

(MPP) Mineral Processing Pumps



INTMPE has a history-experience of well over 37 years in pumping erosion/corrosion fluids. We have a combined workforce of 1300 in area of 135,000 square meters. We have a rich technical force with all the necessary processing equipment and can cast a single part weight of 4000KG. We produce patterns, cast, forge, weld, rivet, machine and heat treat all to **ISO-9002** certification. Our foundry molten metal pours are monitored by a modern chemical spectrometer to produce **ASTM** material standards.

Quality Controls: We provide thorough quality control with sophisticated modern equipment, including, Vacuum Spectrometer, X-Ray, Zyglo, Magnoflux, Hydrostatic Testing, Dye Check, Spin Testing and Microscopic Analysis. Heat treating of finished parts is done in house.

Finished Product Testing: Our largest test motor at this time is 1500KW, however, our test cell capacity is 3000KW. We can flow test up to 4800 cubic meters per hour.

INTMPE Slurry Pumps are suitable for handling abrasive and corrosive solids - bearing slurries with maximum concentrations of wt. 45% (ash) and wt. 60% (ore). The pumps can be operated in series, depending on the requirement of end-users. They are widely used in power, metallurgical mining, coal and building material industries. The MPP series slurry pumps have been rated as energy saving products. The MPP pumps are advanced and meet **World Class Expectations in Efficiency** and other industry design parameters.

The MPP series slurry pumps have been listed as a **research-derived engineered product** and selected by Metallurgy and Coal Industries. The pumps are certified as a product which complies to both Asian Domestic Markets in the Pacific Rim and the advanced standards of Western International Markets.

For more information, contact Intmpe Engineering at;

engineering@intmpe.com

Engineering & Product Development Department.

INTMPE ENGINEERED MPP SLURRY PUMPS

COMPETITIVE INFORMATION

COMPETITOR PUMPS

For the statement that our pumps are better than other pumps, I think this is a sensitive issue. The slurry market is very big and there are many experienced producers. Their product lines and materials are indeed very wear-resistant. But I can say our MPP pumps should be advantageous in the following terms:

1. **Our Efficiency is higher by 5-20% in many comparisons.** MPP pumps are a new generation of slurry pumps designed on the theory of two-phase flow. From a hydraulics point of view, the design is more suitable for handling slurries by reducing pump wear. MPP Pumps give a daily pay-back due to substantial energy savings and reduced wear over most competitors pumps.
2. **Lighter in weight, simpler in structure.** MPP Pumps utilize a compact frame design with shorter overhang and well-balanced thrust.
3. **Easier in maintenance, longer life cycle.** MPP pumps are fitted with oil cooling coils which increases bearing service life. The lube system is similar to API pumps. In general, bearing life is more than 10000 hours.
4. **Very consistent High Quality Metallurgy.** Using self-developed GLH series materials (based on ASTM A532), our white iron products have good erosion wear and corrosion resistance. The materials have a high hardness in the range of HRC58-62 with good ductility.
5. **Pricing Policies.** Most important is the fact that our pricing is set at fair market value. Consistently our end-users advise that **our pricing is 30-50% on average lower than Others.**
6. **Market Acceptance.** Westerners entered the Asian market much earlier than INTMPE-MPP products and dominated. However, **in a little more than ten years, the MPP pump has taken more than a 50% share of the total Chinese slurry pump market.** Our MPP pumps for certain are more attractive for many reasons.

For more information on the MPP pumps, contact Intmpe Engineering at www.intmpe.com

Thank you for your confidence in our products and services!

STRUCTURAL FEATURES:

Double casing pump heads have an external metal casing and a hard metal or rubber inner liner. Single casing pump heads are one piece hard metal with no liners.

Double casings are centrally split in a vertical direction. The discharge flange can be positioned in 8 different positions at an interval of 45 degrees.

SHAFT SEALING DEVICES:

Expellers with packing on shafts for Dry Gland Operation.

Packing shaft sealing.

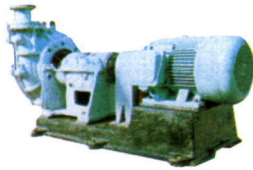
Mechanical Seals with flush.

BEARING LUBRICATION:

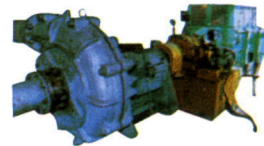
Oil, oil mist or grease depending on pump construction or customer's special requirement.

DRIVING PATTERNS:

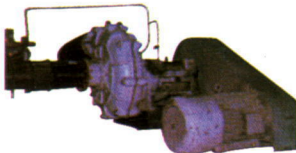
DIRECT DRIVE (DC) DIRECT DRIVE HYDRAULIC COUPLING (HC) BELT DRIVE (CR CL ZV CV)



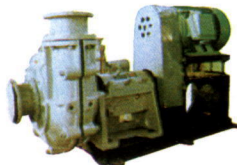
DC



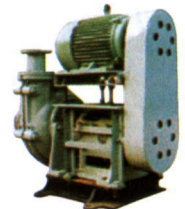
HC



CR(CL)

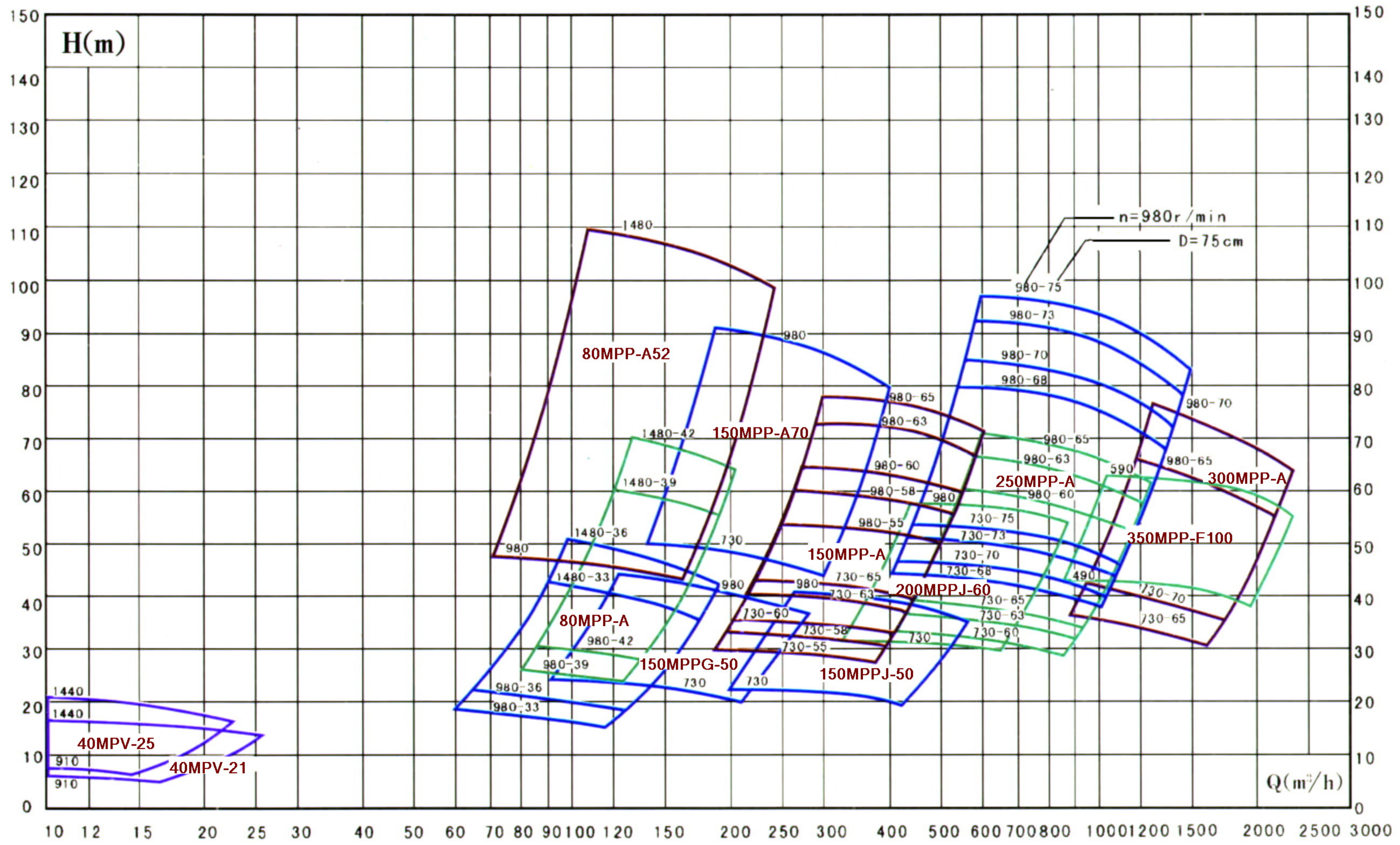


ZV



CV

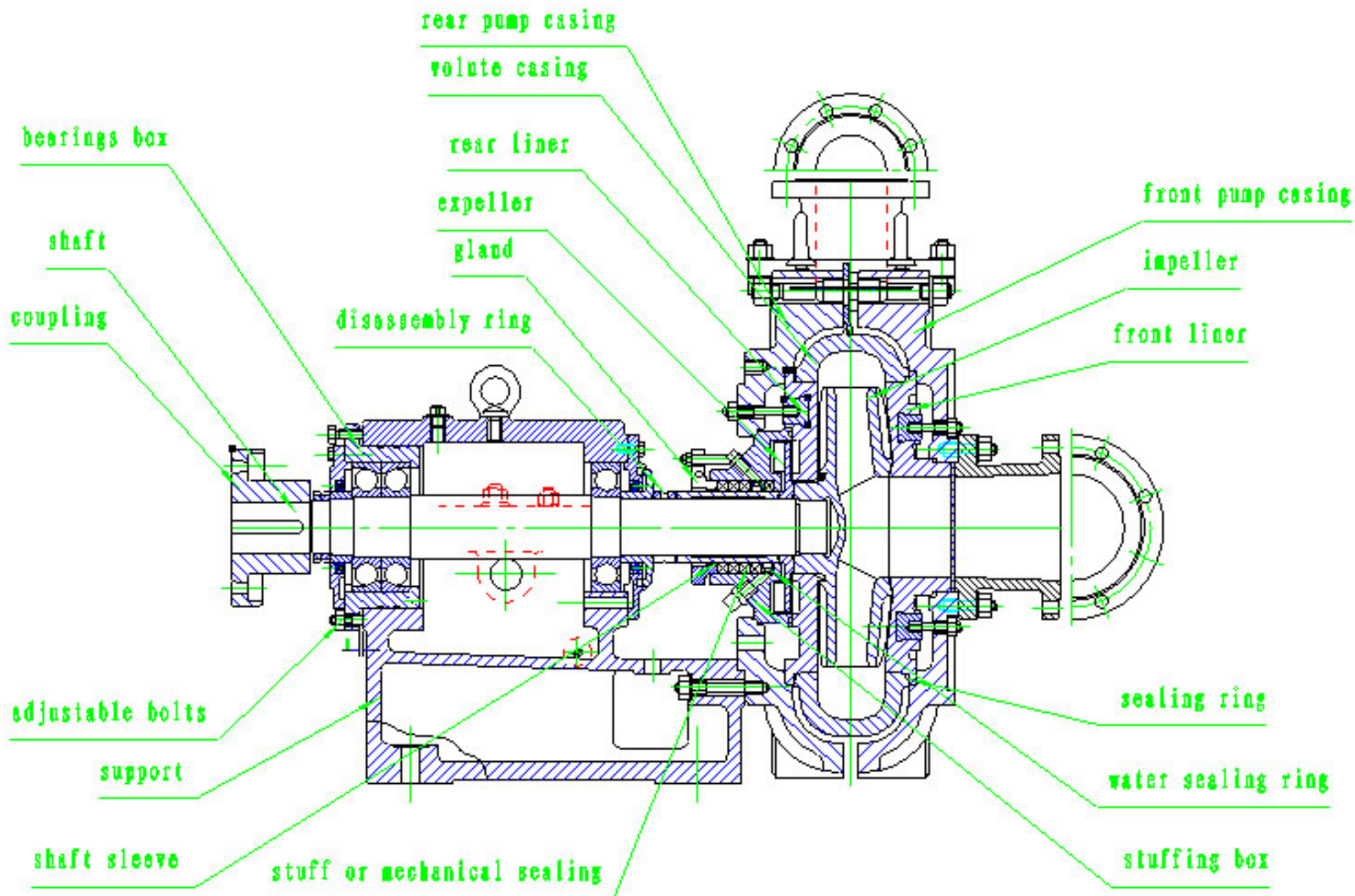
Graphical Performance of MPP Mineral Processing Pumps (1)



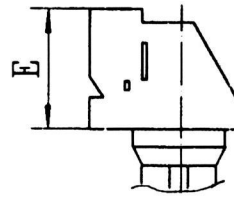
(MPP) Mineral Processing Pumps

intMPE inc.

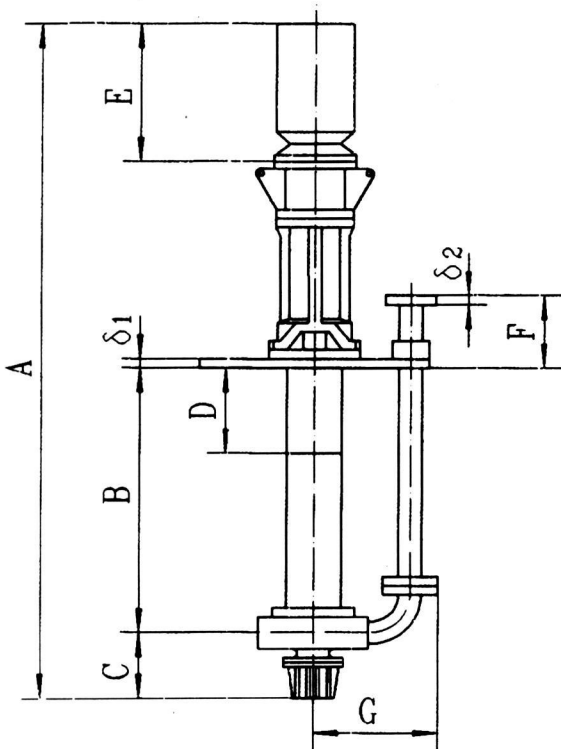
International Mineral Processing Equipment



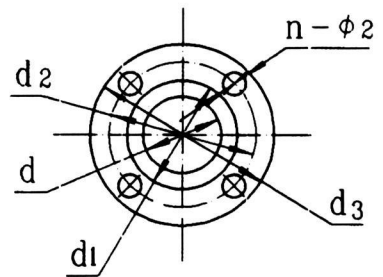




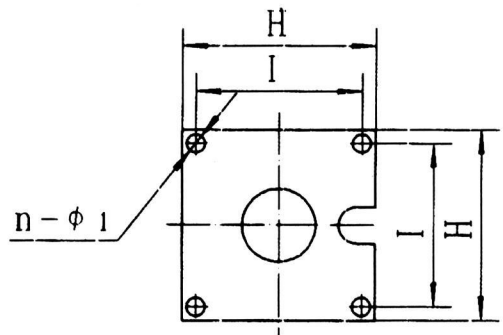
BELT DRIVE TYPE



DIRECT COUPLED TYPE



OUTLET FLANGE



BASE PLATE

INTMPE (MPVP) MINERAL PROCESSING VERTICAL PUMP STANDARD DIMENSIONS

Type	MOTOR SIZES	Driving patterns	A	B	C	D	E	F	G	H	I	n-Φ1	δ1	Outlet flange						Weight motor included(kg)	
														d	d1	d2	d3	n-Φ2	δ2		
150MPVPA35	100HP	DC		1049	360	350	895	221	610	1150	1080	4-Φ25	25	Φ150	Φ200	Φ225	Φ260	8-Φ18	22	1300	
	40HP	DC					740													702	1183
	25HP	ZV					660													660	1036
100MPVPA34	100HP	DC		1031	310	350	795	214	573	1180	1110	4-Φ25	25	Φ100	Φ145	Φ170	Φ205	4-Φ18	18	1183	
	40HP	DC					660													660	1036
80MPVPA36	100HP	DC		1028	270	350	795	212	543	1120	1050	4-Φ25	25	Φ80	Φ125	Φ150	Φ185	4-Φ18	18	993	
	40HP	DC					660													660	864
65MPVPA30	40HP	DC		1028	270	350	620	212	416	712	672	4-Φ22	25	Φ65	Φ115	Φ130	Φ160	4-Φ18	18	703	
	15HP	DC					435													435	614
50MPVPA20	10HP	DC		814	195	350	340	141	321	600	540	4-Φ25	25	Φ50	Φ90	Φ110	Φ140	4-Φ14	16	293	
	3HP	DC					290													290	275
40MPVPB25	15HP	DC		826	210	350	395	130	334	600	540	4-Φ25	25	Φ40	Φ72	Φ100	Φ130	4-Φ14	16	370	
	3HP	DC					290													290	345
40MPVPA21	10HP	DC		829	209	350	340	125	309	600	540	4-Φ25	25	Φ40	Φ72	Φ100	Φ130	4-Φ14	16	370	
	3HP	DC					290													290	345

INTMPE PUMP DESCRIPTION

1. GENERAL

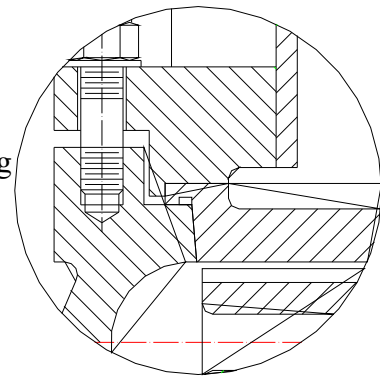
MPV series pumps are heavy-duty sump pumps, designed and built for abrasive applications. They are single-stage, single-suction, overhung, vertical, centrifugal pumps. MPV pumps feature a simple construction design, a single case without shaft seal. They are easy to install and easy to maintain. **ALL MPV PUMPS ARE ISO-9001 CERTIFIED.**

2. SINGLE CASE CONSTRUCTION

MPV pumps have a single casing. However, the pump casing, cover and impeller are made of 28% chrome (ASTM A532) cast iron to ensure wear resistance. They are replaceable when worn out. Enough parts are stocked to ensure prompt delivery when ordered.

3. CASE AND VOLUTE

The pump is of a single volute design. Hydraulically, it features a low constant radial load design. This feature is especially important since MPV pump usually have a long over hung. Mechanically, it features a tapered fitting between the case and the cover for easy assembly and disassembly.



4. IMPELLER

MPV pumps can have a closed impeller or an open impeller, depending on the application. The horsepower is transmitted through threads in the impeller. **No insert is placed for the thread.** The impeller has twisted vanes for high efficiency and good flow conditions to ensure even wear.

5. SHAFT & SHAFT SEAL

MPV pumps have a heavy shaft since they usually have a long over hung. As a standard, there is no shaft seal. Pumping fluid can go into the pump from the drainer above the impeller due to the pumping out vanes. MPV pumps are designed for severe operating conditions. They can even run dry due to their rugged design.

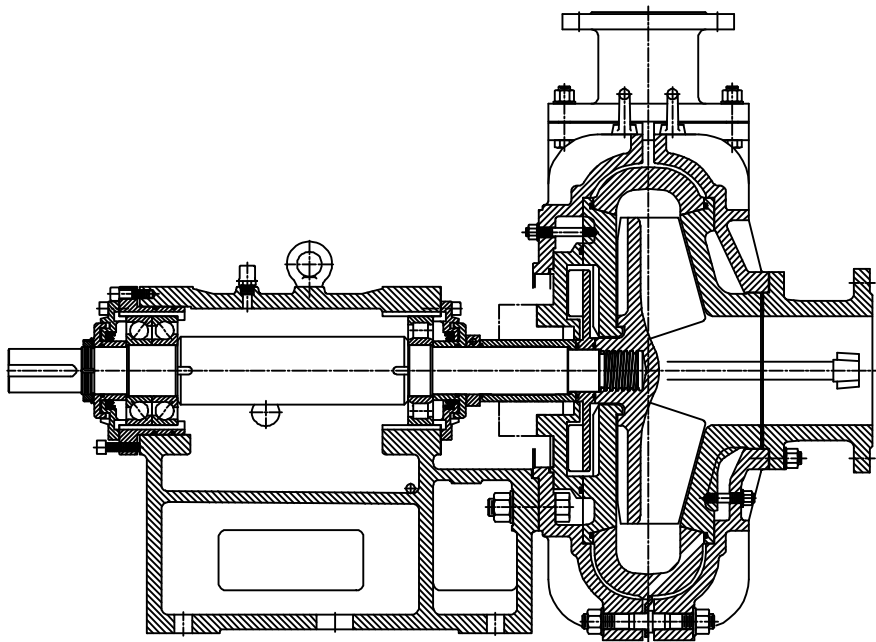
6. BEARING ASSEMBLY

SKF bearings are used in the MP pumps. Bearing design life B10 is minimum 25,000 hours. The bearings are grease lubricated. The bearing housing has a large grease chamber to ensure adequate lubrication and bearing cooling.

7. PUMP AND MOTOR CONNECTION

The pump and motor can be directly coupled or connected with belts. When they are connected with belts, the motor hangs on the bearing housing in a compact arrangement.

INTMPE MPP-OPEN IMPELLER HORIZONTAL SLURRY PUMPS



INTMPE AGITATOR OPTION!

MPP pumps are designed to enable the use of an optional agitator. With slight modification, the agitator is adapted to the suction of the pump by use of an extension shaft.

The MPP agitator option was specifically designed to loosen/breakup solids that would normally clog the slurry flow in the suction passage. It prevents the very situation in which conventional pumps fail. The rotating cutter blades of the built-in agitator will move - from rest, material up to 60% solids by weight into the impeller and through the pump. The combination of the agitator, the closed impeller with large* open passages, the replaceable front and back wear plates (all in 28% or 36% hardened high chrome iron), the heavy duty shaft/bearing configuration result in the most rugged slurry pump available in the world market.

* See pump curve for maximum particle size for each impeller opening size.

BENEFITS!



Cross Section Agitator

- * Eliminates downtime due to solids build up that choke off the suction of conventional pumps.
- * Promotes pumping of high concentrations of solids.

(MPP) impellers





200-65

(MPP) Mineral Processing HC Pump Parts



INTMPE, INC

International Material Standards

It is **INTMPE** Policy to produce cast components conforming to British and International standards and/or customers specifications. Quality controls and systems ensure conformity with these and will, as a minimum requirement, be in accordance with BS.EN.ISO 9002:1994, and will also embrace additional customer specific requirements as and when identified.

BS EN 1561 : 1997 FLAKE GRAPHITE IRONS

Used for general engineering castings requiring moderate strength and no ductility.

BS EN 1563 : 1997 NODULAR IRONS

Used for general engineering castings requiring greater strength and toughness than flake graphite iron castings.

BS4844 : 1986 ABRASION RESISTANT IRONS

Used in applications where abrasion resistance or high hardness is required i.e slurry pumps, grinding balls and earth moving equipment.

BS3468 : 1986 NI-RESIST IRONS

Used in applications where corrosion and/or heat resistance is desirable e.g valve equipment for use in corrosive environments such as salt water or the chemical industry.

BS3100 : 1991 CARBON STEELS

Used for general engineering castings.

CUSTOMERS OWN SPECIFICATIONS

We will produce to additional customer specifications if required.

INTERNATIONAL STANDARDS

We can produce to any International standard as required. Full details can be provided on request.

NATIONAL STANDARD	FLAKE IRONS	NODULAR IRONS	AUSTENITIC IRONS	WHITE IRONS	COMPACTED GRAPHITE IRONS
UK	BSEN 1561 1997	BSEN 1563 1997	BS 3468 1986	BS 4844 1986	
FRANCE	NF A32-101	NF A32-201	NF A32-301	NF A32-401	
GERMANY	DIN 1691	DIN 1693	DIN 1694	DIN 1695	
ITALY	UNI 5007	UNI 4544			
JAPAN	JIS.G. 5501	JIS.G. 5502			
USA (Canada)	ASTM A48	ASTM A536	ASTM A436 ASTM A439	ASTM A532	ASTM A482
NORWAY	NS11 100	NS 11 301			
SWEDEN	SS 1401	SS 14 07 17		SIS 14 04 57	
		SS 14 07 27	SIS 14 05 23	SIS 14 04 66	
		SS 14 07 32	SIS 14 07 76	SIS 14 05 12	
		SS 14 07 37		SIS 14 05 13	
DENMARK	DS 11 301	DS 11 303			

“ISO-9002 Certified Parts”

INTMPE Polyurethane technological Advances

System Description

Component A a mixture of polyols and activators

Component B consists of prepolymers based on MDI (diphenylmethane diisocyanate) and containing isocyanate groups.

Data for the Engineer

System 6020	6020/65	6020/75	6020/85	6020/95	Unit
Hardness	65±3	75±3	85±3	95±3	Shore A
Tensile Strength	25	40	50	55	N/mm ²
Elongation at Break	500	450	400	400	%
Tear propagation Resistance	25	45	50	70	N/mm
Abrasion	15	30	35	40	mg

Operating temperature range -30°C to +70°C (peaks up to + 90°C)

Polyurethane specific Weight: 1.15
Available colours: yellow

System SUPERELASTIC		Unit
Hardness	70±5	Shore A
Tensile Strength	13.5	N/mm ²
Elongation at Break	665	%
Tear propagation Resistance	19.5	N/mm
Abrasion	90	mg

Operating temperature range -30°C to +70°C (peaks up to + 90°C)

Polyurethane specific Weight: 1.15
Available colours: yellow



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