



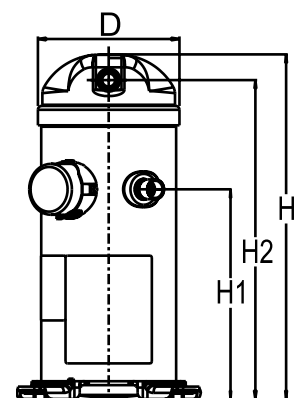
Datasheets

# Danfoss scroll compressors H series



**General Characteristics**

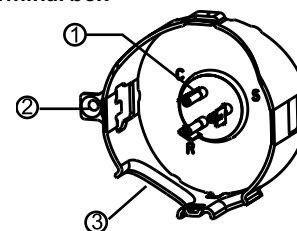
|   |                    |                    |
|---|--------------------|--------------------|
| Model number (on compressor nameplate)            |                    | <b>HRH041U1LP6</b> |
| Code number for Singlepack*                       |                    | 120U1281           |
| Code number for Industrial pack**                 |                    | 120U1278           |
| Drawing number                                    |                    | 0XR6002B-2         |
| Suction and discharge connections                 |                    | Brazed             |
| Suction connection                                |                    | 7/8 " ODF          |
| Discharge connection                              |                    | 1/2 " ODF          |
| Oil sight glass                                   |                    | None               |
| Oil equalization connection                       |                    | None               |
| Oil drain connection                              |                    | None               |
| LP gauge port                                     |                    | None               |
| IPR valve   |                    | Yes                |
| Swept volume                                      | 2.4 in3/rev        |                    |
| Displacement @ Nominal speed                      | 292 cfh @ 3500 rpm |                    |
| Net weight  |                    | 82 lbs             |
| Oil charge  |                    | 53 oz, PVE - -     |
| Maximum system test pressure Low Side / High side |                    | - psi / - psi      |
| Maximum differential test pressure                |                    | - psi              |
| Maximum number of starts per hour                 |                    | -                  |
| Refrigerant charge limit                          |                    | 12 lbs             |
| Approved refrigerants                             |                    | R410A              |

**Dimensions**


D=7.2 inch, H=17.9 inch,  
H1=11 inch, H2=16.6 inch, H3=- inch

**Electrical Characteristics**

|   |                             |
|---|-----------------------------|
| Nominal voltage                           | 208-230V/1/60Hz             |
| Voltage range                             | 187-253 V                   |
| Winding resistance (main / start) at 25°C | 0,32 Ω / 0,82 Ω             |
| Run capacitors A + C                      | 70 uF + - uF                |
| Start capacitor B                         | 161-193 uF                  |
| Start relay                               | 3ARR3*3L*                   |
| Rated Load Amps (RLA)                     | 21 A                        |
| Maximum Continuous Current (MCC)          | 32 A                        |
| Locked Rotor Amps (LRA)                   | 115 A                       |
| Motor protection                          | Internal overload protector |

**Terminal box**


IP22

- 1: Spade connectors 1/4"
- 2: Earth connection
- 3: Power cable passage

**Recommended Installation torques**

|                                      |                     |
|--------------------------------------|---------------------|
| Oil sight glass                      | 39 ft.lbs           |
| Power connections / Earth connection | 0 ft.lbs / 0 ft.lbs |

**Parts shipped with compressor**

|  |
|--|
| Mounting kit with grommets and sleeves |
| Initial oil charge                     |
| Installation instructions              |

**Approvals** : CE certified, UL certified (file SA11565), -

\*Singlepack: Compressor in cardboard box

\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

**Rotolock accessories, suction side**
**Code no.**

|   |         |
|---|---------|
| Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF) | 8168030 |
| Gasket, 1-1/4"                                  | 8156131 |

**Rotolock accessories, discharge side**
**Code no.**

|   |         |
|---|---------|
| Solder sleeve, P06 (1" Rotolock, 1/2" ODF)  | 8153007 |
| Angle adapter, C06 (1" Rotolock, 1/2" ODF)  | 8168007 |
| Rotolock valve, V06 (1" Rotolock, 1/2" ODF) | 8168031 |
| Gasket, 1"                                  | 8156130 |

**Rotolock accessories, sets**
**Code no.**

|   |          |
|---|----------|
| Solder sleeve adapter set (1-1/4"~7/8"), (1"~1/2")        | 120Z0127 |
| Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white | 8156009  |

**Oil / lubricants**
**Code no.**

|  |          |
|--|----------|
| PVE lubricant, 320HV (FVC68D), 1 litre can | 120Z5034 |
|--|----------|

**Crankcase heaters**
**Code no.**

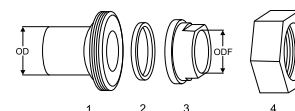
|  |          |
|--|----------|
| Belt type crankcase heater, 50 W, 230 V, CE mark, UL | 120Z0057 |
|--|----------|

**Miscellaneous accessories**
**Code no.**

|                          |         |
|--------------------------|---------|
| Discharge thermostat kit | 7750009 |
|--------------------------|---------|

**Spare parts**
**Code no.**

|  |          |
|--|----------|
| Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers | 120Z5005 |
| Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers | 120Z5031 |

**Solder sleeve adapter set**


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

**Performance data at 60 Hz, ARI rating conditions**
**R410A**

| Cond. temp.<br>in °F (tc) | Evaporating temperature in °F (to) |   |    |    |    |    |    |    |    |
|---------------------------|------------------------------------|---|----|----|----|----|----|----|----|
|                           | -10                                | 0 | 10 | 20 | 30 | 40 | 45 | 50 | 55 |

**Cooling capacity in Btu/h**

|     |        |        |        |        |        |        |        |        |        |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 90  | 14 003 | 19 669 | 25 711 | 32 408 | 40 043 | 48 896 | 53 867 | 59 249 | 65 075 |
| 100 | -      | 17 903 | 23 819 | 30 324 | 37 697 | 46 220 | 51 001 | 56 175 | 61 777 |
| 110 | -      | -      | 21 887 | 28 181 | 35 275 | 43 451 | 48 033 | 52 990 | 58 358 |
| 120 | -      | -      | -      | 25 858 | 32 656 | 40 467 | 44 840 | 49 573 | 54 699 |
| 130 | -      | -      | -      | -      | 29 716 | 37 145 | 41 302 | 45 800 | 50 675 |
| 140 | -      | -      | -      | -      | 26 336 | 33 365 | 37 296 | 41 552 | 46 167 |
| 150 | -      | -      | -      | -      | -      | 29 004 | 32 701 | 36 705 | 41 052 |

**Power input in W**

|     |       |       |       |       |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 90  | 2 528 | 2 566 | 2 565 | 2 533 | 2 475 | 2 397 | 2 353 | 2 306 | 2 257 |
| 100 | -     | 2 862 | 2 873 | 2 854 | 2 810 | 2 750 | 2 714 | 2 677 | 2 638 |
| 110 | -     | -     | 3 246 | 3 232 | 3 195 | 3 143 | 3 113 | 3 081 | 3 048 |
| 120 | -     | -     | -     | 3 677 | 3 638 | 3 586 | 3 557 | 3 526 | 3 496 |
| 130 | -     | -     | -     | -     | 4 150 | 4 090 | 4 057 | 4 024 | 3 991 |
| 140 | -     | -     | -     | -     | 4 740 | 4 663 | 4 623 | 4 583 | 4 543 |
| 150 | -     | -     | -     | -     | -     | 5 316 | 5 264 | 5 212 | 5 162 |

**Current consumption in A**

|     |       |       |       |       |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 90  | 12.15 | 12.07 | 11.96 | 11.81 | 11.61 | 11.36 | 11.20 | 11.03 | 10.84 |
| 100 | -     | 13.66 | 13.52 | 13.35 | 13.16 | 12.93 | 12.80 | 12.65 | 12.49 |
| 110 | -     | -     | 15.32 | 15.13 | 14.93 | 14.71 | 14.59 | 14.46 | 14.32 |
| 120 | -     | -     | -     | 17.21 | 16.98 | 16.75 | 16.64 | 16.52 | 16.39 |
| 130 | -     | -     | -     | -     | 19.39 | 19.14 | 19.02 | 18.91 | 18.79 |
| 140 | -     | -     | -     | -     | 22.24 | 21.95 | 21.82 | 21.70 | 21.58 |
| 150 | -     | -     | -     | -     | -     | 25.26 | 25.11 | 24.97 | 24.84 |

**Mass flow in lbs/h**

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 90  | 177 | 244 | 315 | 391 | 478 | 577 | 633 | 693 | 758 |
| 100 | -   | 234 | 307 | 385 | 473 | 573 | 629 | 689 | 754 |
| 110 | -   | -   | 297 | 378 | 467 | 568 | 624 | 685 | 750 |
| 120 | -   | -   | -   | 367 | 458 | 560 | 616 | 677 | 742 |
| 130 | -   | -   | -   | -   | 444 | 547 | 604 | 665 | 730 |
| 140 | -   | -   | -   | -   | 422 | 526 | 583 | 645 | 710 |
| 150 | -   | -   | -   | -   | -   | 496 | 553 | 615 | 681 |

**Energy Efficiency Ratio (E.E.R.)**

|     |      |      |       |       |       |       |       |       |       |
|-----|------|------|-------|-------|-------|-------|-------|-------|-------|
| 90  | 5.54 | 7.67 | 10.02 | 12.79 | 16.18 | 20.40 | 22.90 | 25.70 | 28.84 |
| 100 | -    | 6.25 | 8.29  | 10.63 | 13.41 | 16.81 | 18.79 | 20.98 | 23.42 |
| 110 | -    | -    | 6.74  | 8.72  | 11.04 | 13.83 | 15.43 | 17.20 | 19.15 |
| 120 | -    | -    | -     | 7.03  | 8.98  | 11.28 | 12.61 | 14.06 | 15.65 |
| 130 | -    | -    | -     | -     | 7.16  | 9.08  | 10.18 | 11.38 | 12.70 |
| 140 | -    | -    | -     | -     | 5.56  | 7.16  | 8.07  | 9.07  | 10.16 |
| 150 | -    | -    | -     | -     | -     | 5.46  | 6.21  | 7.04  | 7.95  |

**Nominal performance at to = 45 °F, tc = 130 °F**

|                  |        |       |                     |       |       |
|------------------|--------|-------|---------------------|-------|-------|
| Cooling capacity | 41 302 | Btu/h | Current consumption | 19.02 | A     |
| Power input      | 4 057  | W     | Mass flow           | 604   | lbs/h |
| E.E.R.           | 10.18  |       |                     |       |       |

**Pressure switch settings**

|                           |     |        |
|---------------------------|-----|--------|
| Maximum HP switch setting | 653 | psi(g) |
| Minimum LP switch setting | 22  | psi(g) |
| LP pump down setting      | 33  | psi(g) |

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

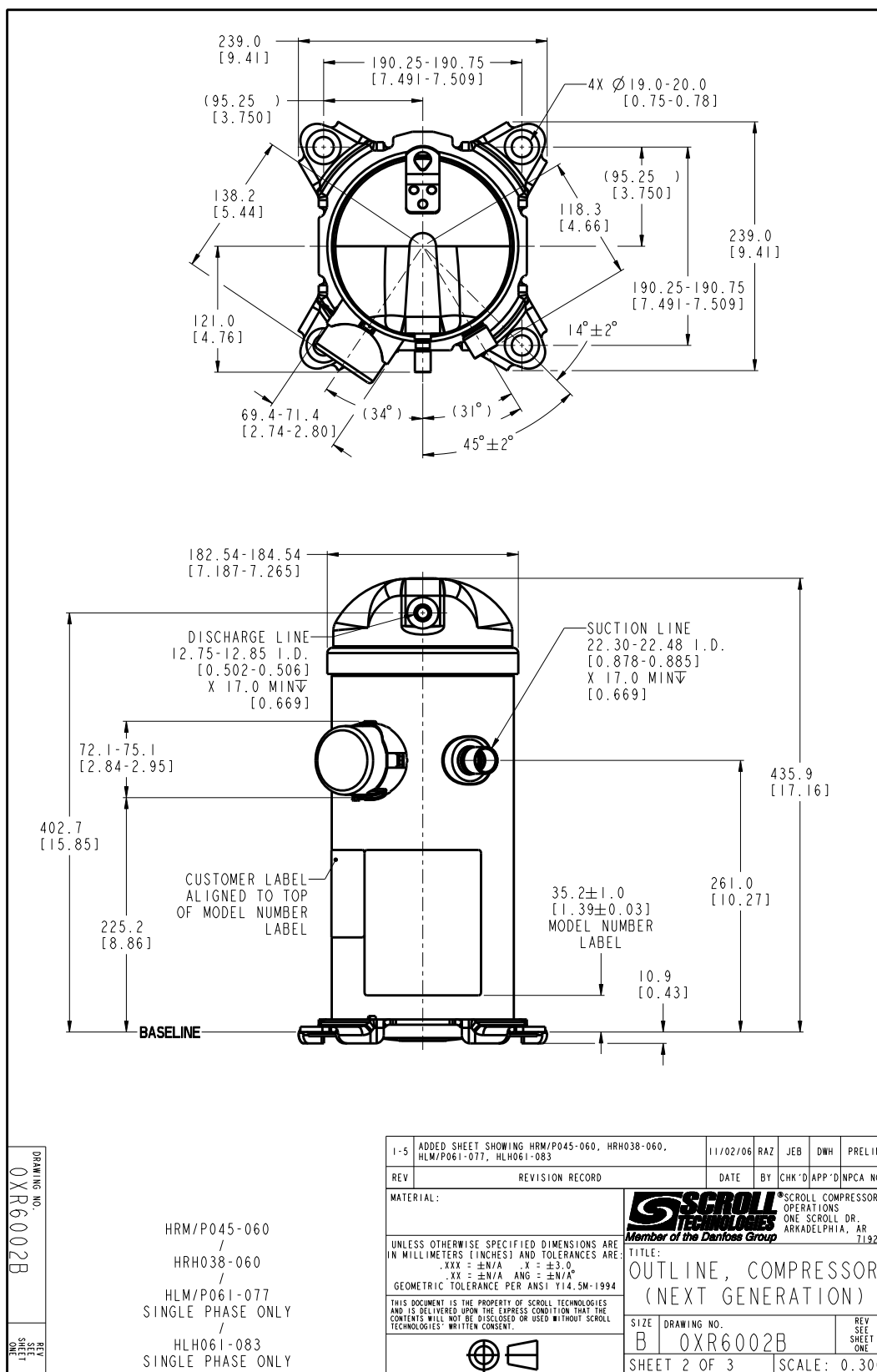
Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

**Sound power data**

|                    |    |       |
|--------------------|----|-------|
| Sound power level  | 70 | dB(A) |
| With acoustic hood | 65 | dB(A) |

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