

## Technical Data

The technical data are valid only for an empty device equipped with three shelves and a spray-painted outer enclosure. Options may have an impact on the specified performance.

**Table 13-1**

Models		IMP 180	IMP 400		
Parameter	Unit				
Chamber volume	L/cu ft	178/6.3	381/13.5		
Chamber temperature range	°C/°F	5-70 (41-158)			
<b>Unit dimensions</b>					
Internal dimensions W x D x H	mm/in	494x590x708 / 19.5x23.2x27.9	600x590x1335 / 23.6x23.2x52.6		
Internal dimensions (useable space) W x D x H	mm/in	464x543x708 / 18.3x21.4x27.9	544x524x1335 / 21.4x20.6x52.6		
External dimensions (without feet / castors W x D x H	mm/in	640x738x920 / 25.2x29.1x36.2	778x770x1545 / 30.6x30.3x60.8		
Footprint	m <sup>2</sup> /ft <sup>2</sup>	0.47 / 5.1	0.56 / 6.0		
Number of shelves: standard/maximum		2 / 9	2 / 17		
Number of shelf positions		19	39		
Shelf size	mm/in	439x505 / 17.28x19.88	528x498 / 20.79x21.06		
Loading capacity per shelf	kg/lbs	25/55	30/66		
Loading capacity of unit	kg/lbs	75/165	75/165		
Weight of the unit	kg/lbs	84/185	167/368		
Weight of unit incl. packing	kg/lbs	97/214	216/476		
External dimension incl. packing W x D x H	mm/in	960x770x1200 / 37.8x30.3x47.2	1030x1100x1900 / 40.6x43.3x74.8		
Access port diameter	mm/in	42 / 1.7	42 / 1.7		
<b>Temperature Performance</b>					
Heat up / cool down time (work space unoccupied), from ambient temperature 22 °C (72 °F) to (according to DIN 12880)	min	5°C/ (41°F)	55/60	5°C/ (41°F)	55/60
		20°C (68°F)	7/8	20°C (68°F)	9/10
		37°C (99°F)	31/34	37°C (99°F)	52/56
		70°C (158°F)	61/66	70°C (158°F)	92/101

**Table 13-1**

<b>Models</b>		<b>IMP 180</b>	<b>IMP 400</b>		
Recovery time (work space unoccupied), (door opening 30 sec, according to DIN 12880) typical value / max. value	min	5°C (41°F)	7/9	5°C (41°F)	8/10
		20°C (68°F)	<1/1	20°C (68°F)	2/3
		37°C (99°F)	2/3	37°C (99°F)	2/4
		70°C (158°F)	8/10	70°C (158°F)	10/12
Temperature stability, temporal mid of work space according to DIN 12880 at 20°C, 25°C, 37°C, (68°F, 77°F, 99°F)	K	≤ ±0,1		≤ ±0,1	
Temperature uniformity according to DIN 12880 at typical value / max. value	K	5°C (41°F)	≤ ±0.9/≤ ±1.1	5°C (41°F)	≤ ±1.3/≤ ±1.5
		20°C (68°F)	≤ ±0.2/≤ ±0.3	20°C (68°F)	≤ ±0.3/≤ ±0.4
		37°C (99°F)	≤ ±0.5/≤ ±0.6	37°C (99°F)	≤ ±0.6/≤ ±0.7
		50°C (122°F)	≤ ±1.0/≤ ±1.2	50°C (122°F)	≤ ±1.3/≤ ±1.5
		70°C (158°F)	≤ ±1.9/≤ ±2.1	70°C (158°F)	≤ ±2.0/≤ ±2.2
BTU output at ambient temperature of 22°C (72°F)	W	5°C (41°F)	400	5°C (41°F)	1000
		20°C (68°F)	100	20°C (68°F)	230
		37°C (99°F)	60	37°C (99°F)	170
		70°C (158°F)	130	70°C (158°F)	300
<b>Electrical data</b>					
Power line voltage (+/- 10%)		100-240		100-240	
Power line frequency	Hz	50/60		50/60	
Power rating, measured at ambient temperature of 28°C/82°F	W	450 920 (230V *) / 700 (120V *)		900 1360 (230V *) / 1140 (120V *)	
Max. current, measured at ambient temperature of 28°C/82°F	A	1.9 - 4.5 4.0 (230V *) / 5.8 (120V *)		3.8 - 9.0 6.0 (230V *) / 9.5 (120V *)	
Energy consumption, measured at ambient temperature of 22°C/72°F typical value / max. value		5°C/ (41°F)	320/350	5°C/ (41°F)	560/590
		20°C (68°F)	80/110	20°C (68°F)	150/180
		37°C (99°F)	90/110	37°C (99°F)	170/190
		70°C (158°F)	220/240	70°C (158°F)	390/410
Earthing system (e.g. 1/N/PE)		1/N/PE AC			
IP protection system		IP 20			
Protection class		I			
Overvoltage category according to IEC 60364-4-443		II			
Device fusing building site	A	16			
Device fusing on PCB	A	2x15			
<b>Environmental conditions</b>					
Ambient temperature range	°C (°F)	18-28 (64-82)			

\* with internal power outlet (optional)

**Table 13-1**

<b>Models</b>		<b>IMP 180</b>	<b>IMP 400</b>
Max. rel. humidity in service at or below 28°C (82°F), non condensing	% r.H.	70	
Storage temperature range	°C (°F)	20-60 (68-140)	
Max. humidity in storage, non condensing	% r.H.	90	
Post-transport acclimation time	h	2	
Noise level, measuring point: device-distance 1.0 m, height 1.6m)	dB(A)	< 50	< 52
Pollution degree according to IEC EN 61010-1		2	
<b>Site conditions</b>			
Maximum altitude above sea level	m/y NN	2000/2187	
Minimum side clearance	mm/in	150/5.9	150/5.9
Minimum front clearance	mm/in	814/32	810/31.9
Minimum back wall clearance	mm/in	130/5.1	150/5.9
Minimum bottom clearance	mm/in	200/8	-/-
Minimum top clearance	mm/in	300/12	360/14.2