MVE

High flow low head volute pumps for industry, municipal and agriculture

Quality

Thompsons Kelly & Lewis

Improving the proven

Introduction

Thompsons, Kelly & Lewis Type MVE mixed flow, single stage volute pumps for high volume flow at low to medium heads have been designed according to the most modern research findings in hydraulics and hydro-dynamics.

The basic design philosophy of the MVE was for a single entry, solid case, radially split pump, including a back withdrawal of the rotating element.

Benefits

- Modern rigid design
- High efficiency
- Easy to install, operate and maintain
- Value
- Low running costs
- Back pull-out feature

Features

CASING

Single volute, symmetrical design, high strength one piece with integral discharge and suction flanges.

All sizes of pumps have the supporting feet as an integral part of the casing, with the discharge flange in either upshot or overshot position.

IMPELLER

Single suction, mixed-flow, enclosed design.

Vanes formed by accurately set cores ensure even thickness and spacing. Balanced to prevent vibration, keyed to shaft and provided with a retaining setscrew and washer.

BACK COVER

High strength in one piece, incorporating a long length stuffing box with provision for water sealing. The stuffing box is fitted as standard with a Vesconite bearing bush, Nylon/Celcon lantern ring, high quality gland packing and a gland.

SHAFT

Overhung, stiff shaft design in stainless steel, accurately machined to size, key seated at both ends for coupling and impeller attachment.

SHAFT SEALING

As a standard, stuffing box will be fitted with high quality packing. A choice of mechanical seals is available to suit specific applications where gland leakage cannot be tolerated.

MADE IN AUSTRALIA

BEARING HOUSING & BEARINGS

Cast Iron, flanged to suit casing and cover, and incorporates large openings for access to gland and stuffing box. Two heavy duty, grease lubricated ball bearings carry all radial and thrust loads. Protected from dust, dirt and water by lip seals and deflectors. Greasing nipples provided at both ends.

ROTATING ELEMENT

Back pull-out design permits removal without disturbing piping.

OPTIONAL EXTRAS

Shaft sleeve and wear rings can be offered.

Materials

The standard pump has a Cast Iron casing and impeller with a Stainless Steel shaft. Alternative materials available are: Bronzes, Zinc Free Bronze, Austenitic Cast Iron and Spheroidal/Nodular Irons to handle the most demanding of your pumping requirements.

Specification

Flow Rate	to 750 L/s
Total Head	to 21 m
Working Pressure	to 350 kPa
Temperature	to 100ºC
Power Range	5 to 75 kW
Sizes	200 to 400 mm

Drive

The MVE pumps are of a rigid design and can be mounted for a drive from a stationary engine. They can also be mounted on a combination baseplate for direct drive from an electric motor.

Mounting

The horizontal construction is standard, but a vertical design, close coupled or intermediate shaft driven can be offered.

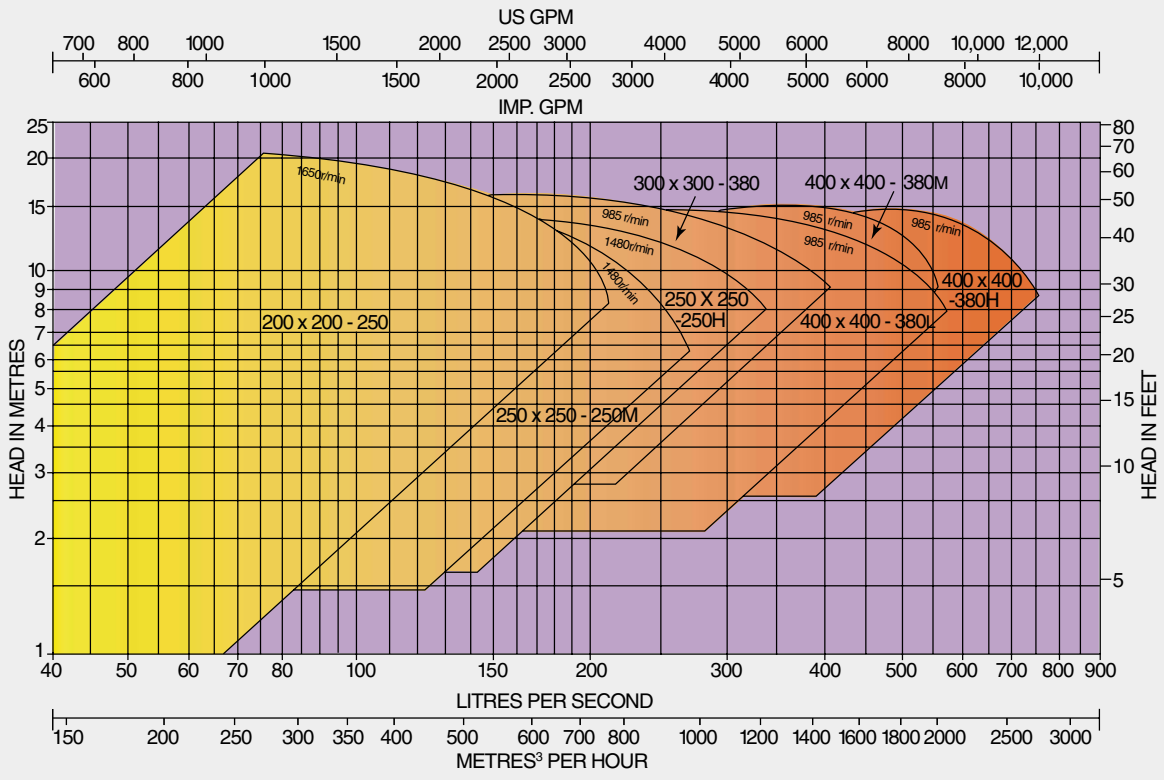
High Speed MVE

For high head applications, the 300 & 400 pump size is available in a special MVH version operating at 1480 r/min. Contact TKL for more details.

Applications

- Pollution Control • Pulpy Liquids
- Sewerage • Stormwater Service
- Dewatering Drydocks
- Wastewater • Drainage
- Waste Disposal • Water Supply
- Agriculture

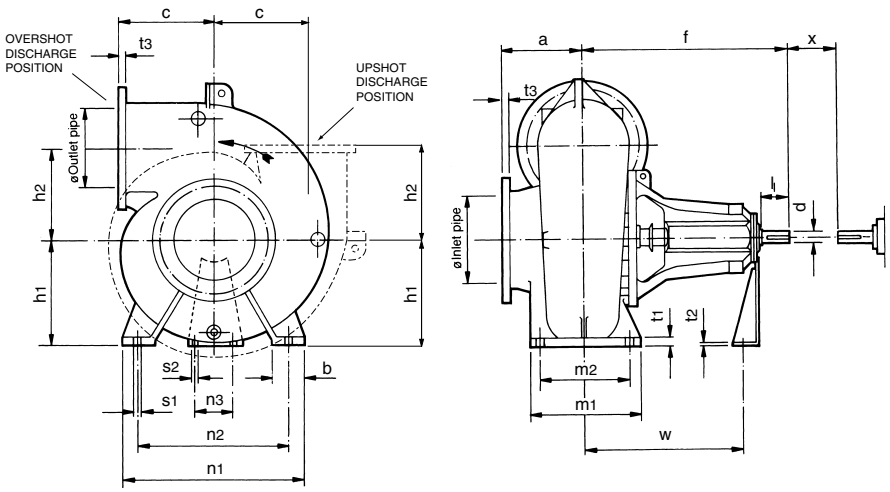
Selection Guide Various Speeds



Principal Dimensions

- Dimensions are in millimetres
- Pump rotation is clockwise when viewed from shaft end

* Standard Flange rating AS 2129-1982 Table D



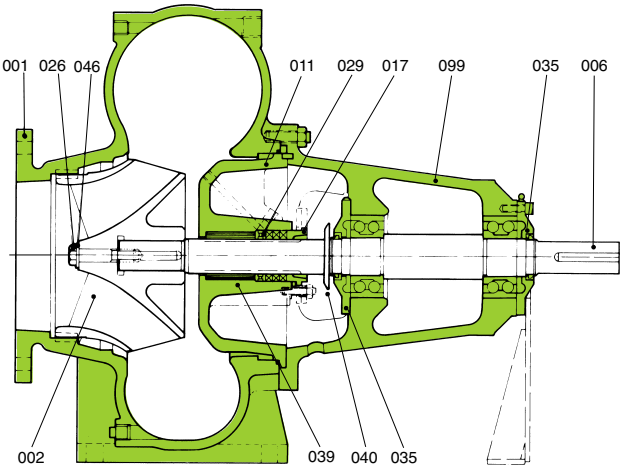
PUMP DESIGNATION AND FRAME SIZE			
Dia Inlet	Dia Outlet	Nom Imp Dia	Frame Size
200	200	250	MV10
250	250	250	MV10
300	300	380	MV12
400	400	380	MV12

PUMP DESIGNATION			PUMP OVERSHOT STANDARD					PUMP UPSHOT OPTIONAL					*FLANGE DETAILS SUCTION AND DISCHARGE			
Dia Inlet	Dia Outlet	Nom Imp Dia	a	f	h1	h2	c	a	f	h1	h2	c	t3	O.D.	P.C.D.	Holes No x Dia
200	200	250	240	581	280	229	280	240	581	340	280	229	22	335	292	8 x 18
250	250	250	260	594	315	267	280	260	594	415	280	267	25	405	356	8 x 22
300	300	380	300	748	400	343	355	300	748	480	355	343	25	455	406	12 x 22
400	400	380	360	770	450	400	380	360	770	565	380	400	29	580	521	12 x 26

PUMP DESIGNATION			PUMP SUPPORT							MOUNTING FOOT				SHAFT END		GAP
Dia Inlet	Dia Outlet	Nom Imp Dia	b	m1	m2	n1	n2	s1	t1	n3	s2	t2	w	d	l	x
200	200	250	100	280	230	500	400	22	26	110	14	6	421	42	110	140
250	250	250	100	315	260	500	400	22	26	110	14	6	434	42	110	180
300	300	380	113	400	330	670	560	22	30	140	18	8	578	48	110	180
400	400	380	128	450	380	740	630	26	30	150	20	8	595	55	110	250

Pump Construction

001 Casing
002 Impeller
006 Shaft
011 Back Cover
017 Gland
026 Impeller Setscrew
029 Lantern Ring
035 Bearing Cover
039 Bearing Bush
040 Water Thrower
046 Impeller Screw Washer
099 Bearing Housing



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