

SPP PUMPS IN SUGAR



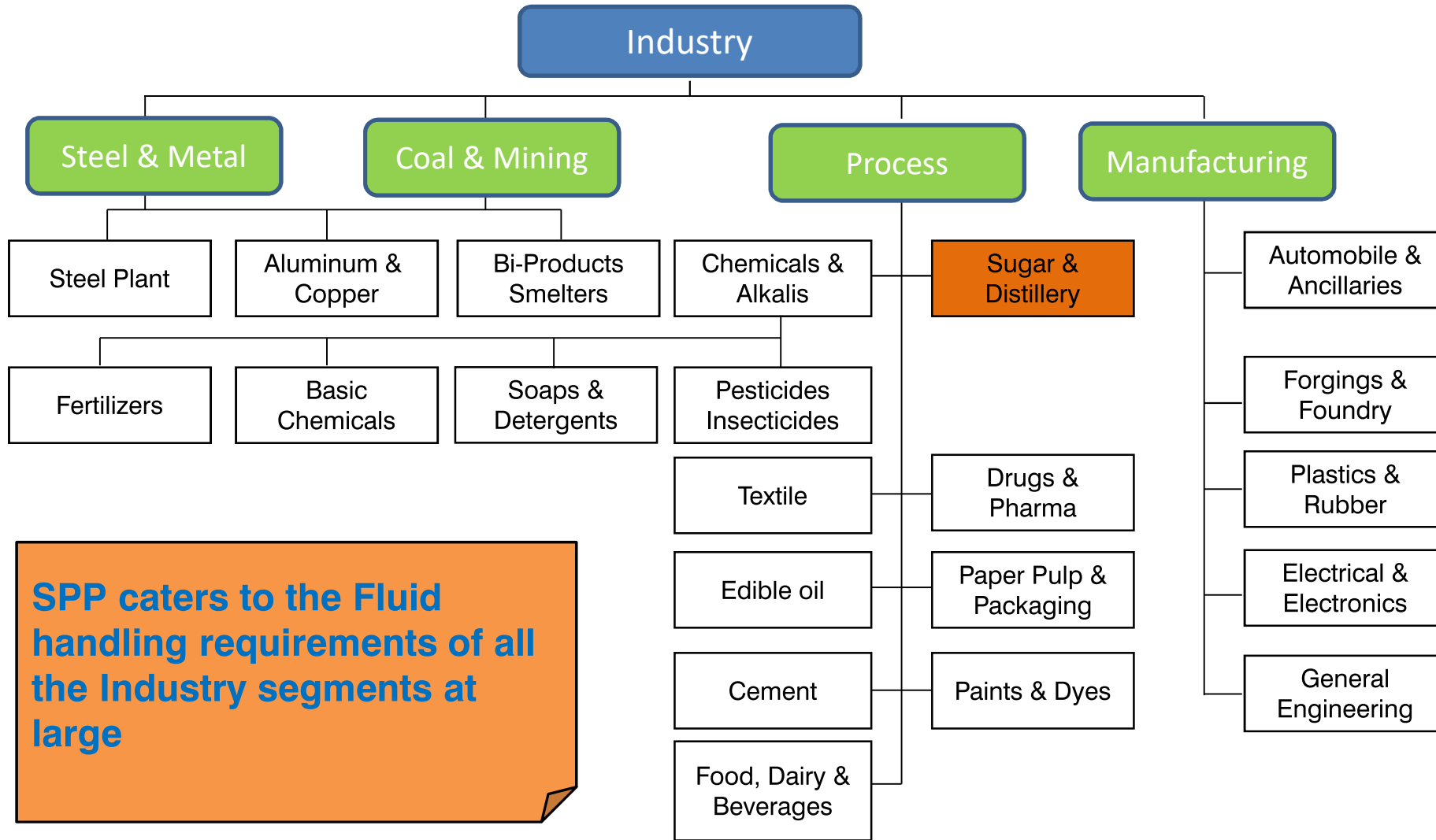
Pumping Solutions



Industry Sub-segments Addressed



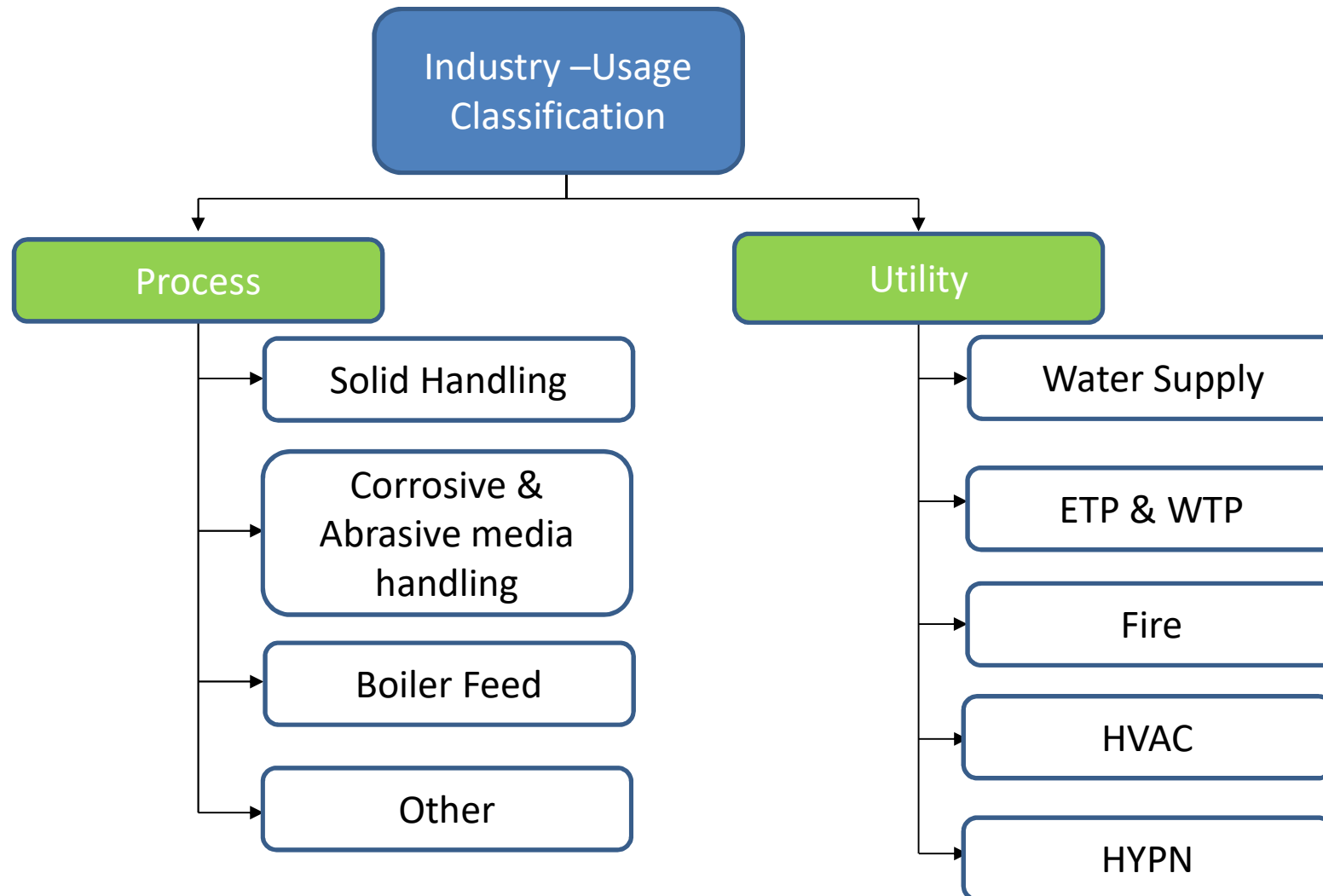
Enriching Lives



Industry – Usage Classification



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	CAPACITY →	2500 TCD	3500 TCD	5000 TCD	12000 TCD	15000 TCD
	SERVICE ↓	PUMP MODEL	PUMP MODEL	PUMP MODEL	PUMP MODEL	PUMP MODEL
mill units	IMBIBITION JUICE	SHM	SHM	SHM	SHM	SHM
	UNSCREENED JUICE	SHM	SHM	SHM	SHL	SHL
	SCREENED JUICE	KPD	KPD	KPD	KPD	KPD
	MASCREATION WATER / IMBIBITION WATER	KPD	KPD	KPD	KPD	KPD
clarifier	MUD RECIRCULATION	SHM	SHM	SHM	SHM	SHM
	MUD LIQUIDATING	SHM	SHM	SHM	SHM	SHM
	FILTRATE PUMP	SHM	SHM	SHM	SHM	SHM
	CLEAR JUICE	KPD	KPD	KPD	KPD	KPD
	FILTRATE PUMP	KPD	KPD	KPD	KPD	KPD
	CAKE WASH	KPD	KPD	KPD	KPD	KPD
boiling house	WEIGHED JUICE	KPD	KPD	KPD	KPD	KPD
	JUICE HEATER COND.	KPD	KPD	KPD	KPD	KPD
	SULPHATED JUICE	KPD	KPD	KPD	KPD	KPD
	COND. FOR EVA	KPD / CE / IL	KPD / CE	KPD / CE	KPD / CE / IL	KPD / CE / IL
	COND. FOR EVA1	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL
	COND. FOR EVA 2 & 3	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE
	COND. FOR EVA 4	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL	KPD / CE / IL
	SYRUP EXTRACTION	SHM	SHM	SHM	SHM	SHM
	PHOSPHATE SLURRY	KPD	KPD	KPD	KPD	KPD
	MILK OF LIME PUMP	KPD	KPD	KPD	KPD	KPD
	CAUSTIC SODA	KPD	KPD	KPD	KPD	KPD
	PAN CONDENSATE	KPD / CE	KPD / CE	KPD / CE	KPD / CE	KPD
	INJECTION PUMP	KPD / CE	KPD / CE	KPD / CE	KPD	KPD
	HOT & COLD WATER	KPD	KPD	KPD	DB	DB
	INJECTION WATER	MF / VT	ME / VT	MF / VT	MF / UPH / VT	ME / UPH / VT
	SYRUP PUMP	SHM	SHM	SHM	SHM	SHM
	SUGAR MELT	SHM	SHM	SHM	SHM	SHM
SPRAY WATER	MF / DBL	MF / DBL	MF / DBL	MF / UPH	MF / UPH	
HOT WATER PRD	RKBF / CF / IL	RKBF / CF / IL	RKBF / CF / IL	RKBF / CF / IL	RKBF / CF / IL	
power house	RECIRCULATING JUICE	MF	MF	MF	MF	MF
	TRANSFER PUMP	KPD	KPD	KPD	KPD	KPD
	CONDENSATE PUMP	KPD	KPD	KPD	KPD	KPD
	STEAM DRIVEN PUMP	RKBF	RKBF	RKBF	RKBF	RKBF
	MOTOR DRIVEN PUMP	RKBF	RKBF	RKBF	RKBF	RKBF

PS







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Product Matrix








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Pump Type	Application	Product	Technical Specifications
End Suction Type: DB, KPD, GK, MF 120			Capacity: 7000 m ³ /h Head: 225 m
Side Channel Type: CF			Capacity: 35 m ³ /h Head: 350 m
Multistage Type: RKB / KBSM / KBDH			Capacity: 850 m ³ /h Head: 2500 m
Non-Clogging Type: SHM / SHL			Capacity: 13000 m ³ /h Head: 90 m

Product Matrix



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Pump Type	Application	Product	Technical Specifications
Hot Oil Type: AT			Capacity: 250 m ³ /h Head: 100 m
Sealless Magnetic Drive Type: ROMAK			Capacity: 300 m ³ /h Head: 150 m
Sump Pump Type: KPDS / SHS			Capacity: 1500 m ³ /h Head: 150 m
Utility Pump Type : UP / SCT			Capacity: 28000 m ³ /h Head: 330 m
Fire Pumps (UL/FM) Type: HYDROSTREAM			Capacity: 9000 m ³ /h Head: 275 m

Process: Hot Oil Handling

Pump: AT



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FOR WHERE
IT REALLY MATTERS



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Air cooled thermic fluid pump - AT

FEATURES

- The pump is integral foot mounted for a given temperature range
- More reliable for thermal isolation of volute casing
- Balanced or unbalanced maintenance free standard mechanical seal
- No additional cooling required (air cooled)
- Pump with grafoil packaging at stuffing box cavity and sintered bearing

APPLICATIONS

- Thermic fluid
- Synthetic oil
- Hot oil

OPERATING RANGE

Delivery Size	32 to 80 mm
Capacity	up to 250 m ³ / hr
Head	up to 100 meters
Working Pressure	16 bar
Temperature	up to +350° C

Process: High Pressure Multistage Pump: CF



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WHERE RELIABILITY
IS THE KEY



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SIDE CHANEL FLOW PUMP - CF

DIN EN 734

FEATURES

- Self Priming
- Capable of handling aerated liquids
- Low Noise level
- Pressure relieved vane impellers
- Seal-less designs available

APPLICATIONS

- Chemical & Process Industry
- Booster Service
- Air Conditioning and Refrigeration
- LPG and Other Petroleum Products

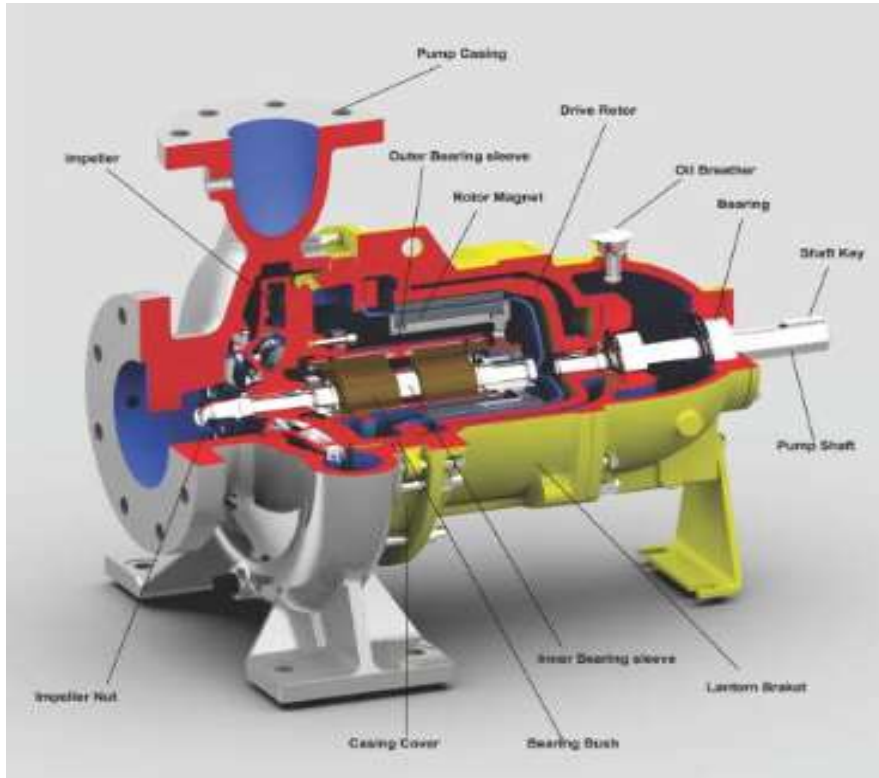
OPERATING RANGE

Capacity	35 m ³ /hr
Head	350 Meter
Temperature range	- 40 to 220°C
Working pressure	up to 40 bar

Process: Magnetic Drive Pump: Romak



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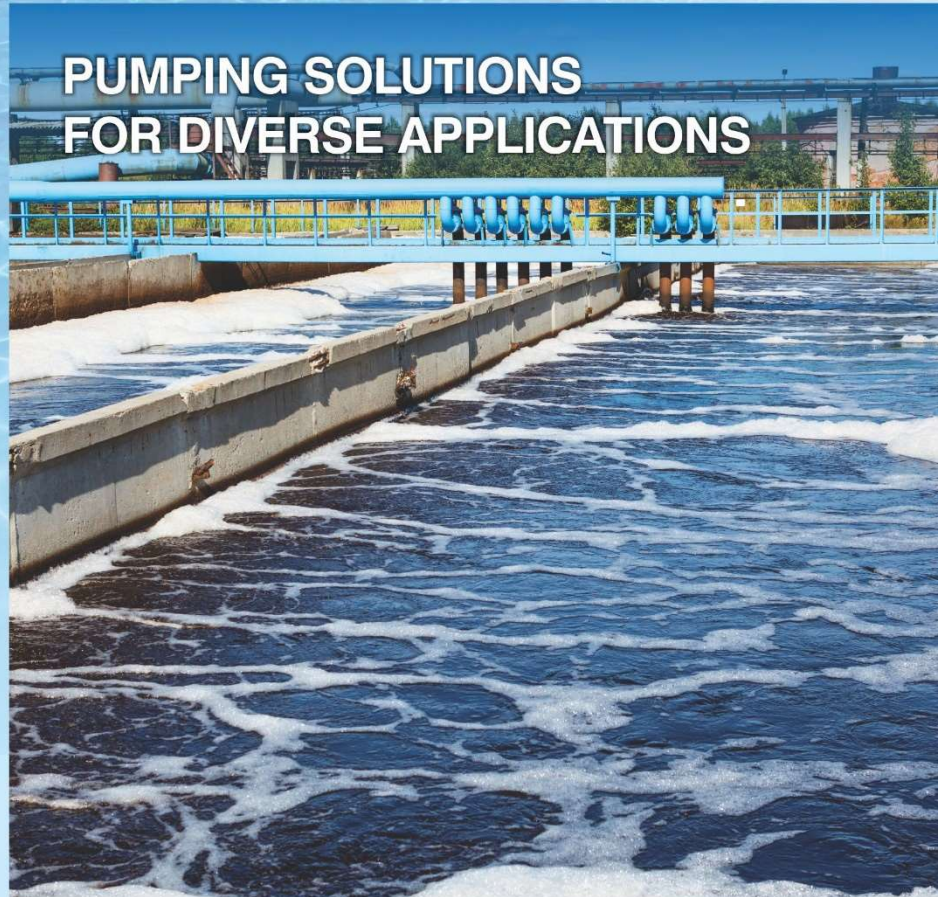
ISO 2858 / DIN EN 22858 / ISO 5100

Discharge capacity (Q)	:	Up to 300 m ³ /hr
Delivery head (H)	:	Up to 150 m (at 2900 rpm)
Available nominal speed (n)	:	2900, 1450, 980 rpm at 50 Hz and 3500, 1750, 1150 rpm at 60 Hz.
Max. operating pressure (P)	:	16 bar (25 bar) (Max. Suction pressure 5 bar)
Temperature range (t)	:	-50°C up to +180°C
Pump Sizes (DN)	:	32 mm to 100 mm
Total Number of Models	:	22

Process: High Pressure Multistage Pump: RKB



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**PUMPING SOLUTIONS
FOR DIVERSE APPLICATIONS**



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MULTI STAGE PUMP - RKB

FEATURES

- Better efficiency and NPSHR characteristics
- Compact in overall size and less weight
- Balancing disc and ring arrangement is eliminated, reducing maintenance cost
- Shaft is located centrally, the possibility of damage of entire rotating unit is totally eliminated

APPLICATIONS

- Boiler Feed
- Booster Service
- Fire Fighting
- Mine Dewatering

OPERATING RANGE

Delivery Size	32 to 250 mm
Capacity	850 m ³ / hr
Head	850 meters
Temperature range	(-)40 to 140°C
Suction Pressure	up to 10 kg/cm ² (g)

Innovative Solutions



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Lowest Life-Cycle Cost (LLC)[™] Pumps

- Focus on wire to water efficiency over entire life cycle
- 2-3% efficiency rise over conventional pumps and sustained high efficiency throughout life cycle
- Increased emphasis over post installation cost
- Optimised mechanical design to reduce downtime
- Coating to enhance efficiency over conventional product



Lowest Life-Cycle Cost (LLC)[™] Pump

Process: Corrosive Media Handling

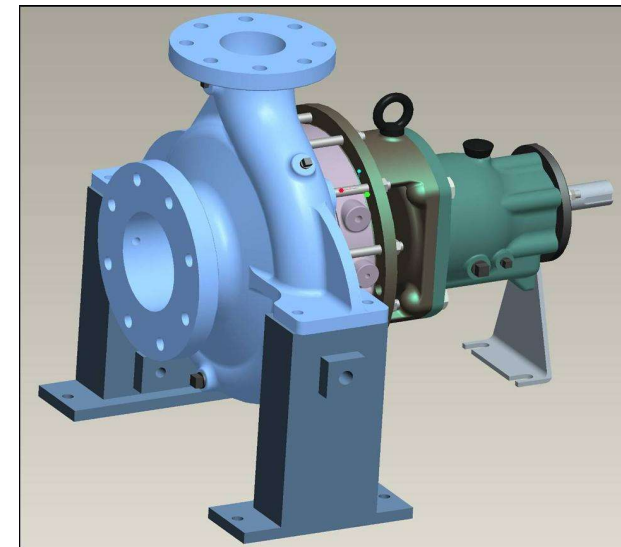
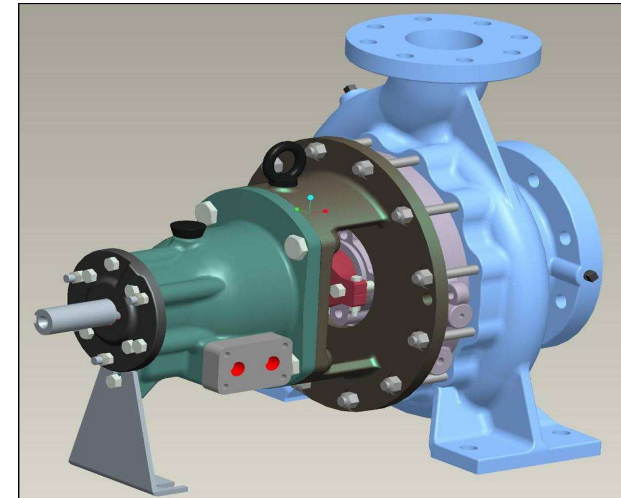
Pump: KPD / KPDS



Enriching Lives

Main Features:

- Centrifugal Back Pull out Design
- Conforming to DIN 24256 & ISO 2858
- Steam jacketing arrangement
- Centre line mounting arrangement for high temperature
- Interchangeability of components
- Wide variety of materials
- Sump pumps
- Replicast castings



Range:

- Delivery size : 20 mm to 200 mm
- Capacity : up to 1450 m³/hr
- Head : up to 150 m
- Temperature : - 50 °C to +350 °C
- Speed : 970,1450 & 2900 rpm

Process: Corrosive Media Handling

Pump: iCP



Enriching Lives

Main Features:

- Maintenance-free
- Zero leakage from Stuffing Box
- No soft Gland Packing or Mechanical Seal; no flushing
- Sealed Bearings; no lubrication to bearings
- Self venting design
- Completely protected shaft
- Energy Efficient Design
- Conforming to ISO 2858 & DIN 24256
- Back pull out design



Range:

- Capacity : up to 180 m³/hr
- Head : up to 55 m
- Temperature : up to 90 °C
- Speed : 1450, 1750 & 2900 rpm

Process: Solid Handling Pump: SHM



Enriching Lives

Main Features:

- Centrifugal Back Pull out Design
- Design confirming to ISO standards
- Can handle solid up to 105 mm size
- Four Type of Impellers to suit various duties
- Horizontal as well as Vertical Delivery
- Pumps with heavy duty antifriction Deep Groove Ball Bearings



Range:

- Delivery size: up to 200 mm
- Capacity : up to 800 m³/hr
- Head : up to 90 m
- Temperature: up to 140 °C.
- Speed : 970, 1450 & 1750 rpm

Process: Solid Handling Pump: SHL



Enriching Lives

Main Features:

- Centrifugal Back Pull out Design
- Design confirming to ISO standards
- Can handle solid up to 150 mm size
- Four Type of Impellers to suit various duties
- Horizontal as well as Vertical Delivery
- Pumps with heavy duty antifriction Deep Groove Ball Bearings



Range:

- Delivery size: up to 900 mm
- Capacity : up to 13,000 m³/hr
- Head : up to 82 m
- Temperature: -10 °C to 140 °C.
- Speed : 970, 1450 & 1750 rpm

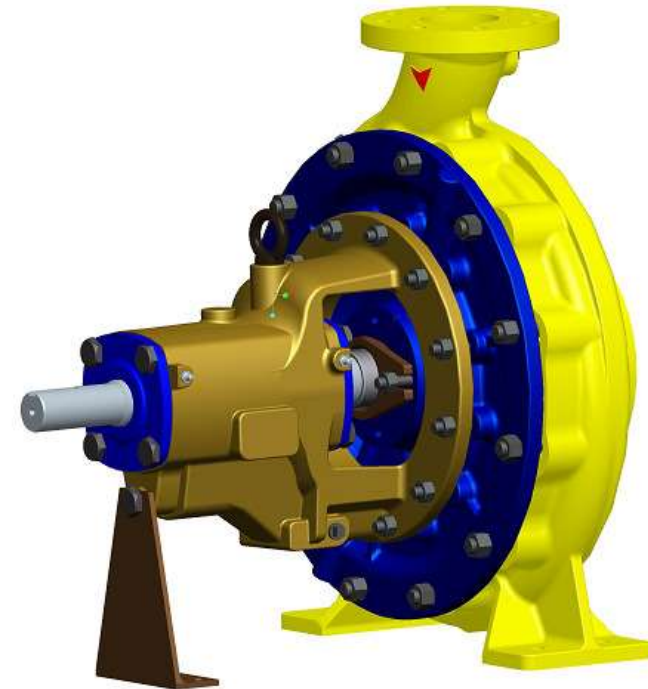
End Suction Pump: GK, CPHM



Enriching Lives

Main Features:

- Confirming to DIN 24256, ISO 2858 and ISO 5199
- Single stage with back pull-out type design
- Suitable for 3500 rpm
- Gland Packed / Mechanical Seal



Range:

- Delivery size : Up to 125 mm
- Capacity : Up to 750 m³/hr
- Head : Up to 150 m
- Temperature : -10 °C to 140 °C

Utility: Water Supply

Vertical Turbine Pumps - BHR/BHM/BHQ



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Main Features :

- Impeller Pullout Arrangement
- Bowl Pullout Arrangement
- Lubrication:
 - Self Water Lubrication
 - External Water Lubrication
 - Oil Lubrication

Range :

- Delivery size : Up to **2200** mm
- Capacity : Up to **55,000** m³/hr
- Head : Up to **200** m



Utility: Water Supply

Horizontal Split Case Pump: SCT & iHT



Enriching Lives

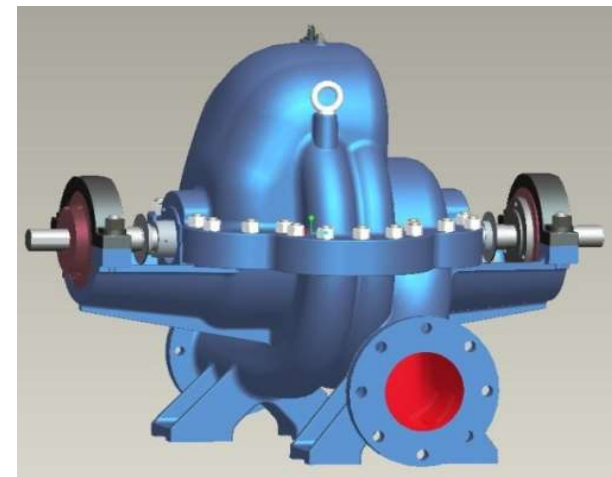
Main Features:

- Higher overall efficiency
- Vibration free operation
- Better suction performance
- Very low maintenance/down time
- Dual drive feature for iHT series
- Pump can be rotated CW or CCW as per the demand for iHT series
- Low Life cycle cost pump (iHT series)



Range:

- Delivery size up to 1100 mm
- Capacity up to 4,500 m³/hr.
- Head up to 330 metres
- Temp. up to 100 °C
- Speed 730, 970 ,1450 & 2900 rpm



Utility: Water Supply

Horizontal Split Case Pump: UP / UPH



Enriching Lives

Main Features:

- Rotating Assembly can be taken out for Maintenance without disturbing piping & motor
- Higher overall efficiency
- Vibration free operation
- Better suction performance
- Very low maintenance/down time



Range:

- Delivery size : 50mm to 1200 mm
- Capacity : Up to 28,000 m³/hr
- Head : Up to 180 m
- Temperature : Upto 100 °C
- Speed : Up to 2950 rpm

Utility: Water Supply

Mixed Flow Pump: MF



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Main Features:

- Centrifugal mixed Flow
- Enclosed & semi closed Impellers
- Delivery flange available in
 - Vertical Delivery end
 - Horizontal Delivery end
 - Oblique Delivery end
- Various Flange drilling Standards



Range:

- Delivery size : Up to 600 mm
- Capacity : Up to 7000 m³/hr
- Head : Up to 30 m
- Temperature : Upto 140 °C
- Speed : 580, 730, 970 & 1450 rpm

Utility: Water Supply

End Suction Pump: DB



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Main Features:

- End suction back pull out design
- Radial split casing
- Simple design

Range:

- Delivery size : 32 mm to 300 mm
- Capacity : Up to 2,100 m³/hr
- Head : Up to 100 m
- Temperature : Up to 90 °C
- Speed : 1450 & 2900 rpm



Utility: Effluent Treatment Plant

Submersible Sewage Pumps: NS



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Main Features :

- Non-clog two vane or single vane enclosed impeller
- Permissible solid size up to 85 mm
- Gland packed / Mechanical seal
- 50 HZ / 60 HZ availability

Range:

- Delivery size : Up to 300 mm
- Capacity : Up to 1,800 m³/hr
- Head : Up to 90 m
- Temperature : -10 °C to 90 °C

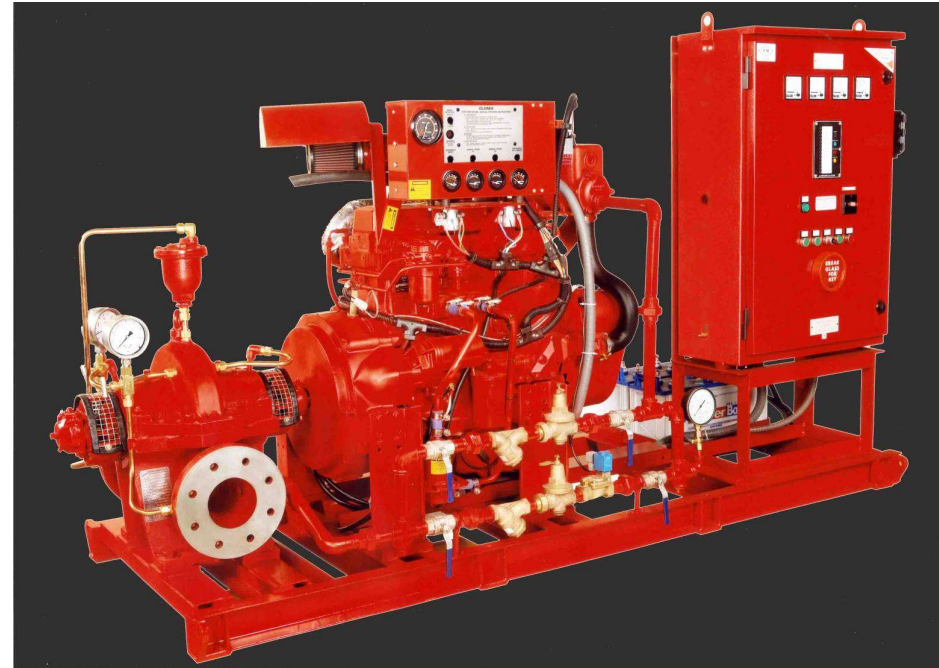


Utility: Fire Fighting



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- Confirms to NFPA-20 Standards
- Confirms to FM/UL standards
- Capacity up to 5000 USgpm
- Pressure up to 37 bar

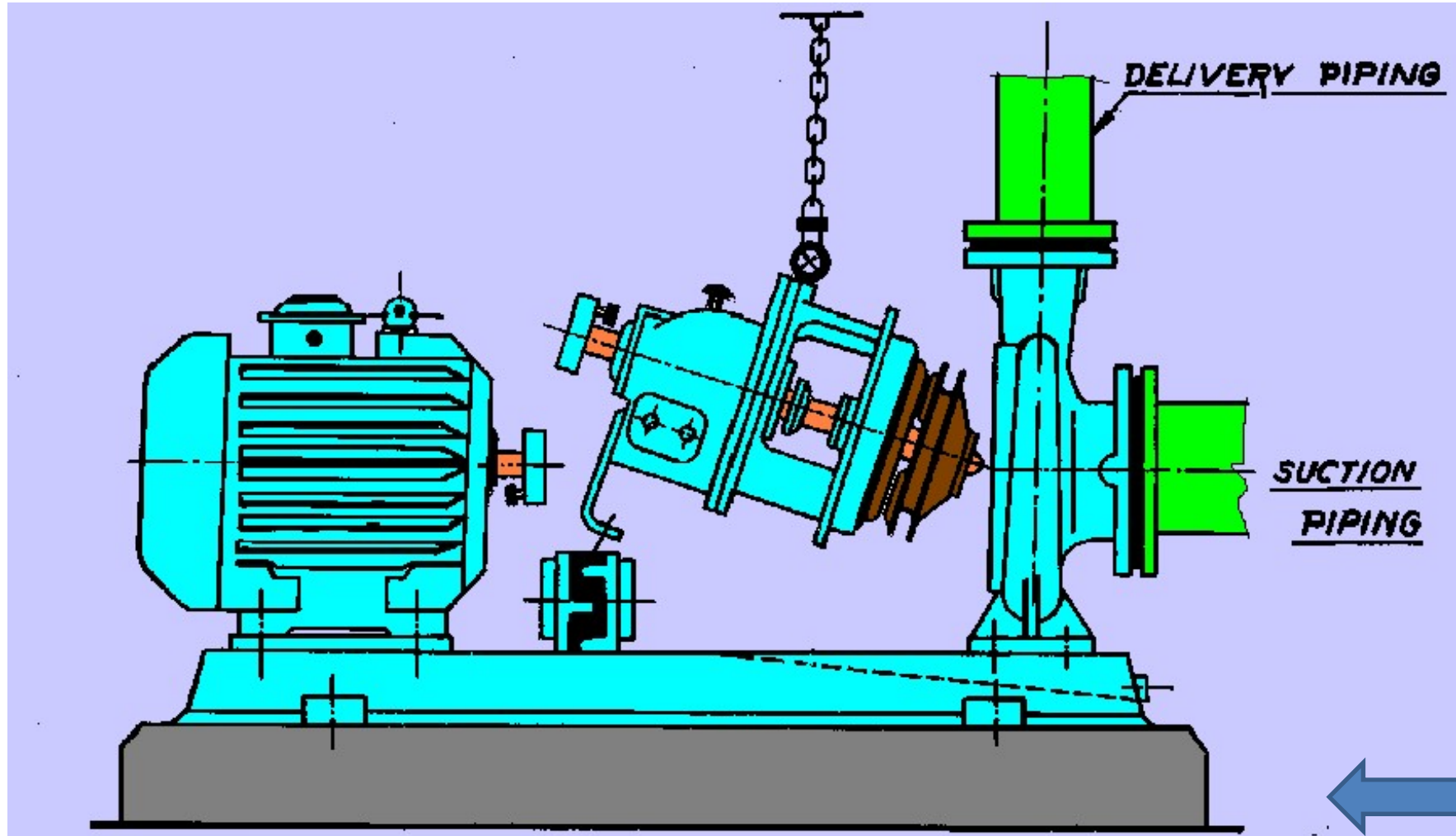




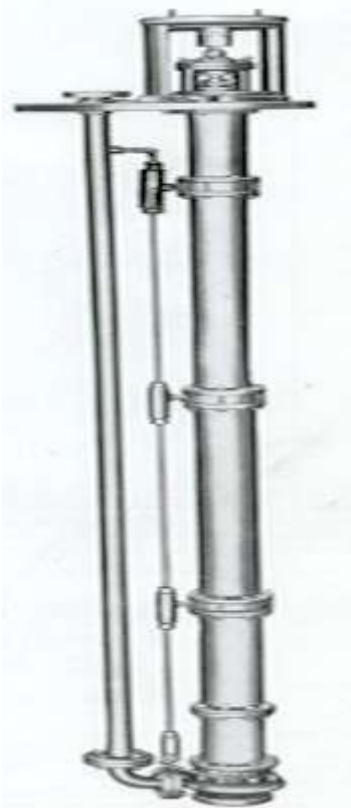
Fluid Management for a Better Tomorrow

THANK YOU

Back Pullout Arrangement

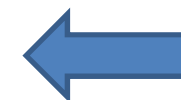


Sump Pumps



Range:

- Delivery size : 20 mm to 200 mm
- Capacity : up to 2,400 m³/hr
- Head : up to 92 m
- Column length up to 6.5 M



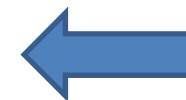
KPD Pumps – MOC Options



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Materials of Construction offered

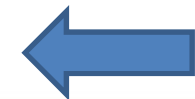
Major Material Grades (ASTM Standards)
CD4MCu
CD3MN
CE3MN
CD4MCuN
CN7M/CN7MS
R-55
CF3/CF3M/CF3Mn
CF8/CF8M
CG6MMN
CA15/CA6NM
WCB/LCB



MSMO Pumps



Single inlet and up to 3 outlets for catering different pressure zones

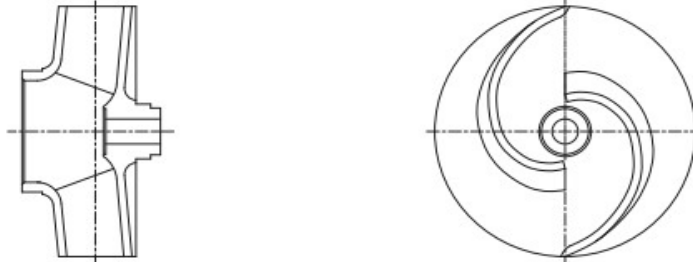


DIFFERENT TYPES OF IMPELLER FOR SOLID HANDLING PUMP TYPE 'SHM'

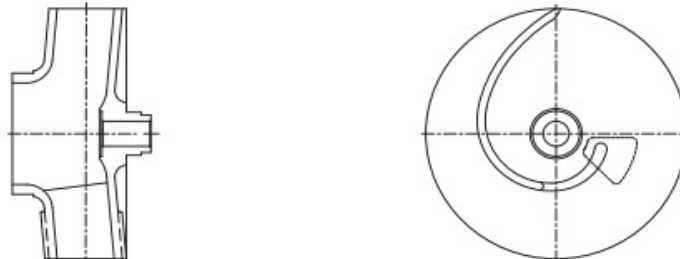


Enriching Lives

N- TWO VANES ENCLOSED IMPELLER



P- SINGLE VANE ENCLOSED IMPELLER



Q/QP - THREE VANES SEMIOPEN IMPELLER



R - EIGHT VANES FREE FLOW IMPELLER

