.73 | 2.09 | 2.50 | 2.96 | 3.49 | 4.11 |
| 60 | - | - | - | - | 1.74 | 2.09 | 2.49 | 2.94 | 3.47 |
| 65 | - | - | - | - | - | - | 2.07 | 2.46 | 2.91 |

Nominal performance at to = 7.2 °C, tc = 54.4 °C

| | | |
|---------------------|---------|------|
| Cooling capacity | 140 556 | W |
| Power input | 43 278 | W |
| Current consumption | 61.78 | A |
| Mass flow | 3 205 | kg/h |
| C.O.P. | 3.25 | |

Pressure switch settings

| | | |
|---------------------------|------|--------|
| Maximum HP switch setting | 46.1 | bar(g) |
| Minimum LP switch setting | 1.5 | bar(g) |
| LP pump down setting | 1.7 | bar(g) |

Sound power data

| | | |
|--------------------|----|-------|
| Sound power level | 91 | dB(A) |
| With acoustic hood | 87 | dB(A) |

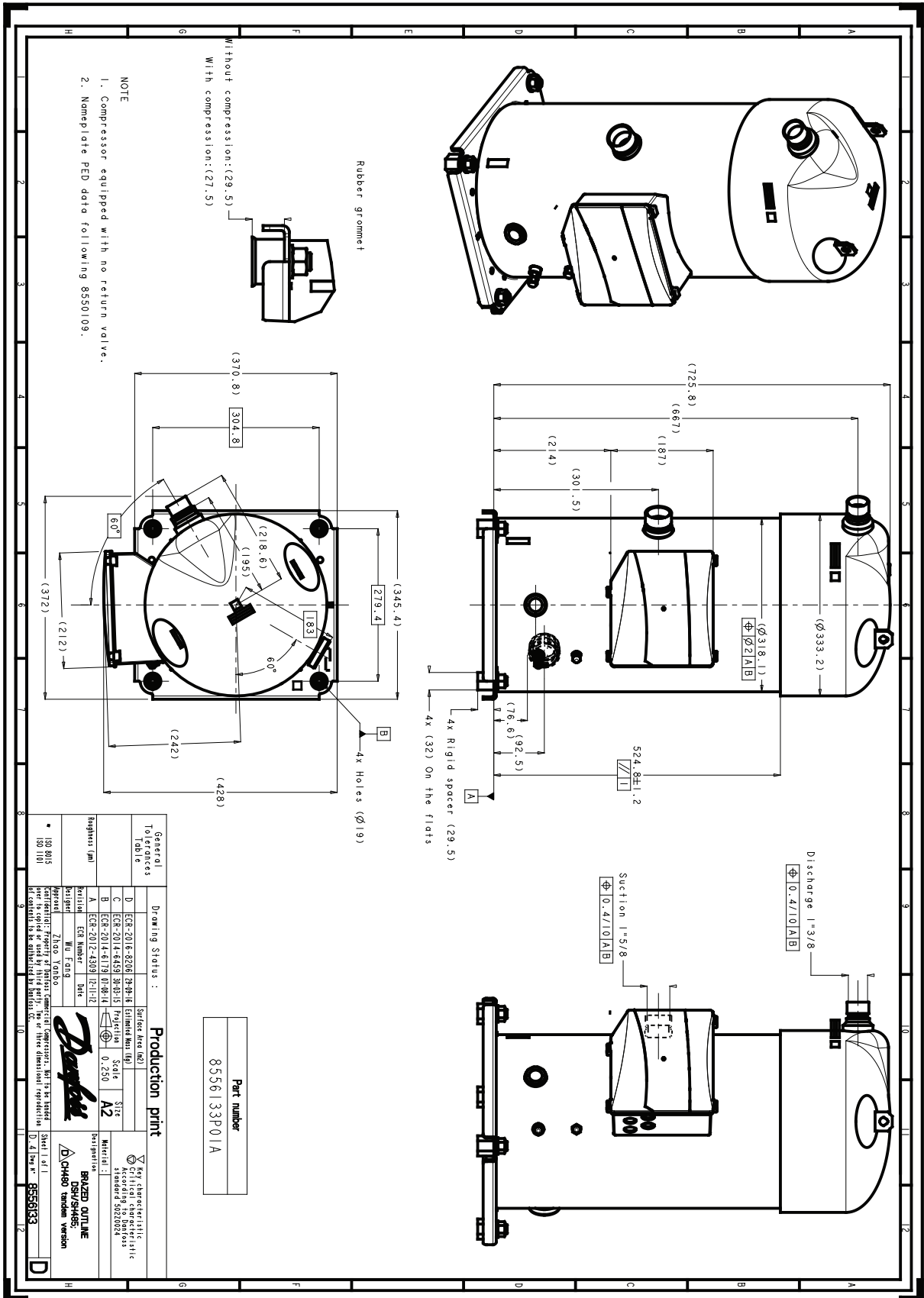
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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| General To be filled in | | Drawing Status : | | Production print | |
|-------------------------|----------------|------------------|--------------------|------------------|------|
| D | ECH-2016-32246 | 38-38-18 | Estimated Man (kg) | Scale | Site |
| C | ECH-2014-64459 | 30-30-15 | Projection | 0.250 | A2 |
| B | ECH-2014-6119 | 01-08-14 | | | |
| A | ECH-2012-4399 | 12-11-12 | | | |
| Project | Wu Fang | Date | | | |
| Designer | Zhao Yansuo | | | | |

Key characteristic:
 Official characteristic
 standard 5020224

Material :
 BRAZED OUTLINE
 CHASER
 standard version

Sheet 1 of 1
 Dwg. n° 8556133

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