

Industrial chillers



1. Product description

The LS series Industrial Chillers could cool the water around 7°C or -15°C, we could reach even lower temperature as per customers request. The medium can be water and glycol etc. They are applicable to the industries of textile, chemicals, machinery, electronics, medicine and health, food etc. Features high efficiency, high reliability, very low noise, and low vibration;

2. Main components

World famous brand refrigeration parts are employed for all products:

World leading brand compressors;

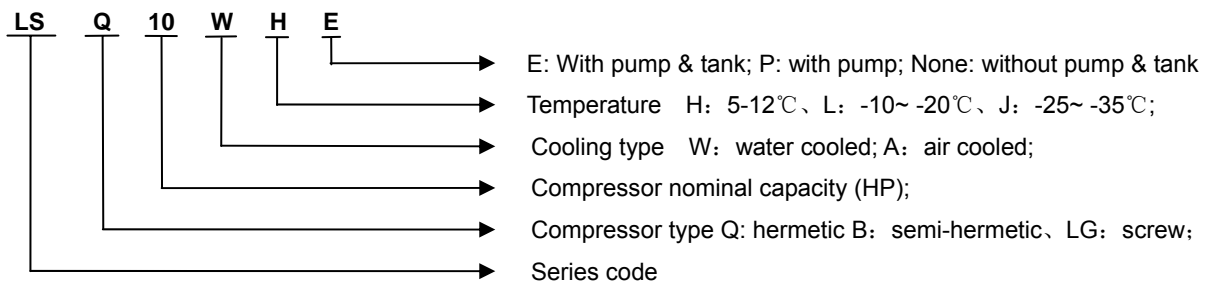
High efficient heat exchangers of shell & pipe or copper & fin type;

Digital control system;

Temperature can be displayed, set;

Multi-Protection devices for over loading, oil pressure, high and low pressure, phase lacking and water lacking etc;

3. Nomenclature



4. Specifications

1. Air cooled hermetic compressor chillers

Model		LSQ-										
		03AHE	05AHE	08AHE	10AHE	12AHE	15AHE	20AHE	25AHE	30AHE	40AHE	
Capacity	kW	7.9	13.1	21.2	28.0	32.0	42.0	54.0	64.0	84.0	108.0	
Power supply		3P-380V-50Hz										
Nominal capacity	kW	3.13	4.81	8.01	10.21	11.8	15.1	19.4	23.6	30.2	38.8	
Current	A	5.9	9.9	16	17.6	21.4	27.7	34.2	42.7	55.4	68.3	
Compressor	type	Hermetic scroll										
	input	kW	2.56	4.01	6.1	8.3	9.2	12.4	16.1	18.3	24.8	32.2
Condenser	type	Copper pipe and aluminum fin										
	Power	kW	0.2	0.25	1.16	1.16	1.16	1.2	1.8	2.2	3.48	3.6
Evaporator	type	Under water			Shell and pipe							
	Water dia	DN25			DN40			DN50			DN65	
	Rate	m ³ /h	1.4	2.3	3.6	4.8	5.5	7.2	9.3	11.0	14.4	18.6
Refrigeration		R22										
Chilled water pump	type	centrifugal										
	input	kW	0.37	0.55	0.75	0.75	1.5	1.5	1.5	1.5	2.2	2.2
	Pre head	mH ₂ O	17	22	23	20	18	25	25	24	23	22
Water tank volume	L	85	90	100	120	150	250	270	320	350	400	
Overall size	L	mm	1250	1400	1550	1550	1600	1750	1750	2050	2050	2550
	W	mm	810	810	810	850	850	1000	1250	1250	1250	1350
	H	mm	1350	1390	1550	1550	1550	1600	1600	1600	1850	2050

Test condition: Ambient temperature: 35°C; cooled water out/in: 7°C/12°C;

Model		LSQ-					
		05ALE	08ALE	10ALE	12ALE	15ALE	
Capacity	kW	5.2	6.9	11.2	13.3	16.0	
Power supply		3P-380V-50Hz					
Nominal capacity	kW	5.42	8.8	10.7	13.0	15.7	
Current	A	10.7	17.7	19.2	23.2	29.8	
Compressor	type	Hermetic scroll					
	input	kW	4.7	7.5	9.2	10.7	13.0
Condenser	type	Copper pipe and aluminum fin					
	Power	kW	0.2	0.58	0.75	0.75	1.2
Evaporator	type	Shell and pipe					
	Water dia.	DN25	DN40			DN50	
	Rate	m ³ /h	1.2	1.6	2.6	3.1	3.7
Refrigeration		R404A					
Chilled water pump	type	centrifugal					
	input	kW	0.55	0.75	0.75	1.5	1.5
	Pre head	mH ₂ O	21	22	19	17	25
Water tank volume	L	90	100	115	145	250	
Overall size	L	mm	1250	1400	1550	1550	1600
	W	mm	810	810	810	850	850
	H	mm	1350	1550	1550	1550	1600

Test condition: Ambient temperature: 35°C; cooled medium (glycol) out/in: -15°C/-11°C;

2. Water cooled Hermetic compressor chillers

Model		LSQ-										
		03WHE	05WHE	08WHE	10WHE	12WHE	15WHE	20WHE	25WHE	30WHE	40WHE	
Capacity	kW	8.9	14.7	23.5	30.5	36.0	46.0	61.5	72.0	92.0	123.0	
Power supply		3P-380V-50Hz										
Nominal capacity	kW	2.45	3.84	5.7	7.6	8.9	11.5	14.8	17.8	23.0	29.6	
Current	A	4.7	8.2	12.1	13.4	17.0	22.4	27.0	34.0	44.8	54.0	
Compressor	type	Hermetic scroll										
	input	kW	2.1	3.3	5.0	6.9	7.4	10.0	13.3	14.8	20.0	26.6
Condenser	type	Shell and pipe										
	Power	m3/h	1.9	3.1	4.9	6.4	7.5	9.6	12.9	15.0	19.3	25.7
	Rated flow		DN25		DN40			DN50			DN65	
Evaporator	type	Under water		Shell and pipe								
	Water dia		DN25		DN40			DN50			DN65	
	Rated flow	m3/h	1.5	2.5	4.0	5.2	6.2	7.9	10.6	12.4	15.8	21.2
Refrigeration		R22										
Chilled water pump	type	centrifugal										
	input	kW	0.37	0.55	0.75	0.75	1.5	1.5	1.5	1.5	2.2	2.2
	Pre head	mH2O	15	20	19	19	17	25	24	23	22	21
Water tank volume		L	85	90	190	190	190	210	250	250	320	400
Overall size	L	mm	1200	1300	1350	1350	1350	1600	1900	1900	2150	2300
	W	mm	750	750	850	850	850	900	900	900	1000	1100
	H	mm	900	1100	1200	1200	1200	1200	1200	1200	1200	1300

Test condition: Temperature of cooling water: 30°C; cooled water out/in: 7°C/12°C;

Model		LSQ-					
		05WLE	08WLE	10WLE	12WLE	15WLE	
Capacity	kW	6.3	9.3	13.3	15.8	19.1	
Power supply		3P-380V-50Hz					
Nominal capacity	kW	4.3	6.6	8.1	10.5	12.3	
Current	A	9.0	13.0	14.3	19.5	24.4	
Compressor	type	Hermetic scroll					
	Input	kW	3.8	5.8	7.3	9.0	10.8
Condenser	type	Shell and pipe					
	Water dia		DN25		DN40		DN50
	Rated flow	m ³ /h	1.7	2.6	3.5	4.3	5.1
Evaporator	Type	Shell and pipe					
	Water dia		DN25		DN40		DN50
	Rated flow	m ³ /h	1.5	2.2	3.1	3.7	4.5
Refrigeration		R404A					
Chilled water pump	type	centrifugal					
	input	kW	0.55	0.75	0.75	1.5	1.5
	Pre head	mH ₂ O	22	23	20	18	25
Water tank volume		90	190	190	190	210	
Overall size	L	mm	1300	1350	1350	1350	1600
	W	mm	750	850	850	850	900
	H	mm	1100	1200	1200	1200	1200

Test condition: Temperature of cooling water: 30°C; cooled medium (glycol) out/in: -15°C/-11°C;

3. Air cooled Semi-hermetic compressor chillers

Model			LSB-						
			15AH	20AH	25AH	30AH	35AH	40AH	50AH
Capacity	kW		41	47.4	61.7	70.7	92.7	106.1	125.3
Power supply			3P-380V-50Hz						
Nominal capacity	kW		13.14	16.39	20.47	25.18	31	36.2	44.74
Current	A		22.5	28.1	34.8	43.1	53.9	63.5	82.1
Compressor	type		Semi-hermetic						
	Input	kW	11.94	14.59	18.27	21.7	27.4	32.6	40.1
Condenser	Type		Copper pipe and aluminum fin						
	input	kW	1.2	1.8	2.2	3.48	3.6	3.6	4.64
Evaporator	Type		Shell and pipe						
	Water dia		DN50			DN65			
	Rated flow	m ³ /h	7.1	8.2	10.6	12.2	15.9	18.2	21.6
Refrigeration			R22						
Overall size	L	mm	1750	1750	2050	2050	2200	2550	2850
	W	mm	1000	1250	1250	1250	1250	1350	1350
	H	mm	1600	1600	1600	1850	1600	2050	2200

Test condition: Ambient temperature: 35°C; cooled water out/in: 7°C/12°C;

Model			LSB-				
			15AL	20AL	25AL	30AL	40AL
capacity	kW		19.8	23.0	29.7	34.5	41.5
current			3P-380V-50Hz				
Nominal capacity	kW		13.7	16.6	21.0	25.7	30.6
Current	A		23.8	28.7	36.3	44.0	56.9
Compressor	type		Semi-hermetic				
	Input	kW	12.5	14.8	18.8	22.2	27.0
Condenser	type		Copper pipe and aluminum fin				
	Input	kW	1.2	1.8	2.2	3.48	3.6
Evaporator	Type		Shell and pipe				
	Water pipe dia		DN50		DN65		
	Rated flow	m ³ /h	5.0	5.8	7.4	8.7	10.4
Refrigeration			R22				
Overall size	L	mm	1750	1750	2050	2050	2550
	W	mm	1000	1250	1250	1250	1350
	H	mm	1600	1600	1600	1850	2050

Test condition: Temperature of Environment: 35°C; cooled medium water (glycol) out/in: -15°C/-11°C;

4.4 Water cooled Semi-hermetic compressor chillers

Model			LSB-						
			15WH	20WH	25WH	30WH	35WH	40WH	50WH
capacity	kW		46.8	54.2	68.9	79.1	103.5	118.6	139.8
current			3P-380V-50Hz						
Nominal capacity	kW		10.29	12.63	15.82	18.68	23.7	28	35.2
Current	A		18	21.9	27.2	32.5	41.8	50.3	66.9
Compressor	type		Semi- hermetic						
Condenser	type		Copper pipe and aluminum fin						
	Water pipe dia		DN50			DN65			
	Rated flow	m ³ /h	9.8	11.5	14.6	16.8	21.9	25.2	30.1
Evaporator	Type		Shell and pipe						
	Water pipe dia		DN50			DN65			
	Rated flow	m ³ /h	8.0	9.3	11.9	13.6	17.8	20.4	24.0
Refrigeration			R22						
Overall size	L	mm	1600	1900	1900	1900	2150	2150	2300
	W	mm	850	900	900	900	1000	1000	1100
	H	mm	1050	1100	1100	1100	1200	1200	1300

Test condition: cooling water out/in: 35°C/30°C; cooled water out/in: 7°C/12°C;

Model			LSB-				
			15WL	20WL	25WL	30WL	40WL
Capacity	kW		23.0	26.5	34.5	39.8	47.5
Power supply			3P-380V-50Hz				
Nominal capacity	kW		11.2	13.1	16.8	21.9	24.3
Current	A		19.2	22.5	28.6	37.1	45.5
Compressor	type		Semi- hermetic				
Condenser	type		Shell and pipe				
	Water pipe dia		DN50			DN65	
	Rated flow	m ³ /h	5.9	6.8	8.8	12.8	12.3
Evaporator	Type		Shell and pipe				
	Water pipe dia		DN50			DN65	
	Rated flow	m ³ /h	5.8	6.6	8.7	13.2	11.9
Refrigeration			R22				
Overall size	L	mm	1600	1900	1900	1900	2150
	W	mm	850	900	900	900	1000
	H	mm	1050	1100	1100	1100	1200

Test condition: cooling water out/in:35°C/30°C; cooled glycol water out/in: -15°C/-11°C;

4.5 Water cooled screw compressor chillers

Model			LSLG-						
			30WH	40WH	50WH	60WH	70WH	80WH	90WH
Capacity	kW		105	140	174	232	267	326	349
Power supply			3P-380V-50Hz						
Compressor	input	kW	24.4	32.1	40.3	53.7	58.5	70.5	76.3
	Running current	A	41	54	68	90	98	119	128
	control capacity	—	0-66-100% (start-up @ 33%)			0-50-75-100% (start-up @ 25%)			
	start model		Y-Δ start-up						
Refrigeration			R22						
Evaporator	Water pipe dia	mm	DN50Flg		DN65Flg	DN80Flg		DN100Flg	
	Water flow	m ³ /h	18	24	30	40	46	56	60
	Pressure drop	K Pa	37	37	39	42	42	45	45
Condenser	Water pipe dia	mm	DN50Flg		DN65Flg	DN80Flg		DN100Flg	
	Water flow	m ³ /h	22	30	37	49	56	68	73
	Pressure drop	K Pa	38	38	39	43	44	46	46
Overall size	L	mm	2400	2400	2600	2850	3000	3000	3050
	W	mm	900	900	900	900	1100	1100	1100
	H	mm	1350	1350	1450	1450	1550	1670	1770

Test condition: cooling water out/in: 35°C/30°C; cooled water out/in: 7°C/12°C;

Model			LSLG-						
			100WH	110WH	120WH	130WH	140WH	160WH	180WH
Capacity	kW		384	419	488	523	570	663	732
Power supply			3P-380V-50Hz						
Compressor	input	kW	83.3	92.6	107.5	113.5	123	141.5	157.4
	Running current	A	140	156	181	191	207	238	265
	Control capacity		0-50-75-100% (start-up @25%)						
	start model		Y-Δ start-up						
Refrigerant			R22						
Evaporator	Water pipe dia	mm	DN100Flg		DN125Flg			DN150Flg	
	Water flow	m ³ /h	66	72	84	90	98	114	126
	Pressure drop	K Pa	46	48	48	49	49	52	55
Condenser	Water pipe dia	mm	DN100Flg		DN125Flg			DN150Flg	
	Water flow	m ³ /h	80	88	102	109	119	138	153
	Pressure drop	K Pa	47	49	49	51	51	55	57
Overall size	L	mm	3105	3105	3105	3200	3200	3300	3300
	W	mm	1100	1100	1100	1100	1100	1100	1100
	H	mm	1770	1770	1770	1780	1780	1780	2050

Test condition: cooling water out/in: 35°C/30°C; cooled water out/in: 7°C/12°C;

Model			LSLG-							
			30WL	40WL	50WL	60WL	70WL	80WL	90WL	
Capacity	kW		34	50	66	86	96	119	130	
Power supply			3P-380V-50Hz							
Compressor	input	kW	19.0	25.1	33.1	42.5	46.2	55.0	59.7	
	Running current	A	32	43	54	72	77	91	100	
	Control capacity		0-66-100% (start-up @ 33%)				0-50-75-100% (start-up @25%)			
	start model		Y-Δ start-up							
Refrigerant			R22							
Evaporator	Water pipe dia	mm	DN50Flg		DN65Flg	DN80Flg		DN100Flg		
	Water flow	m ³ /h	9	13	17	22	24	30	33	
	Pressure drop	kPa	40	40	42	45	45	48	48	
Condenser	Water pipe dia	mm	DN50Flg		DN65Flg	DN80Flg		DN100Flg		
	Water flow	m ³ /h	9	13	17	22	24	30	33	
	Pressure drop	kPa	35	35	36	40	41	43	43	
Overall size	L	mm	2400	2400	2600	2850	3000	3000	3050	
	W	mm	900	900	900	900	1100	1100	1100	
	H	mm	1350	1350	1450	1450	1550	1670	1770	

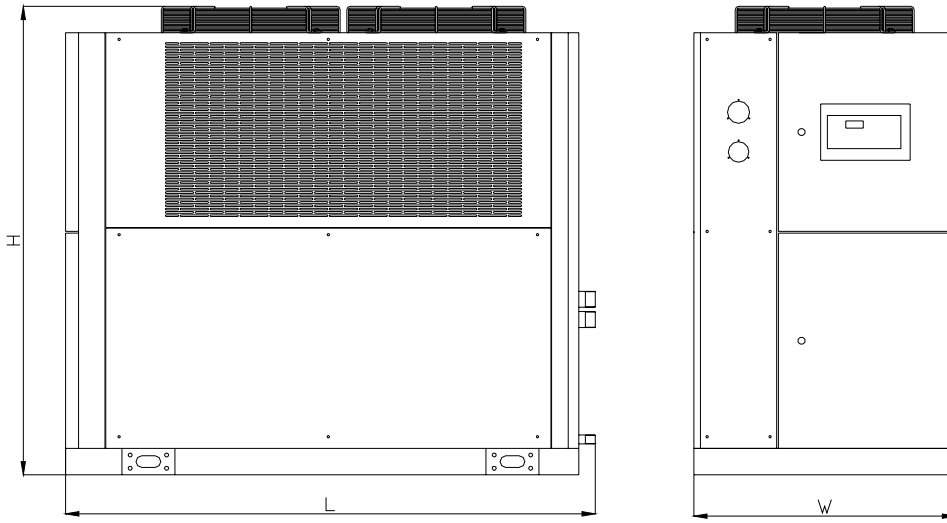
Test condition: cooling water out/in: 35°C/30°C; cooled glycol water out/in: -15°C/-11°C;

Model			LSLG-						
			100WL	110WL	120WL	130WL	140WL	160WL	180WL
Capacity	kW		139	154	185	205	214	240	280
Power supply			3P-380V-50Hz						
Compressor	input	kW	65.1	72	84	93.2	96	106.8	123
	Running current	A	110	122	141	150	162	180	207
	Control capacity		0-50-75-100% (start-up @25%)						
	start model		Y-Δ start-up						
Refrigeration			R22						
Evaporator	Water pipe dia	mm	DN100Flg			DN125Flg			DN150Flg
	Water flow	m ³ /h	35	39	46	51	54	60	70
	Pressure drop	kPa	49	51	51	52	52	55	58
Condenser	Water pipe dia	mm	DN100Flg			DN125Flg			DN150Flg
	Water flow	m ³ /h	35	39	46	51	63	60	70
	Pressure drop	kPa	44	46	46	48	48	52	54
Overall size	L	mm	3105	3105	3105	3200	3200	3300	3300
	W	mm	1100	1100	1100	1100	1100	1100	1100
	H	mm	1770	1770	1770	1780	1780	1780	2050

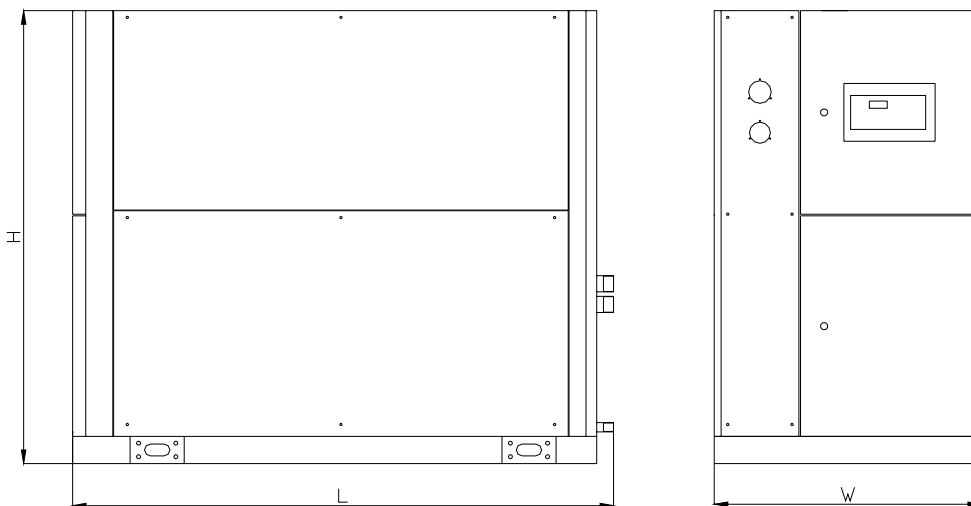
Test condition: cooling water out/in: 35°C/30°C; cooled glycol water out/in: -15°C/-11°C;

5. Diagrams of the overall unit

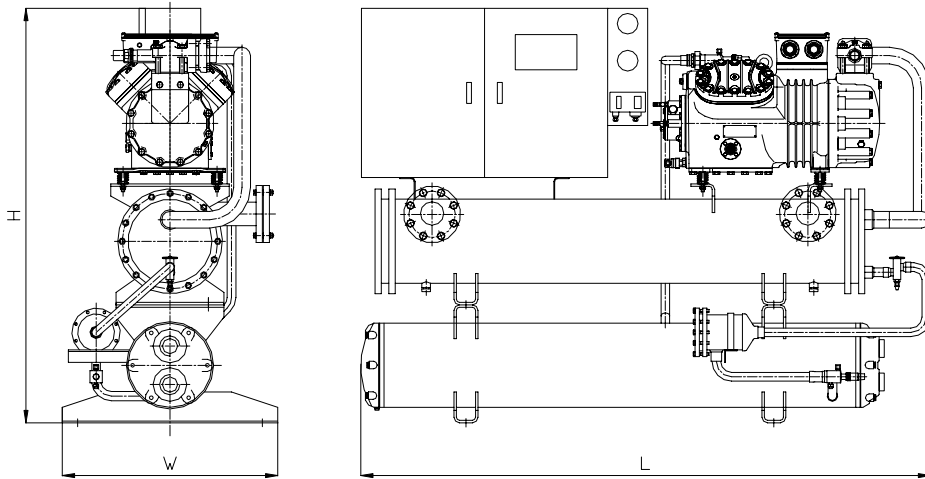
5.1 LSQ (B) xxAxx Air cooled chiller



5.2 LSQxxWxx Water cooled chiller



5.3 LSB xxWx Water cooled chiller



5.4 LSLGxxWx Water cooled chiller

