

WFC SC Single stage hot water absorption chiller

Cooling capacities from 17.6 kW to 175.8 kW

CH K & CH MG Natural gas-fired chiller/heaters

Cooling capacities from 105 kW to 703 kW

Heating capacities from 86 kW to 572 kW



Features WFC SC

WFC SC chillers from **Yazaki** are single stage hot water driven chillers. Compared to electrically driven chillers the **WFC SC** series can dramatically lower system operating costs when using waste heat. Applications particularly well suited to the **Yazaki WFC SC** absorption chiller include waste heat recovery from cogeneration or biomass, waste heat from district power station or industry as well as solar thermal. This makes absorption cooling an environmentally friendly and cost-saving alternative to conventional air-conditioning systems. A low electrical energy consumption results in low CO₂ emissions and provide a relief for electricity grids by replacing conventional cooling demand peaks. All chillers are pre-filled and ready for "plug & chill".

Driving heat source hot water

WFC SC units can operate with entering hot water temperature from 70 to 95°C.

Refrigerant cycle

The **Yazaki WFC SC** high efficiency single-stage absorption refrigeration cycle uses water as the refrigerant and lithium bromide (non-flammable, non-toxic, ecologically benign and ozone-friendly) as the absorbent. It is the strong affinity and ease of separation that these two substances have for each other that makes the cycle work. The entire process occurs in hermetic vessels in a near complete vacuum.

Features CH K & CH MG

Natural gas-fired chiller/heaters **CH K & CH MG** from **Yazaki** work with double effect thermo-cycle and may be used for both cooling or heating distribution. Compared to electrically driven chillers **CH K & CH MG** chillers can dramatically lower system operating costs.

A low electrical energy consumption results in low CO₂ emissions and provide a relief for electricity grids by replacing conventional cooling demand peaks. All chillers are pre-filled and ready for "plug & chill".

Direct fired chiller

Driving energy is provided by natural gas. Typically a COP of 1.0 or above is achievable.

Refrigerant cycle

The **Yazaki CH K & CH MG** high efficiency double-effect absorption refrigeration cycle uses water as the refrigerant and lithium bromide (non-flammable, non-toxic, ecologically benign and ozone-friendly) as the absorbent. It is the strong affinity and ease of separation that these two substances have for each other that makes the cycle work. The entire process occurs in hermetic vessels in a near complete vacuum.

Single stage hot water absorption chiller

WFC SC

Natural gas-fired chiller/heaters

CH K & CH MG



Nominal capacity WFC SC

| Model | | | | WFC SC 05 | WFC SC 10 | WFC SC 20 | WFC SC 30 | WFC SC 50 |
|-----------------------|---------------------|--------|----|-----------|-----------|-----------|-----------|-----------|
| Cooling Capacity | | kW | | 17.6 | 35 | 70 | 105 | 175.8 |
| Sound pressure at 1 m | | dB(A) | | 46 | 46 | 49 | 52 | 52 |
| Cold water | Temperature | Inlet | °C | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 |
| | | Outlet | °C | 7 | 7 | 7 | 7 | 7 |
| Cooling water | Cooling performance | | kW | 42.7 | 85.5 | 171 | 256 | 427 |
| | Temperature | Inlet | °C | 31 | 31 | 31 | 31 | 31 |
| | | Outlet | °C | 35 | 35 | 35 | 35 | 35 |
| Hot water | Power consumption | | kW | 25.1 | 50.2 | 100.4 | 150.6 | 251 |
| | Temperature | Inlet | °C | 88 | 88 | 88 | 88 | 88 |
| | | Outlet | °C | 83 | 83 | 83 | 83 | 83 |

Technical data WFC SC

| Model | | | | WFC SC 05 | WFC SC 10 | WFC SC 20 | WFC SC 30 | WFC SC 50 |
|------------------|------------------------------|----|--|-----------|-----------|-----------|-----------|-----------|
| Dimensions | Length | mm | | 594 | 760 | 1060 | 1380 | 1785 |
| | Width | mm | | 744 | 970 | 1300 | 1545 | 1960 |
| | Height (with mounting plate) | mm | | 1756 | 1920 | 2030 | 2065 | 2085 |
| Operating weight | | kg | | 420 | 604 | 1156 | 1801 | 2650 |

Nominal capacity CH K & CH MG

| Model | | | | CHK 30 | CHK 40 | CHK 50 | CHK 60 | CHK 80 | CHK 100 | CHMG 150 | CHMG 200 |
|------------------|-------------|--------|----|--------|--------|--------|--------|--------|---------|----------|----------|
| Cooling Capacity | | kW | | 105 | 141 | 176 | 211 | 281 | 352 | 527 | 703 |
| Heating Capacity | | kW | | 86 | 115 | 143 | 172 | 229 | 286 | 429 | 572 |
| Chilled water | Temperature | Inlet | °C | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12 | 12 |
| | | Outlet | °C | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Cooling water | Temperature | Inlet | °C | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 | 29.5 |
| | | Outlet | °C | 35.5 | 35.5 | 35.5 | 35.5 | 35.5 | 35.5 | 34.6 | 34.6 |
| Hot water | Temperature | Inlet | °C | 50.5 | 50.5 | 50.5 | 50.5 | 50.5 | 50.5 | 56 | 56 |
| | | Outlet | °C | 55 | 55 | 55 | 55 | 55 | 55 | 60 | 60 |

Technical data CH K & CH MG

| Model | | | | CHK 30 | CHK 40 | CHK 50 | CHK 60 | CHK 80 | CHK 100 | CHMG 150 | CHMG 200 |
|------------------|--|----|--|--------|--------|--------|--------|--------|---------|----------|----------|
| Dimensions | Length | mm | | 1635 | 1635 | 1875 | 1875 | 1995 | 1995 | 3663 | 3735 |
| | Width | mm | | 1460 | 1460 | 1780 | 1780 | 1840 | 1840 | 1951 | 2051 |
| | Height (with fixed plate and vent cap) | mm | | 2440 | 2440 | 2440 | 2440 | 2820 | 2820 | 2763 | 3003 |
| Operating weight | | kg | | 1720 | 1970 | 2510 | 2770 | 4060 | 4540 | 6210 | 7340 |



Manufacturer reserves the rights to change specifications without prior notice.

