

# **ALTECH**

# **Air-Cooled Type Industrial Chiller**

*High Efficiency / Stable Operation*



## **Special Features**

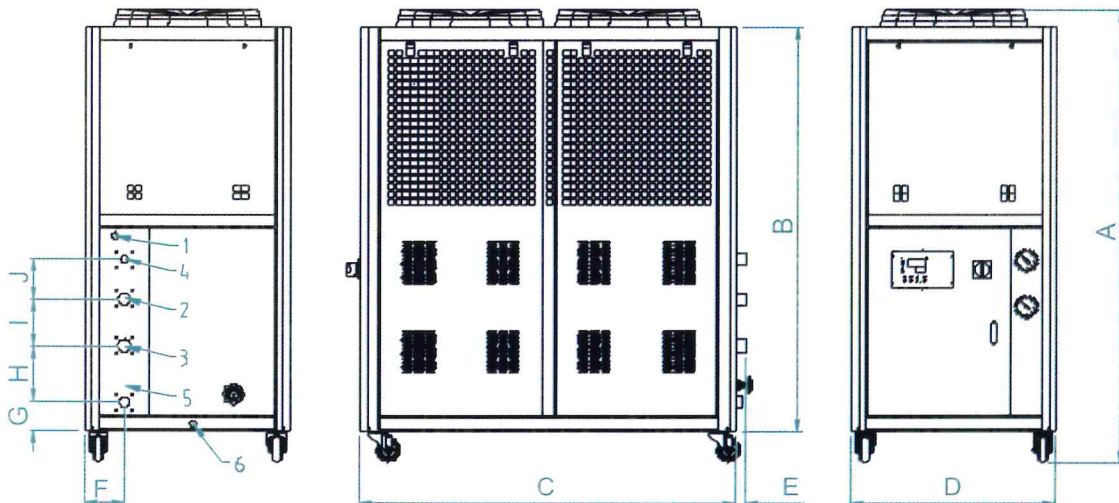
- Without water-cooling tower for easier installation and higher mobility. It is favourable when there is lack of water supply or when water-cooling tower is not applicable.
- Low noise fan motor provides excellent cooling and condensation effects. The throttle unit is stable and finished with high-grade anti-rust treatment.
- Equipped with a powerful compressor imported from U.S. and Europe. The compressor operates smoothly and quietly at high EER value.

Technical parameter table of Air-cooled Industrial Chiller (part 2)

| Parameter            |                  | Model                        | HT-10AD                   | HT-12AD                                   | HT-15AD | HT-20AD | HT-25AD  | HT-30AD  | HT-40AD | HT-50AD  | HT-60AD  |
|----------------------|------------------|------------------------------|---------------------------|---|---------|---------|----------|----------|---------|----------|----------|
| Cooling Capacity     | KW               |                              | 28.01                     | 33.79                                     | 44.15   | 59.08   | 71.72    | 87.20    | 113.58  | 135.49   | 181.68   |
|                      | 50HZ/60HZ        |                              | 32.78                     | 39.53                                     | 51.65   | 69.12   | 83.91    | 102.02   | 132.89  | 158.52   | 218.02   |
|                      | kcal/h           |                              | 24089                     | 29059                                     | 37965   | 50805   | 61683    | 74992    | 97675   | 116521   | 156249   |
|                      | 50HZ/60HZ        |                              | 18184                     | 33999                                     | 44419   | 59442   | 72169    | 87741    | 114280  | 136330   | 187499   |
| Total Input          | KW               |                              | 11                        | 13.3                                      | 17      | 22.8    | 27.7     | 33.7     | 42.8    | 51.1     | 68.8     |
| Max. Running Current | A                |                              | 26.7                      | 32.3                                      | 41.3    | 55.4    | 63.1     | 76.8     | 97.5    | 116.5    | 143.1    |
| Power Supply         |                  | 3N ~ 380V / 415V 50HZ / 60HZ |                           |   |         |         |          |          |         |          |          |
| Refrigerant          | Name             |                              | R407C                     |   |         |         |          |          |         |          |          |
|                      | Charge           | Kg                           | 4.3 x 2                   | 5 x 2                                     | 6.5 x 2 | 8.5 x 2 | 10.5 x 2 | 12.5 x 2 | 17 x 2  | 20.5 x 2 | 24.9 x 2 |
|                      | Control Type     |                              | Capillary Tube            | External Balanced Thermal Expansion Valve |         |         |          |          |         |          |          |
| Compressor           | Type             |                              | Hermetic Scroll or Piston |   |         |         |          |          |         |          |          |
|                      | Motor            | KW                           | 3.75 x 2                  | 4.5 x 2                                   | 5.5 x 2 | 7.5 x 2 | 9.4 x 2  | 11.3 x 2 | 15 x 2  | 18.8 x 2 | 22.5 x 2 |
| Air Flow             | m³/h             |                              | 1000                      | 12000                                     | 15000   | 20000   | 25000    | 30000    | 40000   | 48000    | 66000    |
| Chilled Water        | Flow             | m³/h                         | 4.82                      | 5.81                                      | 7.60    | 10.16   | 12.34    | 15.00    | 19.53   | 23.30    | 30.52    |
|                      |                  | 5.64                         | 6.80                      | 8.89                                      | 11.89   | 14.44   | 17.55    | 22.85    | 27.27   | 36.63    |          |
|                      | Tank             | m³                           | 0.188                     | 0.188                                     | 0.285   | 0.285   | 0.405    | 0.405    | 0.61    | 0.61     | 0.7      |
|                      | In/Out Pipe Size |                              | G2"                       | G2"                                       | G2"     | G2"     | G2-1/2"  | G2-1/2"  | G3"     | G3"      | G3"      |
| Pump                 | Motor            | Kw                           | 1.5                       | 1.5                                       | 1.5     | 2.2     | 2.2      | 4        | 4       | 4        | 4        |
|                      | Pressure         | KPa                          | 205                       | 205                                       | 205     | 220     | 220      | 250      | 250     | 250      | 250      |
| Dimension            | Length           | mm                           | 1470                      | 1470                                      | 1680    | 1680    | 2080     | 2080     | 2565    | 3556     | 3556     |
|                      | Width            | mm                           | 710                       | 800                                       | 890     | 940     | 1000     | 1000     | 1220    | 2200     | 2200     |
|                      | Height           | mm                           | 1700                      | 1780                                      | 1900    | 1960    | 2055     | 2055     | 2310    | 2210     | 2210     |
| Weight               | kg               |                              | 350                       | 370                                       | 520     | 590     | 790      | 880      | 1100    | 1280     | 1420     |

Exterior Dimension

Dimension of Air-cooled Industrial Chiller (HT-02A ~ HT-05A)



| Mark | Name                   | Model | HT-02A | HT-03A | HT-04A | HT-05A |
|------|------------------------|-------|--------|--------|--------|--------|
| 1    | Power Cable Connection |       | 3/4"   | 3/4"   | 3/4"   | 3/4"   |
| 2    | Chilled Water Inlet    |       | 3/4"   | 3/4"   | 3/4"   | 1"     |
| 3    | Chilled Water Outlet   |       | 3/4"   | 3/4"   | 3/4"   | 1"     |
| 4    | Water Supply           |       | 1/2"   | 1/2"   | 1/2"   | 1/2"   |
| 5    | Water Tank Drain       |       | 1/2"   | 1/2"   | 1/2"   | 1/2"   |
| 6    | Sump Drain             |       | 1/2"   | 1/2"   | 1/2"   | 1/2"   |

| Model  | Dimensions (mm) |      |      |     |    |     |    |     |     |     |  |
|--------|-----------------|------|------|-----|----|-----|----|-----|-----|-----|--|
|        | A               | B    | C    | D   | E  | F   | G  | H   | I   | J   |  |
| HT-02A | 1170            | 1016 | 820  | 460 | 70 | 90  | 80 | 110 | 140 | 150 |  |
| HT-03A | 1370            | 1220 | 945  | 550 | 70 | 115 | 80 | 175 | 175 | 175 |  |
| HT-04A | 1370            | 1220 | 945  | 550 | 70 | 115 | 80 | 175 | 175 | 175 |  |
| HT-05A | 1385            | 1220 | 1035 | 610 | 70 | 110 | 80 | 150 | 200 | 150 |  |



## Working condition for nominal cooling capacity of Industrial Chiller.

### Air-Cooled Type

| Chilled Water     |                    | Ambient Temperature  |                      |
|-------------------|--------------------|----------------------|----------------------|
| Inlet Temperature | Outlet Temperature | Dry-Bulb Temperature | Wet-Bulb Temperature |
| 15°C              | 10°C               | 35°C                 | 24°C                 |

### Coefficient chart for adjusting the cooling capacity of Air-cooled Industrial Chiller.

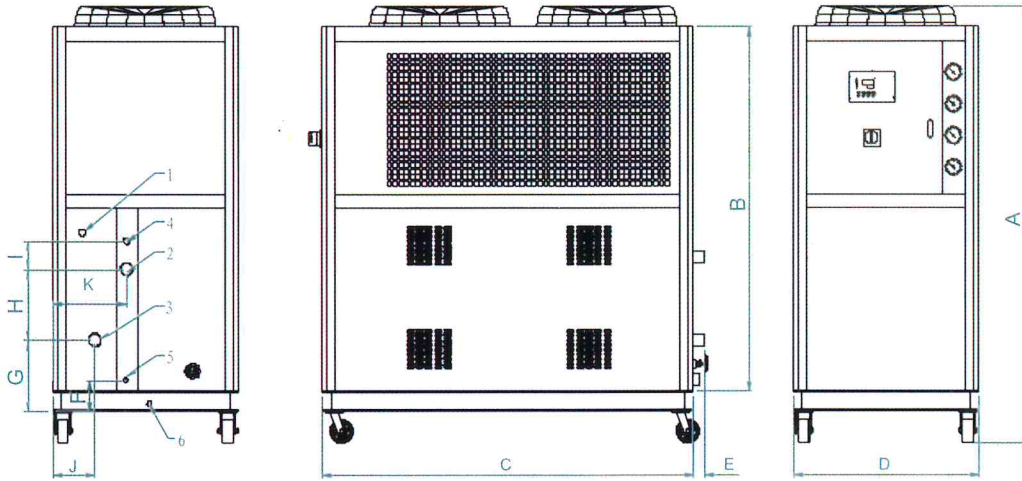
| Chilled Water Outlet Temperature °C | Ambient Dry-Bulb Temperature °C |      |      |      |      |
|-------------------------------------|---------------------------------|------|------|------|------|
|                                     | 25                              | 30   | 35   | 40   | 43   |
| 3                                   | 0.89                            | 0.85 | 0.80 | 0.75 | 0.72 |
| 5                                   | 0.95                            | 0.90 | 0.85 | 0.80 | 0.77 |
| 7                                   | 1.01                            | 0.96 | 0.91 | 0.86 | 0.83 |
| 9                                   | 1.07                            | 1.02 | 0.97 | 0.91 | 0.88 |
| 10                                  | 1.10                            | 1.05 | 1.00 | 0.94 | 0.91 |
| 11                                  | 1.14                            | 1.09 | 1.03 | 0.97 | 0.94 |
| 13                                  | 1.20                            | 1.15 | 1.09 | 1.03 | 1.00 |
| 15                                  | 1.26                            | 1.21 | 1.15 | 1.09 | 1.06 |
| 17                                  | 1.31                            | 1.27 | 1.21 | 1.15 | 1.12 |
| 19                                  | 1.37                            | 1.33 | 1.27 | 1.21 | 1.18 |
| 20                                  | 1.40                            | 1.36 | 1.30 | 1.24 | 1.21 |

### Specification

#### Technical parameters table of Air-cooled Industrial Chiller (part1)

| Parameter            |                  | Model | HT-1/2A               | HT-01A | HT-02A | HT-03A                       | HT-04A | HT-05A | HT-06A | HT-08AD |
|----------------------|------------------|-------|-----------------------|--------|--------|------------------------------|--------|--------|--------|---------|
| Cooling Capacity     | KW               |       | 1.53                  | 2.94   | 5.67   | 8.93                         | 10.90  | 13.95  | 16.90  | 21.80   |
|                      | 50HZ/60HZ        |       | 1.79                  | 3.44   | 6.63   | 9.82                         | 12.75  | 16.32  | 19.77  | 25.51   |
| Total Input          | kcal/h           |       | 1316                  | 2528   | 4872   | 7216                         | 9374   | 11990  | 14530  | 18748   |
|                      | 50HZ/60HZ        |       | 1540                  | 2958   | 5701   | 8442                         | 10968  | 14028  | 17000  | 21935   |
| Max. Running Current | A                |       | 4.1                   | 8      | 15.8   | 8.8                          | 10.9   | 13.4   | 16     | 20.9    |
| Power Supply         |                  |       | 1N ~ 220V 50HZ / 60HZ |        |        | 3N ~ 380V / 415V 50HZ / 60HZ |        |        |        |         |
| Refrigerant          | Name             |       | R407C                 |        |        |                              |        |        |        |         |
|                      | Charge           | Kg    | 0.6                   | 0.8    | 1.8    | 2.7                          | 3.5    | 4.3    | 5      | 3.5 x 2 |
|                      | Control Type     |       | Capillary Tube        |        |        |                              |        |        |        |         |
| Compressor           | Type             |       | Hermetic Rotary       |        |        | Hermetic Scroll or Piston    |        |        |        |         |
|                      | Motor            | KW    | 0.55                  | 0.75   | 1.5    | 2.25                         | 3      | 3.75   | 4.5    | 3 x 2   |
| Air Flow             |                  | m³/h  | 800                   | 1000   | 2000   | 3000                         | 4000   | 5000   | 6000   | 8000    |
| Chilled Water        | Flow             | m³/h  | 0.26                  | 0.51   | 0.97   | 1.44                         | 1.87   | 2.40   | 2.91   | 3.75    |
|                      | Tank             | m³    | 0.022                 | 0.028  | 0.038  | 0.038                        | 0.065  | 0.065  | 0.11   | 0.11    |
|                      | In/Out Pipe Size |       | G1/2"                 | G1/2"  | G3/4"  | G3/4"                        | G3/4"  | G1"    | G1"    | G1-1/2" |
| Pump                 | Motor            | Kw    | 0.375                 | 0.375  | 0.55   | 0.55                         | 0.55   | 0.75   | 0.75   | 0.75    |
|                      | Pressure         | KPa   | 180                   | 180    | 250    | 242                          | 242    | 290    | 290    | 290     |
| Dimension            | Length           | mm    | 600                   | 600    | 820    | 945                          | 945    | 1035   | 1200   | 1470    |
|                      | Width            | mm    | 400                   | 400    | 460    | 550                          | 550    | 610    | 650    | 710     |
|                      | Height           | mm    | 940                   | 940    | 1170   | 1370                         | 1370   | 1385   | 1480   | 1700    |
| Weight               |                  | kg    | 45                    | 60     | 120    | 130                          | 160    | 170    | 250    | 270     |

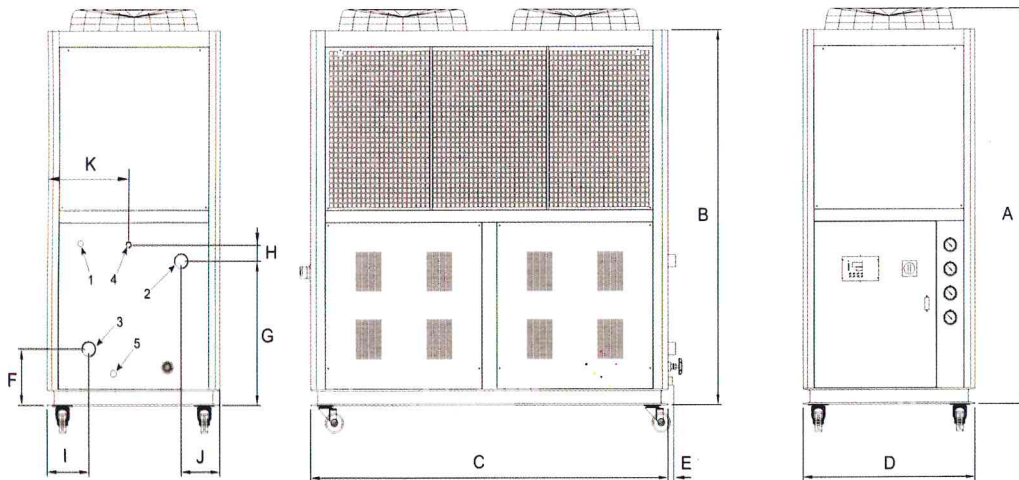
*Dimension of Air-cooled Industrial Chiller (HT-06A ~ HT-12AD)*



| Mark | Name                   | Model | HT-06A | HT-08AD | HT-10AD | HT-12AD |
|------|------------------------|-------|--------|---------|---------|---------|
| 1    | Power Cable Connection |       | 1-1/2" | 1-1/2"  | 1-1/2"  | 1-1/2"  |
| 2    | Chilled Water Inlet    |       | 1"     | 1-1/2"  | 2"      | 2"      |
| 3    | Chilled Water Outlet   |       | 1"     | 1-1/2"  | 2"      | 2"      |
| 4    | Water Supply           |       | 1/2"   | 1/2"    | 1/2"    | 1/2"    |
| 5    | Water Tank Drain       |       | 3/4"   | 3/4"    | 3/4"    | 3/4"    |
| 6    | Sump Drain             |       | 1/2"   | 1/2"    | 1/2"    | 1/2"    |

| Model   | Dimensions (mm) |      |      |     |    |     |     |     |     |     |     |
|---------|-----------------|------|------|-----|----|-----|-----|-----|-----|-----|-----|
|         | A               | B    | C    | D   | E  | F   | G   | H   | I   | J   | K   |
| HT-06A  | 1480            | 1300 | 1200 | 650 | 75 | 130 | 295 | 130 | 135 | 125 | 125 |
| HT-08AD | 1700            | 1475 | 1470 | 710 | 75 | 90  | 155 | 390 | 160 | 180 | 360 |
| HT-10AD | 1700            | 1475 | 1470 | 710 | 75 | 90  | 155 | 390 | 160 | 180 | 360 |
| HT-12AD | 1780            | 1600 | 1470 | 800 | 75 | 90  | 155 | 390 | 160 | 180 | 360 |

*Dimension of Air-cooled Industrial Chiller (HT-15AD ~ HT-60AD)*



| Mark | Name                   | Model | HT-15AD | HT-20AD | HT-25AD | HT-30AD | HT-40AD | HT-60AD |
|------|------------------------|-------|---------|---------|---------|---------|---------|---------|
| 1    | Power Cable Connection |       | 1-1/2"  | 1-1/2"  | 1-1/2"  | 1-1/2"  | 2"      | 2"      |
| 2    | Chilled Water Inlet    |       | 2"      | 2"      | 2-1/2"  | 2-1/2"  | 3"      | 3"      |
| 3    | Chilled Water Outlet   |       | 2"      | 2"      | 2-1/2"  | 2-1/2"  | 3"      | 3"      |
| 4    | Water Supply           |       | 1/2"    | 1/2"    | 1/2"    | 1/2"    | 1/2"    | 1/2"    |
| 5    | Water Tank Drain       |       | 1"      | 1"      | 1"      | 1"      | 1"      | 1"      |

| Model   | Dimensions (mm) |      |      |      |    |     |     |     |     |     |     |
|---------|-----------------|------|------|------|----|-----|-----|-----|-----|-----|-----|
|         | A               | B    | C    | D    | E  | F   | G   | H   | I   | J   | K   |
| HT-15AD | 1900            | 1655 | 1680 | 890  | 75 | 180 | 445 | 280 | 190 | 190 | 625 |
| HT-20AD | 1960            | 1750 | 1955 | 940  | 75 | 180 | 445 | 280 | 190 | 190 | 625 |
| HT-25AD | 2055            | 1925 | 2080 | 1000 | 75 | 225 | 445 | 150 | 150 | 150 | 350 |
| HT-30AD | 2055            | 1925 | 2080 | 1000 | 75 | 225 | 445 | 150 | 150 | 150 | 350 |
| HT-40AD | 2312            | 2180 | 2565 | 1200 | 75 | 225 | 445 | 150 | 150 | 150 | 350 |
| HT-50AD | 2310            | 2180 | 3556 | 2200 | 75 | 225 | 445 | 150 | 150 | 150 | 350 |