YANO ENGINEERING SUPPLIES PROJECTS BROCHURE

DESIGN & CONSTRUCTION

Yano Engineering supplies majors in the outright design and fabrication of offsite and onsite manufacturing systems aswel as modification of old systems for mining, manufacturing industries, and power stations. We further offer services for repairing such huge operating systems and supply of parts & other engineering consumables, which are necessary to keep them running.

We have teamed up with some of the biggest South African Design & Manufacturer of equipment. Specializing mainly in the following; Knife gates, Screw conveyors, Diverter valves, Vibrating Bin Discharge, Telescopic Loaders, Ribbon blenders and Louvre Dampers.

YANO ENGINEERING SUPPLIES

DAMPERS

Butterfly Dampers are available as motorised, pneumatic or hand operated units. They can be supplied with accurate positioning actuators or as a simple open / closed configuration. The shaft stubs are bolted to the robust damper blade. This allows the blade to be replaced.

Sealing strips are fitted to the damper casing and the damper blade closes against the strip. The damper blade and casing flanges are laser cut allowing for precision fitting holes and accurate alignment of the shaft stubs. The shaft stubs are fitted with stuffing glands to seal against a pressure differential where necessary.

The shaft stubs are bearing mounted and the no driven shaft can be fitted with limit switches. Standard sizes are available to match standard nominal bore ducting or pipework but non-standard diameters can be manufactured to suit. This is particularly relevant where an existing damper needs to be replaced

Material of construction is mild steel. Stainless steel and high temperature versions are available on request.

Standard sizes include 200, 250, 300, 400, 500, 600, 700 and 800.

YANO ENGINEERING SUPPLIES

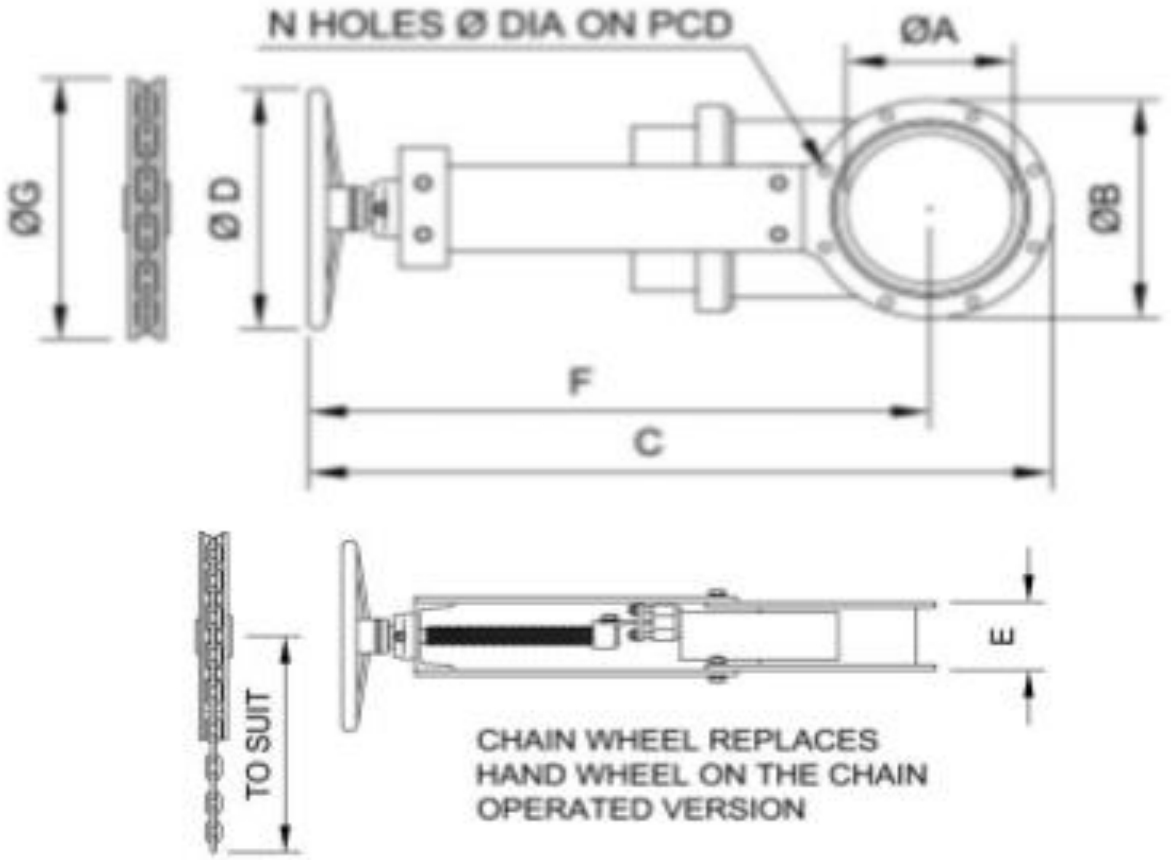
KNIFE GATES: Round Hand or Chain Wheel Operated

Round Knife Gates are manufactured in two basic forms – "Hand operated" or "Chain Wheel operated". Laser profiling results in a light but robust knife gate. The inlet ports are generously sized with a protective wear ring insert.

This wear ring ensures that contact of material with the sealing strip above the gate plate is minimized reducing wear and maintenance. The outlet port opening is larger than the inlet ensuring minimal chances of material hang-up.

The design of the stuffing box is such that the packing can be changed with the knife gate blade in position. The Hand Wheel operated valve uses a conventional hand wheel while the Chain Wheel operated version is ideal for hand operation where the gate is installed in an elevated position. Limiter proximity switches can be fitted as optional extras.

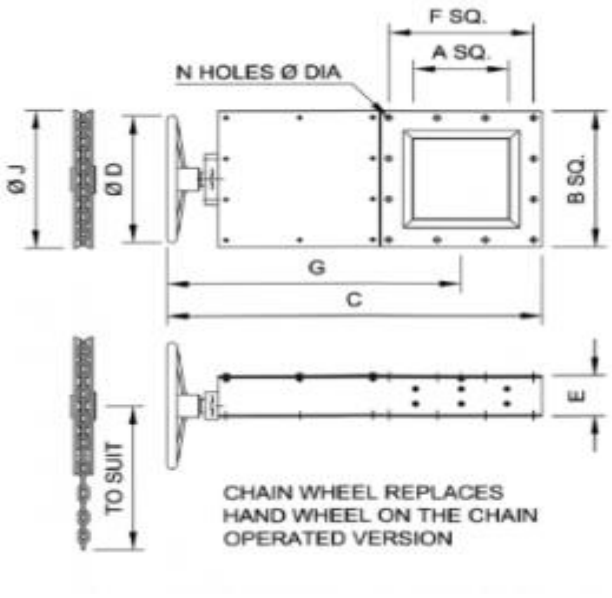
Knife Gates can also be supplied in mild or stainless steel.



Knife Gates - Round: Hand or Chain Wheel Operated

UNIT NO.	A	B	C	D	E	F	G	N	J	DIA	WEIGHT kg
KG-R-150-H/C	148	249	725	300	100	600	305	6	12	219	27
KG-R-200-H/C	183	300	800	300	100	665	305	8	12	270	33
KG-R-250-H/C	248	355	970	300	100	795	305	8	12	315	40
KG-R-300-H/C	315	405	1085	300	120	885	305	8	14	375	53
KG-R-350-H/C	325	440	1235	300	120	985	305	8	14	405	73
KG-R-400-H/C	385	510	1435	300	140	1155	305	8	14	465	105
KG-R-500-H/C	492	610	1565	300	140	1260	305	12	14	568	149

YANO ENGINEERING SUPPLIES



Standard sizes include 150, 200, 250, 300, 350, 400 and 500. Other sizes manufactured on request.

YANO ENGINEERING SUPPLIES

Knife Gates - Square: Hand or Chain Wheel Operated

UNIT NO.	A	B	C	D	E	F	G	N	J	DIA	WEIGHT kg
KG-0150-H/C	165	250	600	300	100	2x105=210	475	8	305	10	16
KG-0200-H/C	215	300	700	300	100	3x90=270	550	12	305	12	23
KG-0250-H/C	270	355	800	300	100	3x105=315	625	12	305	12	27
KG-0300-H/C	320	405	900	300	100	3x125=375	695	12	305	14	51
KG-0350-H/C	355	440	1005	300	100	3x135=405	785	12	305	14	70
KG-0400-H/C	400	510	1110	300	110	3x155=465	855	12	305	14	95
KG-0500-H/C	500	610	1310	300	110	4x142=568	1005	16	305	14	124

Knife Gates - Square: Pneumatic Cylinder Operated

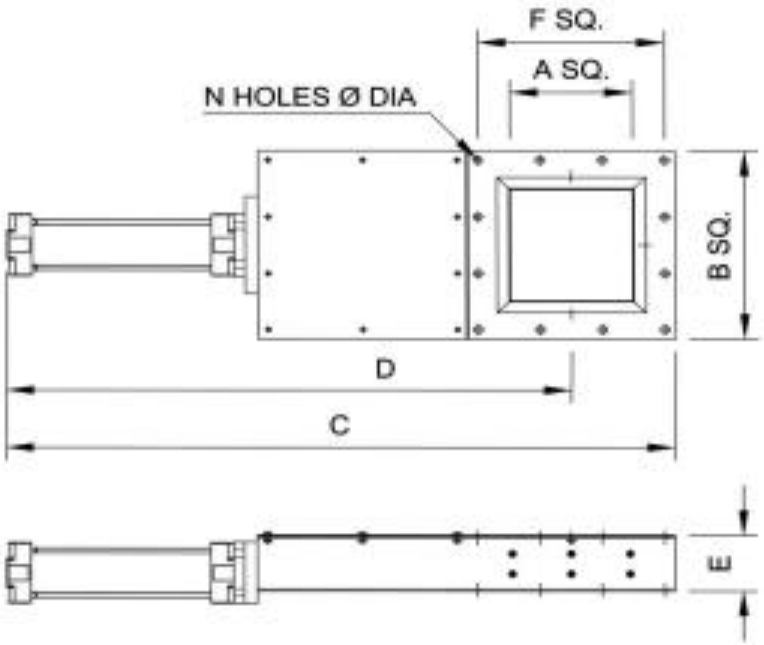
Pneumatic Knife Gates are ideal for automated applications or as a maintenance gate in hard to reach positions.

Laser profiling results in a light but robust knife gate. The inlet ports are generously sized with a protective cover shroud insert. This shroud ensures that contact of material with the sealing strips above the gate blade is minimised reducing wear and maintenance. The outlet port opening is larger than the inlet ensuring minimal chances of material hang-up.

The design of the stuffing box is such that the packing can be changed with the knife gate blade in position and only the cover plate removed for access.

Limit or proximity switches can be fitted as optional extras. For specialised applications a Motorised version is also available. All Knife gates can be supplied in stainless steel.

Standard sizes include 150, 200, 250, 300, 350, 400 and 500. Other sizes manufactured on request.



YANO ENGINEERING SUPPLIES

Knife Gates - Square: Pneumatic Cylinder Operated

UNIT NO.	A	B	C	D	E	F	N	H	DIA	WEIGHT kg
KG-0150-P	165	250	815	690	100	2x105=210	8	125	10	30
KG-0200-P	215	300	970	825	100	3x90=270	12	175	12	40
KG-0250-P	270	355	1125	950	100	3x105=315	12	230	12	50
KG-0300-P	320	405	1280	1080	100	3x125=375	12	280	14	65
KG-0350-P	355	440	1440	1220	100	3x135=405	12	320	14	85
KG-0400-P	400	510	1615	1360	110	3x155=465	12	365	14	108
KG-0500-P	500	610	1910	1610	110	4x142=568	16	465	14	125

YANO ENGINEERING SUPPLIES

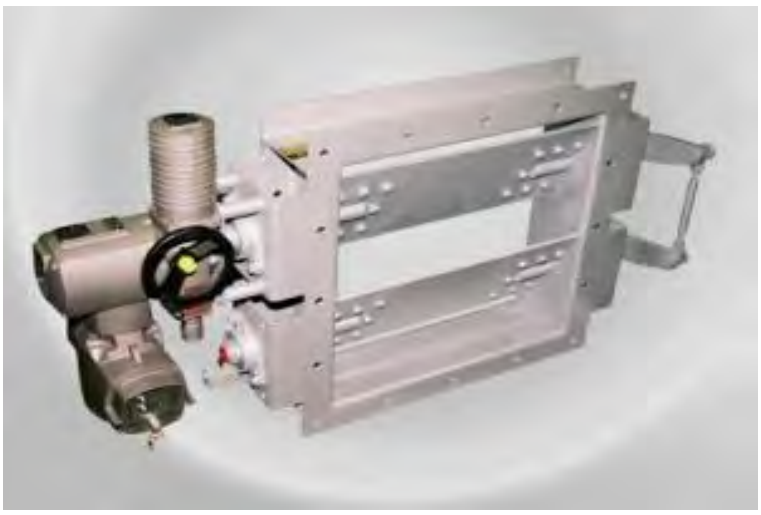
Louvre Dampers (Motorised / Pneumatic / Hand)

Louvre Dampers are available as motorised, pneumatic or hand operated units. They can be supplied with accurate positioning actuators or as a simple open / close configuration. The shaft stubs are bolted to the robust damper blades. This allows the blade to be replaced. The damper blade and casing flanges are laser cut allowing for precision fitting holes and accurate alignment of the shaft stubs.

An adjustable link mechanism allows for synchronisation of the individual blade angles. The shaft stubs are fitted with stuffing glands to seal against a pressure differential where necessary. The shaft stubs are bearing mounted and the non-driven shaft can be fitted with limit switches.

Standard round sizes are also available to match standard nominal bore ducting or pipework but non-standard diameters can be manufactured to suit. This is particularly relevant where existing dampers need to be replaced. Material of construction is mild steel. Stainless steel and high temperature versions are available on request.

Standard sizes include 200, 250, 300, 400, 500, 600, 700 and 800. Other sizes and configurations are supplied on request.



YANO ENGINEERING SUPPLIES

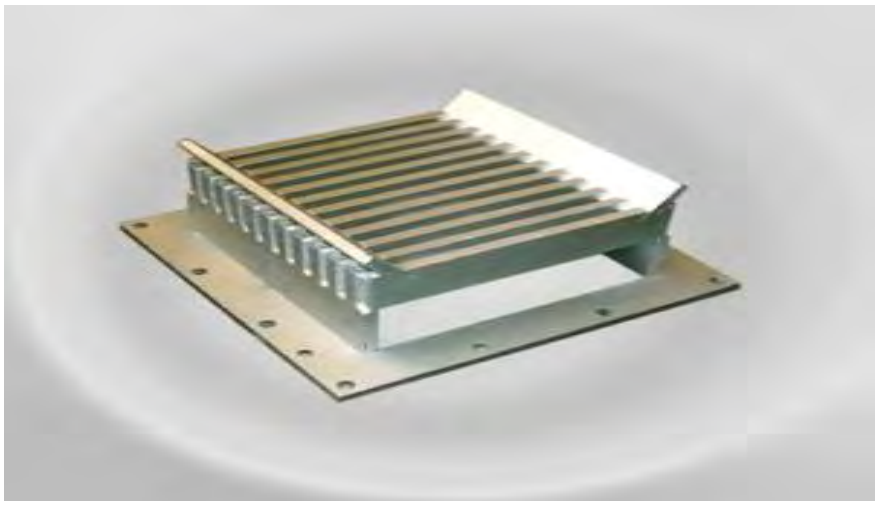
Lump Breakers

Lump Breaker flange dimensions and heights are consistent with the standard range of rotary vane feeders. This allows easy stacking of units to produce the required powder or granule-processing configuration. The maximum lump size at the exit is determined by the grid size below the toothed shaft. The grid aperture can be manufactured to customer requirement and is removable from the bottom for maintenance and replacement. A sturdy coupling dampens the shock loading of the gearbox during the lump breaking process.

The Lump Breaker is designed to crush harder lumps such as material that form hard crusts as part of a process or as a result of moisture. The unit is not designed to crush mineral rock. A dedicated crusher should be used for this purpose.

Optional extras recommended on the Lump Breaker is the rotation sensor on the non-driven side of the unit. Standard material of manufacture is mild steel with Hardox or Roqlast teeth, grid and liners.
Stainless steel units are also available.

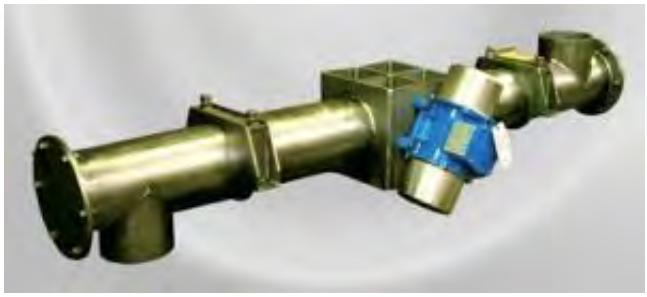
Standard sizes include 200, 300, 400, 500 and 600. Other sizes manufactured on request



Vibrating Feeders (VF) – Motorised

Vibrating Feeders are manufactured using the latest technology including CAD and laser profiling. Laser profiling is specifically used for the flanges, foot and motor supports and the rubber mounting brackets ensuring consistent, accurate and repeatable part size. Each feeder application is assessed independently and the feeder designed to suit the type of material and feed rate required. Vibrating Feeders are available as a tube or trough type and rely on two robust vibrator motors to generate the oscillating motion of the feeder. The feeders can either be foot mounted or suspended. The eccentric weight settings on the motors are adjustable to fine-tune the required feed rate.

For abrasive materials, the base of the infeed tube can be fitted with an abrasive resistant liner that will increase the life of the tube. The inlet and outlet are configurable to suit customer requirements. Vibrating feeders are available in mild steel or stainless steel. Feed into a vibrating tube feeder should preferably be controlled while the feed into vibratory tray feeders can be controlled via an adjustable spade plate on the hopper outlet. Vibratory tube feeders can be sealed by means of flexible couplings ensuring dust free operation.



Standard sizes include 100, 150, 200, 250, 300, 400 and 500. Other sizes manufactured on request.

YANO ENGINEERING SUPPLIES

VALVES

Our Stock Range Includes:

- Hi Pressure Industrial Valves
- Oil Refinery, Power Stations & Petro Chemical Valves.
- Gate, Globe, Wafer Check, Ball Valves, Relief Valves, Needle, Steam Flexi Wedge Gate Valves and many more

YANO ENGINEERING SUPPLIES

SINGLE & MULTI STAGE CENTRIFUGAL PUMPS

Centrifugal Pumps are the most popular and commonly used type of pump for the transfer of fluids. In simple words, it is a pump that uses a rotating impeller to move water or other fluids by using centrifugal force. These are the undisputed pump choice especially for delivering liquid from one location to another in numerous industries including AGRICULTURE, MUNICIPAL (WATER AND WASTEWATER PLANTS) INDUSTRIAL , POWER GENERATION PLANTS, CHEMICAL , PETROLEUM & MINING.

Centrifugal Pumps are useful since they can generally handle large quantities of fluids, provide very high flow rates (which may vary with the changes in the Total Dynamic Head (TDH) of the particular piping system) and have the ability to adjust their flow rates over a wide range.

Centrifugal Pumps are generally designed and suitable for liquids with a relatively low viscosity that pours like water or light oil. More viscous liquids such as 10 or 20 wt. oils at 20-21 Deg Celsius will require additional horsepower for centrifugal pumps to work. For viscous liquids of more than 30 wt. oils, positive displacement pumps are preferred over centrifugal pumps to help lower energy costs.

Depending on the number of Impellers in the pump, pumps can be classified as per the following:

Single Stage – A one-impeller pump, single stage pump has a simple design and easy maintenance. Ideal for large flow rates and low-pressure installations. They are commonly used in pumping services of high flow and low to moderate TDH (Total Dynamic Head).

Two-Stage – This type of pump has to impellers operating side by side which are used for medium head applications.

Multi-Stage – pump has three or more impellers in series for high head services.

Cast Iron Horizontal Centrifugal Pump, 0.5 HP, Electric

YANO ENGINEERING SUPPLIES

Product Specification

Power Source	Electric
Frequency	50 Hz
Voltage	220-240 V
Material	Mild Steel
Max Flow Rate	700 m3/hr

Applications:

- Chemical Process Industries
- Fertilizer Plants
- Bulk Drugs and Pharmaceutical
- Heating and Air Conditioning Plants
- Sugar Plant
- Water Supply
- Pulp and Paper
- Cement
- Agriculture Textile
- Jet Dyeing
- Organic & Inorganic Liquids Refineries
- Dyes & Intermediates
- Effluent Treatment Plants
- Cooling Towers
- Fire Fighting
- Power
- Steel
- Thermic Fluid

YANO ENGINEERING SUPPLIES

Cast Iron, Stainless Steel Horizontal Centrifugal Pump, 1450/1750/2900/3500 Rpm, Electric

Product Description:

These Pumps are with Mechanical Seal of SS316, Teflon, Graphite or Conventional Gland Packing. Semi open type Impellers, a wide range sizes from 19 to 100 mm, Head from 1 M to 60 M. Self-priming attachment are fitted wherever desired.

Product Specification

Material	Cast Iron, Stainless Steel
Power Source	Electric
Motor Speed	1450/1750/2900/3500 RPM
Maximum Temperature	105 deg C
Frequency	50-60 Hz
Max Flow Rate	1600 m3/H
Max Pump Head	160 m
Max Working Pressure	2.5 MPA

Multi –Stage Centrifugal Pumps

YANO ENGINEERING SUPPLIES

High Lift, High Volume Multi Stage Centrifugal Clear Water Pumps

Self-Balancing Multi –Stage Centrifugal Pump: Units are suitable for pumping clear water at a maximum temperature of 40* Deg Celsius. They represent a major advance in high lift multi-stage pump technology and are designed to meet the stringent demands of modern day mine dewatering methods.

GSB250
Operates at 1490 rpm, pumping to heads of 1 500 metres at a volumetric output of 240 litres per second.

GSB200
Operates at 1490 rpm, pumping to heads of 1 330 metres at a volumetric output of 120 litres per second.

GSB 150
Operates at 1490 rpm, pumping to heads of 650 metres at a volumetric output of 60 litres per second.

GSB 150
Operates at 2980 rpm, pumping to heads of 2 100 metres at a volumetric output of 105 litres per second.

Sliding Roller Bearing Multi-Stage Centrifugal Pump

Self-Balancing Multi –Stage: SB pump units, which utilise non-friction, heavy duty ball and roller bearings to support the rotating element were successfully introduced to the market. As a result of this innovation, all standard balance disc centrifugal multi-stage pumps can now be converted from white metal bearing arrangements to the non-friction, heavy duty sliding roller bearings (SRB).

FEATURES Heavy duty sliding roller bearings, rating 40 000 hours, with elongated inner race allow for axial movement of the rotating element in the course of normal balance disc wear.

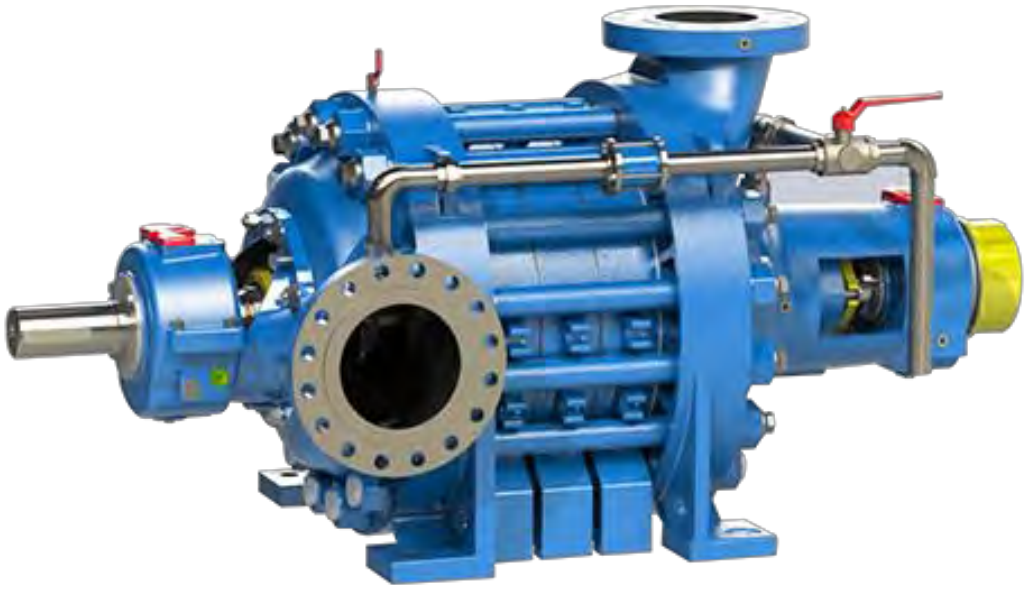
A water flinger disc minimises water flow along the shaft to the bearing housing from the gland sealing arrangement. Labyrinth seals on the bearing housing prevents ingress of water and dirt into the bearing housing.

Positive oil lubrication is ensured by incorporation of an oil ring in the bearing housing.

HP SERIES

High Performance Centrifugal Pump

YANO ENGINEERING SUPPLIES



Robustly constructed to withstand the harshest mining environments, the pumps embody modern Hydraulic design principles.

HIGH LIFT, HIGH VOLUME – MULTI-STAGE CLEAR WATER PUMPS

The HP high lift, horizontally design multi-stage centrifugal pump units are suitable for pumping water at a maximum temperature of 40* Deg Celsius and operate at ***1490rpm,*** pumping to heads of ***1 200 Metres*** at a volumetric output ***of 200 Litres per second.***

OTHER SERVICES

Pneumatics & Hydraulics Components for repairs and general maintenance

Please contact us for data, drawings, material type and specifications.

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