

Technical Data Sheet

Compressor model **HPY12AAa**
 Voltage **220-240V 50Hz ~1**
 Refrigerant **R600a**

APPLICATION

Application Low Back Pressure
 Refrigerant R600a
 Evaporating Temp. -35,0 °C to -10,0 °C
 Expansion Capillar
 Comp. Cooling Static
 Max. ambient temp. 43,0 °C

COMPRESSOR

Displacement 12,10 cm³
 Diameter 27,00 mm
 Stroke 21,13 mm
 Net Weight 11,13 Kg
 Oil type ISO VG 10 MINER
 Oil charge 300 cm³

MOTOR

Nominal Power 1/5 hp
 Voltage/Frequency 220-240V 50Hz
 Voltage range 187-264 V
 Type RSIR
 Phase number 1 PH
 Locked Rotor Amps (LRA) 10,90 A
 Max. Cont. Current (MCC) 1,20 A
 Main W. resist. at 25°C 14,17 Ω
 Start W. resist. at 25°C 18,25 Ω

NOMINAL PERFORMANCE

| | ASHRAE | CECOMAF |
|------------------|--------------|--------------|
| Cooling Capacity | 165 kCal/h | 144 W |
| COP | 1,43 W/W | 1,13 W/W |
| EER | 1,23 kCal/Wh | 0,97 kCal/Wh |
| Input Power | 134 W | 128 W |
| Current | 0,86 A | 0,84 A |

APPROVALS



TEST CYCLE CONDITIONS

| | ASHRAE LBP (B) | CECOMAF LBP (A) |
|---------------------------------------|-------------------|--------------------|
| Evaporating temp. (T _e) | -23,3 °C | -25,0 °C |
| Condensing temp. (T _c) | 55,0 °C | 55,0 °C |
| Liquid temp. (T _{liq.}) | 32,0 °C | 55,0 °C |
| Ambient temp. (T _{amb.}) | 32,0 °C | 32,0 °C |
| Suction temp. (T _{suction}) | 32,0 °C | 32,0 °C |
| Voltage/Frequency | 220 V 50 Hz | 220 V 50 Hz |

ELECTRICAL COMPONENTS

| | | | | |
|-------------------------|-------------------|-------------------|-------------------|-------------------|
| Relay | Option 1 | | | |
| Reference | PTC K100 | | | |
| Voltage | 200-240 V | | | |
| Resistance | 14.00 Ω | | | |
| Protector | Option 1 | Option 2 | Option 3 | Option 4 |
| Reference | MSP327LZ | 4TM265NFBYY | T0500 | AE18FU |
| Current | 6,30 A | 9,20 A | 5,70 A | 6,30 A |
| Time check | 7,5-14 seg | 5-15 seg | 7,5-14 seg | 7,5-14 seg |
| Disc temp. (Open/Close) | 120,00 / 61,00 °C | 120,00 / 61,00 °C | 135,00 / 62,00 °C | 120,00 / 62,00 °C |

Technical Data Sheet

ASHRAE

| Tc °C | Te °C | Cooling Capacity kCal/h | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|-------------------------------|------------------|--------------|------------|----------------|
| 40 | -35 | 100 | 95 | 0,74 | 1,22 | 1,05 |
| 40 | -30 | 134 | 109 | 0,78 | 1,43 | 1,23 |
| 40 | -25 | 175 | 124 | 0,83 | 1,65 | 1,42 |
| 40 | -23,3 | 191 | 129 | 0,84 | 1,73 | 1,48 |
| 40 | -20 | 225 | 140 | 0,88 | 1,88 | 1,62 |
| 40 | -15 | 284 | 156 | 0,94 | 2,11 | 1,81 |
| 40 | -10 | 350 | 174 | 1,01 | 2,34 | 2,01 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 45 | -35 | 94 | 94 | 0,74 | 1,16 | 1,00 |
| 45 | -30 | 126 | 109 | 0,78 | 1,35 | 1,16 |
| 45 | -25 | 167 | 125 | 0,83 | 1,55 | 1,34 |
| 45 | -23,3 | 183 | 131 | 0,85 | 1,63 | 1,40 |
| 45 | -20 | 216 | 142 | 0,89 | 1,77 | 1,52 |
| 45 | -15 | 273 | 160 | 0,95 | 1,99 | 1,71 |
| 45 | -10 | 338 | 178 | 1,03 | 2,20 | 1,90 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 50 | -35 | 88 | 94 | 0,74 | 1,09 | 0,94 |
| 50 | -30 | 119 | 110 | 0,78 | 1,27 | 1,09 |
| 50 | -25 | 159 | 126 | 0,83 | 1,46 | 1,25 |
| 50 | -23,3 | 174 | 132 | 0,85 | 1,53 | 1,31 |
| 50 | -20 | 206 | 144 | 0,90 | 1,66 | 1,43 |
| 50 | -15 | 262 | 163 | 0,97 | 1,87 | 1,61 |
| 50 | -10 | 326 | 183 | 1,05 | 2,08 | 1,78 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 55 | -35 | 82 | 93 | 0,74 | 1,03 | 0,88 |
| 55 | -30 | 112 | 110 | 0,78 | 1,19 | 1,02 |
| 55 | -25 | 150 | 128 | 0,84 | 1,37 | 1,18 |
| 55 | -23,3 | 165 | 134 | 0,86 | 1,43 | 1,23 |
| 55 | -20 | 197 | 147 | 0,90 | 1,56 | 1,34 |
| 55 | -15 | 251 | 166 | 0,98 | 1,76 | 1,51 |
| 55 | -10 | 314 | 187 | 1,07 | 1,95 | 1,68 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 60 | -35 | 76 | 92 | 0,74 | 0,96 | 0,82 |
| 60 | -30 | 105 | 110 | 0,79 | 1,11 | 0,95 |
| 60 | -25 | 142 | 129 | 0,84 | 1,28 | 1,10 |
| 60 | -23,3 | 156 | 136 | 0,87 | 1,34 | 1,15 |
| 60 | -20 | 187 | 149 | 0,91 | 1,46 | 1,26 |
| 60 | -15 | 240 | 170 | 0,99 | 1,65 | 1,42 |
| 60 | -10 | 302 | 191 | 1,09 | 1,84 | 1,58 |

CECOMAF

| Tc °C | Te °C | Cooling Capacity W | Consumption W | Current A | COP W/W | EER kCal/Wh |
|----------|----------|--------------------------|------------------|--------------|------------|----------------|
| 40 | -35 | 109 | 95 | 0,74 | 1,15 | 0,99 |
| 40 | -30 | 148 | 109 | 0,78 | 1,36 | 1,18 |
| 40 | -25 | 195 | 124 | 0,83 | 1,58 | 1,36 |
| 40 | -23,3 | 213 | 129 | 0,84 | 1,65 | 1,43 |
| 40 | -20 | 250 | 140 | 0,88 | 1,79 | 1,55 |
| 40 | -15 | 312 | 156 | 0,94 | 2,00 | 1,73 |
| 40 | -10 | 383 | 174 | 1,01 | 2,20 | 1,90 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 45 | -35 | 99 | 94 | 0,74 | 1,05 | 0,91 |
| 45 | -30 | 135 | 109 | 0,78 | 1,23 | 1,07 |
| 45 | -25 | 178 | 125 | 0,83 | 1,42 | 1,23 |
| 45 | -23,3 | 195 | 131 | 0,85 | 1,49 | 1,29 |
| 45 | -20 | 229 | 142 | 0,89 | 1,62 | 1,40 |
| 45 | -15 | 288 | 160 | 0,95 | 1,81 | 1,56 |
| 45 | -10 | 355 | 178 | 1,03 | 1,99 | 1,72 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 50 | -35 | 89 | 94 | 0,74 | 0,95 | 0,82 |
| 50 | -30 | 121 | 110 | 0,78 | 1,10 | 0,95 |
| 50 | -25 | 161 | 126 | 0,83 | 1,27 | 1,10 |
| 50 | -23,3 | 176 | 132 | 0,85 | 1,33 | 1,15 |
| 50 | -20 | 209 | 144 | 0,90 | 1,45 | 1,25 |
| 50 | -15 | 264 | 163 | 0,97 | 1,62 | 1,40 |
| 50 | -10 | 328 | 183 | 1,05 | 1,79 | 1,55 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 55 | -35 | 79 | 93 | 0,74 | 0,85 | 0,73 |
| 55 | -30 | 107 | 110 | 0,78 | 0,98 | 0,84 |
| 55 | -25 | 144 | 128 | 0,84 | 1,13 | 0,97 |
| 55 | -23,3 | 158 | 134 | 0,86 | 1,18 | 1,02 |
| 55 | -20 | 188 | 147 | 0,90 | 1,28 | 1,11 |
| 55 | -15 | 240 | 166 | 0,98 | 1,45 | 1,25 |
| 55 | -10 | 301 | 187 | 1,07 | 1,61 | 1,39 |

| | | | | | | |
|----|-------|-----|-----|------|------|------|
| 60 | -35 | 68 | 92 | 0,74 | 0,74 | 0,64 |
| 60 | -30 | 94 | 110 | 0,79 | 0,85 | 0,73 |
| 60 | -25 | 127 | 129 | 0,84 | 0,98 | 0,85 |
| 60 | -23,3 | 140 | 136 | 0,87 | 1,03 | 0,89 |
| 60 | -20 | 168 | 149 | 0,91 | 1,13 | 0,97 |
| 60 | -15 | 217 | 170 | 0,99 | 1,28 | 1,10 |
| 60 | -10 | 273 | 191 | 1,09 | 1,43 | 1,23 |

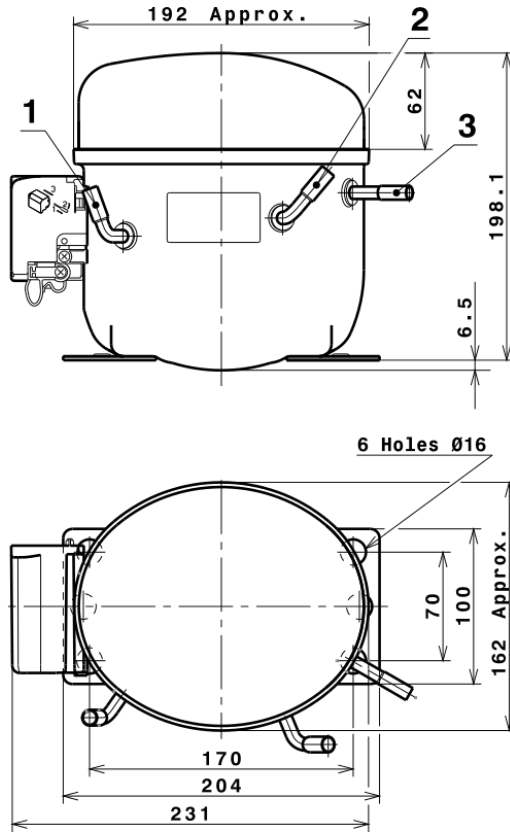
EN12900

| X | Cooling Capacity (W) | Consumption (W) | Current (A) | Mass Flow (kg/h) |
|---|----------------------|-----------------|--------------|----------------------|
| 1 | 810,9189674710 | 165,4696786939 | 0,9943981324 | 8,1944880536462 |
| 2 | 23,0966246402 | 2,5002843797 | 0,0147310966 | 0,25650888571689 |
| 3 | -6,9297102303 | 1,2950732931 | 0,0057115683 | -0,037839949912592 |
| 4 | 0,1519368674 | 0,0199930136 | 0,0002327498 | 0,0022084603565255 |
| 5 | -0,1394503777 | 0,0408920292 | 0,0001730718 | -0,00063588096500096 |

| | |
|----------|---|
| Equation | $x_1 + x_2Te + x_3Tc + x_4Te^2 + x_5TeTc$ |
|----------|---|

Technical Data Sheet

COMPRESSOR DIMENSIONS

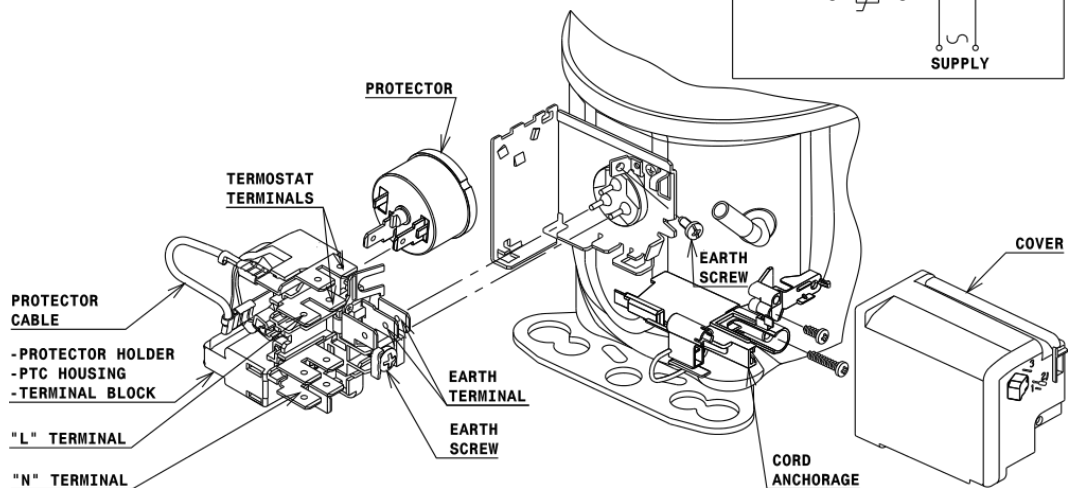
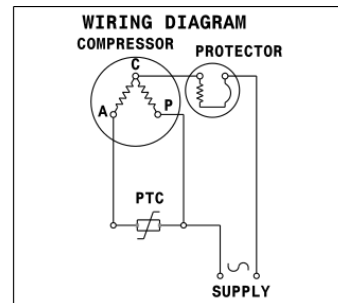


DESIGNATION INTERNAL DIAM.

| | | |
|---|-----------|--------|
| 1 | Suction | 8,1 mm |
| 2 | Service | 8,1 mm |
| 3 | Discharge | 6,5 mm |

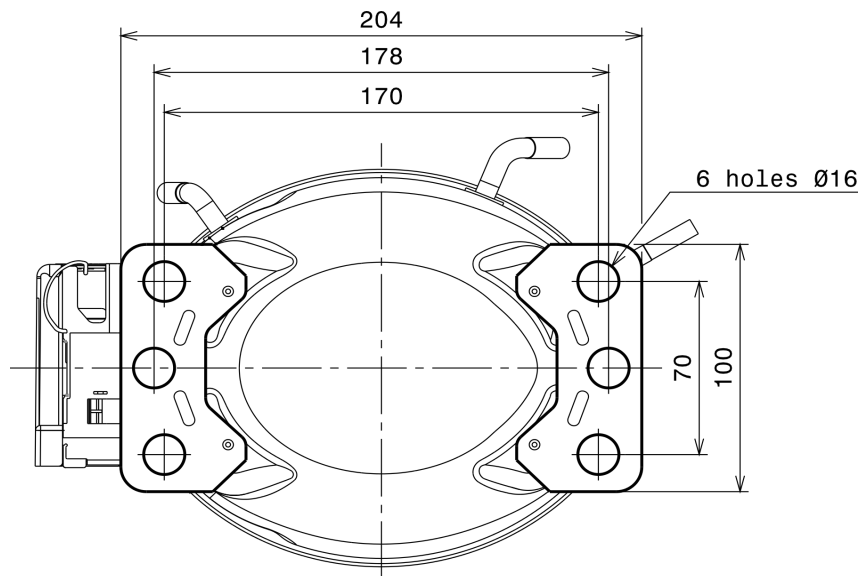
WIRING DIAGRAMS AND ELECTRICAL ASSEMBLY

RSIR CONNECTION (PTC) (L, P ranges)



Technical Data Sheet

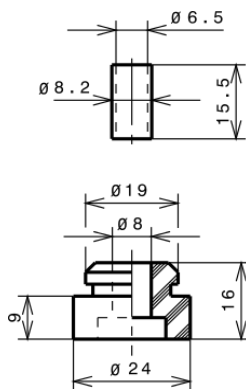
FIXINGS



SILENT BLOCKS (MOUNTING ACCESSORIES)

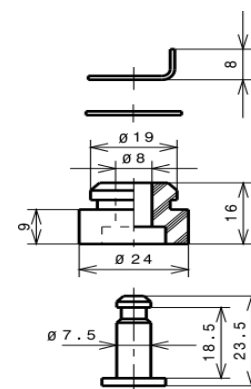
STANDARD

$\varnothing 16$ holes (170x70 net)



SNAP-ON

$\varnothing 16$ holes (170x70 net)



SOA

SOA R600a LBP

