

# FRIGO rack

## Parallel Rack Systems and Custom Engineered Solutions

**R404A**  
Refrigerant

**R507A**  
Refrigerant

**R134A**  
Refrigerant



**Innovative Refrigeration Solutions**

## STANDARD INCLUSIONS:

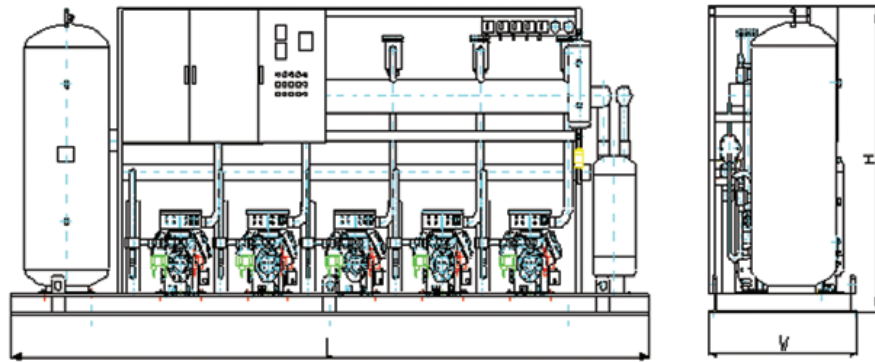
- |                                      |                                |
|--------------------------------------|--------------------------------|
| Crankcase Heaters                    | Filter shell                   |
| Danfoss discharge check valve        | Filter core                    |
| Vibration eliminators                | Pressure switches              |
| Oil separator                        | Condenser Fan control switches |
| Oil level controller                 | Oil pressure protection        |
| Oil filter                           | HP gauge                       |
| Diff. pressure check valve (Sporlan) | LP gauge                       |
| Oil receiver                         | Suction filter                 |
| Sight glass                          | Suction filter core            |
| Oil return hand shut off valve       | Accumulator                    |
| Liquid receiver with valves          |                                |
| Pressure relief safety valve         |                                |

## OPTIONAL EXTRAS:

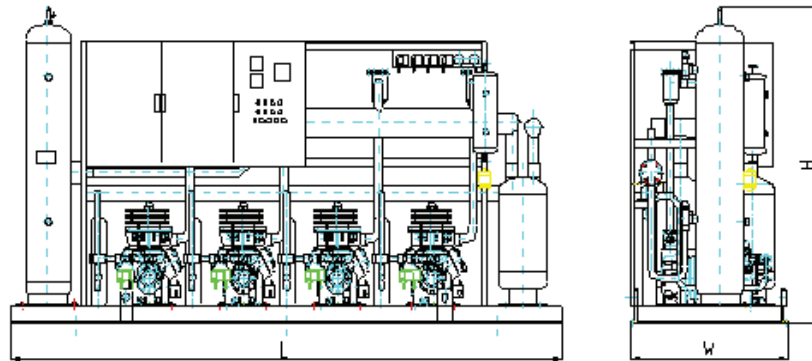
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|------------------------------|--|
| Head Cooling Fans            | Electrical Control Panel               |
| Capacity Control Unloaders   | Water Cooled Condenser                 |
| Energy Reclaim Desuperheater | Additional Valves (Provide Schematic)  |
| Electronic Oil Management    | Compressor - Mixed Capacities / Models |



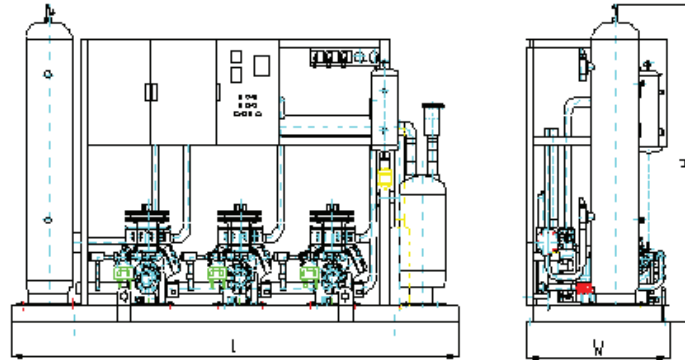
### 5 COMPRESSOR PARALLEL RACK



### 4 COMPRESSOR PARALLEL RACK



### 3 COMPRESSOR PARALLEL RACK



## MODEL NOMENCLATURE - FRIGO PARALLEL RACK SYSTEMS

**Example:** FPR-MT-2-50BZ

### Nomenclature

F	= Frigo	
PR	= Parallel Rack	
MT	= Medium Temp	LT = Low Temp
2	= No. of Compressors	
50	= Nominal Horsepower	
B	B = Bitzer, C = Copeland, D = Dori n, F = Frascold, H = Hanbell	
Z	= Refrigerant R404A	Y = R134A

FRIGO ENGINEERED REFRIGERATION SOLUTIONS - PARALLEL RECIPROCATING COMPRESSOR RACK SYSTEMS										
Model		F-PR-MT-2								
		20BZ	30BZ	40BZ	50BZ	60BZ	70BZ	80BZ	100BZ	
Nominal Rack Horsepower		20	30	40	50	60	70	80	100	
Operating Temperature Range °C		+5°C to -15°C SST								
Refrigerant		R404A								
Power supply		380V-415V/3N/50HZ								
Compressor	Description	Semi-Hermetic Reciprocating (piston)								
	Model	4VCS10.2	4PCS15.2	4NCS20.2	4H25.2	4G30.2	6H35.2	6G40.2	6F50.2	
	Nominal HP	10	15	20	25	30	35	40	50	
	Quantity	2	2	2	2	2	2	2	2	
R404A Refrig Capacity & Power Input @+45°C SCT	Te 0°C	Qo	49800	71600	83000	107000	122600	160600	184000	217400
		Pw	15000	21100	25800	32300	38200	48400	57200	71200
	Te -5°C	Qo	40600	58400	67600	87200	100000	130800	150000	177600
		Pw	14000	19800	24000	30300	35800	45400	53600	66800
	Te -10°C	Qo	32620	46800	54200	70200	80600	105200	120800	143600
		Pw	13000	18300	22000	28000	33100	42000	49800	62000
Connection Sizes (mm)	Suction	ø42	ø54	ø54	ø79	ø79	ø79	ø79	ø79	
	Liquid Line	ø22	ø22	ø28	ø28	ø28	ø35	ø35	ø35	
	Discharge	ø35	ø35	ø42	ø42	ø42	ø54	ø54	ø54	
	Liquid Drain	ø28	ø28	ø35	ø35	ø35	ø42	ø42	ø42	
Overall Dimensions (mm)	L	2550	2550	2550	2550	2550	2550	2550	2550	
	W	1000	1000	1000	1000	1000	1000	1000	1000	
	H	1850	1850	1850	1850	1850	1850	1850	1850	

Model		F-PR-LT-2							
		20BZ	24BZ	30BZ	40BZ	50BZ	60BZ	8BZ	
Nominal Rack Horsepower		20	24	30	40	50	60	80	
Operating Temperature Range °C		-5°C to -30°C SST							
Refrigerant		R404A							
Power supply		380V-415V/3N/50HZ							
Compressor	Description	Semi-Hermetic Reciprocating (piston)							
	Model	4PCS10.2	4NCS12.2	4H15.2	4G20.2	6H25.2	6G30.2	6F40.2	
	Nominal HP	10	12	15	20	25	30	40	
	Quantity	2	2	2	2	2	2	2	
R404A Refrig Capacity & Power Input @+45°C SCT	Te -20°C	Qo	28760	33820	43200	50000	65000	75000	90000
		Pw	15300	17900	23700	27800	35600	41600	51400
	Te -30°C	Qo	16240	18940	23920	27820	35900	41800	50600
		Pw	11600	13600	17800	21500	26700	32200	38800
	Te -40°C	Qo	7600	8880	10840	12680	16280	19020	23720
		Pw	8100	9600	11700	14200	17500	21300	26000
Connection Sizes (mm)	Suction	ø54	ø54	ø54	ø79	ø79	ø79	ø79	
	Liquid Line	ø22	ø22	ø22	ø22	ø28	ø28	ø28	
	Discharge	ø35	ø35	ø35	ø42	ø42	ø54	ø54	
	Liquid Drain	ø22	ø22	ø28	ø28	ø35	ø35	ø35	
Overall Dimensions (mm)	L	2500	2500	2500	2500	2500	2500	2500	
	W	1000	1000	1000	1000	1000	1000	1000	
	H	1850	1850	1850	1850	1850	1850	1850	

## FRIGO ENGINEERED SOLUTIONS 3 COMPRESSOR RANGE

FRIGO ENGINEERED REFRIGERATION SOLUTIONS - PARALLEL RECIPROCATING COMPRESSOR RACK SYSTEMS											
Model		F-PR-MT-3									
		30BZ	45BZ	60BZ	75BZ	90BZ	105BZ	120BZ	150BZ		
Nominal Rack Horsepower		30	45	60	75	90	105	120	150		
Operating Temperature Range °C		+5°C to -15°C SST									
Refrigerant		R404A									
Power supply		380V-415V/3N/50HZ									
Compressor		Semi-Hermetic Reciprocating (piston)									
		Description									
		Model	4VCS10.2	4PCS15.2	4NCS20.2	4H25.2	4G30.2	6H35.2	6G40.2	6F50.2	
		Nominal HP	10	15	20	25	30	35	40	50	
		Quantity	3	3	3	3	3	3	3		
R404A Refrig Capacity & Power Input @+45°C SCT		Te 0°C	Qo	74700	107400	124500	160500	183900	240900	276000	326100
			Pw	22500	31700	38600	48400	57300	72600	85800	106800
		Te -5°C	Qo	60900	87600	101400	130800	150000	196200	225000	266400
			Pw	21000	29700	36000	45400	53700	68100	80400	100200
		Te -10°C	Qo	48930	70200	81300	105300	120900	157800	181200	215400
			Pw	19500	27500	33000	42100	49700	63000	74700	93000
Connection Sizes (mm)		Suction	ø54	ø79	ø79	ø79	ø79	ø108	ø108	ø108	
		Liquid Line	ø22	ø28	ø28	ø35	ø35	ø42	ø42	ø42	
		Discharge	ø35	ø42	ø42	ø54	ø54	ø66	ø66	ø66	
		Liquid Drain	ø28	ø35	ø35	ø42	ø42	ø54	ø54	ø54	
Overall Dimensions (mm)		L	3150	3150	3150	3150	3150	3150	3150		
		W	1000	1000	1000	1000	1000	1000	1000		
		H	1850	1850	1850	1850	1850	1850	2000	2000	

FRIGO ENGINEERED REFRIGERATION SOLUTIONS - PARALLEL RECIPROCATING COMPRESSOR RACK SYSTEMS										
Model		F-PR-LT-3								
		30BZ	36BZ	45BZ	60BZ	75BZ	90BZ	120BZ		
Nominal Rack Horsepower		30	36	45	60	75	90	120		
Operating Temperature Range °C		-5°C to -30°C SST								
Refrigerant		R404A								
Power supply		380V-415V/3N/50HZ								
Compressor		Semi-Hermetic Reciprocating (piston)								
		Description								
		Model	4PCS10.2	4NCS12.2	4H15.2	4G20.2	6H25.2	6G30.2	6F40.2	
		Nominal HP	10	12	15	20	25	30	40	
		Quantity	3	3	3	3	3	3		
R404A Refrig Capacity & Power Input @+45°C SCT		Te -20°C	Qo	43140	50730	64800	75000	97500	112500	135000
			Pw	23000	26800	35600	41700	53400	62400	77100
		Te -30°C	Qo	24360	28410	35880	41730	53850	62700	75900
			Pw	17400	20400	26700	32200	40100	48400	58300
		Te -40°C	Qo	11400	13320	16260	19020	24420	28530	35580
			Pw	12100	14400	17500	21300	26300	32000	39000
Connection Sizes (mm)		Suction	ø54	ø54	ø79	ø79	ø79	ø108	ø108	
		Liquid Line	ø22	ø22	ø28	ø28	ø28	ø35	ø35	
		Discharge	ø42	ø42	ø42	ø42	ø54	ø54	ø54	
		Liquid Drain	ø28	ø28	ø35	ø35	ø35	ø42	ø42	
Overall Dimensions (mm)		L	3150	3150	3150	3150	3150	3150		
		W	1000	1000	1000	1000	1000	1000	1000	
		H	1850	1850	1850	1850	1850	1850	1850	



FRIGO ENGINEERED REFRIGERATION SOLUTIONS - PARALLEL RECIPROCATING COMPRESSOR RACK SYSTEMS											
Model		F-PR-MT-4									
		40BZ	60BZ	80BZ	100BZ	120BZ	140BZ	160BZ	200BZ		
Nominal Rack Horsepower		40	60	80	100	120	140	160	200		
Operating Temperature Range °C		+5°C to -15°C SST									
Refrigerant		R404A									
Power supply		380V-415V/3N/50HZ									
Compressor		Semi-Hermetic Reciprocating (piston)									
		Description									
		Model	4VCS10.2	4PCS15.2	4NCS20.2	4H25.2	4G30.2	6H35.2	6G40.2	6F50.2	
		Nominal HP	10	15	20	25	30	35	40	50	
		Quantity	4	4	4	4	4	4	4		
R404A Refrig Capacity & Power Input @+45°C SCT		Te 0°C	Qo	99600	143200	166000	214000	245200	321200	368000	434800
			Pw	30000	42200	51500	64600	76400	96800	114400	142400
		Te -5°C	Qo	81200	116800	135200	174400	200000	261600	300000	355200
			Pw	28000	39600	48000	60600	71600	90800	107200	133600
		Te -10°C	Qo	65240	93600	108400	140400	161200	210400	241600	287200
			Pw	26000	36600	44000	56100	66300	84000	99600	124000
Connection Sizes (mm)		Suction	ø54	ø79	ø79	ø79	ø108	ø108	ø140	ø140	
		Liquid Line	ø28	ø28	ø35	ø35	ø42	ø42	ø42	ø42	
		Discharge	ø42	ø54	ø54	ø54	ø66	ø66	ø79	ø79	
		Liquid Drain	ø35	ø35	ø42	ø42	ø54	ø54	ø54	ø54	
Overall Dimensions (mm)		L	3800	3800	3800	3800	3800	3800	3800	3800	
		W	1000	1000	1000	1000	1000	1000	1000	1000	
		H	1850	1850	1850	1850	2000	2000	2000	2000	

Model		F-PR-LT-4								
		40BZ	48BZ	60BZ	80BZ	100BZ	120BZ	160BZ		
Nominal Rack Horsepower		40	48	60	80	100	120	160		
Operating Temperature Range °C		-5°C to -30°C SST								
Refrigerant		R404A								
Power supply		380V-415V/3N/50HZ								
Compressor		Semi-Hermetic Reciprocating (piston)								
		Description								
		Model	4PCS10.2	4NCS12.2	4H15.2	4G20.2	6H25.2	6G30.2	6F40.2	
		Nominal HP	10	12	15	20	25	30	40	
		Quantity	4	4	4	4	4	4		
R404A Refrig Capacity & Power Input @+45°C SCT		Te -20°C	Qo	57520	67640	86400	100000	130000	150000	180000
			Pw	30600	35800	47400	55600	71200	83200	102800
		Te -30°C	Qo	32480	37880	47840	55640	71800	83600	101200
			Pw	23200	27200	35600	43000	53400	64400	77600
		Te -40°C	Qo	15200	17760	21680	25360	32560	38040	47440
			Pw	16200	19200	23400	28400	35000	42600	52000
Connection Sizes (mm)		Suction	ø79	ø79	ø79	ø79	ø108	ø108	ø108	
		Liquid Line	ø22	ø28	ø28	ø28	ø35	ø35	ø35	
		Discharge	ø42	ø42	ø42	ø54	ø54	ø54	ø66	
		Liquid Drain	ø28	ø35	ø35	ø35	ø42	ø42	ø42	
Overall Dimensions (mm)		L	3800	3800	3800	3800	3800	3800	3800	
		W	1000	1000	1000	1000	1000	1000	1000	
		H	1850	1850	1850	1850	1850	2000	2000	

## FRIGO ENGINEERED SOLUTIONS 5 COMPRESSOR RANGE

FRIGO ENGINEERED REFRIGERATION SOLUTIONS - PARALLEL RECIPROCATING COMPRESSOR RACK SYSTEMS										
Model		F-PR-MT-5								
		50BZ	75BZ	100BZ	125BZ	150BZ	175BZ	200BZ	250BZ	
Nominal Rack Horsepower		50	75	100	125	150	175	200	250	
Operating Temperature Range °C		+5°C to -15°C SST								
Refrigerant		R404A								
Power supply		380V-415V/3N/50HZ								
Compressor	Description	Semi-Hermetic Reciprocating (piston)								
	Model	4VCS10.2	4PCS15.2	4NCS20.2	4H25.2	4G30.2	6H35.2	6G40.2	6F50.2	
	Nominal HP	10	15	20	25	30	35	40	50	
	Quantity	5	5	5	5	5	5	5	5	
R404A Refrig Capacity & Power Input @+45°C SCT	Te 0°C	Qo	124500	179000	207500	267500	306500	401500	460000	543500
		Pw	37500	92800	64400	80700	95500	121000	143000	178000
	Te -5°C	Qo	101500	146000	169000	218000	250000	327000	375000	444000
		Pw	35000	49500	60000	75700	89500	113500	134000	167000
	Te -10°C	Qo	81550	117000	135500	175500	201500	263000	302000	359000
		Pw	32500	45800	55000	70100	82900	105000	124500	155000
Connection Sizes (mm)	Suction	ø79	ø79	ø79	ø108	ø140	ø140	ø140	ø140	
	Liquid Line	ø28	ø35	ø35	ø42	ø42	ø42	ø42	ø42	
	Discharge	ø54	ø54	ø54	ø66	ø79	ø79	ø79	ø79	
	Liquid Drain	ø35	ø42	ø42	ø54	ø54	ø54	ø54	ø54	
Overall Dimensions (mm)	L	4450	4450	4450	4450	4450	4450	4450	4450	
	W	1000	1000	1000	1000	1000	1000	1000	1000	
	H	1850	1850	1850	2000	2000	2000	2000	2000	

Model		F-PR-LT-5							
		50BZ	60BZ	75BZ	100BZ	125BZ	150BZ	200BZ	
Nominal Rack Horsepower		50	60	75	100	125	150	200	
Operating Temperature Range °C		-5°C to -30°C SST							
Refrigerant		R404A							
Power supply		380V-415V/3N/50HZ							
Compressor	Description	Semi-Hermetic Reciprocating (piston)							
	Model	4PCS10.2	4NCS12.2	4H15.2	4G20.2	6H25.2	6G30.2	6F40.2	
	Nominal HP	10	12	15	20	25	30	40	
	Quantity	5	5	5	5	5	5	5	
R404A Refrig Capacity & Power Input @+45°C SCT	Te -20°C	Qo	71900	84550	108000	125000	162500	187500	225000
		Pw	38300	44700	59300	69500	89000	104000	128500
	Te -30°C	Qo	40600	47350	59800	69550	89750	104500	126500
		Pw	29000	34000	44600	53700	66900	80600	97100
	Te -40°C	Qo	19000	22200	27100	31700	40700	47550	59300
		Pw	20200	24100	29200	35500	43800	53300	65000
Connection Sizes (mm)	Suction	ø79	ø79	ø79	ø108	ø108	ø108	ø108	
	Liquid Line	ø28	ø28	ø28	ø35	ø35	ø35	ø42	
	Discharge	ø42	ø42	ø54	ø54	ø54	ø66	ø66	
	Liquid Drain	ø35	ø35	ø35	ø42	ø42	ø42	ø54	
Overall Dimensions (mm)	L	4450	4450	4450	4450	4450	4450	4450	
	W	1000	1000	1000	1000	1000	1000	1000	
	H	1850	1850	1850	1850	2000	2000	2000	

RACKS CAN ALSO BE MANUFACTURED USING THE FOLLOWING COMPRESSORS



WORLD-CLASS COMPONENTS



HEAT RECOVERY



**Optional Extra**  
*Typical Brazed Plate Heat Exchanger  
used in desuperheater applications to capture  
low grade heat for water heating and in fluid chiller  
applications as the refrigerant to fluid evaporator*



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Re-Order No. RA-FRIGO-RACK

**FRIGO**  
refrigeration systems

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