

TJX Bioengineering Intelli-Ferm mini Bioreactor Specifications

Parameter	Parts	Microbial fermentation				
Model	Vessel	3L	5L	7L	10L	15L
Required space (L*W*H)	Controller+Vessel	700*520*600mm	700*520*650mm	700*520*670mm	750*520*700mm	800*520*780mm
Vessel dimensions	Diameter (mm)	124	150	170	190	220
	Height (mm)	271	328	340	364	440
	Total volume (L)	3.17	5.6	7.46	10	16.5
	Working volume (L)	30%-70%Total volume				
Sterilization parameter	Max O.D	264mm	273mm	292mm	312mm	386mm
	Max H	506mm	563mm	612mm	630mm	709mm
Power supply	Power Requirement	220VAC,50/60HZ,10A				
	Equipment power	1.5kW	1.5kW	2.0kW	2.0kW	2.0kW
	Fuses	25A	25A	25A	25A	25A
Gas inlet	Gas pressure	2 bar (0.02 MPa) ±10%; dry, oil and dust-free				
	Gas inlet tube	Outer diameter 6mm, reinforced tubing				
Cooling water	inlet pressure	0-0.3 Mpa				
Sparger	Ring sparger	20holes-Φ0.8mm	20holes-Φ0.8mm	24holes-Φ0.8mm	24holes-Φ0.8mm	26holes-Φ0.8mm
Impellers	Type	Rushton*2 + Pitched*1+AF Impeller*1				
	AF Impellerdiameter (mm)	52	69	83	108	122
	Impeller diameter (mm)	50	60	68	76	88
Agitation	Motor power (W)	400W	400W	750W	750W	750W
	Range (rpm)	20~1500	20~1200	20~1200	20~1200	20~1200
	Tip Speed(m/s)	(0.05~3.93)	(0.06~3.77)	(0.07~4.27)	(0.08~4.77)	(0.09~5.53)
Temperature	Temperature control	Heating blanket + Cooling finger				
	Heating blanket power (W)	200W	300W	350W	350W	450W
	Range (°C)	5°C above coolant to 70 °C				5°C above coolant to 65 °C
	Accuracy (°C)	±0.2				
	Max RoC (°C/min)	1.0 (cooling from 37°C to 20 °C)				
	Steady state Error (°C)	±0.2				
pH	Probe type	Electro-chemical (gel-filled)				
	Range	0~14				
	Accuracy	±0.02				
	Steady state Error	±0.02				
DO	Probe type	Polarographic or Optical				
	Range	0~300% (Air saturation)				
	Accuracy	±2%				
Rotermeter	Air	5L/min	10L/min	10L/min	20L/min	20L/min
MFCs	Air	Optional				
	O2					
Pumps	Variable speed	114DV *2 +400A*2 (programable)				
	Speeds	114DV: 0-200rpm 400A: 0-200rpm				
	Flow rate	114DV: 0.02ml/min - 52.6ml/min 400A: 0.0025ml/min - 17.5ml/min				
	Pump pipe diameter	114DV: φ2.4mm*1.6mm*(*)(19#) 400A: φ2mm*1mm*(*)()				