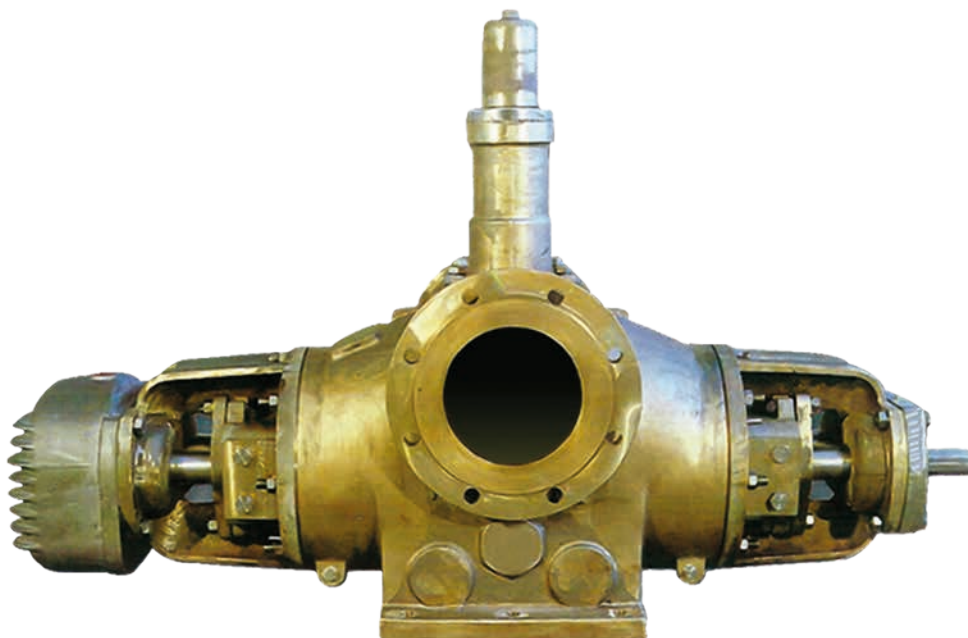




/ Pera-Prinz®
Twin Screw Pumps
Single and Double End
Positive Displacement Pumps
Series: HM - HD





PERA-PRINZ®

Pera-Prinz® is a trademark of 3P Prinz® srl



/ Pera-Prinz® Twin Screw Pumps – Single and Double End Positive Displacement Pumps HM – HD SERIES

The **PERA-PRINZ®** Screw Pumps are Rotating Positive Displacement Pumps, externally supported. One or Two Pairs of Screws, which operate without being in contact with each other, ensure a constant flow, pulsation-free, together with a high suction lift capability with very low NPSH values.

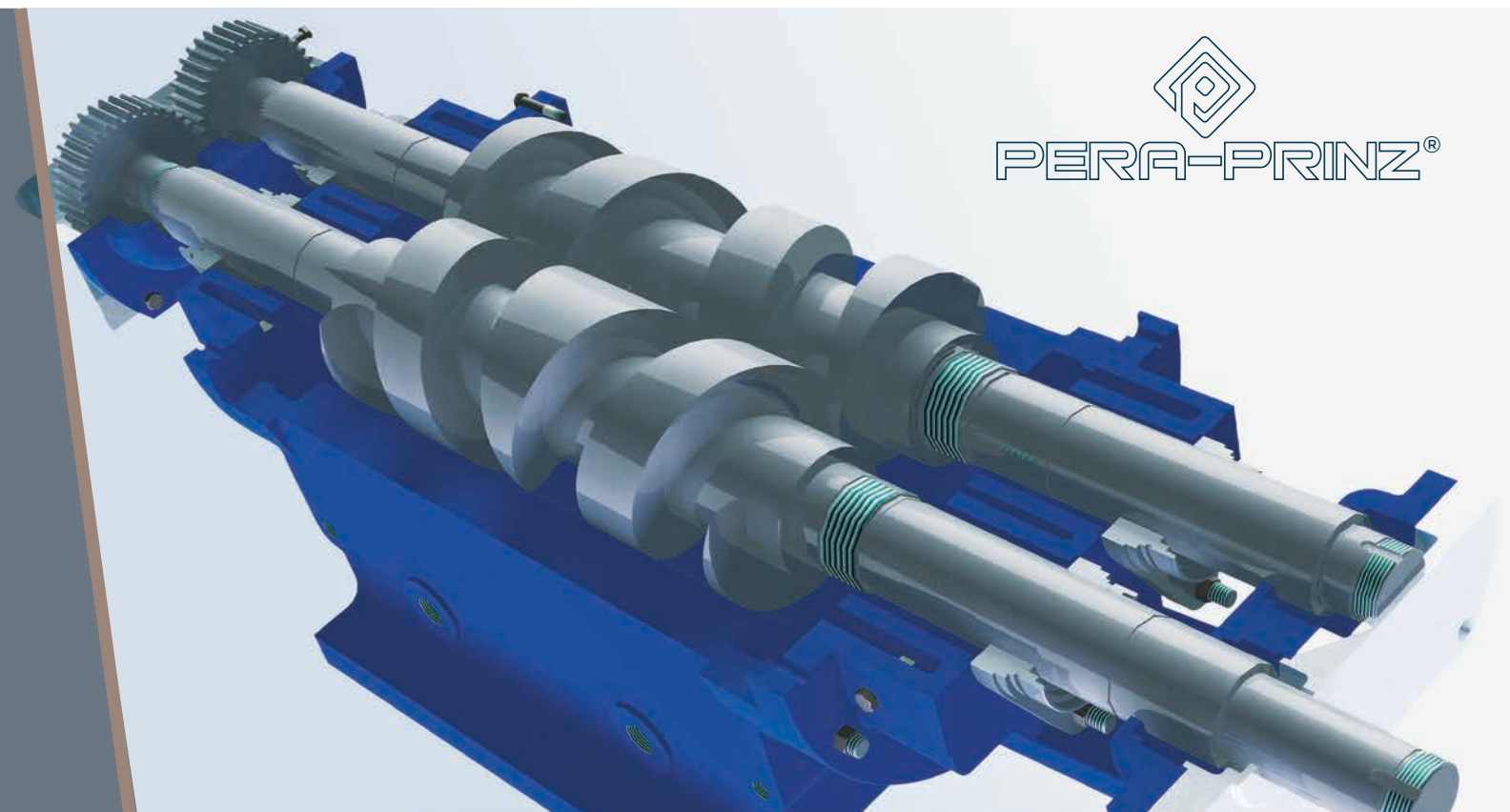
3P Prinz builds pumps that work the way you wish they would. They are proven and well established pumps in the market.

The Trim design is modular with a high degree of interchangeability of parts between their variants, inside the same Pump Series.

Each pump can be customized for a specific application allowing the customer to be served in an optimal way.

3P Prinz supplies to the customers a full range of documentation and certification depending on needs: ATEX, Material traceability 2.1, 2.2, 3.1 or 3.2.

On request special tests like Noise level test and Vibration test.



/ EXECUTIONS

- Standard
- API 676

/ ADVANTAGES AND GENERAL FEATURES

- **Self Priming**
- They ensure a **constant flow, pulsation-free**
- **High Suction Lift Capability** – generally from 7 to 8,5 meters (the pump NPSH being very low)
- Suitable to pump **fluids with low, medium, high and very high viscosity**, up to 35000 cSt (for example Bitumen, Tar, Lubricating Oils, Crude Oil, Fuels, Grease, Paraffin, Glues, Glycerin, Wax, Molasses, Syrups, Honey, Vegetable and Animal Fats, Vegetable Oils).

Very well suited to **pump very viscous liquids, sensitive to shear forces and turbulences** thanks to the low internal velocities given by the screws movement.

- **Low Noise Level and Low Vibrations**
- The Screws are Contactless and **Wear out is minimized**
- Capable of Operating at **High Angular Speeds** thanks to the screws low inertia, allowing a **high range of flow rates** if the pumps are driven by a Variable Speed Drive or by an Inverter
- **Constant Flow** regardless pressure changes (in particular when viscous fluids are pumped)
- Capability of handling a **Wide Range of viscosities and pressures** compared to the Centrifugal Pumps
- Flow can be reversed (**reversibility**) in low pressure applications, upon request
- **Entrapped Air or Gas in the Liquid are tolerated in small percentages** (multi-phase service on request)
- Capability of **Dry Running** for a limited period and in particular conditions
- **Compact Design and Dimensions, Easy Access for Maintenance**
- Flow Rates up to 1700 m³/h (7484 GPM)
- Pressures up to 24 bar (348 PSI) – executions at higher pressures upon request
- Temperatures up to 180°C (356°F)

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/ WORKING PRINCIPLE

The Screws Pair rotates inside the Pump Enclosure, creating several separate chambers and pushing the fluid trapped inside in accordance with the progression of the screws pitch.

The flow rate is particularly uniform and pulsation-free, and the pumped fluid flows in an axial direction (not circumferentially, as it happens in the centrifugal pumps).

Fluids that are sensitive to shear forces or turbulent flows are subject only to very limited stresses during the pumping phase:

Thanks to the absence of pulsations, to the low flow internal velocities, to the minimization of the centrifugal movements and to the absence of contact between the screw rotors, the pumped product does not suffer of changes of volume, texture, aspect and properties.

Thanks to the low inertia of the rotating parts, the Screw Pumps can work at rotating speeds higher than other Positive Displacement Pumps of equivalent volume chambers.

/ ADDITIONAL FEATURES

The Components of the PERA-PRINZ® Screw Pumps are machined with very accurate tolerances and with very high quality surface finishing, in order to reduce the clearance and minimize the leakages and slip.

The PERA-PRINZ® Screw Pumps can also be used as Dosing Pumps and Metering Pumps, in particular in applications in which the pressure and fluid viscosity are constant during the operation.

For Viscous Fluids, simply by changing the rotation speed, flow rates directly proportional to velocity can be achieved, with a good repeatability too.

Thanks to their working principle, the Screw Pumps can suction also limited percentages of Air, Gas or Vapors that are entrapped in the fluid.

The Screws can be either Solid-Piece or Coated / Overlaid, in order to be more resistant to Abrasion and Wear out.

The Radial and Axial Forces are balanced, either hydraulically, either by the permanently lubricated bearings that are mounted in a separate chamber from the pump casing, in order to extend their operating life (they are not in contact with the pumped fluid).

The movement between the two screws is transmitted by Gears in Oil Bath (not in contact with the pumped fluid), allowing a Silent and Long-lasting Operation.

The Reverse Flow is possible simply by reversing the axis direction of rotation: in case the reversible capability is required, on low-pressure applications, we can supply a suitable pump version.

We can also supply Mechanical Seals, Single or Dual, or Packing Type (Stuffing Box), or Cartridge type, or with Seal Flushing, or with Heating/Cooling Devices.

The Pump Casing can be supplied with Cooling or Heating Device, that can be Integral or with Welded Jacket.

The Pumps can be manufactured in Horizontal or Vertical Execution.

In Toxic or Dangerous Fluids Applications, we can supply the Screw Pumps Hermetically Sealed, complete with Magnetic Drive: this solution does not allow any leakage to the external environment, compared to the Mechanical Seals version that cannot assure zero emissions.

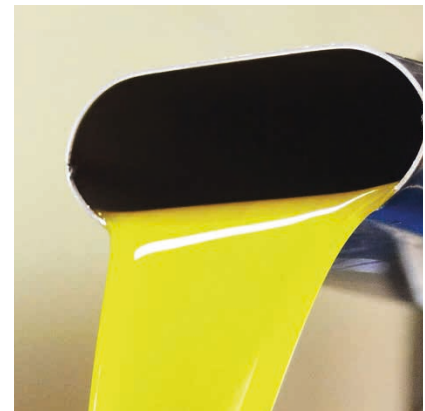


/ INDUSTRIES SERVED – SCREW PUMPS

Oil&Gas, Petrochemical, Chemical, Marine and Shipbuilding, Power Plants, General Industry, Paint Industry, Food & Beverage and Pharmaceutical.

The Screw Pumps have a wide range of applications, that include the following:

MAIN APPLICATION FIELDS			
Oil & Gas	Raw Crude Oil	Refined Crude Oil	Chemical Products
	Light and Heavy Hydrocarbons	Bitumen and Tar	Produced Water
Petrochemical Industry	Light and Heavy Hydrocarbons	Lubricating Oil	Bitumen and Tar
	Benzene and Toluene	Gasoline	Phenol
	Diesel	Fuel Oil	Crude Oil
	Fluids from the Refinery Process	Petrochemical Products	All types of Oils
Chemical Industry	Acids and Concentrated Acids	Solvents	Lubricating Oils
	Aliphatic Acids	Additives	Wax
	Glycerin	Latex	Lye
	Glues	Alkaline Solutions	Emulsions
	Soaps	Caustic Soda	Solvents
	Liquid Sulfur	Rubber Suspensions	Paraffin
	Polymers / Fibers Suspensions	Polyester	Resins
Marine and Shipbuilding	Transfer of Tanker Fluids	Fuel Oil	Diesel
	Cargo Load and Offload	Service Fluids and Water	Hydraulics
Power Plants	Light and Heavy Liquid Fuels	Fuel Burner Oils	
General Industry	Colouring & Pigmented Pastes	Thickeners	Additives
	Enamels and Paints	Emulsions	Hydraulics
Food & Beverage and Pharmaceutical	Vegetable and Animal Oils	Fruit Juices, Pastes, Jam	Syrups and Molasses
	Animal Fats	Lecithin	Cream
	Alcohol	Chocolate	Caramel and Fudge
	Sauces and Dough	Dairy Products	Wines



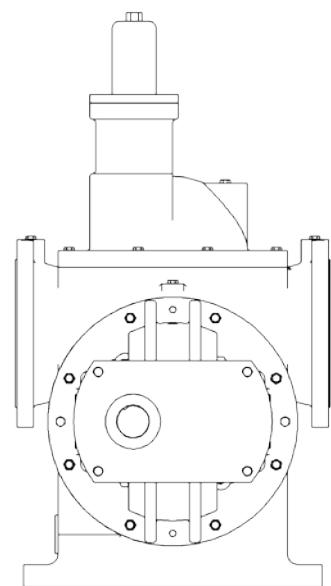
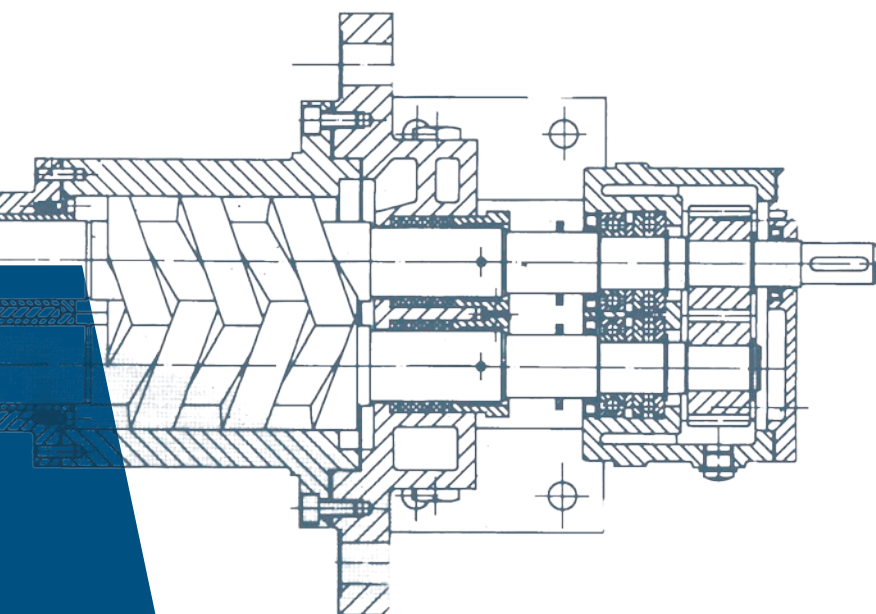
HM SERIES

Pumps with One Pairs of Screws – Single End

HM Series

This type of Pump, with one Pair of Screws, Single End, is suitable for pumping High Viscosity Fluids, which do not contain Solid Particles.

HM SERIES – MAIN SPECIFICATION	
Maximum manometric head:	Up to 24 bar [348 PSI] Higher Pressures available on request
Flow rates:	up to 500 m ³ /h [up to 2201 GPM]
Viscosity of the pumped fluid:	up to 35.000 cSt
Pipe Nominal Size DN:	from 40 to 100
Rotation speed:	up to 1750 rpm
Temperature range:	-20 / +180 °C [-4 / 356 °F]
Handling Solid Particles & Dirty Fluids:	No
Handling Aggressive Fluids:	Yes
Pulsations:	Minimized (almost zero)
Dosing capability:	Good
Flanged connections available:	ANSI 150 & 300 DIN PN 16, PN 25 UNI PN 16 (low pressures only)
Bearing types:	Bearings in Oil Bath



HD SERIES

Pumps with Two Pairs of Screws – Double End

HD Series

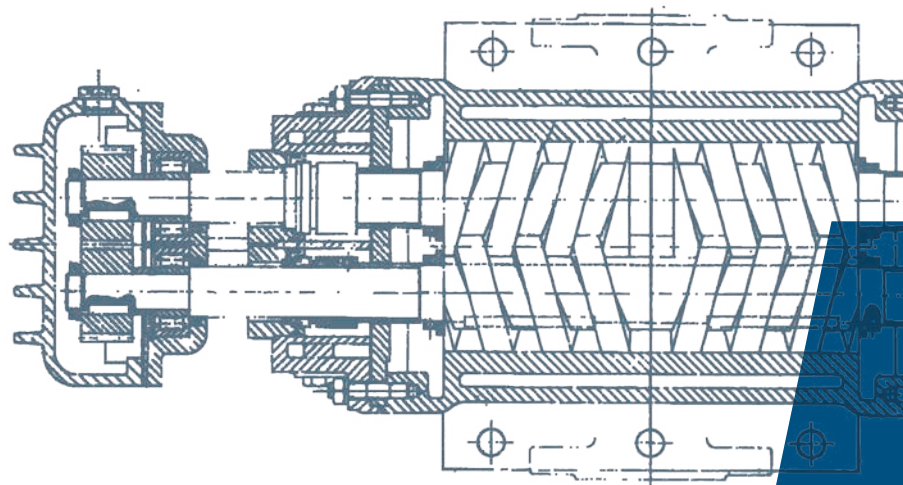
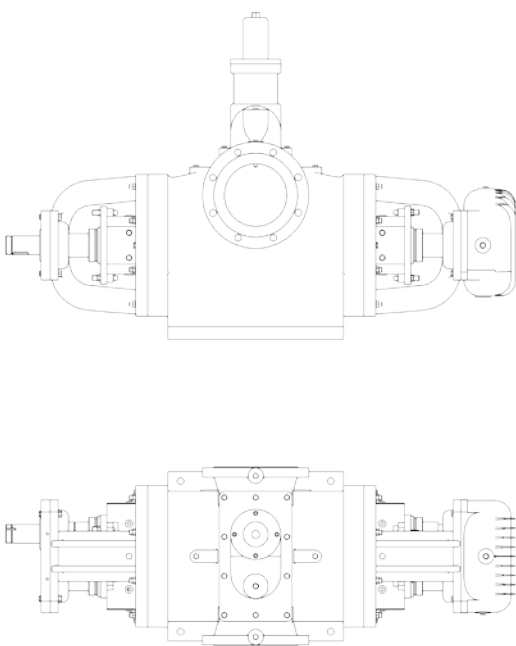
This type of Pump, with Two Pairs of Screws, is suitable for transferring fluids with High Viscosity, which do not contain Solid Particles.

The HD Series is supplied in the “Double End” Execution, that consists of Two Pumping Systems with a Single Pair of Screw each, having the same drive rotor; the Two Pairs of Screws are Opposite and Symmetrical, as they were Two Pumps with a Single Pair of Screw in Parallel.

The fluid enters into the Suction Port and is then split and transferred to the two opposite sides of the Pumping Elements, that push it towards the center through the several screws chambers.

The fluid is then discharged to the Supply Port, which is on the opposite side to the Inlet Port.

HD SERIES – MAIN SPECIFICATION	
Maximum manometric head:	up to 20 bar [290 PSI] Higher Pressures available on request
Flow rates:	up to 1700 m ³ /h [up to 7485 GPM]
Viscosity of the pumped fluid:	up to 35.000 cSt
Pipe Nominal Size DN:	from 50 to 600
Rotation speed:	up to 1750 rpm
Temperature range:	-20 / +180 °C [-4 / 356 °F]
Handling Solid Particles & Dirty Fluids:	No
Handling Aggressive Fluids:	Yes
Pulsations:	Minimized (almost zero)
Dosing capability:	Good
Flanged connections available:	ANSI 150 & 300 DIN PN 16, PN 25 UNI PN 16 (low pressures only)
Bearing types:	Bearings in Oil Bath



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/ STANDARD MATERIALS FOR SCREW PUMPS

The Selection of the Materials originates from the Handled Service Fluid, Temperature Range and Surrounding Environmental Conditions.

The Design Life of a Pump is given by the Right Materials Selection

Material Combinations	Body Material	Screws Material	Shafts Material
Standard Materials	Cast Iron	Carbon Steel	Carbon Steel
	Cast Iron	Stainless Steel AISI 316	Stainless Steel AISI 420
	Carbon Steel	Carbon Steel	Carbon Steel
	Stainless Steel AISI 304	Stainless Steel AISI 316	Stainless Steel AISI 420
	Stainless Steel AISI 316	Stainless Steel AISI 316	Stainless Steel 17-4 PH
	Nickel-Aluminium Bronze	Stainless Steel AISI 316	Stainless Steel AISI 420
	Low Temperature Carbon Steel	Stainless Steel AISI 316	Stainless Steel XM-19
	Carbon Steel	Duplex Stainless Steel	Duplex Stainless Steel
	Duplex Stainless Steel	Duplex Stainless Steel	Duplex Stainless Steel
	Super Duplex Stainless Steel	Super Duplex Stainless Steel	Super Duplex Stainless Steel
	Nickel-Aluminium Bronze	Monel	Monel
	Hastelloy	Hastelloy	Hastelloy
	Inconel®	Inconel®	Inconel®
	Titanium	Titanium	Titanium
Special Trim		HVOF Spray Coating (Tungsten Carbide)	
Hardening Coatings		CRA Weld Overlay (Corrosion Resistant Alloys, for example Inconel, Stellite etc.)	
		Chromium Carbide Coating	
		Ceramic Coating	
Custom Materials	Other Special Alloys and Material Combinations are available upon request		

Special Executions and Materials

3P Prinz is able to manufacture the complete Product Range with Special Materials for the Pumps Wetted Parts.



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/ SEAL TYPES

The PERA-PRINZ® Screw Pumps can be supplied with many seal types. They can be fitted with every type of Unified Mechanical Seal, Single or Dual, or with Flushing Systems in accordance with the API PLANS, or with Packing type Seals (Stuffing Boxes) or even with not unified Seals, like the Cartridge type.

MAIN TYPES OF SEALS FOR THE SCREW PUMPS
Unified External Mechanical Seals DIN 24960 Viton/Widia/Widia or Teflon/Widia/Widia
Unified External Mechanical Seals DIN 24960 Viton/Graphite/Stainless Steel or Teflon/ Graphite/Stainless Steel
Packing type Seals – Braided Teflon
External Mechanical Seals of several Brands like FLUITEN, MICROTEM, JOHN CRANE (upon request)
Mechanical Seals following Flushing Schemes according to the API PLANS
Mechanical Seals, Cartridge type, Single or Dual (upon request)
Other Seal Types and Executions upon request
MAG MAGNETIC DRIVE AVAILABLE

The scope of supply is not limited to the Pumps

3P Prinz supplies:

- Pump Unit, with or without Base Plate
- Pump with Reduction Gear or Variable Speed Drive, Motor and Base Plate

3P Prinz also supplies:

1. Skid type base frames or custom skid mounted
2. Instrumentation
3. On-Skid Piping with Valves and Accessories
4. Control equipment
5. Monitoring devices
6. Auxiliary equipment



OPTIONAL EXECUTIONS FOR THE PERA-PRINZ® SCREW PUMPS

Magnetic Drive: Total absence of any liquid leakage thanks to the magnetic drive. Suitable for dangerous and toxic media
In Accordance with API Standards (API 676)
High Pressure Versions
Heating or Cooling Jacket
Custom Made Enclosure
Custom Made Base Plate
Diesel Engine
Filter (In-Line or Bowl type) for filtering inlet particles
Pressure, Electric, Electronic and Digital Instrumentation (Brands and Models can follow specific requests from the Customer)
Electrical Control and/or Monitoring Cabinet (customizable and in several materials)
Cooled or Heated Bearing / Gears Oil Chamber
Skid complete with Piping, Manifolds, Valves and Accessories
High Performance and Long Life Mechanical Seals and Double Mechanical Seals
Special Execution for low or high Temperatures and / or Harsh Ambient Temperatures
Executions with a Double Seal Combination with Flushing or Recirculation In accordance with the required API PLANS

CERTIFICATIONS	
Products:	Electrical Group:
Standard Execution: CE	Standard Execution: CE and ATEX
On Request:	On Request:
ATEX	IECEX
API	UL / FM or CSA or AUS
Vibration Test	NEMA
Noise Level Test	Others on request (Diesel Engines etc.)
On the Materials:	
ISO EN 10204-2.1	
ISO EN 10204-2.2	
ISO EN 10204-3.1	
ISO EN 10204-3.2	





3P Prinz

3P PRINZ is based in Tuscany, Italy, 3P Prinz is a pumps manufacturing company.

The company is highly-specialized in engineering products and innovative technology, serving the demands of customers worldwide. 3P Prinz is the owner for the following Brands:

Pompe 3P - Hollow rotary disk and Gear Pumps

Pera-Prinz - Screws pumps

We believe that After sales service, reliability and efficiency are the base in this type of products and industry.

The pumps selection is based on cost-effective and energy-efficient pumping solutions.

Strong of its 60 years spent supplying Italy's top refineries, chemical, petrochemical, ship building, ecological and food industries, 3P Prinz has become an undisputed benchmark of quality and service.

Our richness is based on customers that require perfection, personalization, promptly!

We fulfill our customer's requirements and our customers fulfill our desire of growth at a steady rate!

Genuine spare parts

Base on 3P Prinz culture and philosophy the pumps reliability and life is base of a good investment.

In many case the pumps are the heart of the plant, so the efficiency is extremely important in order not to slow down the production process.

3P Prinz is able to ship spare parts worldwide within 48 hours.

Quality Assurance & Quality Controls (QA/QC)

3P Prinz commits to Quality.

The Quality assurance and Quality Controls are registered and independently audited to the ISO 9001 standard.

3P Prinz is certified by CSI.

For Enquiries or Further Information please contact: sales@3pprinz.com

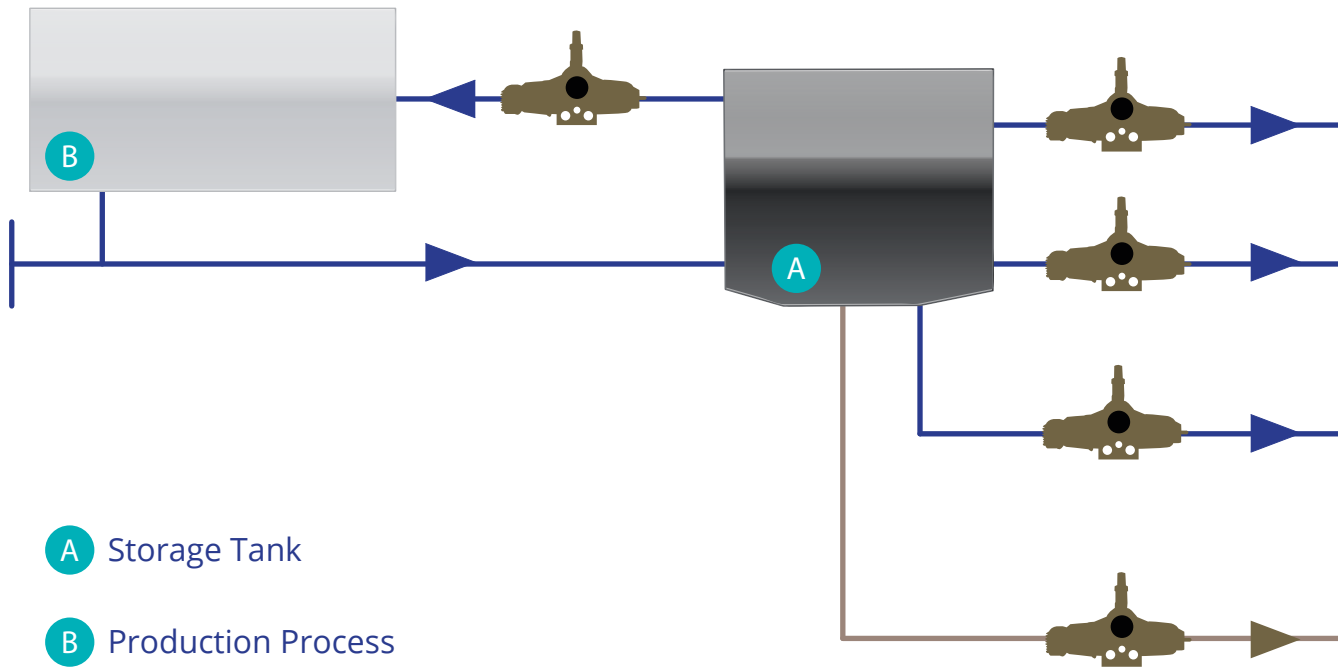


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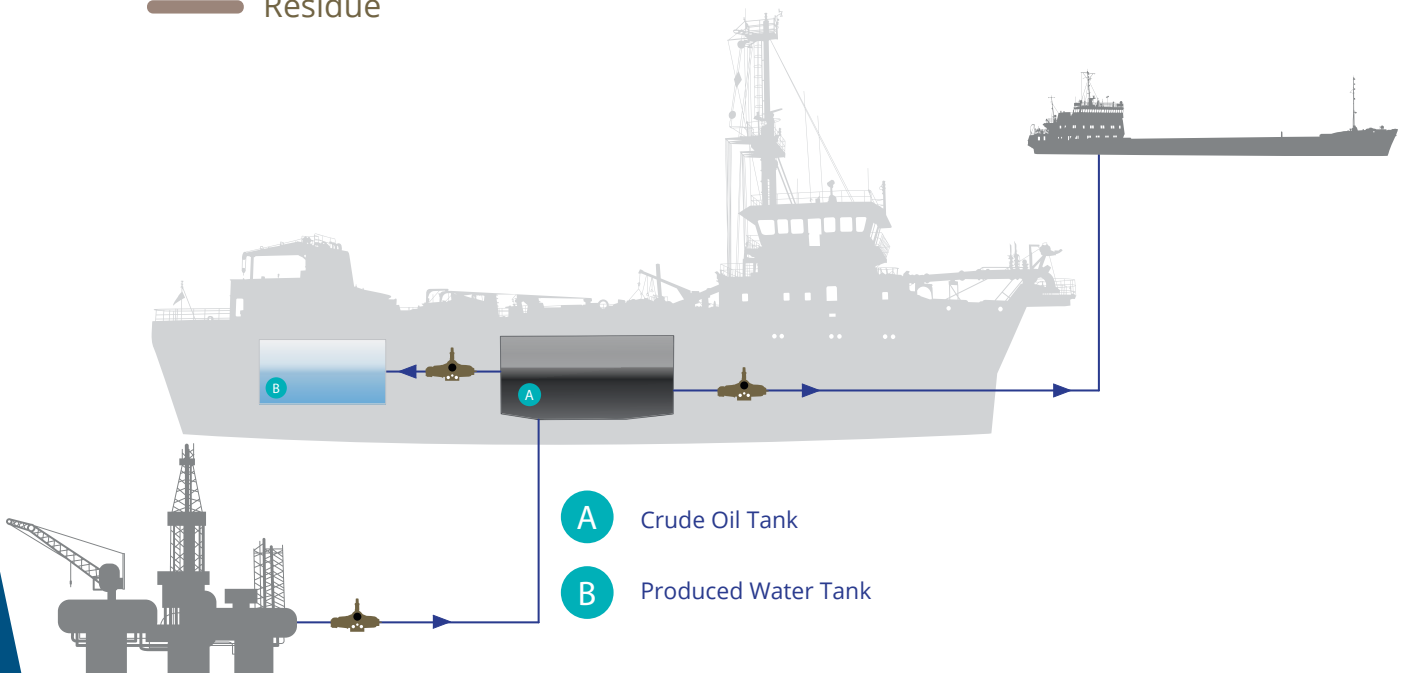


HM-HD SERIES Oil & Gas Industry Simplified Operation Scheme



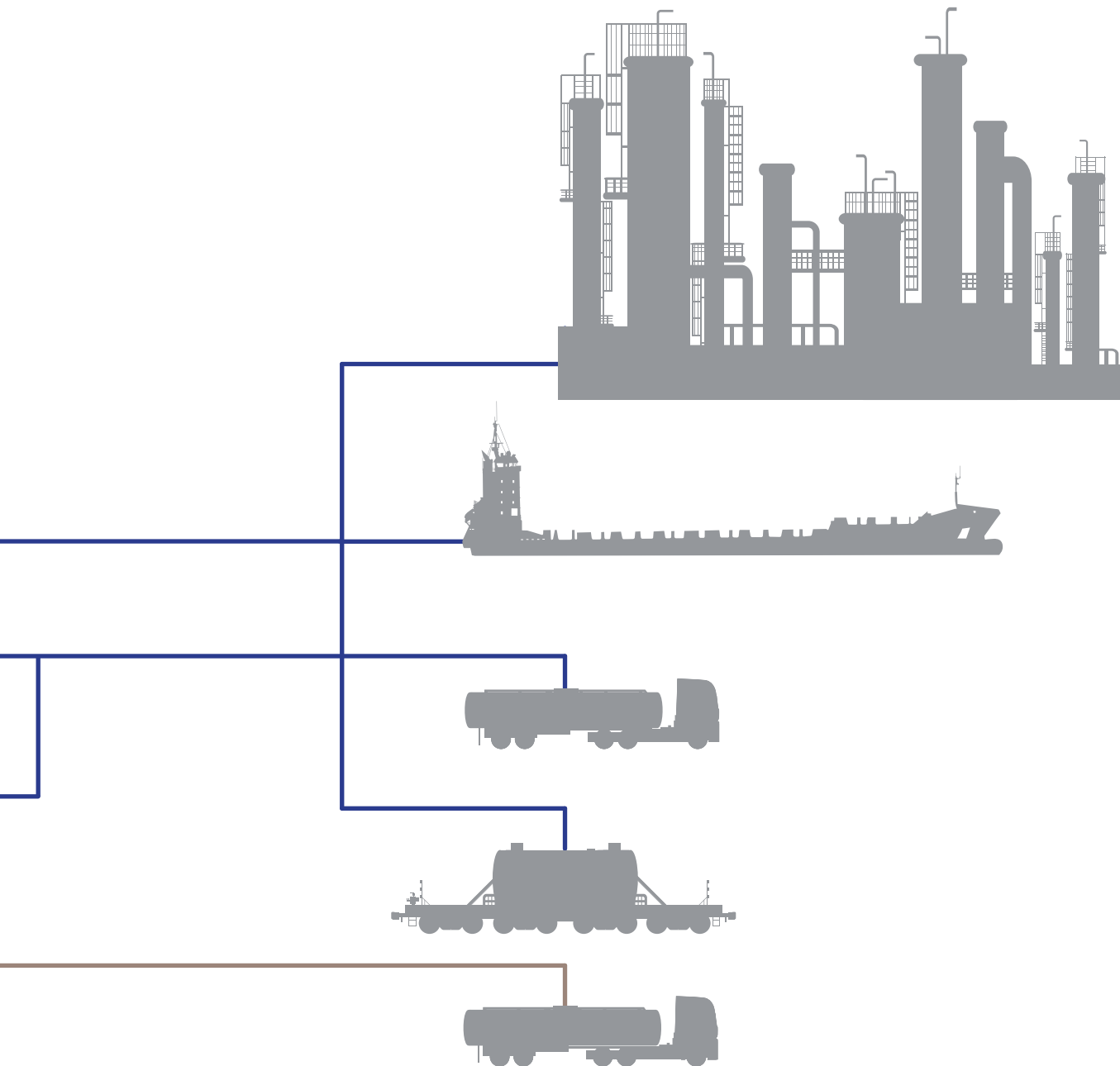
- A Storage Tank
- B Production Process

- Crude Oil
- Residue



- A Crude Oil Tank
- B Produced Water Tank





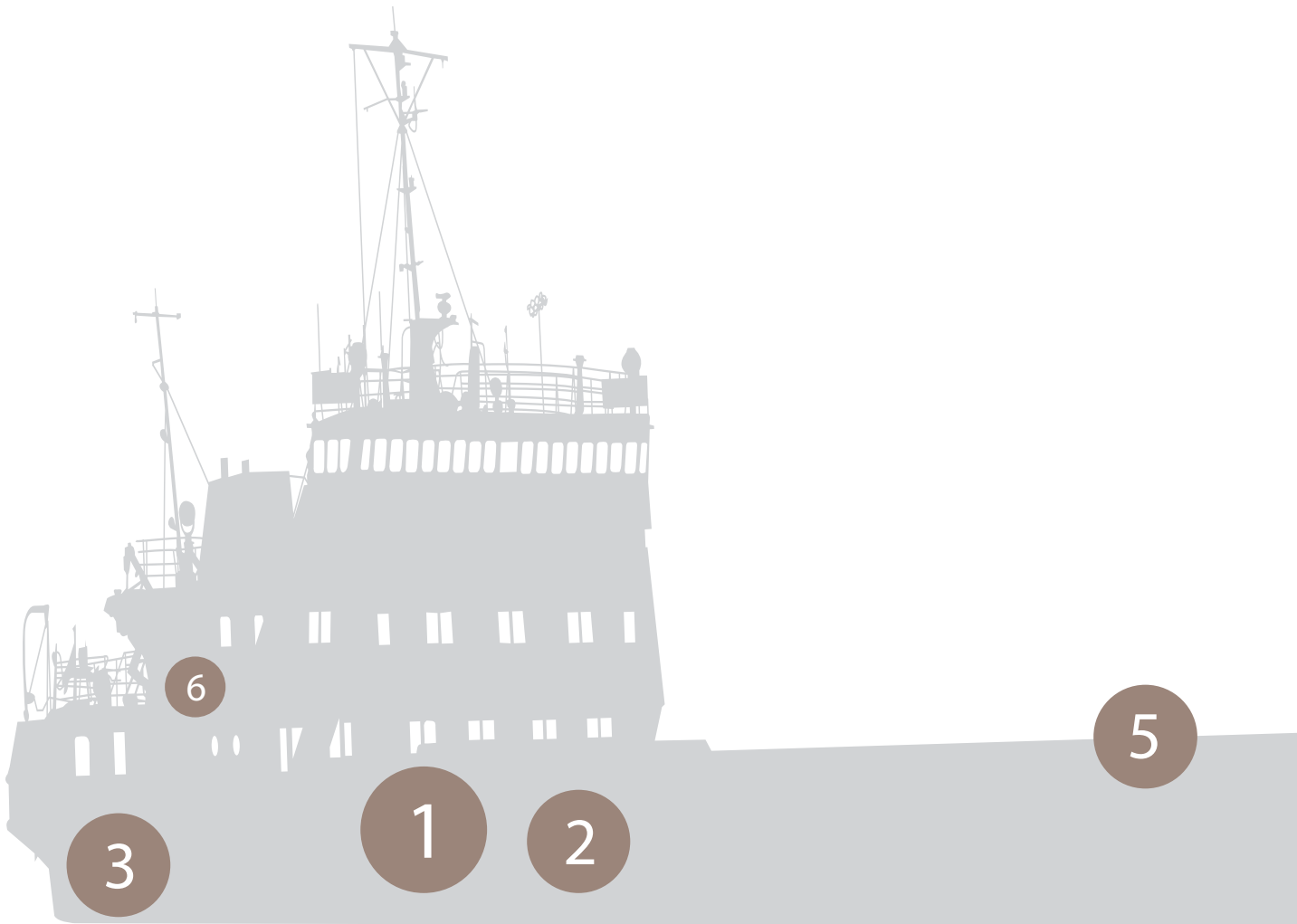
3P Prinz believes that buying a pump is a long term investment and not "One-Off Transaction".

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HM-HD SERIES Marine & Vessel Simplified Pumps Installation Scheme



Engine rooms fuel oil system

1

Engine rooms lube oil systems

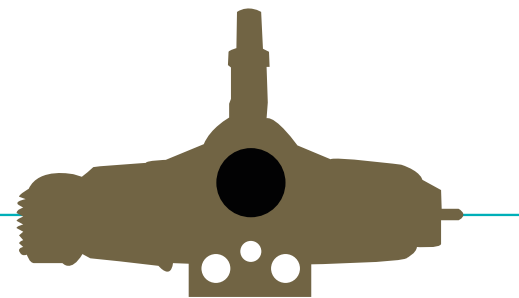
2

Steering gears and pitch propellers

3

Special applications and executions

6





4 Hydraulic Winches

5 Loading and unloading operations

3P Prinz believes that buying a pump is a long term investment and not "One-Off Transaction".

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CAPACITY AND ABSORBED POWER

Pump Model	Screw Pitch	2 Bar		4 Bar		6 Bar		8 Bar	
		mm	m3/h	Kw	m3/h	Kw	m3/h	Kw	m3/h
HM 62	14	1,59	0,53	1,33	0,64	1,14	0,75	0,95	0,87
	29	3,77	1,1	3,51	1,33	3,31	1,56	3,13	1,8
	44	5,8	1,65	5,54	2	5,34	2,35	5,16	2,7
	59	7,97	2,22	7,71	2,69	7,52	3,16	7,33	3,62
	74	10,15	2,79	9,89	3,38	9,69	3,96	9,51	4,55
HM 84	28	5,98	1,91	4,79	2,35	3,88	2,79	3,02	3,24
	48	11,78	3,28	10,59	4,04	9,68	4,81	8,82	5,57
	68	17,43	4,64	16,24	5,72	15,33	6,8	14,48	7,88
	88	23,09	6	21,9	7,39	21	8,79	20,13	10,18
	108	28,89	7,37	27,7	9,09	26,8	10,8	25,93	12,52
HD 80	30	10,27	1,43	8,61	2,15	7,34	2,88	6,16	3,6
	40	14,62	1,91	12,96	2,87	11,69	3,84	10,51	4,81
	50	18,97	2,38	17,31	3,6	16,04	4,8	14,86	6,01
	60	23,32	2,86	21,66	4,31	20,39	5,76	19,21	7,21
	70	27,67	3,34	26,01	5,03	24,74	6,72	23,56	8,41
HD92	40	19,89	2,6	17,21	3,95	15,21	5,31	9,55	6,66
	55	29,17	3,58	26,49	5,45	24,49	7,32	15,91	9,19
	70	38,31	4,56	35,63	6,93	33,62	9,31	22,31	11,69
	85	47,44	5,53	44,76	8,42	42,76	11,3	28,67	4,18
	100	56,58	6,51	53,9	9,9	51,89	13,29	35,04	16,68
HD115	30	24,1	3,07	21,07	4,69	18,76	6,31	16,6	7,93
	50	43,53	5,11	40,5	7,81	38,19	10,51	36,03	13,21
	70	63,1	7,17	60,07	10,95	57,77	14,74	55,61	18,53
	90	82,53	9,21	79,5	14,08	77,2	18,94	75,04	23,81
	110	101,96	11,26	98,93	17,2	96,63	23,15	94,47	29,09
HD120	50	51,82	5,73	48,28	8,93	45,59	12,14	43,07	15,35
	70	74,87	8,02	71,34	12,5	68,65	16,99	66,12	21,48
	90	97,93	10,3	94,39	16,07	91,7	21,84	89,18	27,61
	110	121,13	12,6	117,59	19,66	114,9	26,71	112,38	33,77
	130	144,18	14,89	140,65	23,23	137,96	31,56	135,43	39,9
HD150	50	86,02	9,09	81,18	14,32	77,49	19,55	74,02	24,77
	70	123,43	12,71	118,59	20,02	114,9	27,32	111,43	34,63
	90	161,13	16,35	156,29	25,75	152,6	35,15	149,13	44,55
	110	198,69	19,98	193,84	31,47	190,15	42,96	186,69	54,44
	130	236,39	23,62	231,54	37,2	227,85	50,78	224,39	64,36
HD154	70	133,89	13,52	128,18	21,48	123,83	29,45	119,75	37,42
	90	174,92	17,38	169,21	27,63	164,87	37,88	160,79	48,12
	110	215,81	21,24	210,1	33,76	205,76	46,27	201,68	58,79
	130	256,85	25,1	251,14	39,9	246,79	54,7	242,71	69,5
	150	297,88	28,97	292,17	46,05	28-83	63,12	283,75	80,2
HD182	96	228,51	24,77	220,85	38,17	215,02	51,58	209,55	64,98
	112	268,53	28,88	260,87	44,51	255,04	60,14	249,57	75,77
	128	308,99	33,02	301,33	50,9	295,49	68,78	290,02	86,65
	144	349,15	37,15	34t,49	57,25	335,66	77,36	330,19	97,47
	152	369,16	39,21	361,5	60,43	355,67	81,65	350,2	102,86
HD250	75	332,3	36,54	319,93	56,15	310,5	75,75	301,67	95,36
	95	426,41	46,28	414,04	71,12	404,61	95,95	395,77	120,79
	115	520,66	56,03	508,29	86,1	498,86	116,78	490,02	146,25
	135	614,91	65,78	602,54	101,09	593,11	136,4	584,27	171,71
	155	708,87	75,52	696,5	116,05	687,07	156,58	678,23	197,11

N=1450 G/1' VISCOSITY=5°E (35CP) /

Pump Model	Screw Pitch	10 Bar		12 Bar		14 bar		16 bar	
		m3/h	Kw	m3/h	Kw	m3/h	Kw	m3/h	Kw
HM 62	14	0,79	0,98	0,65	1,09	0,62	1,21	0,60	1,34
	29	2,97	2,03	4,82	2,26	2,69	2,51	2,48	2,78
	44	5	3,04	4,85	3,39	4,09	3,76	3,77	4,18
	59	7,17	4,09	7,02	4,56	6,74	5,06	6,58	5,62
	74	9,35	5,14	9,2	5,73	8,99	6,36	8,78	7,06
HM 84	28	2,28	3,68	1,6	4,12	1,52	4,57	1,44	5,08
	48	8,08	6,34	7,4	7,11	6,86	7,89	6,59	8,76
	68	13,74	8,96	13,06	10,04	12,63	11,14	12,24	12,37
	88	19,39	11,58	18,71	12,97	18,11	14,40	17,61	15,98
	108	25,19	14,23	24,51	15,95	23,77	17,70	23,15	19,65
HD 80	30	5,13	4,33	4,18	5,05	3,17	5,91	2,21	6,91
	40	9,48	5,77	8,53	6,74	7,36	7,89	6,25	9,23
	50	13,83	7,22	12,88	8,42	11,96	9,85	11,04	11,53
	60	18,18	8,66	17,23	10,11	16,00	11,83	14,89	13,84
	70	22,53	10,1	21,58	11,8	20,60	13,81	19,63	16,15
HD92	40	11,6	8,01	10,07	9,37	8,55	10,96	7,08	12,83
	55	20,88	11,06	19,35	12,93	15,91	15,13	14,38	17,70
	70	30,02	14,06	28,48	16,44	26,51	19,23	24,80	22,50
	85	39,15	17,07	37,62	19,95	35,82	23,34	34,26	27,31
	100	48,29	20,07	46,75	23,46	45,19	27,45	43,97	32,11
HD115	30	14,73	9,55	13	11,16	11,38	13,06	9,63	15,28
	50	34,16	15,91	32,43	18,61	30,16	21,77	28,22	25,48
	70	53,73	22,31	52	26,1	49,72	30,54	47,68	35,73
	90	73,16	28,67	71,43	33,54	70,06	39,24	68,30	45,91
	110	92,59	35,04	90,86	40,98	88,83	47,95	86,69	56,10
HD120	50	40,88	18,55	38,86	21,76	37,12	25,46	35,38	29,79
	70	63,94	25,96	61,92	30,45	60,60	35,63	58,98	41,68
	90	86,99	33,37	84,97	39,14	83,20	45,79	81,12	53,58
	110	110,19	40,83	108,17	47,88	105,41	56,02	102,87	65,54
	130	133,25	48,24	131,23	56,58	127,50	66,20	124,50	77,45
HD150	50	71,02	30	68,26	35,23	65,80	41,22	62,98	48,23
	70	108,43	41,94	105,67	49,24	102,65	57,61	100,02	67,40
	90	146,13	53,95	143,37	63,36	138,74	74,13	135,36	86,73
	110	183,69	65,93	180,92	77,42	175,78	90,58	171,64	105,98
	130	221,39	77,95	218,62	91,53	215,12	107,09	212,67	125,30
HD154	70	116,22	45,38	112,96	53,35	107,55	62,42	103,25	73,03
	90	157,26	58,37	153,99	68,62	149,36	80,29	145,68	93,93
	110	198,15	71,31	194,88	83,83	189,34	98,08	184,83	114,75
	130	239,18	84,3	235,92	99,1	229,10	115,95	223,78	135,66
	150	280,22	97,28	276,95	114,36	273,50	133,80	270,42	156,55
HD182	96	204,81	78,39	200,43	91,79	195,37	107,39	190,55	125,65
	112	244,83	91,4	240,45	107,02	233,56	125,21	227,93	146,50
	128	285,28	104,53	280,91	122,4	273,36	143,21	266,93	167,55
	144	325,45	117,58	321,07	137,69	318,38	161,10	314,77	188,48
	152	345,46	124,08	341,08	145,3	336,07	170,00	332,25	198,90
HD250	75	294,01	114,97	286,94	134,58	278,95	157,46	271,89	184,23
	95	388,11	145,63	381,04	170,46	371,26	199,44	362,31	233,34
	115	482,36	176,33	475,29	206,4	465,60	241,49	454,78	282,54
	135	576,61	207,02	569,54	242,33	559,33	283,53	552,97	331,73
	155	670,57	237,64	663,5	278,17	656,73	325,46	649,43	380,79



Reliability

Thanks to its product range, the company is able to provide complete pumps manufactured on customer's specification for the transport of liquids in key industrial sectors.

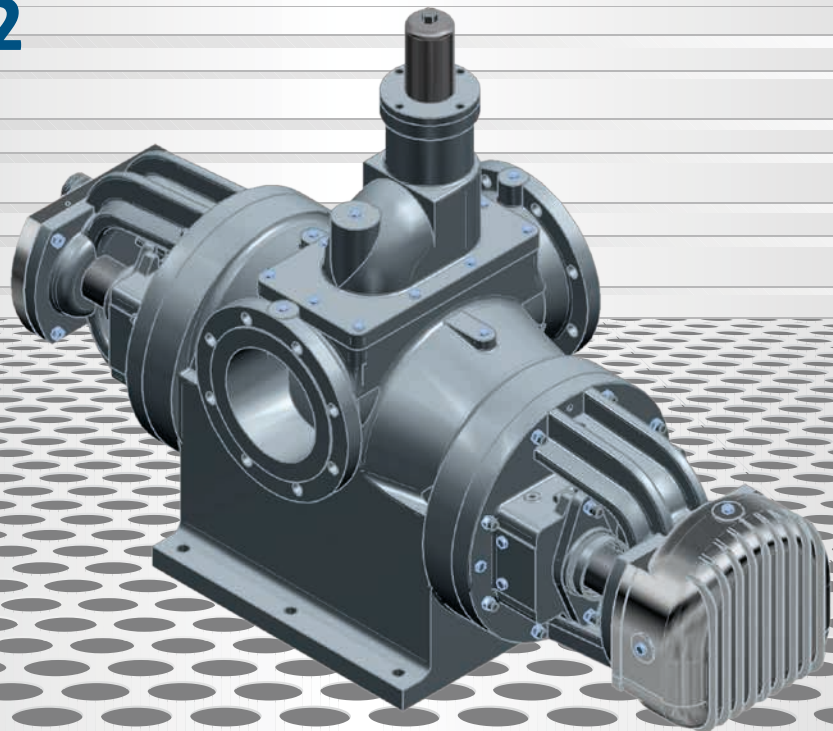
Efficiency

With design features of high precision, our pumps, are particularly suitable for the transport of "delicate" fluids and extremely viscous in the most critical industrial sectors of the world.

Performance

Each component of the pumps 3P Prinz can be realized in the best materials available on the market, depending on the chemical and physical characteristics of the fluids to be treated.

Since 1952



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