



High quality dispersions and emulsions are at the heart of most fluid production processes. Maelstrom's DB range of production high shear mixers offers the benefits of patented Fluid Division Mixing (FDM) technology in a cost-effective, flexible format. With standardised hoist, bridge and vessel mountings and a wide range of options for abrasive, flameproof and hygienic applications, the DB range really is the all-round performer in high shear mixing.

The unique FDM high shear action uses the principles of inter-cavity transfer and hydraulic shear to deliver high levels of mixing energy to the fluid. Using its centrifugal self-pumping action, fluid is drawn into mixing head and subjected to strong cavity vortex actions which shear the fluid against itself. In contrast to conventional rotor-stator mixers, all of the material passing through the head experiences the same mixing actions. This reduces the number of passes needed and therefore the mixing time.

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



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

## MODEL RANGE

		IBV60	IBV100
Nominal rotor diameter	mm	60	100
Typical maximum mixing volume at low viscosity (e.g. water)	litres	200	1000
	gals	50	250
Typical maximum mixing volume at high viscosity (e.g. thick cream)*	litres	50	250
	gals	15	65
Viscosity range (approx.)	Pa.s (cP)	0.0001 (0.1) - 30 (30,000)	
Weight**	kg	33	65
	lbs	73	145
Motor power range (standard**)	kW	5.5	25
	hp	3	7.5
Rotor speed (typical max.)	rpm	1500	
Approvals / Certification (standard)		CE marking (Europe), UL/ASME components (US) + others	

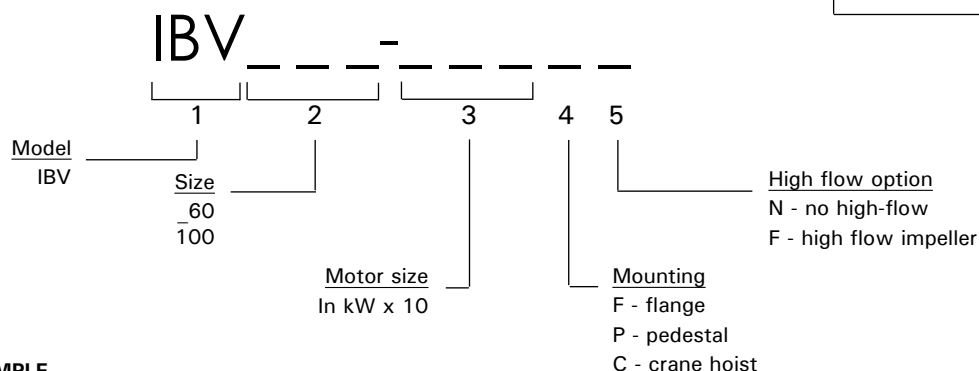
\* For fluids in this viscosity range, supplementary agitation using some form of impeller may be required .

\*\* Typical for alloy motors. Larger and non-standard motors available on request



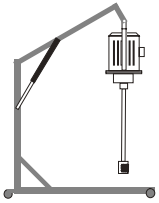
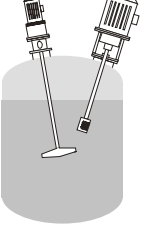
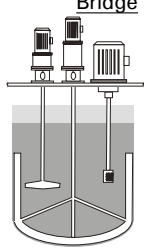

# PART CODES AND ORDERING

**IBV60-100**  
PRODUCTION IPM BATCH MIXERS











### EXAMPLE

IBV60-55PF means an IBV60 mixer with 5.5kW motor, pedestal mounted with high flow impeller. Single mechanical seal fitted within mixing head.

CODE POSITION	DETAILS			
4	<p><b>Mounting</b></p> <p>The mixer can be mounted above a vessel on a bridge using a simple flat flange plate (F) or it can be mounted directly onto the top of a lidded vessel using a pedestal (P). Note that the mechanical seal is mounted inside the mixing head so that only a static seal (o-ring) is needed for the mixer shaft as it passes through the vessel wall or lid.</p> <p>A crane hoist mount (C) allows the mixer to be suspended above the vessel for frequent removal.</p>	<p><b>Crane hoist</b></p> 	<p><b>Pedestal</b></p> 	<p><b>Bridge</b></p> 
5	<p><b>High flow option</b></p> <p>The design of the IBV mixing head allows the driveshaft to be extended through the centre of the mixer and a radial impeller (F) to be fitted to it. The impeller can provide greatly increased agitation for low viscosity fluids in the vessel where it is impractical or expensive to use a separate impeller/stirrer to improve batch uniformity.</p>			

## SPARES

CODE	SPARES			
IBVxxx-ROT	<p><b>Rotor (Central Element)</b></p> <p>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.</p>	<p>1mm</p> 	<p>2.5mm</p> 	<p>5mm</p> 
IBVxxx-VSP	<p><b>Vane set - PEEK</b></p> <p>Spare set of 8 vanes in PEEK polymer</p>			
IBVxxx-TBP	<p><b>Thrust bearings - PEEK</b></p> <p>Spare set of 2 thrust bearings in PEEK polymer</p>	<p><b>TBP</b></p> 	<p><b>TBP</b></p> 	<p><b>RBP</b></p> 
IBVxxx-RBP	<p><b>Radial bearings - PEEK</b></p> <p>Spare set of 2 radial bearings in PEEK polymer</p>			



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