

# HEAT PUMPS

DX-heat pumps and Air-Water  
heat pumps

Wide range of heat pumps with various applications

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pumps page on our  
website



## Wide range of heat pumps with various applications

Mark Climate Technology also has the energy-efficient TOSHIBA heat pumps in its program. These DX heat pumps are fully compatible with the Mark AIRSTREAM heat recovery units and air handling units. The heat pumps are also available separately.



### Applications:

- Combination with DX battery in an air handling unit for cooling and / or heating.
- Combination with DX air curtains.

### Air-water heat pumps:

Also available are Air-Water heat pumps, which are still able to heat with the nominal capacity at an outside temperature of up to -15 °C.

### Product features

- High energy efficiency, distinctive partial load efficiencies and therefore high S(easonal)COPs
- A high and highly valued reliability.
- Inverter controlled Twin-Rotary compressor technology with individual control, low starting currents and a very large control range.
- Technical support



## DX-Heat pumps

| Type                                          |         | RAV-GM301ATP | RAV-GM401ATP | RAV-GM561ATP | RAV-GM801ATP |
|-----------------------------------------------|---------|--------------|--------------|--------------|--------------|
| Nominal cooling capacity                      | kW      | 2,5          | 3,6          | 5,0          | 6,7          |
| Nominal heating capacity                      | kW      | 3,4          | 4,0          | 5,3          | 7,7          |
| Cool power range                              | kW      | 0,9 - 3,0    | 0,9 - 4,0    | 1,5 - 5,6    | 1,5 - 8,0    |
| Heat power range                              | kW      | 0,8 - 4,5    | 0,8 - 5,0    | 1,5 - 6,3    | 1,5 - 9,0    |
| SEER                                          |         | 5,94         | 5,76         | 6,34         | 5,81         |
| SCOP                                          |         | 5,48         | 5,08         | 5,29         | 4,79         |
| Heating capacity at -10°C                     | kW      | 2,92         | 3,25         | 4,09         | 5,85         |
| Electrical connection                         | V/ph/Hz | 230/1/50     | 230/1/50     | 230/1/50     | 230/1/50     |
| Recommended fuse                              | A       | 16           | 16           | 16           | 16           |
| Air quantity                                  | m³/h    | 1.800        | 2.200        | 2.400        | 2.700        |
| Power condenser fan                           | W       | 43           | 43           | 43           | 43           |
| Sound pressure level cooling / heating        | dB(A)   | 38/39        | 41/42        | 40/42        | 40/44        |
| Cooling / heating sound power                 | dB(A)   | 61/62        | 64/65        | 63/65        | 65/69        |
| Dimensions H x W x D                          | mm      | 550x780x290  | 550x780x290  | 550x780x290  | 550x780x290  |
| Weight                                        | kg      | 33           | 39           | 40           | 44           |
| Minimum outdoor temperature cooling / heating | °C      | -15/ -15     | -15/ -15     | -15/ -15     | -15/ -15     |
| Refrigeration connection                      | flare   | 1/4" x 3/8"  | 1/4" x 1/2"  | 1/4" x 1/2"  | 3/8" x 5/8"  |
| Cooling pipe length max.                      | m       | 15/20*       | 15/20*       | 20/30*       | 20/30*       |
| Maximum height difference                     | m       | 10           | 10           | 30           | 30           |
| Refrigerant content R32                       | kg      | 0,6          | 0,9          | 0,9          | 1,3          |
| Extra refrigerant                             | g/m     | 20           | 20           | 20           | 20           |
| Article number                                |         | 0699500      | 0699501      | 0699502      | 0699503      |
| Price                                         | €       | 1.814        | 2.050        | 2.529        | 3.466        |

| Type                                          |         | RAV-GM901ATP | RAV-GM1101ATP | RAV-GM1401ATP | RAV-GP1601AT8 |
|-----------------------------------------------|---------|--------------|---------------|---------------|---------------|
| Nominal cooling capacity                      | kW      | 8,0          | 9,5           | 12,0          | 14,0          |
| Nominal heating capacity                      | kW      | 9,0          | 11,2          | 13,0          | 16,0          |
| Cool power range                              | kW      | 1,9 - 8,8    | 3,0 - 11,2    | 3,0 - 13,2    | 2,6 - 16      |
| Heat power range                              | kW      | 1,6 - 9,9    | 3,0 - 13,0    | 3,0 - 16,0    | 2,4 - 19,0    |
| SEER                                          |         | 7,0          | 6,15          | 5,71          | 6,72 (EER)    |
| SCOP                                          |         | 5,22         | 4,71          | 4,69          | 4,82 (COP)    |
| Heating capacity at -10°C                     | kW      | 6,43         | 8,45          | 10,40         | 13,14         |
| Electrical connection                         | V/ph/Hz | 230/1/50     | 230/1/50      | 230/1/50      | 400/3-N/50    |
| Insurance value                               | A       | 16           | 20            | 25            | 3 x 16        |
| Air quantity                                  | m³/h    | 2.900        | 4.080         | 4.200         | 6.180         |
| Power condenser fan                           | W       | 45           | 100           | 100           | 2 x 100       |
| Sound pressure level cooling / heating        | dB(A)   | 43/47        | 47/51         | 47/51         | 45/47         |
| Cooling / heating sound power                 | dB(A)   | 68/72        | 70/74         | 70/74         | 68/70         |
| Dimensions H x W x D                          | mm      | 630x800x300  | 890x900x320   | 890x900x320   | 1.340x900x320 |
| Weight                                        | kg      | 47           | 68            | 68            | 95            |
| Minimum outdoor temperature cooling / heating | °C      | -15/ -15     | -15/ -15      | -15/ -15      | -15/ -20      |
| Refrigeration connection                      | flare   | 3/8" x 5/8"  | 3/8" x 5/8"   | 3/8" x 5/8"   | 3/8" x 5/8"   |
| Cooling pipe length max.                      | m       | 30/50*       | 30/50*        | 30/50*        | 30/75*        |
| Maximum height difference                     | m       | 30           | 30            | 30            | 30            |
| Refrigerant content R32                       | kg      | 2,0 (R32)    | 2,1 (R32)     | 2,1 (R32)     | 2,6 (R32)     |
| Extra refrigerant                             | g/m     | 20           | 40            | 40            | 40            |
| Article number                                |         | 0699507      | 0699504       | 0699505       | 0699506       |
| Price                                         | €       | 3.770        | 4.581         | 5.234         | 7.439         |

\* With extra refrigerant charge



| Type                                          |         | RAV-GP561ATP | RAV-GP801AT     | RAV-GP1101AT    | RAV-GP1401AT    |
|-----------------------------------------------|---------|--------------|-----------------|-----------------|-----------------|
| Nominal cooling capacity                      | kW      | 5,0          | 7,1             | 10,0            | 12,5            |
| Nominal heating capacity                      | kW      | 5,6          | 8,0             | 11,2            | 14,0            |
| Cool power range                              | kW      | 1,2 - 5,6    | 1,9 - 8,0       | 3,1 - 12,0      | 3,1 - 14,0      |
| Heat power range                              | kW      | 0,9 - 8,1    | 1,3 - 11,3      | 2,6 - 13,0      | 2,6 - 16,5      |
| SEER                                          |         | 7,61         | 8,8             | 8,65            | 8,15            |
| SCOP                                          |         | 5,54         | 6,48            | 5,87            | 5,79            |
| Heating capacity at -10°C                     | kW      | 4,79         | 6,84            | 9,89            | 12,17           |
| Electrical connection                         | V/ph/Hz | 230/1/50     | 230/1/50        | 230/1/50        | 230/1/50        |
| Insurance value                               | A       | 16           | 16              | 25              | 25              |
| Air quantity                                  | m³/h    | 2.250        | 3.180           | 6.960           | 6.960           |
| Power condenser fan                           | W       | 43           | 60              | 2 x 100         | 2 x 100         |
| Sound pressure level cooling / heating        | dB(A)   | 40/42        | 40/42           | 43/44           | 44/45           |
| Cooling / heating sound power                 | dB(A)   | 63/65        | 63/65           | 66/67           | 67/68           |
| Dimensions H x W x D                          | mm      | 630x799x299  | 1.050x1.010x370 | 1.550x1.010x370 | 1.550x1.010x370 |
| Weight                                        | kg      | 45           | 74              | 104             | 104             |
| Minimum outdoor temperature cooling / heating | °C      | -15/ -27     | -15/ -27        | -15/ -27        | -15/ -27        |
| Refrigeration connection                      | flare   | 1/4" x 1/2"  | 3/8" x 5/8"     | 3/8" x 5/8"     | 3/8" x 5/8"     |
| Cooling pipe length max.                      | m       | 20/50*       | 30/50*          | 30/75*          | 30/75*          |
| Maximum height difference                     | m       | 30           | 30              | 30              | 30              |
| Refrigerant content R32                       | kg      | 1,35         | 1,9             | 3,1             | 3,1             |
| Extra refrigerant                             | g/m     | 20           | 40              | 40              | 40              |
| Article number                                |         | 0699512      | 0699513         | 0699514         | 0699515         |
| Price                                         | €       | 3.234        | 3.946           | 6.451           | 7.132           |

| Type                                          |         | RAV-GM1101AT8P | RAV-GM1401AT8P | RAV-GM1601AT8P | RAV-GM2241AT8   | RAV-GM2801AT8   |
|-----------------------------------------------|---------|----------------|----------------|----------------|-----------------|-----------------|
| Nominal cooling capacity                      | kW      | 9,5            | 12,0           | 14,0           | 20,0            | 23,5            |
| Nominal heating capacity                      | kW      | 11,2           | 12,8           | 16,0           | 22,4            | 27,0            |
| Cool power range                              | kW      | 3,0 - 11,2     | 3,0 - 13,2     | 3,0 - 16,0     | 4,6 - 22,4      | 4,6 - 27,0      |
| Heat power range                              | kW      | 3,0 - 13,0     | 3,0 - 16,0     | 3,0 - 18,0     | 4,6 - 25,0      | 4,6 - 31,5      |
| SEER                                          |         | 6,15           | 5,71           | 6,3            | 6,53            | 6,21            |
| SCOP                                          |         | 4,71           | 4,69           | 4,71           | 4,41            | 4,67            |
| Heating capacity at -10°C                     | kW      | 8,45           | 10,4           | 11,7           | 16,95           | 21,57           |
| Electrical connection                         | V/ph/Hz | 400/3-N/50     | 400/3-N/50     | 400/3-N/50     | 400/3-N/50      | 400/3-N/50      |
| Insurance value                               | A       | 3x10           | 3x10           | 3x16           | 3 x 20          | 3 x 25          |
| Air quantity                                  | m³/h    | 4.080          | 4.200          | 6.900          | 9150            | 10.890          |
| Power condenser fan                           | W       | 2x100          | 2x100          | 2x100          | 2 x 100         | 2 x 100         |
| Sound pressure level cooling / heating        | dB(A)   | 47/51          | 47/51          | 45/47          | 53/53           | 55/57           |
| Cooling / heating sound power                 | dB(A)   | 70/74          | 70/74          | 70/72          | 76/76           | 78/80           |
| Dimensions H x W x D                          | mm      | 890x900x320    | 890x900x320    | 1.340x900x320  | 1.550x1.010x370 | 1.550x1.010x370 |
| Weight                                        | kg      | 69             | 69             | 94             | 142             | 142             |
| Minimum outdoor temperature cooling / heating | °C      | -15/ -15       | -15/ -15       | -15/ -15       | -15/ -27        | -15/ -27        |
| Refrigeration connection                      | flare   | 3/8" x 5/8"    | 3/8" x 5/8"    | 3/8" x 5/8"    | 1/2" x 1 1/8"   | 1/2" x 1 1/8"   |
| Cooling pipe length max.                      | m       | 30/50*         | 30/50*         | 30/50*         | 30/60*          | 30/60*          |
| Maximum height difference                     | m       | 30             | 30             | 30             | 30              | 30              |
| Refrigerant content R32                       | kg      | 2,1            | 2,1            | 2,4            | 5               | 5               |
| Extra refrigerant                             | g/m     | 40             | 40             | 40             | 80              | 80              |
| Article number                                |         | 0699520        | 0699521        | 0699522        | 0699527         | 0699528         |
| Price                                         | €       | 5.316          | 6.069          | 6.784          | 12.863          | 14.423          |

\* With extra refrigerant charge



## Air-water heat pumps

| Type                       |                                               | HWS-P805HR | HWS-P1105HR    | HWS-P805H8R    | HWS-P1105H8R   | HWS-P1405H8R   |                |
|----------------------------|-----------------------------------------------|------------|----------------|----------------|----------------|----------------|----------------|
| Heating                    | Nominal heating capacity*                     | kW         | 8,0            | 11,2           | 8,0            | 11,2           | 14,0           |
|                            | Power consumption*                            | kW         | 1,68           | 2,29           | 1,71           | 2,33           | 3,15           |
|                            | Water outlet temperature                      | °C         | 20-60          | 20-60          | 20-60          | 20-60          | 20-60          |
|                            | Heating capacity -7 °C/-15 °C                 | kW         | 11,92 / 9,37   | 12,79 / 11,23  | 10,82 / 8,18   | 11,62 / 9,26   | 13,44 / 10,7   |
|                            | COP                                           |            | 4,76           | 4,88           | 4,68           | 4,80           | 4,44           |
| Cooling                    | Nominal cooling capacity*                     | kW         | 6,0            | 10,0           | 6,0            | 10,0           | 11,0           |
|                            | Power consumption*                            | kW         | 1,64           | 3,33           | 1,64           | 3,33           | 3,9            |
|                            | Water outlet temperature                      | °C         | 7-25           | 7-25           | 7-25           | 7-25           | 7-25           |
|                            | Annual energy consumption heating             | kWh        | 5.881          | 5.523          | 5.372          | 5.476          | 6.588          |
|                            | Energy label heating                          |            | A+++           | A+++           | A+++           | A+++           | A+++           |
|                            | SCOP                                          |            | 4,01           | 4,48           | 4,31           | 4,43           | 4,43           |
|                            | Fuse                                          | A          | 20             | 25             | 3 x 16         | 3 x 16         | 3 x 16         |
|                            | Electrical connection                         | V/ph/Hz    | 230/1/50       | 230/1/50       | 400/3-N/50     | 400/3-N/50     | 400/3-N/50     |
|                            | Compressor type                               |            | DC Twin Rotary | DC Twin Rotary | DC Twin Rotary | DC Twin Rotary | DC Twin Rotary |
|                            | Connections (gas-fluid)                       | flare      | 5/8" x 3/8"    | 5/8" x 3/8"    | 5/8" x 3/8"    | 5/8" x 3/8"    | 5/8" x 3/8"    |
|                            | Sound pressure level **                       | dB(A)      | 47             | 47             | 47             | 48             | 49             |
|                            | Dimensions (H x W x D)                        | mm         | 1.340x900x320  | 1.340x900x320  | 1.340x900x320  | 1.340x900x320  | 1.340x900x320  |
|                            | Weight                                        | kg         | 92             | 92             | 94             | 94             | 94             |
|                            | Minimum outdoor temperature cooling / heating | °C         | 10/-25         | 10/-25         | 10/-25         | 10/-25         | 10/-25         |
|                            | Minimum pipe length                           | m          | 5              | 5              | 5              | 5              | 5              |
| Maximum pipe length        | m                                             | 30         | 30             | 30             | 30             | 30             |                |
| Maximum height difference  | m                                             | 30         | 30             | 30             | 30             | 30             |                |
| Pipe length without refill | m                                             | 30         | 30             | 30             | 30             | 30             |                |
| Refrigerant                |                                               | R410A      | R410A          | R410A          | R410A          | R410A          |                |
| Article number             |                                               | 0699550    | 0699551        | 0699555        | 0699556        | 0699557        |                |
| Price                      | €                                             | 14.737     | 16.083         | 15.447         | 16.784         | 18.266         |                |

\* These capacities apply under the following conditions and are in accordance with standard EN14511:

Heating: hot water outlet temperature: 35°C (ΔT 5°C), outside temperature: 7°C DB / 6 °C WB.

Cooling: cold water outlet temperature: 7°C (ΔT 5°C), outside temperature: 35°C DB.

\*\* The sound pressure level is specified at 2 m distance in free field conditions.