

Thermo-chiller Standard Type

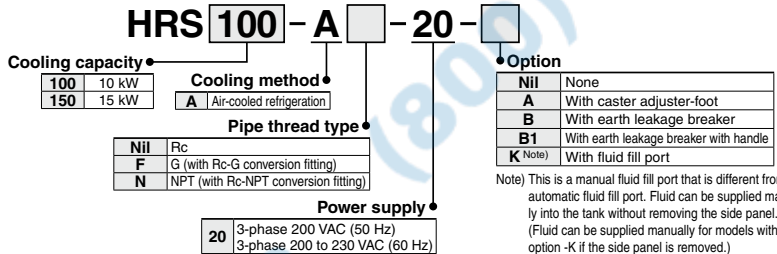
Air-cooled 200 V Type

HRS100/150 Series

RoHS



How to Order



Specifications

Model			HRS100-A□-20-□	HRS150-A□-20-□	
Cooling method			Air-cooled refrigeration		
Refrigerant			R410A (HFC)		
Refrigerant charge			kg	1.3	1.65
Control method			PID control		
Ambient temperature			°C	-5 to 45	
Circulating fluid system	Circulating fluid			Tap water, 15% ethylene glycol aqueous solution, Deionized water	
	Set temperature range			5 to 35	
	Cooling capacity 50/60 Hz			9.0/9.5	13.0/14.5
	Heating capacity 50/60 Hz			1.7/2.2	2.5/3.0
	Temperature stability			±1.0	
	Pump capacity	Rated flow 50/60 Hz (Outlet)		L/min	42/56
		Maximum flow rate 50/60 Hz		L/min	55/68
		Maximum pump head		m	50
	Minimum operating flow rate 50/60 Hz			L/min	28/42
	Tank capacity			18	
	Circulating fluid outlet, circulating fluid return port			Rc3/4 (Symbol F: G3/4, Symbol N: NPT3/4)	
	Tank drain port			Rc1/4 (Symbol F: G1/4, Symbol N: NPT1/4)	
	Automatic fluid fill system (Standard)	Supply side pressure range		MPa	0.2 to 0.5
Supply side fluid temperature		°C	5 to 35		
Automatic fluid fill port		Rc1/2 (Symbol F: G1/2, Symbol N: NPT1/2)			
Overflow port		Rc1 (Symbol F: G1, Symbol N: NPT1)			
Fluid contact material			Stainless steel, Copper (Heat exchanger brazing), Brass, Bronze, PTFE, PU, EPDM, PVC, NBR, PE, NR, PBT, PP, POM, Carbon, Ceramic		
Electrical system	Power supply			3-phase 200 VAC (50 Hz), 3-phase 200 to 230 VAC (60 Hz) Allowable voltage range ±10% (No continuous voltage fluctuation)	
	Applicable earth leakage breaker	Rated current	A	30	40
		Sensitivity of leak current	mA	30	
	Rated operating current 50/60 Hz			14/15	16/19
	Rated power consumption 50/60 Hz			3.8/4.8 (4.9/5.3)	4.7/6.1 (5.6/6.7)
	Noise level (Front 1 m/Height 1 m)			70	70
Waterproof specification			IPX4		
Accessories			Alarm code list stickers 2 pcs. (English 1 pc./Japanese 1 pc.), Operation Manual (for installation/operation) 2 pcs. (English 1 pc./Japanese 1 pc.), Y-strainer 20A 1 pc., Barrel nipple 20A 1 pc., Drain pan for the pump		
Weight (dry state)			kg	171	177

Note 1) Use a 15% ethylene glycol aqueous solution if operating in a place where the ambient temperature and/or circulating fluid temperature is 10°C or less.

Note 2) Use fluid in condition below as the circulating fluid.

Tap water: Standard of The Japan Refrigeration And Air Conditioning Industry Association (JRA GL-02-1994)

15% ethylene glycol aqueous solution: diluted by tap water in condition above without any additives such as antiseptics.

Deionized water: Electric conductivity 1 μS/cm or higher (Electric resistivity 1 MΩ·cm or lower)

Note 3) ① Ambient temperature: 32°C, ② Circulating fluid: Tap water, ③ Circulating fluid temperature: 20°C, ④ Circulating fluid flow rate: Rated flow, ⑤ Power supply: 200 VAC

Note 4) ① Ambient temperature: 32°C, ② Circulating fluid: Tap water, ③ Circulating fluid flow rate: Rated flow, ④ Power supply: 200 VAC

Note 5) ① Ambient temperature: 32°C, ② Circulating fluid: Tap water, ③ Circulating fluid temperature: 20°C, ④ Load: Same as the cooling capacity, ⑤ Circulating fluid flow rate: Rated flow, ⑥ Power supply: 200 VAC, ⑦ Piping length: Shortest

Note 6) When circulating fluid outlet port pressure – return port pressure = 0.25 MPa.

Note 7) Fluid flow rate to maintain the cooling capacity and to keep the circulating fluid discharge pressure to 0.5 MPa or less. If the actual flow rate is lower than this, install a bypass piping.

Note 8) To be prepared by user. A specified earth leakage breaker is installed for option B [With earth leakage breaker] and B1 [With earth leakage breaker with handle].

Note 9) If the product is used at altitude of 1000 m or higher, refer to "Operating Environment/Storage Environment" (page 120) Item 13* For altitude of 1000 m or higher".