

佛斯科系列螺杆机组

FrozCube Screw Rack System



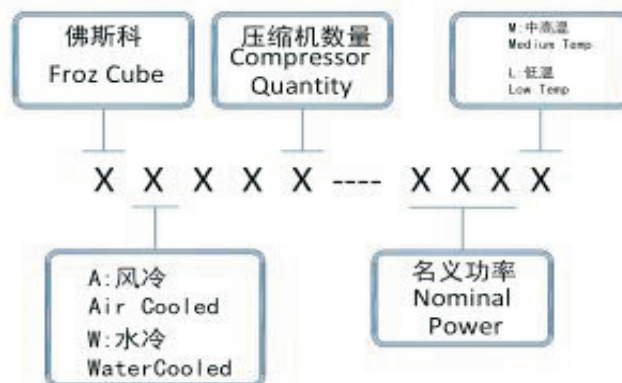
螺杆机组简介

Description

- ☆ 机组标配Mach系列半封闭螺杆制冷压缩机，具有效率高、寿命长、震动小、噪音低等特点；
Semi hermetic screw compressor, high efficiency, long service life, low vibration and noise;
- ☆ 机组类型包含螺杆单机和螺杆并联机组，可满足各类制冷系统的需要；
Optional for single and parallel unit;
- ☆ 机组配置齐全，主要制冷配件及控制元件均采用世界知名品牌，可靠性高；
Complete configuration, with reliable famous refrigeration parts and control components;
- ☆ 机组具有压缩机反转、过热、过载、排气温度、低油位、油流及系统高低压等多种安全保护，确保运行的可靠性；
With Motor protector, current protector, oil flow switch etc, to prevent overheat, overload, high temperature, low oil level, oil flow and hi/low working pressure;
- ☆ 低温机组带有经济器运行，大大提高了低温工况运行时的制冷量；
Economizer is equipped to low temperature unit which highly increases condensing condition capacity when operating under low temperature;
- ☆ 具有多级能量调节，可适应于不同冷负荷的变化，有效降低能耗；
Multi-control capacity regulator can adapt to different cooling load, thus reduce energy consumption effectively;
- ☆ 机组制冷剂可选R22、R507A、R404A；
Suitable for Refrigerants R22, R404A, R507A;
- ☆ 机组结构紧凑，高度集成化，大大节约机房面积，安装和操作十分方便。
Compact structure and highly integrated makes installation and operation easily, and save installation space.

命名规则

Model Classification



螺杆单机-中温应用性能参数

SCREW RACK SYSTEM -MEDIUM TEMP. PERFORMANCE DATA

R22

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR1-040M	40	Qo	106	71.6	57	36.1			
		Pe	30.2	27.7	28.3	26.4			
FASR1-040M	45	Qo	98.7	66.2	54.7	34.5			
		Pe	32.9	30.2	31.4	28.7			
FWSR1-050M	40	Qo	139.2	94.1	74.9	38.1			
		Pe	37.8	34.7	35.5	29.4			
FASR1-050M	45	Qo	129.7	87	71.9	45.3			
		Pe	41.2	37.8	39.4	36.8			
FWSR1-060M	40	Qo	151.6	102.4	81.5	51.7			
		Pe	41.5	38	38.9	36.4			
FASR1-060M	45	Qo	141.2	94.7	78.3	49.3			
		Pe	45.2	41.5	43.2	40.3			
FWSR1-070M	40	Qo	184.8	124.9	99.4	63			
		Pe	50.5	46.3	47.3	44.3			
FASR1-070M	45	Qo	172.1	115.4	95.4	60.1			
		Pe	55.1	50.5	52.5	49.1			
FWSR1-080M	40	Qo	202.8	137.1	109.1	69.2			
		Pe	55	50.4	51.6	48.2			
FASR1-080M	45	Qo	188.9	126.7	104.7	66			
		Pe	60	55	57.2	53.5			
FWSR1-090M	40	Qo	239.2	161.7	128.7	81.7			
		Pe	61.9	56.8	58.1	54.3			
FASR1-090M	45	Qo	222.8	149.6	123.6	78.1			
		Pe	67.5	62	64.5	60.2			
FWSR1-100M	40	Q	252.7	170.9	136	86.4			
		P	65.1	59.7	61.1	57.1			
FASR1-100M	45	Q	235.4	158.1	130.6	82.5			
		P	71	65.2	67.8	63.3			
FWSR1-105M	40	Q	276.5	186.9	148.8	94.5			
		P	71.7	65.8	67.2	62.9			
FASR1-105M	45	Q	257.6	172.9	142.9	90.2			
		P	76.2	71.8	74.6	69.7			
FWSR1-110M	40	Q	299.3	202.3	161.1	102.2			
		P	78.2	71.8	73.4	68.6			
FASR1-110M	45	Q	278.8	187.1	154.6	97.6			
		P	85.3	78.3	81.4	76			
FWSR1-120M	40	Q	329.4	222.7	177.3	112.5			
		P	87	79.8	81.6	76.3			
FASR1-120M	45	Q	306.9	205.9	170.2	107.4			
		P	94.9	87	90.5	84.5			

注：①蒸发温度 $\geq -10^{\circ}\text{C}$ 不带经济器运行，蒸发温度 $\leq -20^{\circ}\text{C}$ 带经济器运行；

Evaporating temperature $\geq -10^{\circ}\text{C}$ without economizer, evaporating temperature $\leq -20^{\circ}\text{C}$ with economizer ;

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

Standard Mach semi-hermetic compressor, optional Hanbell, Bitzer, Refcomp and other brand compressors upon request .

螺杆单机-低温应用性能参数

SCREW RACK SYSTEM -LOW TEMP. PERFORMANCE DATA

R22

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [° C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR1-50L	40	Qo				52.5	42.3	33.3	25.5
		Pe				34	32.8	31.5	30.2
FASR1-50L	45	Qo				50.6	40.5	31.7	24
		Pe				37.6	36.3	34.9	33.4
FWSR1-60L	40	Qo				63.7	50.7	39.5	29.8
		Pe				41.7	40.3	39	37.8
FASR1-60L	45	Qo				61	48.4	37.4	27.9
		Pe				46.6	45	43.5	42
FWSR1-70L	40	Qo				72.3	58.1	45.8	35.1
		Pe				46.2	44.7	43.1	41.5
FASR1-70L	45	Qo				69.6	55.7	43.5	33
		Pe				51	49.3	47.5	45.6
FWSR1-75L	40	Qo				78.3	63.1	49.8	38.3
		Pe				49.4	47.6	45.9	44.1
FASR1-75L	45	Qo				75.3	60.4	47.4	36.1
		Pe				54.5	52.7	50.8	48.8
FWSR1-125L	40	Qo				132.6	107.2	85.1	66.1
		Pe				78.3	74.6	70.9	66.9
FASR1-125L	45	Qo				127.5	102.4	80.6	61.7
		Pe				86.5	82.3	77.8	72.9

注：①制冷量基于吸气过热 10K，带经济器运行；

The refrigerating Capacity Qo is based on suction gas overheating 10K, with economizer

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

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螺杆单机-中温应用性能参数

SCREW RACK SYSTEM -MEDIUM TEMP. PERFORMANCE DATA

R404 A/R507 A

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [° C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR1-040M	40	Qo	101.7	68.2	62.3	40.4			
		Pe	33.9	31.6	34.7	31.2			
FASR1-040M	45	Qo	91.2	59.4	57.8	36			
		Pe	38.2	35.3	39.6	33.7			
FWSR1-050M	40	Qo	132.3	88.7	81	52.6			
		Pe	43.1	40.1	44.2	40			
FASR1-050M	45	Qo	118.6	77.3	75.1	46.8			
		Pe	48.5	44.8	50.4	43.2			
FWSR1-060M	40	Qo	146.3	98.1	89.5	58.2			
		Pe	48.2	45	49.5	44.5			
FASR1-060M	45	Qo	131.1	85.4	83.1	51.7			
		Pe	54.3	50.2	56.4	48.2			
FWSR1-070M	40	Qo	176.3	118.2	107.9	70.1			
		Pe	56.4	52.5	57.8	53.3			
FASR1-070M	45	Qo	158	103	100.1	63.9			
		Pe	63.5	58.7	65.9	57			
FWSR1-080M	40	Qo	197.5	132.5	120.9	78.5			
		Pe	63.4	59.1	65	60			
FASR1-080M	45	Qo	177.1	115.4	112.2	71.6			
		Pe	71.4	66	74.1	64			
FWSR1-090M	40	Qo	227.8	152.8	139.4	90.6			
		Pe	72.2	67.3	74	68.3			
FASR1-090M	45	Qo	204.2	135.2	129.4	82.6			
		Pe	81.3	75.1	84.4	73.2			
FWSR1-100M	40	Qo	240.8	161.5	147.4	95.7			
		Pe	75.9	70.7	77.8	71.8			
FASR1-100M	45	Qo	215.9	142.9	136.8	87.3			
		Pe	85.5	79	88.8	77.2			
FWSR1-105M	40	Qo	263.6	176.7	161.3	104.8			
		Pe	83.4	77.8	85.6	78.9			
FASR1-105M	45	Qo	236.3	156.4	149.7	95.6			
		Pe	94	86.8	97.6	84.7			
FWSR1-110M	40	Qo	290.4	194.7	177.7	115.4			
		Pe	90.8	84.6	93.1	85.9			
FASR1-110M	45	Qo	260.3	172.3	164.9	105.3			
		Pe	102.3	94.5	106.2	92.6			
FWSR1-120M	40	Qo	313.4	210.1	191.8	124.6			
		Pe	99.5	92.7	102	94.1			
FASR1-120M	45	Qo	280.9	186	178	113.6			
		Pe	112.1	103.5	116.3	100.8			

注：①蒸发温度 $\geq -10^{\circ}\text{C}$ 不带经济器运行，蒸发温度 $\leq -20^{\circ}\text{C}$ 带经济器运行；

Evaporating temperature $\geq -10^{\circ}\text{C}$ without economizer, evaporating temperature $\leq -20^{\circ}\text{C}$ with economizer;

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

Standard Mach semi-hermetic compressor, optional Hanbell, Bitzer, Refcomp and other brand compressors upon request.

螺杆单机-低温应用性能参数

SCREW RACK SYSTEM -LOW TEMP. PERFORMANCE DATA

R404A/R507A

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR1-50L	40	Qo				57.2	46.7	37.5	29.5
		Pe				40.8	39	37.2	35.4
FASR1-50L	45	Qo				54.5	44.5	35.6	27.9
		Pe				45.3	43.4	41.5	39.8
FWSR1-60L	40	Qo				69	55.7	44.2	34.2
		Pe				50	48.9	47.6	46.1
FASR1-60L	45	Qo				65.2	52.7	41.7	32.2
		Pe				55.9	54.7	53.4	51.9
FWSR1-70L	40	Qo				78.7	63.9	51	39.9
		Pe				53.4	51.5	49.6	47.7
FASR1-70L	45	Qo				74.8	60.7	48.4	37.8
		Pe				59.5	57.6	55.6	53.4
FWSR1-75L	40	Qo				82.9	67.7	54.5	43
		Pe				58.1	55.5	53	50.7
FASR1-75L	45	Qo				78.5	64.1	51.5	40.5
		Pe				64.2	61.5	59.1	56.8
FWSR1-125L	40	Qo				137.7	112.3	90.3	71.2
		Pe				91.5	87.5	83.9	80.7
FASR1-125L	45	Qo				129.2	104.9	83.7	65.2
		Pe				100.5	96.2	92.2	88.2

注：①制冷量基于吸气过热 10K，带经济器运行；

The refrigerating Capacity Qo is based on suction gas overheating 10K, with economizer

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

Standard Mach semi-hermetic compressor, optional Hanbell, Bitzer, Refcomp and other brand compressors upon request.

并联螺杆机组 -中温应用性能参数

PARALLEL SCREW RACK SYSTEM -MEDIUM TEMP. PERFORMANCE DATA

R22

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR2-60M	40	Qo	303.2	204.8	163	103.4			
		Pe	83	76	77.8	72.8			
FASR2-60M	45	Qo	282.4	189.4	156.6	98.6			
		Pe	90.4	83	86.4	80.6			
FWSR2-80M	40	Qo	405.6	274.2	218.2	138.4			
		Pe	110	100.8	103.2	96.4			
FASR2-80M	45	Qo	377.8	253.4	209.4	132			
		Pe	120	110	114.4	107			
FWSR2-100M	40	Qo	505.4	341.8	272	172.8			
		Pe	130.2	119.4	122.2	114.2			
FASR2-100M	45	Qo	470.8	316.2	261.2	165			
		Pe	142	130.4	135.6	126.6			
FWSR3-80M	40	Qo	608.4	411.3	327.3	207.6			
		Pe	165	151.2	154.8	144.6			
FASR3-80M	45	Qo	566.7	380.1	314.1	198			
		Pe	180	165	171.6	160.5			
FWSR3-90M	40	Qo	717.6	485.1	386.1	245.1			
		Pe	185.7	170.4	174.3	162.9			
FASR3-90M	45	Qo	668.4	448.8	370.8	234.3			
		Pe	202.5	186	193.5	180.6			
FWSR4-110M	40	Qo	1197.2	809.2	644.4	408.8			
		Pe	312.8	287.2	293.6	274.4			
FASR4-110M	45	Qo	1115.2	748.4	618.4	390.4			
		Pe	341.2	313.2	325.6	304			

注：①蒸发温度 $\geq -10^{\circ}\text{C}$ 不带经济器运行，蒸发温度 $\leq -20^{\circ}\text{C}$ 带经济器运行；

Evaporating temperature $\geq -10^{\circ}\text{C}$ without economizer, evaporating temperature $\leq -20^{\circ}\text{C}$ with economizer;

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

Standard Mach semi-hermetic compressor, optional Hanbell, Bitzer, Refcomp and other brand compressors upon request.

并联螺杆机组 - 中温应用性能参数

PARALLEL SCREW RACK SYSTEM - MEDIUM TEMP. PERFORMANCE DATA

R404 A/507 A

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR2-60M	40	Qo	292.6	196.2	179	116.4			
		Pe	96.4	90	99	89			
FASR2-60M	45	Qo	262.2	170.8	166.2	103.4			
		Pe	108.6	100.4	112.8	96.4			
FWSR2-80M	40	Qo	395	265	241.8	157			
		Pe	126.8	118.2	130	120			
FASR2-80M	45	Qo	354.2	230.8	224.4	143.2			
		Pe	142.8	132	148.2	128			
FWSR2-100M	40	Qo	481.6	323	294.8	191.4			
		Pe	151.8	141.4	155.6	143.6			
FASR2-100M	45	Qo	431.8	285.8	273.6	174.6			
		Pe	171	158	177.6	154.4			
FWSR3-80M	40	Qo	592.5	397.5	362.7	235.5			
		Pe	190.2	177.3	195	180			
FASR3-80M	45	Qo	531.3	346.2	336.6	214.8			
		Pe	214.2	198	222.3	192			
FWSR3-90M	40	Qo	683.4	458.4	418.2	271.8			
		Pe	216.6	201.9	222	204.9			
FASR3-90M	45	Qo	612.6	405.6	388.2	247.8			
		Pe	243.9	225.3	253.2	219.6			
FWSR4-110M	40	Qo	1161.6	778.8	710.8	461.6			
		Pe	363.2	338.4	372.4	343.6			
FASR4-110M	45	Qo	1041.2	689.2	659.6	421.2			
		Pe	409.2	378	424.8	370.4			

注：①蒸发温度 $\geq -10^{\circ}\text{C}$ 不带经济器运行，蒸发温度 $\leq -20^{\circ}\text{C}$ 带经济器运行；

Evaporating temperature $\geq -10^{\circ}\text{C}$ without economizer, evaporating temperature $\leq -20^{\circ}\text{C}$ with economizer;

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并联螺杆机组 -低温应用性能参数

PARALLEL SCREW RACK SYSTEM -MEDIUM TEMP. PERFORMANCE DATA

R22

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR2-70L	40	Qo				144.6	116.2	91.6	70.2
		Pe				92.4	89.4	86.2	83
FASR2-70L	45	Qo				139.2	111.4	87	66
		Pe				102	98.6	95	91.2
FWSR3-75L	40	Qo				234.9	189.3	149.4	114.9
		Pe				148.2	142.8	137.7	132.3
FASR3-75L	45	Qo				225.9	181.2	142.2	108.3
		Pe				163.5	158.1	152.4	146.4
FWSR3-125L	40	Qo				397.8	321.6	255.3	198.3
		Pe				234.9	223.8	212.7	200.7
FASR3-125L	45	Qo				382.5	307.2	241.8	185.1
		Pe				259.5	246.9	233.4	218.7
FWSR4-75L	40	Qo				313.2	252.4	199.2	153.2
		Pe				197.6	190.4	183.6	176.4
FASR4-75L	45	Qo				301.2	241.6	189.6	144.4
		Pe				218	210.8	203.2	195.2
FWSR4-125L	40	Qo				530.4	428.8	340.4	264.4
		Pe				313.2	298.4	283.6	267.6
FASR4-125L	45	Qo				510	409.6	322.4	246.8
		Pe				346	329.2	311.2	291.6
FWSR5-125L	40	Qo				663	536	425.5	330.5
		Pe				391.5	373	354.5	334.5
FASR5-125L	45	Qo				637.5	512	403	308.5
		Pe				432.5	411.5	389	364.5

注：①制冷量基于吸气过热 10K，带经济器运行；

The refrigerating Capacity Qo is based on suction gas overheating 10K, with economizer

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

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并联螺杆机组-低温应用性能参数

PARALLEL SCREW RACK SYSTEM -LOW TEMP. PERFORMANCE DATA

R404A/507A

Watt (50Hz 380v)

型号 Model	冷凝温度 Condensing Temp. [°C]	↓	制冷量 Q (kw) 功率消耗 P (kw)						
			0	-10	-20	-30	-35	-40	-45
FWSR2-70L	40	Qo				157.4	127.8	102	79.8
		Pe				106.8	103	99.2	95.4
FASR2-70L	45	Qo				149.6	121.4	96.8	75.6
		Pe				119	115.2	111.2	106.8
FWSR3-75L	40	Qo				248.7	203.1	163.5	129
		Pe				174.3	166.5	159	152.1
FASR3-75L	45	Qo				235.5	192.3	154.5	121.5
		Pe				192.6	184.5	177.3	170.4
FWSR3-125L	40	Qo				413.1	336.9	270.9	213.6
		Pe				274.5	262.5	251.7	242.1
FASR3-125L	45	Qo				387.6	314.7	251.1	195.6
		Pe				301.5	288.6	276.6	264.6
FWSR4-75L	40	Qo				331.6	270.8	218	172
		Pe				232.4	222	212	202.8
FASR4-75L	45	Qo				314	256.4	206	162
		Pe				256.8	246	236.4	227.2
FWSR4-125L	40	Qo				550.8	449.2	361.2	284.8
		Pe				366	350	335.6	322.8
FASR4-125L	45	Qo				516.8	419.6	334.8	260.8
		Pe				402	384.8	368.8	352.8
FWSR5-125L	40	Qo				688.5	561.5	451.5	356
		Pe				457.5	437.5	419.5	403.5
FASR5-125L	45	Qo				646	524.5	418.5	326
		Pe				502.5	481	461	441

注：①制冷量基于吸气过热 10K，带经济器运行；

The refrigerating Capacity Qo is based on suction gas overheating 10K, with economizer

② 机组标配Mach半封闭螺杆压缩机，也可根据客户需要选配汉钟、比泽尔、莱富康等品牌压缩机。

Standard Mach semi-hermetic compressor, optional Hanbell, Bitzer, Refcomp and other brand compressors upon request.