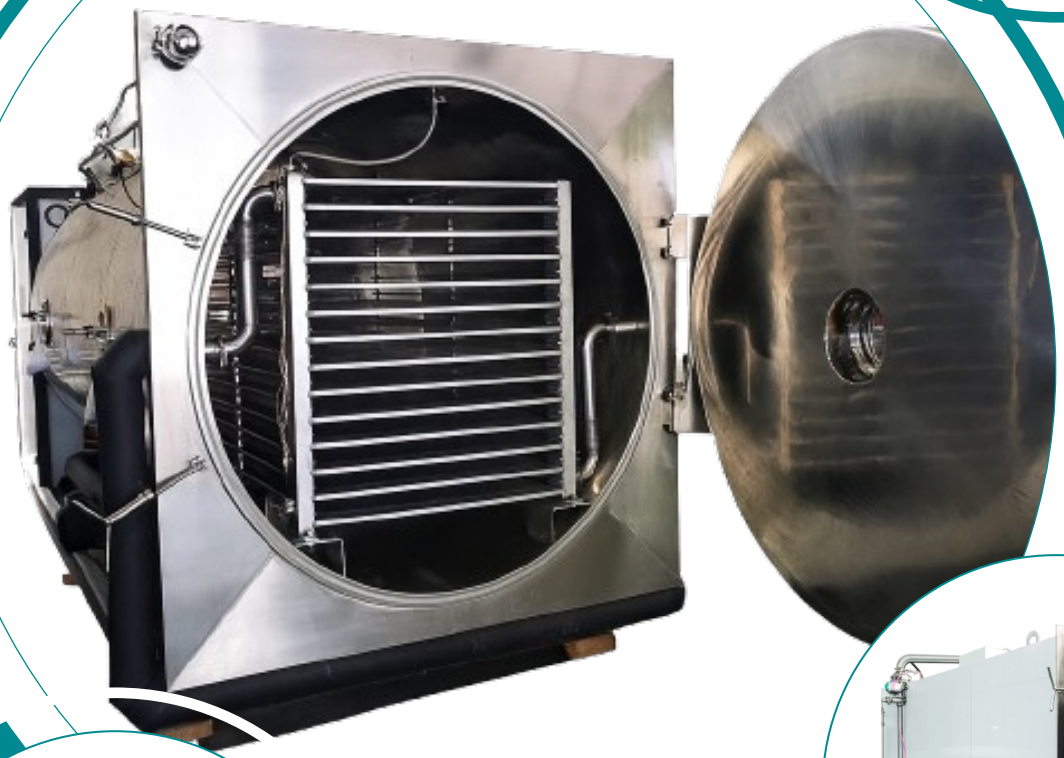
Biospectrix Industrial Scale Freeze Dryer









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Selection of laboratory freeze dryer

Pre-freezing and drying process both finished on shelf, no need to move product.

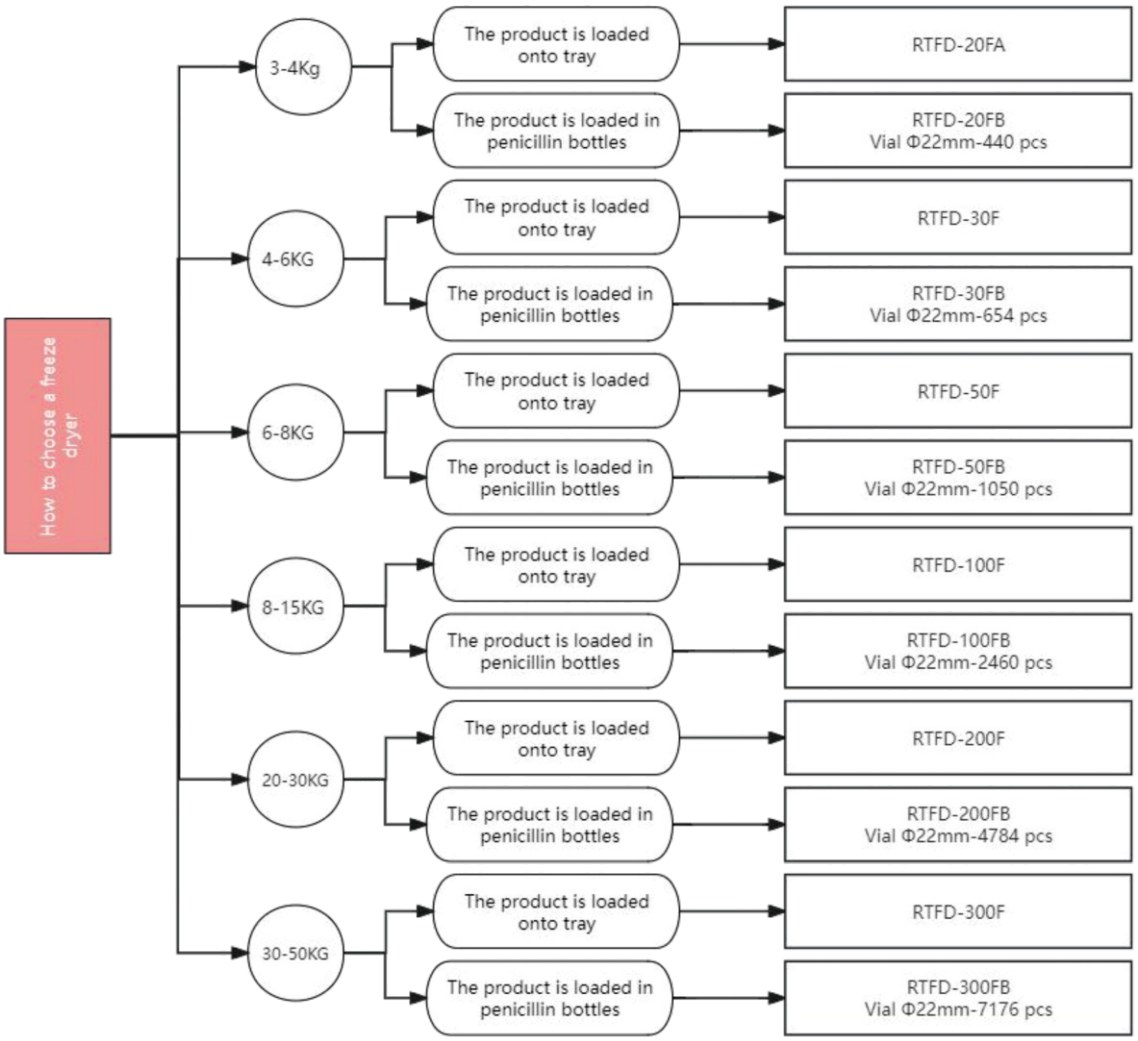
Safety control system used for shelf heating, to control heating rate.

There are options for condenser temperatures of -80 ℃/-100 ℃.

Low viscosity medium circulating to control temperature , high precision of temperature control, shelf temperature uniformity ±1℃, drying effect is uniform

Cooling method: air cooling, no need to connect cooling water

Suitable for freeze-drying products such as food, medicine, new materials, soil, etc.



BSFD-GZL1/2/3/5/10/15/20 Series of Freeze Dryer for big scale production

Drying area range: 1.15 m^2 up to 20 m^2 ; **Bulk capacity range :** 10 L up to 200 L

Main features

- PLC control standard, with programmable function
- Freeze and drying process are both made on shelf
- Silicon oil heating, shelf temperature accuracy is ± 1℃
- Color LCD touch screen, English interface, display of freeze drying curves, store data
- Login facility on control panel; Multilevel password protection,effectively prevent illegal operation.
- Inner wall of drying chamber, condenser ,shelf, trays are of stainless steel 304
- 32 groups program can be stored, each program can be set up 36 segments
- With USB port to output drying data, to open and view in Excel format
- With Nitrogen inflation valve
- Alarm： ambient temperature too high , vacuum degree abnormal， condenser temp. too high, shelf temp. too high, pre-freeze finishing， drying process finishing

Options

* vacuum degree adjustment * Eutectic point test *CIP system *SIP system
*Exhaust filter for pump * SS316L material for chamber , shelf , condenser, tray
*computer and control software, to control freeze dryer in PC, save freeze drying data

Technical Parameters	Unit	GZL1	GZL2	GZL3	GZL5	GZL10	GZL15	GZL20
Drying area	㎡	1.15	2.16	3.24	5.2	10.5	15	20.2
Shelf number	layer	4+1	4+1	6+1	7+1	7+1	10+1	11+1
Shelf spacing	mm	80	80	80	80	80	80	80
Shelf size	mm	480x600	600x900	600x900	750x1000	990x1520	1520x990	1210x1520
Bulk capacity (10 mm thick)	Liter	10	20	30	50	100	150	200
Condenser capability	kg/batch	≥20	≥40	≥60	≥100	≥200	≥300	≥400
Shelf temperature control range	℃	-50~+80	-50~+80	-50~+80	-50~+80	-50~+80	-50~+80	-50~+80
Vacuum degree	Pa	≤5	≤5	≤5	≤5	≤5	≤5	≤5
Condenser temp.	℃	≤-75	≤-75	≤-75	≤-75	≤-75	≤-75	≤-75
Cooling method	-	Water	Water	Water	Water	Water	Water	Water
Defrosting type	-	Water soaking	Water soaking	Water soaking	Water soaking	Water soaking	Water soaking	Water soaking
Installed power	kw	15	18	21	23	50	75	93
Dimension L*W*H	m	2.5*1.1*2	2.5*1.3*2	2.8*1.2*2.5	4*1.5*2.5	5*2.1*3.6	6.5*2.3*3.6	7.4*2.3*3.8
Weight	kg	1200	2000	2800	3500	6500	8000	9500

BSFD-GZLY2/3/5/10/15/20/25/30 Series Pharmaceutical Vacuum Freeze Dryer

Freeze Dryer Model				GZLY-2	GZLY-3	GZLY-4	GZLY-5	GZLY-8	GZLY-10	GZLY-15	GZLY-20	GZLY-25	GZLY-30	GZLY-40
Nominal area (m^2)				2	3	4	5	8	10	15	20	25	30	40
Capacity	Shelf area		m^2	1.98	2.96	4.4	5.5	7.75	10.33	14.76	20.63	24.38	29.7	40.5
	Condenser capacity		kg/batch	25	40	60	80	120	210	290	410	480	590	800
	Vials	Φ22mm	pcs	3600	5300	8000	12700	17800	23700	33900	47400	56000	68300	93000
		Φ16mm	pcs	9800	10000	15000	24800	34800	46400	66400	92800	109700	133600	182200
		Φ12mm	pcs	12600	16000	28000	35000	49000	65300	95700	130400	154000	187700	256000
	Bulk capacity		L	20	40	60	80	120	210	300	450	500	600	850
Basic parameter	Shelf size	L	mm	610	610	915	915	915	1215	1215	1250	1250	1500	1500
		W	mm	810	810	1210	1210	1210	1215	1215	1500	1500	1800	1800
	Shelf spacing		mm	100					100-120					
	Shelf numbers		layers	4+1	6+1	4+1	5+1	7+1	7+1	10+1	11+1	13+1	11+1	15+1
	Shelf Max. Temp		℃	+70										
	Shelf Min. Temp		℃	<-50										
	Shelf temp. accuracy		℃	±1										
	Condenser Min. temp.		℃	<-70										
	Final vacuum		Pa	<10										
Basic configuration	Cooling water consumption <30℃ 0.15-0.2Mpa		m^3/h	4.2	4.5	6	11	16	20	27	30	33	36	42
	Cooling style			Water cooling										
	CIP-WIP, >65℃ 0.15-0.2Mpa		L/min	100										
	Compressed air 0.7-1.0Mpa		m^3/min	0.1										
	Defrost water (soaking) 50℃ 0.15-0.2Mpa		kg/batch	270	300	350	400	1200	1500	2000	3000	4000	5000	7000
	Machine power		W		16	18	20	30	58	84	105	125	145	170
	Total weight		Kg	2600	2800	3500	4200	6000	7000	9000	11000	12000	15000	20000
Dimension	L		mm	2500	3000	3600	3800	5000	6400	6500	7400	8200	9200	9400
	W		mm	1210	1200	1300	1500	1500	2300	2300	2300	2300	2400	2400
	H		mm	2700	2700	2800	2900	2800	3200	3400	3800	4000	4000	4500





BSFD-GZLY1 with CIP/ SIP system



BSFD-GZLY5



BSFD-GZLY10

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Pre-freezing and drying process both finished on shelf, no need to move product.

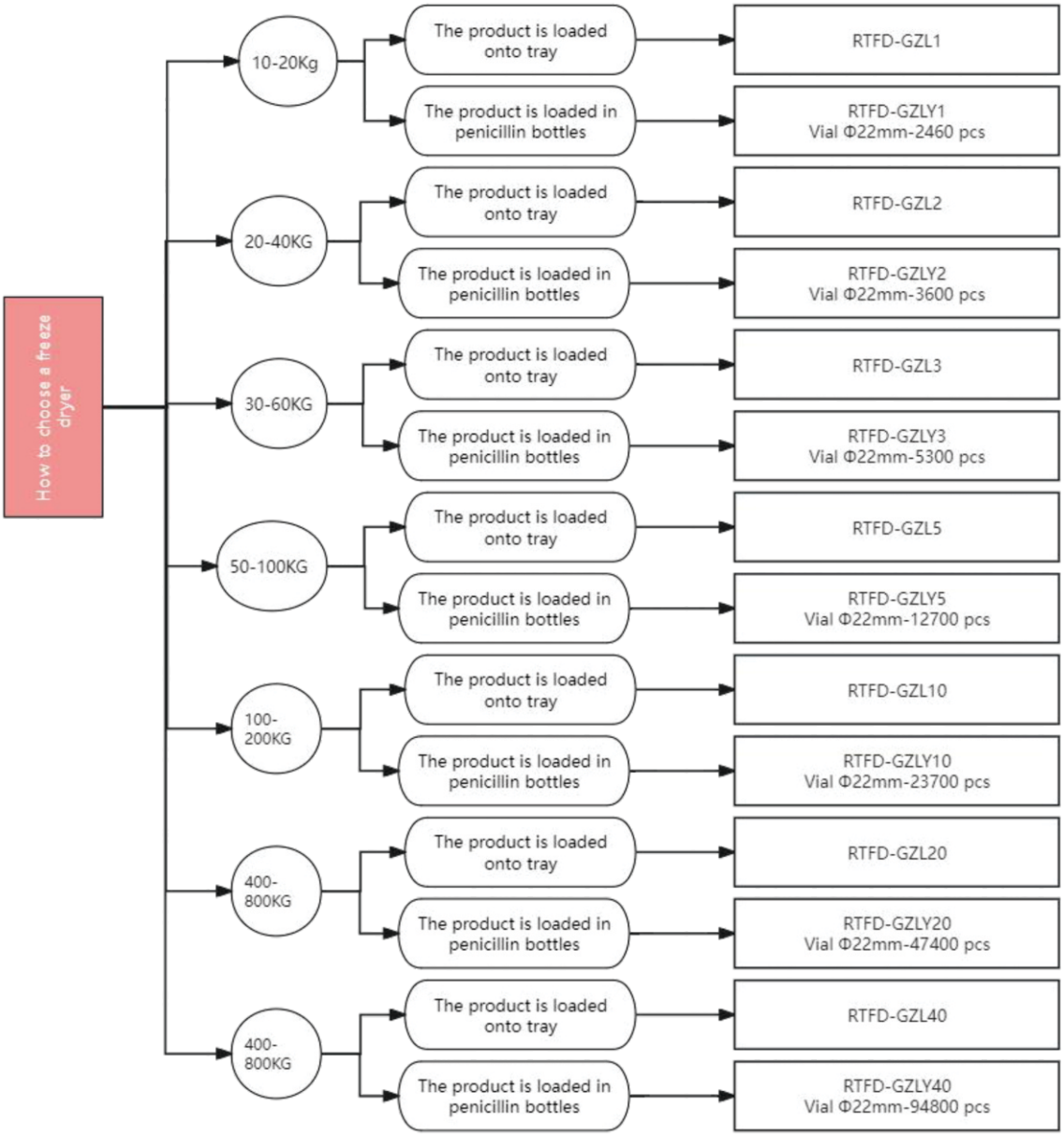
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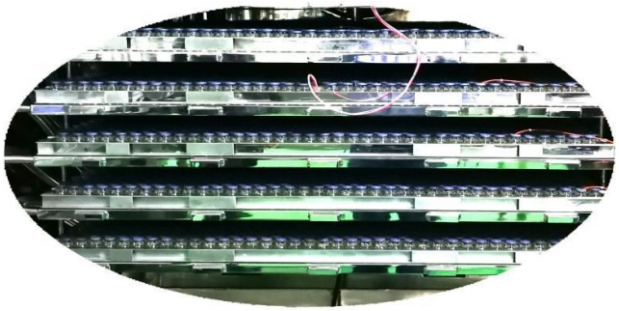
Low viscosity medium circulating to control temperature , high precision of temperature control, shelf temperature uniformity ±1℃, drying effect is uniform

Cooling method: water cooling

Suitable for freeze-drying products such as food, medicine, new materials, soil, etc.





















VT LTD

BiO

BSFD-LG A Series Freeze Dryer For Food

meter

l rs	Unit	LGA01	LGA03	LGA06	LGA10	LGA15	LGA20	LG
rea	㎡	0.1	0.4	0.6	0.96	1.5	2.1	
nber	layer	3	5	5	5	5	7	
cing	mm	40	37	40	50	40	40	
ize	mm	140*280	225*380	300*400	300*830	375*800	375*800	37
acity hick)	Liter	2	4	6	10	15	20	
apability	kg/batch	2	≥5	≥10	≥15	≥23	≥30	
ature ge	℃	-30~+80	-30~+80	-30~+80	-30~+80	-30~+80	-30~+80	-3
ee	Pa	≤5	≤5	≤5	≤5	≤5	≤5	
mp.	℃	≤-35/-40/-50						
od	-	Air cooling, ambient temperature below 25 ℃						
pe	-	Electric heating defrosting						
er	kw	1	1.5	3.5	4.5	4.5	6	
W*H	mm	575*370*565	600*450*800	900*800*1300	900*800*1300	1300*800*1500	1300*800*1700	1600*
ght	kg	60	90	160	180	240	300	

BSFD-LG B Series Freeze Dryer For Food







RTFD-LGB series are production scale freeze dryers, suitable for drying food.

Main features

- The shelf has cooling function, with a minimum temperature of -35 ℃
- Alloy shelf, double-sided radiation heating, radiation rate more than 90%, good temp.uniformity
- High efficiency refrigerant medium, high heat exchange efficiency and long service life.
- The drying curve optimization control , it can control heating rate and vacuum degree in drying stage.
- Good gas diversion design and control technology have strong water catching ability and high drying efficiency.
- Industrial embedded touch screen, special modular controller, stable and reliable system, high control accuracy.
- It can save many groups of recipe, and can adjust the process in real time in the drying process ,to improve the process optimization rate.
- Flexible manual + automatic control mode, manual mode for groping process, automatic mode for batch production.
- Precise sensor calibration function to ensure accuracy of long-term use
- User level and password can be set up

Technical Parameters	Unit	LGB5	LGB10	LGB20	LGB30
Shelf area	m^2	5	10	20	30
loading capacity	kg	50-100	100-200	200-400	300-600
Shelf number	layer	5+1	10+1	13+1	14+1
Shelf size	mm	624mm*1650mm*16mm	624mm*1650mm*16	936mm*1750mm*16mm	1248mm*1750mm*16mm
Shelf spacing	mm	80	65	65	65
Shelf temperature control range	℃	ambient temperature ~ +70℃			
Max. Ice capacity	kg/batch	≥100	≥200	≥400	≥600
Condenser temp.（No-load）	℃	≤-50	≤-50	≤-50	≤-50
Cooling method	-	Air/Water cooling			
Defrosting type	-	Water			
Final vacuum	Pa	≤5Pa (no-load)			
Installed power	kw	25	40	50	65
Cooling water	m3/h	10	20	40	60
Compressed air (P=0.5~0.8Mpa)	L/min	N/A	N/A	N/A	N/A
Overall dimension L*W*H	mm	2500*2000*2400	3500*2000*2400	4500*2200*2600	5500*2600*2800
Total weight	Ton	2	2.5	6	10

BSFD-LG Series Freeze Dryer For Food



BSFD-LG1



BSFD-LG5



BSFD-LG20



BSFD-LG20



BSFD-LG30



BSFD-LG50

RTFD-LG1/5/10/20/30/50/100 Series Freeze Dryer For Fruit ,Vegetable,Meat

RTFD-LG series are production scale freeze dryers, suitable for drying food.

Main features

- The structure of pre-freezing chamber and drying chamber are separated . And both chambers can work simultaneously, this improves the freeze-drying efficiency and shortens the freeze-drying time.
- Alloy shelf, double-sided radiation heating, radiation rate more than 90%, good temp.uniformity
- High efficiency refrigerant medium, high heat exchange efficiency and long service life.
- The drying curve optimization control , it can control heating rate and vacuum degree in drying stage.
- Good gas diversion design and control technology have strong water catching ability and high drying efficiency.
- Industrial embedded touch screen, special modular controller, stable and reliable system, high control accuracy.
- It can save many groups of recipe, and can adjust the process in real time in the drying process ,to improve the process optimization rate.
- Flexible manual + automatic control mode, manual mode for groping process, automatic mode for batch production.
- Precise sensor calibration function to ensure accuracy of long-term use
- User level and password can be set up

Technical Parameters	Unit	LG1	LG5	LG10	LG20	LG30	LG50	LG100
Shelf area	m^2	1	5	10	20.6	31.68	52.92	105.84
loading capacity	kg	10	50	100	200	300	500	1000
Shelf number	layer	4+1	7+1	9+1	8+1	8+1	9+1	18+1
Shelf size	mm	400x625	600x1200	1000x1120	1200x2150*15	1200x3300x15	4900x1200x15	4900x1200x15
Shelf spacing	mm	60	80	80	80	80	80	80
Trolley number	unit	N/A	N/A	N/A	2	2	3	3
Shelf temperature control range	℃	ambient temperature ~ +100℃			ambient temperature ~ +120℃			
Max. Ice capacity	kg/batch	≥15	≥75	≥150	≥300	≥450	≥750	≥1500
Condenser temp. （No-load）	℃	≤-60	≤-50	≤-60	≤-60	≤-60	≤-50	≤-50
Cooling method	-	Air	Water cooling		Water cooling , water temp.＜30℃			
Defrosting type	-	Water	Soak		Spray + soak			
Final vacuum	Pa	≤5Pa (no-load)			＜5 Pa (no-load)		＜10 Pa (no-load)	
Installed power	kw	9	20	45	96	120	150	230
Cooling water	m^3/h	N/A	10	20	40	60	80	160
Compressed air (P=0.5~0.8Mpa)	L/min	N/A	N/A	N/A	30	30	30	30
Overall dimension L*W*H	m	1.9*1.2*1.7	2*3.5*2.1	5*2*2.5	6.2*2.3*3.2	7.5*2.3*3.2	7*8.5*3.2	7*11*3.5
Total weight	Ton	0.9	2.5	6	10	16	29	46

