

ASCS Series

Screw Type Water Cooling Machine





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1. Product Description

For this water cooled screw chiller are widely used in various industrial refrigeration processes such as plastics, electroplating, electronics, chemicals, pharmaceuticals, printing, food processing, etc., where chilled water is needed. They can also provide comfortable air conditioning for human activity spaces such as villas, restaurants, hotels, offices, schools, factories, etc.



(A) Condensing unit features:

- 1 Adopt BITZER/Taiwan Han bell semi-closed screw compressor, energy-saving and efficient;
- 2 High-efficiency slide valve energy control to realize staged or stepless energy control, and the operation is quiet and stable.
- 3 Advanced patented technology for high-precision processing;
- 4 Built-in intelligent monitoring and protection, including motor temperature monitoring, phase sequence monitoring, manual reset locking, oil temperature monitoring.

(B) Micro-processing control system;

- 1 The industrial-level PLC unit is centralized control, and the energy-adjusting system of the compressor is matched, so that the matching of the refrigerating capacity of the unit and the cold load can be accurately controlled, the unit is ensured to operate at the optimal efficiency, and the operation cost is reduced.
- 2 System water shortage, low temperature, high and low pressure, anti-freezing, phase loss, reverse phase, delayed start-up, overload, motor overheating, oil level and other safety protection and treatment functions.



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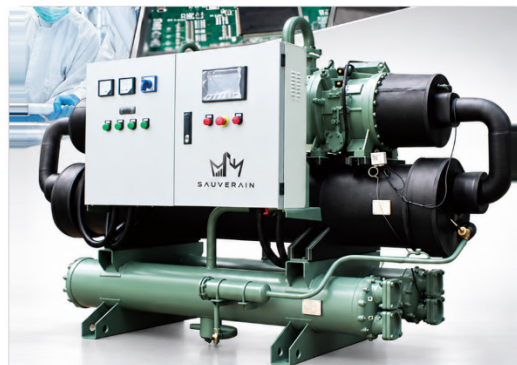
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(C) Micro-processing control system;

- 1 Compressor step-down start-up to minimize impact on voltage;
- 2 Operation balance, safety, small vibration;
- 3 compact structure, small footprint, light weight, easy handling and simple installation;
- 4 Complete various performance debugging before leaving the factory, complete wiring, reduce installation time and cost.



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2. Model Description

Unit Model Code

ASCS	-	50	A	SC	S	S
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Power code:

S: single-phase;
Vacancy: Three phase

Number of compressors:

C: 1 unit; D: 2 units; T: 3 units

SC screw compressor

Cooling method of condenser:

air-cooled: A;
Water-cooled: W

Equipment nominal power: HP

Product series

ASCS



3. Technical Data

ASCS Screw Type Water Cooling Machine

Model		ASCS-40	ASCS-50	ASCS-60	ASCS-70	ASCS-80	ASCS-100	ASCS-120	ASCS-140
COOLING CAPACITY	Kcal/h×10³	99.4	130.6	140.4	174.4	187.8	233.9	280.6	305.0
	kW	115.6	151.9	163.2	202.8	218.4	272.0	326.3	354.7
	USRT	32.9	43.2	46.4	57.7	62.1	77.3	92.8	100.9
Power Source		3PH-380V-50Hz							
Refrigerant		R22/R407C/R134a							
Cooling Loop		1	1	1	1	1	1	1	1
Throttle Device		Thermal expansion valve							
COMPRESSOR	Model	Fully enclosed scroll type							
	Input Power (kW)	37.0	46.5	51.2	61.3	66.9	80.8	95.6	105.3
	Rated Current (A)	62.8	79.6	86.7	103.9	113.1	137.4	164.8	182.5
CONDENSER	Model	High effective red copper pipes covered into aluminum fins							
	Airflow (m³/h)	41000	51000	56000	66000	75000	93000	110000	125000
EVAPORATOR	Model	Shell and tube type							
	Water Flow (m³/h)	19.9	26.1	28.1	34.9	37.6	46.8	56.1	61.0
	Pipe Size	DN80	DN80	DN80	DN80	DN80	DN100	DN100	DN100
SAFETY DEVICES		Overload protection, High/low pressure protection							
		Power reverse protection, Low temperature protection							
		Exhaust overheat protection, Frost protection							
MECHANICAL DIMENSIONS	L (mm)	2000	2200	2400	2600	2800	3000	3200	3200
	W (mm)	580	580	580	650	650	650	750	750
	H (mm)	1180	1180	1180	1350	1350	1350	1380	1380
Weight (kg)		580	710	780	930	980	1080	1180	1350
Cooling Capacity Basis									
Condensing Temperature					50°C				
Evaporation Temperature					5°C				
Installation Note		The finned condenser is installed externally and separated from the main unit.							



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Technical Data

3. Technical Data

ASCD Screw Type Water Cooling Machine

Model		ASCD-80	ASCD-100	ASCD-120	ASCD-140	ASCD-160	ASCD-200	ASCD-240	ASCD-280
COOLING CAPACITY	Kcal/h×10³	198.8	261.3	280.7	348.8	375.6	467.8	561.2	610.1
	kW	231.2	303.8	326.4	405.6	436.8	544.0	652.6	709.4
	USRT	65.7	86.4	92.8	115.3	124.2	154.7	185.6	201.7
Power Source		3PH-380V-50Hz							
Refrigerant		R22/R407C/R134a							
Cooling Loop		2	2	2	2	2	2	2	2
Throttle Device		Thermal expansion valve							
COMPRESSOR	Model	Fully enclosed scroll type							
	Input Power (kW)	2*37	2*47	2*51	2*61	2*67	2*81	2*96	2*105
	Rated Current (A)	2*63	2*79	2*87	2*104	2*113	2*137	2*165	2*183
CONDENSER	Model	High effective red copper pipes covered into aluminum fins							
	Airflow (m³/h)	82000	102000	112000	132000	150000	186000	220000	250000
EVAPORATOR	Model	Shell and tube type							
	Water Flow (m³/h)	39.8	52.2	56.1	69.8	75.1	93.6	112.2	122.0
	Pipe Size	DN80	DN100	DN100	DN100	DN100	DN125	DN125	DN150
SAFETY DEVICES		Overload protection, High/low pressure protection							
		Power reverse protection, Low temperature protection							
		Exhaust overheat protection, Frost protection							
MECHANICAL DIMENSIONS	L (mm)	2800	3000	3200	3200	3500	3600	3600	3800
	W (mm)	850	850	920	920	920	1000	1000	1080
	H (mm)	1350	1350	1380	1380	1380	1450	1450	1480
Weight (kg)		980	1250	1380	1680	1780	1920	2100	2450
Cooling Capacity Basis									
Condensing Temperature					50°C				
Evaporation Temperature					5°C				
Installation Note		The finned condenser is installed externally and separated from the main unit.							



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WSCS Water-Cooled Chiller

Model		WSCS-40	WSCS-50	WSCS-60	WSCS-70	WSCS-80	WSCS-100	WSCS-120	WSCS-140
COOLING CAPACITY	Kcal/h×10 ³	114.6	150.3	161.5	200.6	216.1	269.0	322.6	350.8
	kW	133.2	174.8	187.8	233.3	251.3	312.8	375.1	407.9
	USRT	37.9	49.7	53.4	66.3	71.5	88.9	106.7	116.0
Power Source		3PH-380V-50Hz							
Refrigerant		R22/R407C/R134a							
Cooling Loop		1	1	1	1	1	1	1	1
Throttle Device		Thermal expansion valve							
COMPRESSOR	Model	Fully enclosed scroll type							
	Input Power (kW)	30.8	38.6	42.5	51.0	55.6	67.1	79.4	87.5
	Rated Current (A)	53.3	68.1	73.7	87.4	94.8	116.0	138.4	154.4
CONDENSER	Model	Shell and tube type							
	Water Flow (m ³ /h)	28.2	36.7	39.6	48.9	52.8	65.3	78.2	85.2
	Pipe Size	DN80	DN80	DN80	DN80	DN80	DN100	DN100	DN100
EVAPORATOR	Model	Shell and tube type							
	Water Flow (m ³ /h)	22.9	30.1	32.3	40.1	43.2	53.8	64.5	70.1
	Pipe Size	DN80	DN80	DN80	DN80	DN80	DN100	DN100	DN100
SAFETY DEVICES		Overload protection, High/low pressure protection							
		Power reverse protection, Low temperature protection							
		Exhaust overheat protection, Frost protection							
MECHANICAL DIMENSIONS	L (mm)	2000	2200	2400	2600	2800	3000	3200	3200
	W (mm)	950	950	950	1000	1000	1000	1000	1100
	H (mm)	1180	1180	1180	1350	1350	1350	1380	1380
Weight (kg)		750	880	980	1150	1250	1380	1500	1750
Cooling Capacity Basis									
Condensing Temperature					40°C				
Evaporation Temperature					5°C				



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WSCD Water-Cooled Chiller

Model		WSCD-80	WSCD-100	WSCD-120	WSCD-140	WSCD-160	WSCD-200	WSCD-240	WSCD-280
COOLING CAPACITY	Kcal/h×10³	229.1	300.7	323.0	401.3	432.2	538.0	645.2	701.6
	kW	266.4	349.6	375.6	466.6	502.6	625.6	750.2	815.8
	USRT	75.7	99.4	106.8	132.7	142.9	177.9	213.3	232.0
Power Source		3PH-380V-50Hz							
Refrigerant		R22/R407C/R134a							
Cooling Loop		2	2	2	2	2	2	2	2
Throttle Device		Thermal expansion valve							
COMPRESSOR	Model	Fully enclosed scroll type							
	Input Power (kW)	2*31	2*39	2*43	2*51	2*56	2*67	2*79	2*88
	Rated Current (A)	2*53	2*68	2*74	2*87	2*95	2*116	2*138	2*154
CONDENSER	Model	Shell and tube type							
	Water Flow (m³/h)	56.4	73.4	79.2	97.8	105.6	130.7	156.3	170.4
	Pipe Size	DN100	DN100	DN100	2"DN100	2"DN100	2"DN100	2"DN100	2"DN125
EVAPORATOR	Model	Shell and tube type							
	Water Flow (m³/h)	45.8	60.1	64.6	80.2	86.4	107.6	129.0	140.3
	Pipe Size	DN80	DN100	DN100	DN100	DN125	DN125	DN125	DN150
SAFETY DEVICES		Overload protection, High/low pressure protection							
		Power reverse protection, Low temperature protection							
		Exhaust overheat protection, Frost protection							
MECHANICAL DIMENSIONS	L (mm)	2800	3000	3200	3200	3200	3400	3400	3600
	W (mm)	1000	1000	1000	1100	1100	1100	1100	1100
	H (mm)	1350	1350	1380	1380	1380	1380	1380	1380
Weight (kg)		1350	1600	1750	2080	2180	2350	2480	2780
Cooling Capacity Basis									
Condensing Temperature					40°C				
Evaporation Temperature					5°C				



4. Dimension Drawing of Units

