

TJX Bioengineering Intelli-Ferm A/B/Q Bioreactor Specifications						
Parameter		Microbial fermentation				
Model	Vessel	3L	5L	7L	10L	15L
Required space (L*W*H)	Controller+Vessel/ +	Ferm A:1200*360*750mm; Ferm B:1250*550*840mm; Ferm Q:1850*700*900mm(4 units);2700*700*900mm(6 units)				
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 A-type	1.5kW	1.5kW	2kW	2kW	2kW
	Equipment power B-type	2.0kW	2.0kW	2.5kW	2.5kW	2.5kW
	Equipment power Q-type (3 parallel)	2.5kW	2.5kW	3.5kW	3.5kW	3.5kW
	Equipment power Q-type (4 parallel)	3.5kW	3.5kW	5.0kW	5.0kW	5.0kW
	Equipment power Q-type (6 parallel)	4.5kW	4.5kW	6.5kW	6.5kW	6.5kW
	Fuses	25A	25A	25A(Q4/6 63A)	25A(Q4/6 63A)	25A(Q4/6 63A)
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	Size	20holes-Φ0.8mm		24holes-Φ0.8mm		26holes-Φ0.8mm
Impellers	Type	Rushton turbine*2 + Pitched*1+AF Impeller*1				
	AF Impeller diameter (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%				
Rotometer	Air	5L/min	10L/min	10L/min	20L/min	20L/min
MFCs	Air	Optional				
	O2					
Pumps	Type	Watson Marlow 114DV				
	Number	4 per unit				
	Speeds	0-200rpm				
	Flow rate	0.02ml/min - 52.6ml/min				
	Pump pipe diameter	114DV: φ2.4mm*1.6mm*(19#)				