



The IBV40 makes it possible to homogenise small volumes of fluids inside the vessel. In a laboratory environment, the ability to perform homogenisation and emulsification in a beaker has traditionally been the domain of rotor-stator (high shear) mixers but these cannot produce the results of nozzle homogenisation.

Using Maelstrom's unique, patented IPM technology, the IBV40 combines internal pumping with integrated nozzles to bring new levels of batch mixing performance to the benchtop. Smaller droplet and particle sizes with narrower size ranges allow finer and more stable emulsions and dispersions to be formed directly in the vessel. The results are easily scalable too, with larger batch and inline IPM mixers able to translate laboratory processes into the factory.

IBV40 machines are supplied with a separate controller boasting infinitely variable speed, displays of both speed and load and optional outputs to datalogging software.

In terms of both performance and versatility, the IBV40 package is the ideal homogenisation partner in the laboratory.

- Emulsifying
- Homogenising
- De-agglomerating<sup>1</sup>
- Stabilising



<sup>1</sup> The sliding nature of internal components makes the IBV40 unsuited to the processing of hard or abrasive solids.

## SPECIFICATIONS

		<b>IBV40</b>
Nominal rotor diameter	mm	40
Rotor speed (typical max.)	rpm	1500
Typical minimum mixing volume at low viscosity (e.g. water)	litres (gals)	0.5 (0.13)
Typical maximum mixing volume at low viscosity (e.g. water)	litres (gals)	5 (1.25)
Typical maximum mixing volume at high viscosity (e.g. thick cream)*	litres (gals)	3 (0.8)
Viscosity range (approx.)	cP (Pa.s)	0.1 (0.0001) to 30000 (30)
Materials of construction	316 stainless steel wetted parts + PEEK vanes & bearings	
Control & Instrumentation	Power ON/OFF, Mixer START/STOP, speed control pot., LCD displays of power (load) and speed, optional PC link	
Weight**	kg (lbs)	31 (68)
Motor power	kW (hp)	1.1 (1.5)
Electrical controls	240V/120Vac, fused, 2000W max.	
Approvals / Certification (standard)	CE marking (Europe), UL/ASME components (US) + others	







\* For fluids in this viscosity range, supplementary agitation using some form of impeller may be required.

\*\* Excluding control panel







## IBV40

- IBV40 laboratory batch IPM mixer
- 1.0mm diameter nozzle rotor
- 1.1kW 4-pole induction motor
- Single mechanical shaft seal
- Stainless steel base and support column
- Separate control panel with speed control and digital speed and load displays
- Cables and user manual

## OPTIONS AND ACCESSORIES

CODE	DETAILS	
IBV40-P	<u>Datalogging port</u> A serial connection port fitted to the IBV40 control panel allowing load and speed data signals (0-10V) to be fed to a PC datalogger. Note that this option must be specified at the time of ordering.	
LAB-USB	<u>USB data interface</u> Multi-channel external data acquisition device with USB connection to a PC to allow logging of load and speed data. Basic Windows® datalogging software included. Note that option IBV40-P is required.	
LAB-CBL	<u>Datalogging interface cable</u> Serial connection cable linking the IBV40-P port to the LAB-USB interface.	
LAB-XL	<u>Excel® datalogging upgrade</u> Upgrade to the basic datalogging software of the LAB-USB option to enable data export to Microsoft® Excel® for detailed analysis.	

## SPARES

CODE	SPARES			
IBV40-ROT	<u>Rotor (Central Element)</u> The rotor carries the nozzles which provide the extensional stressing action of the IBV machine. Rotors with different nozzle diameters are available to suit particular fluid viscosities.	<u>0.5mm</u> 	<u>1.0mm</u> 	<u>2.5mm</u> 
IBV40-VSP	<u>Vane set - PEEK</u> Spare set of 8 vanes in PEEK polymer	<u>VSP</u> 	<u>TBP</u> 	<u>RBP</u> 
IBV40-TBP	<u>Thrust bearings - PEEK</u> Spare set of 2 thrust bearings in PEEK polymer			
IBV40-RBP	<u>Radial bearings - PEEK</u> Spare set of 2 radial bearings in PEEK polymer			



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