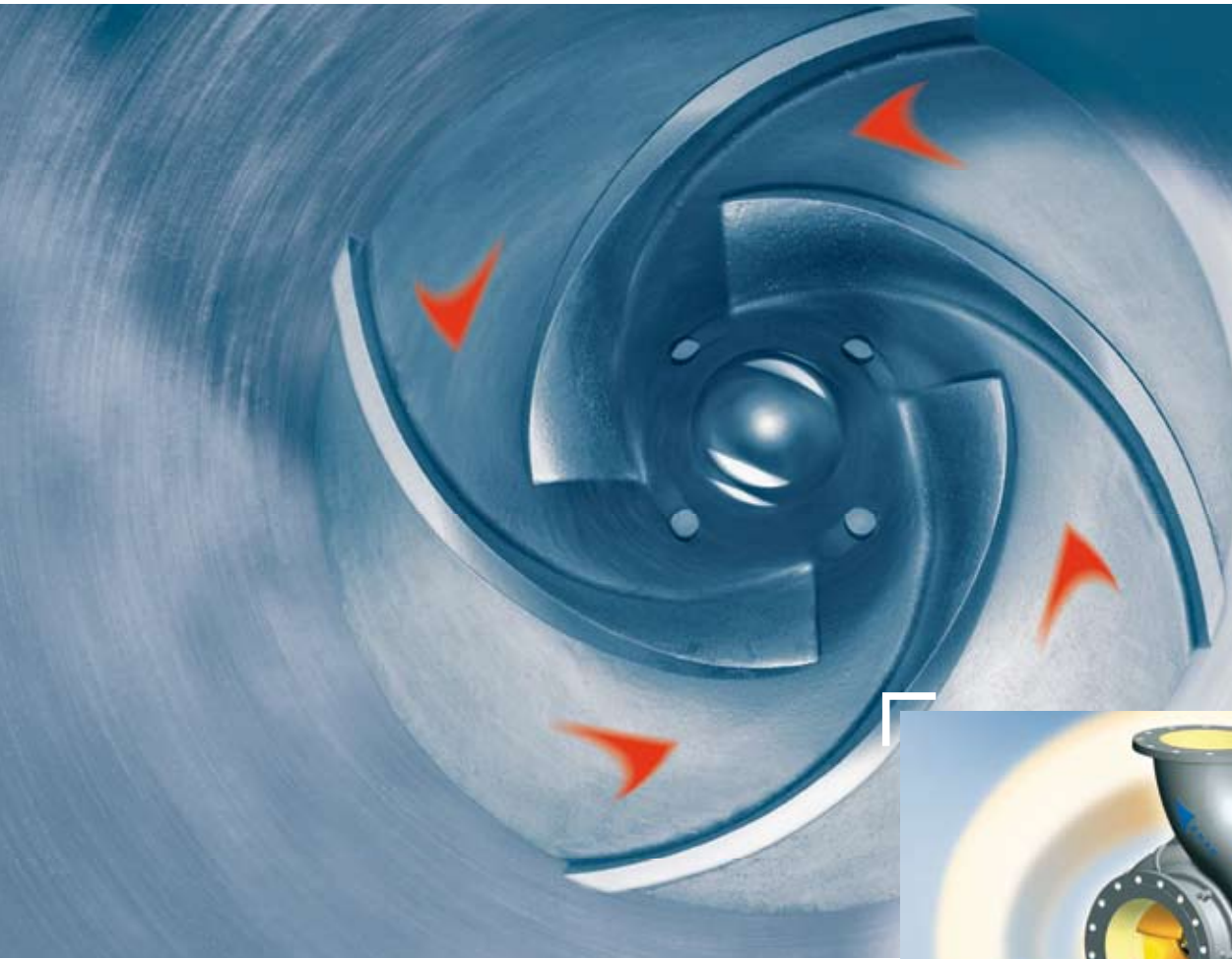


# Hydro Power

Pumps



Andritz Centrifugal Pumps  
SP Series

focus on performance

# Andritz Centrifugal Pumps, SP Series Process Pumps for Highest Requirements

For over 100 years, Andritz has been a byword for competence and innovation in the design of centrifugal pumps. As suppliers of complete production systems we have full command of process technologies in the pulp and paper industry.

This forms a solid basis on which we build and develop components for conveying pulp and paper stock.

SP series Andritz centrifugal pumps meet the high customer requirements for efficiency, long life, maintenance friendliness, and economy.

Stringent guidelines are the core of our high production quality. All pump components are manufactured in our own workshops, which are ISO certified. Many parts are made in our workshop in Foshan, China.

## Fields of Application

### Chemical pulp production

- Digester
- Bleaching line
- Recovery
- Waste water treatment
- Chemical pulp



### Mechanical pulp production

- Woodyard
- Groundwood pulp
- Mechanical pulp



### Secondary fibres

- Stock preparation system
- Finished DIP



### Paper production

- Paper machine
- Tissue machine
- Board machine



### Food industry

- Breweries
- Sugar industry



### Chemical industry

- Bio-ethanol treatment



### Energy supply

- Flue gas desulphurization



### Waste water treatment

- Biological waste water treatment

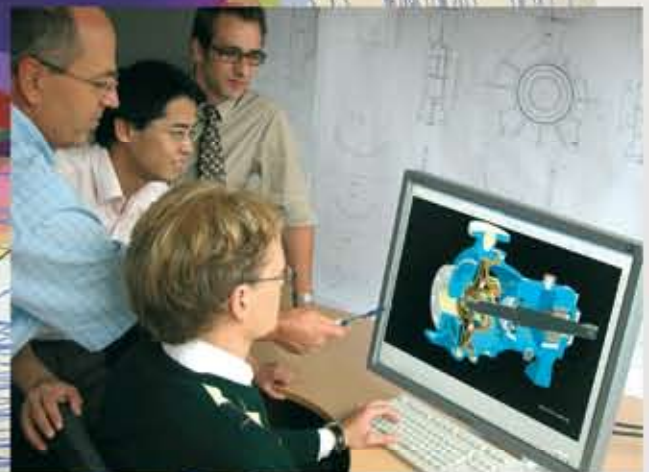
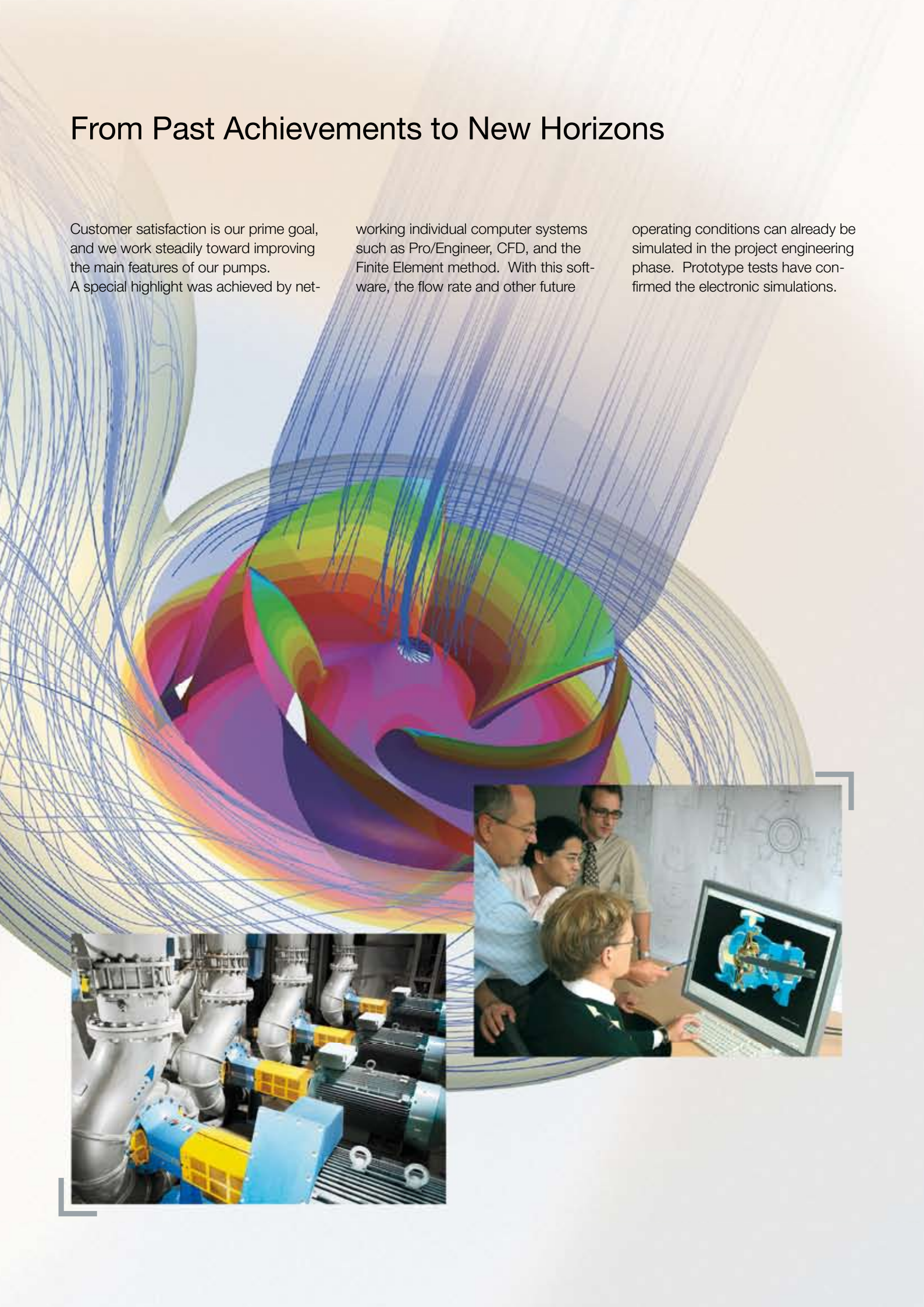


# From Past Achievements to New Horizons

Customer satisfaction is our prime goal, and we work steadily toward improving the main features of our pumps. A special highlight was achieved by net-

working individual computer systems such as Pro/Engineer, CFD, and the Finite Element method. With this software, the flow rate and other future

operating conditions can already be simulated in the project engineering phase. Prototype tests have confirmed the electronic simulations.



# Innovative Design in Every Detail

## Shaft seals

- There is a choice of six shaft seal variants for our pumps. The change from one seal type to another is achieved simply by changing the seal cartridge.

## Oil or grease lubrication

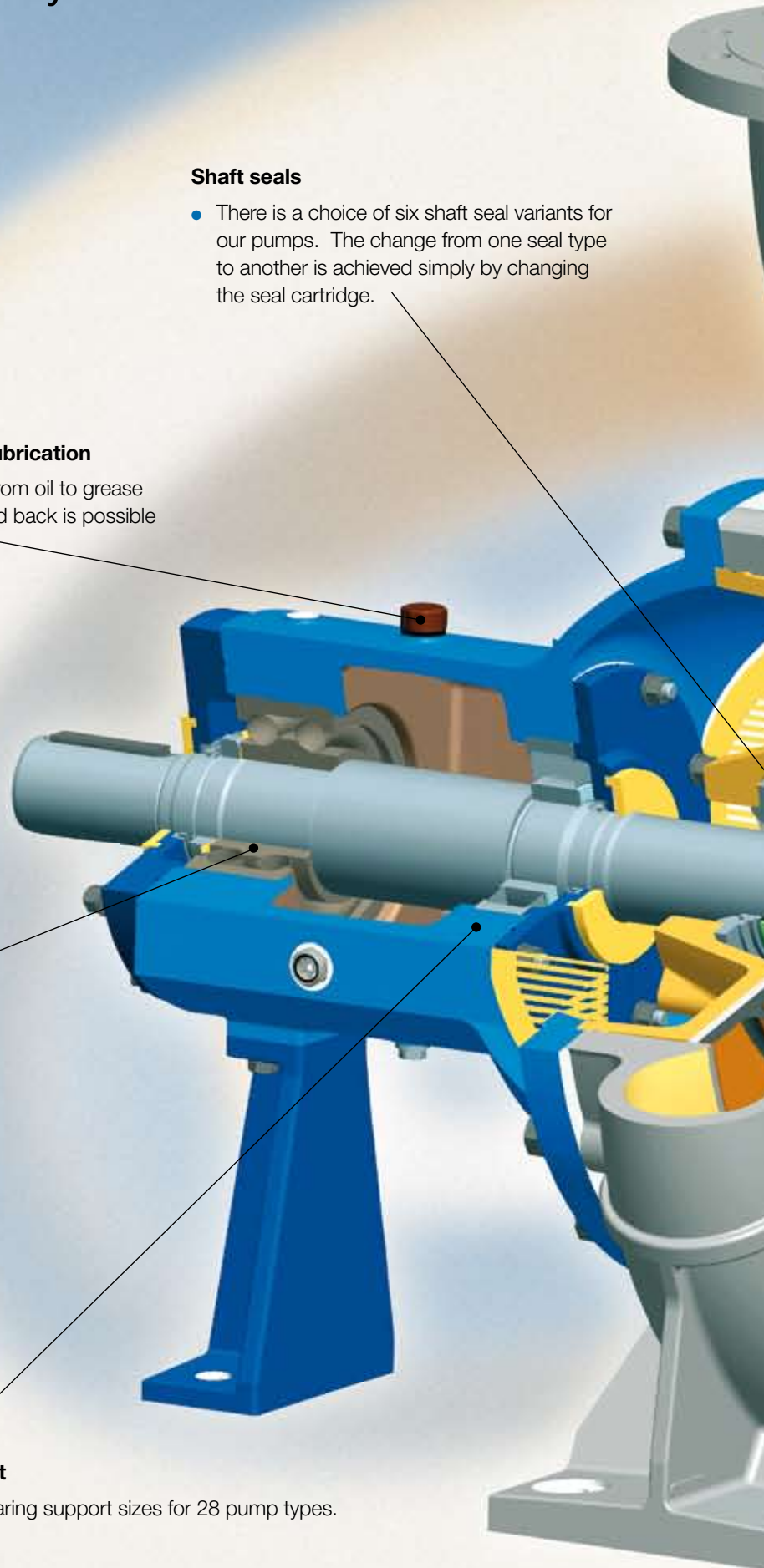
- Switch-over from oil to grease lubrication and back is possible at any time.

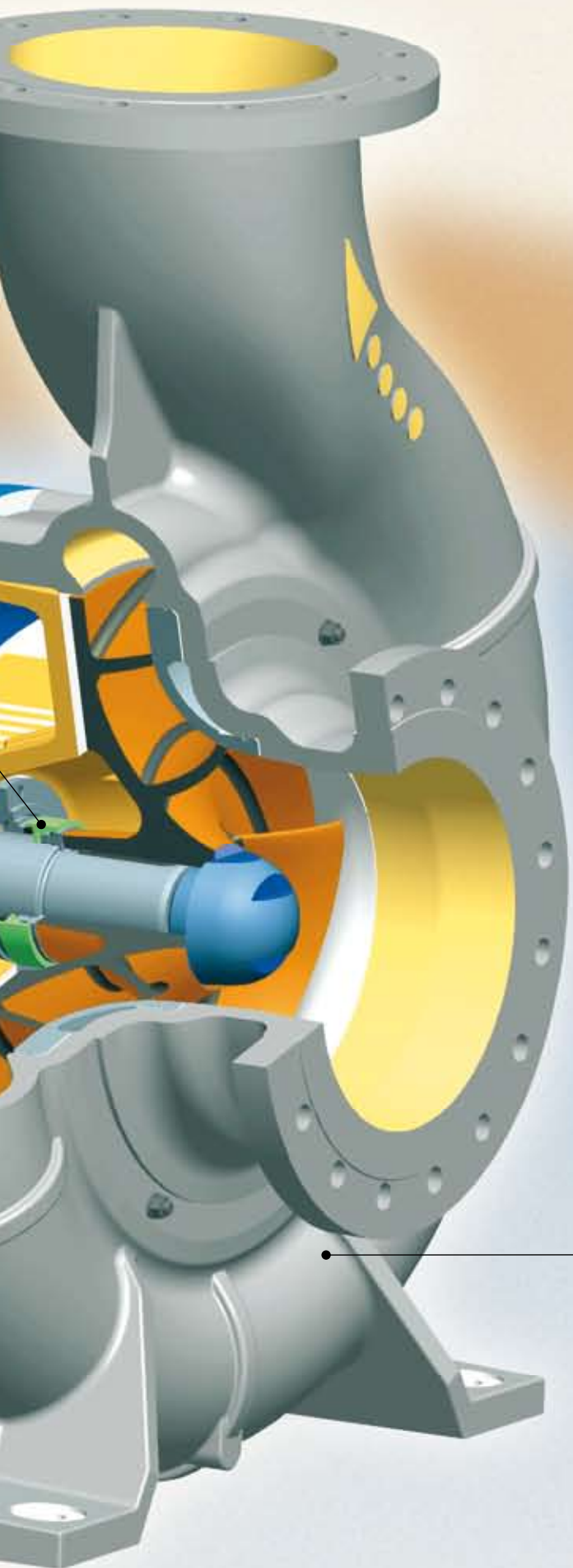
## Antifriction bearings

- SKF explorer bearings ensure long life at maximum shaft load.

## Bearing support

- Just seven bearing support sizes for 28 pump types.





### Nameplate

- An electronic chip implanted in the nameplate contains all major pump data: its data sheet, characteristic curve, documentation, etc. The data can be transferred from and to a PC.



### Sensors

- Sensors can be attached at pre-selected points to record the pump operating data such as the temperature, vibration, etc.

### Volute casing

- Pressure classes from 10 to 25 bar and different materials meet all requirements of the pulp and paper industry.

# A Selection of Shaft Seals for Each Use

The new Andritz sealing system makes installation of mechanical seals possible without dismantling the sealing cover (casing cover),

resulting in fast and safe installation work and hence cost and time savings. The mechanical seal was developed together with well-known

seal manufacturers. These new mechanical seals are suitable for over 90% of all Andritz pumps.

## Andritz Cartridge Single Mechanical Seal



## Andritz Cartridge Tandem Mechanical Seal



## Other Sealing Systems

Installation of a standard mechanical seal according to DIN 24960 in the standard sealing cover (casing cover) is also an option.

### Standard Single Mechanical Seal



### Standard Tandem Mechanical Seal

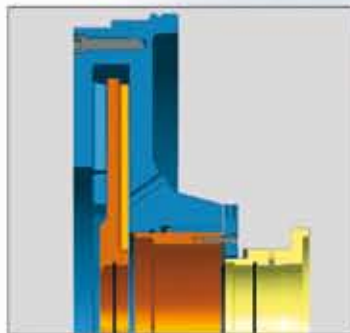


### Stuffing Box Packing



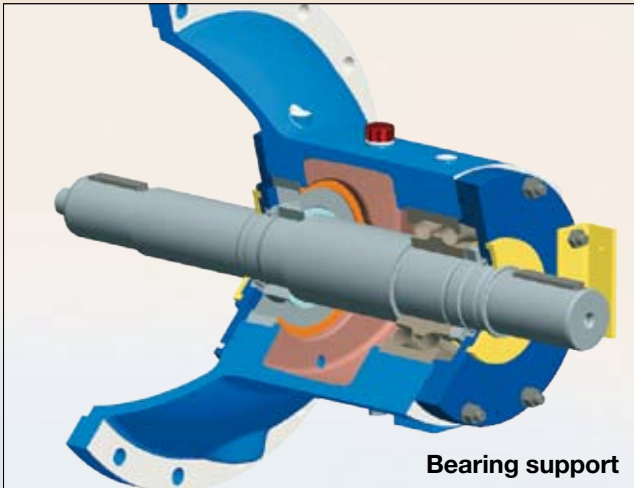
- The design also provides for use of standard packing cords.

### Dynamic Shaft Seal



- This seal type was specially developed for the paper industry. It is insensitive to entrained air in the medium, and to shocks and vibrations. This proven system is available as cartridge.

# Bearing Assemblies and Lubrication



**Oil lubrication**



**Grease lubrication**

# Semi-open Impellers Offering High Efficiencies

Semi-open impellers for conveying fibre stock, solid containing liquids, and abrasive media.

Design:  
Standard with four blades;  
special-purpose design with eight blades.



**Impeller with 4 blades**



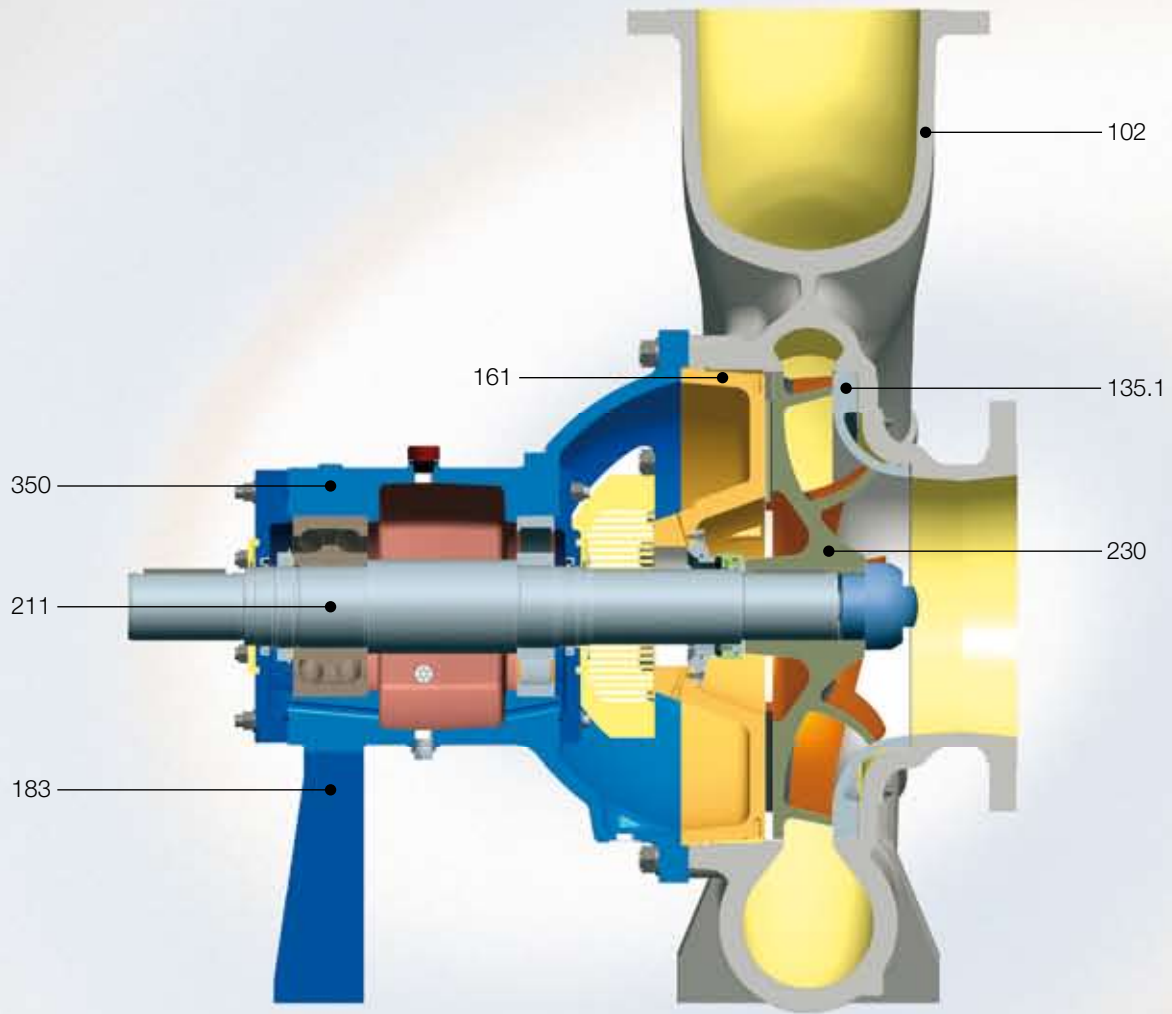
**Impeller with 8 blades**

# Andritz Centrifugal Pumps, SP Series

Type	Bearing size	Shaft sealing D [mm]	Max. shaft load [kW]
SP 32 - 200	24	30	77
SP 40 - 200			
SP 50 - 200			
SP 40 - 250	32	40	115
SP 50 - 250			
SP 65 - 250			
SP 100 - 250			
SP 125 - 250			
SP 40 - 315			
SP 50 - 315	42	53	380
SP 65 - 315			
SP 100 - 315			
SP 125 - 315			
SP 125 - 400			
SP 150 - 315			

Type	Bearing size	Shaft sealing D [mm]	Max. shaft load [kW]
SP 100 - 500	48	58	425
SP 150 - 400			
SP 200 - 400			
SP 150 - 450	75	85	660
SP 200 - 450			
SP 250 - 500			
SP 300 - 400			
SP 200 - 550	90	100	1030
SP 250 - 600			
SP 300 - 600			
SP 350 - 500			
SP 450 - 550			
SP 600 - 700	100	115	1850

# Material Combinations

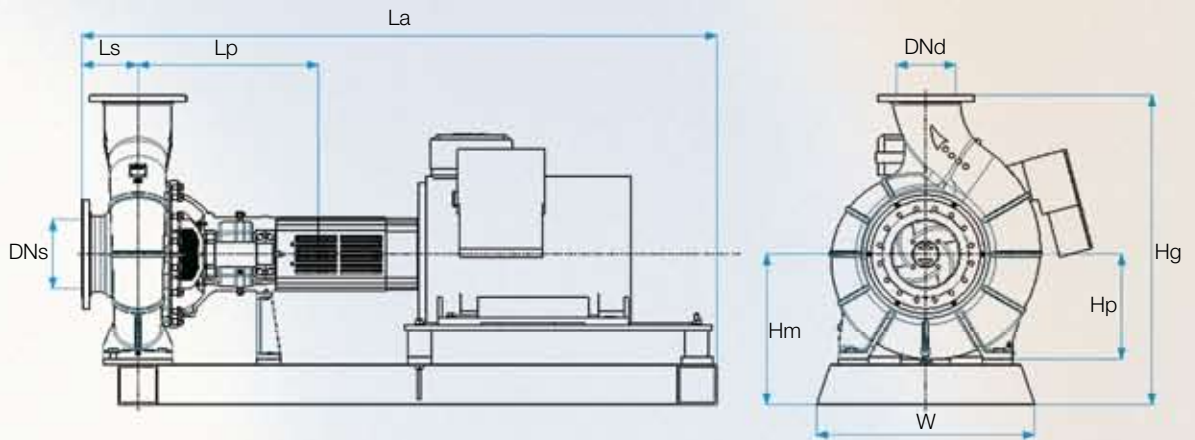


## Parts List and Materials

Item No.	Designations	ENG JL 250	1.4460	1.4408	1.4517	1.4588	1.4404	1.4462	Carbon steel
102	Volute casing	•	•	•	•	•			
135.1	Front lining		•	•	•	•			
161	Casing cover	•	•	•	•	•			
183	Support leg	•							
211	Shaft						•	•	
230	Impeller		•		•	•			
350	Bearing casing	•					•		
681	Coupling protection								•
891	Base frame								•

Materials	DIN	AISI	UNS	SS	AFNOR	BS	USA-ASTM
ENG JL 250	GG25	/	/	/	/	/	/
1.4460	X3CrNiMoN27-5-2	329	S32900	2324	Z 5 CND 27-05 Az	/	3A, CD6MN
1.4408	GX5CrNiMo19-11-2	316	J92900	/	/	316 C 16	CF8M
1.4517	GX2CrNiMoCuN25-6-3-3	/	J93372, J93404	/	/	/	1B, 5A, CD4MCuN
1.4588	GX2NiCrMoCuN25-20-6	/	/	/	/	/	/
1.4404	X2CrNiMo17-12-2	316L	S31603	2348	Z 3 CND 17-11-02	316 S 11	CF3M
1.4462	X2CrNiMoN22-5-3	/	S31803, S32205	2377	Z 3 CND 22-05 Az	318 S 13	2205

# Main Dimensions

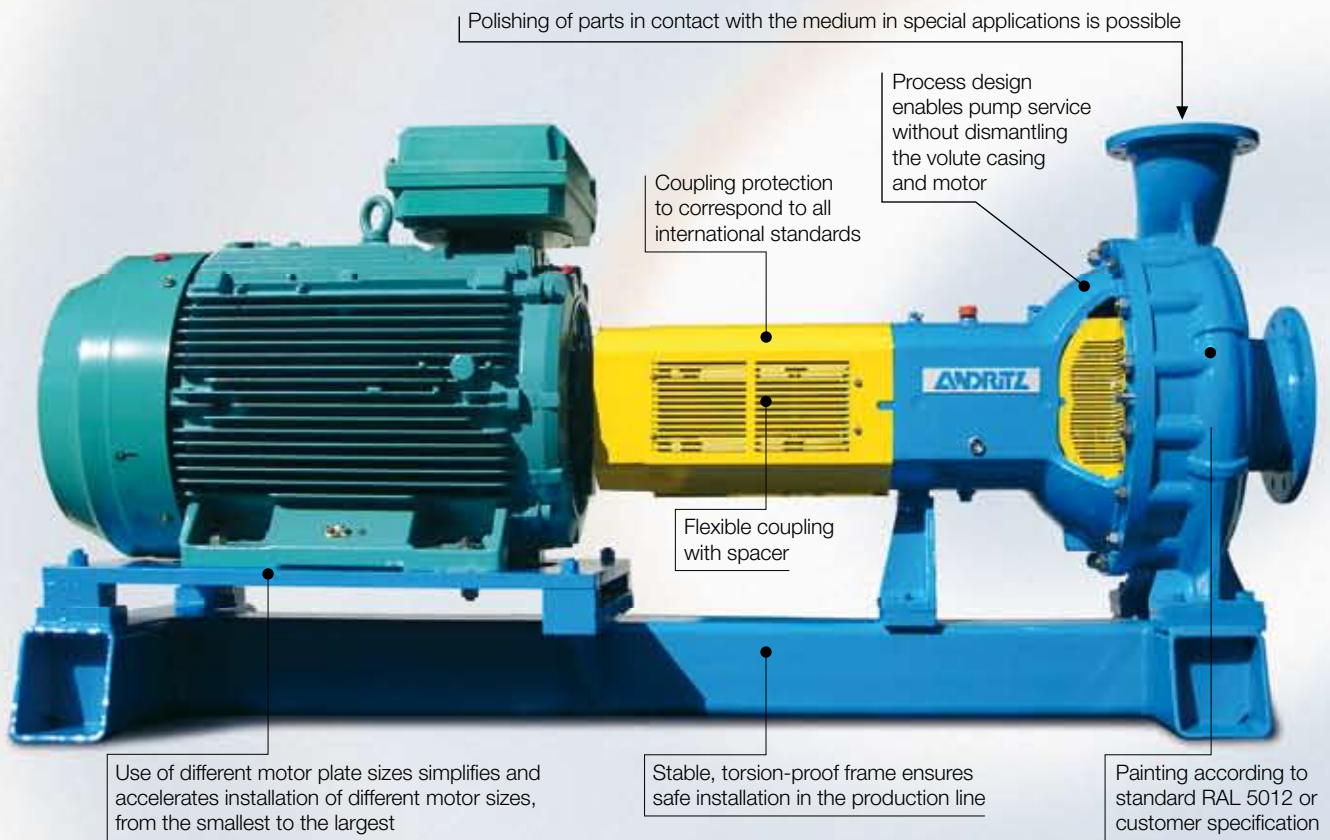


Type	Poles	DNs [mm]	Ls[mm]	DNd[mm]	Lp[mm]	La[mm]	Hm[mm]	W[mm]	Hp[mm]	Hg[mm]
SP 32 - 200	4	50	80	32	465	1095	265	400	160	445
SP 40 - 200	4	65	100	40	485	1165	275	400	160	455
SP 50 - 200	4	80	100	50	485	1270	360	420	160	560
SP 40 - 250	4	65	100	40	600	1280	335	470	180	560
SP 50 - 250	4	80	125	50	625	1590	445	470	180	670
SP 65 - 250	2	100	125	65	625	1390	405	570	200	655
SP 65 - 250	4	100	125	65	625	1555	325	510	200	575
SP 100 - 250	4	100	140	65	640	1380	405	600	225	685
SP 125 - 250	4	150	140	125	640	1740	500	600	250	855
SP 40 - 315	4	65	125	40	500	1500	385	495	200	635
SP 50 - 315	4	80	125	50	500	1590	445	495	225	725
SP 65 - 315	4	100	125	65	655	1445	350	550	225	630
SP 100 - 315	2	125	140	100	670	1830	500	600	250	815
SP 100 - 315	4	125	140	100	670	1480	375	550	250	690
SP 125 - 315	4	150	140	125	670	1542	400	680	280	755
SP 150 - 315	4	200	160	150	690	1790	455	710	315	855
SP 125 - 400	4	150	140	125	670	1670	455	660	315	855
SP 125 - 400	6	150	140	125	670	1398	455	660	315	855
SP 100 - 500	4	150	190	100	860	2050	485	700	345	915
SP 150 - 400	4	200	160	150	830	2030	505	700	315	955
SP 200 - 400	4	250	180	200	850	2080	610	810	400	1110
SP 200 - 400	6	250	180	200	850	1640	550	810	400	1050
SP 150 - 450	4	200	200	150	1010	2260	555	750	360	1055
SP 150 - 450	6	200	200	150	1010	2070	535	750	360	1035
SP 250 - 500	4	300	200	250	1010	2670	700	810	460	1330
SP 250 - 500	6	300	200	250	1010	2280	645	810	460	1275
SP 300 - 400	6	350	250	300	1060	2380	645	680	460	1305
SP 200 - 550	4	250	250	200	1140	2810	670	820	440	1270
SP 200 - 550	6	250	250	200	1140	2435	630	820	440	1230
SP 250 - 600	4	300	245	250	1155	2845	720	1050	490	1420
SP 300 - 600	4	350	280	300	1190	3196	760	1100	530	1560
SP 350 - 500	4	400	280	350	1190	3126	790	840	560	1590
SP 450 - 550	4	450	315	450	1235	2931	880	1200	650	1765
SP 600 - 700	4	600	420	600	1320	2925	1090	1600	800	2270

**Important Note:**

The dimensions in this table are subject to modification and must not be used for planning purposes.

# Clear Layout Creates Installation Advantages



## Steel profile base frame

- During installation, the steel profile base frame for the pump and motor is fastened with drop-in anchors and grouted.



## Special steel profile base frame for Centerline pumps

- The frame for this pump and motor is also fastened with drop-in anchors and grouted.

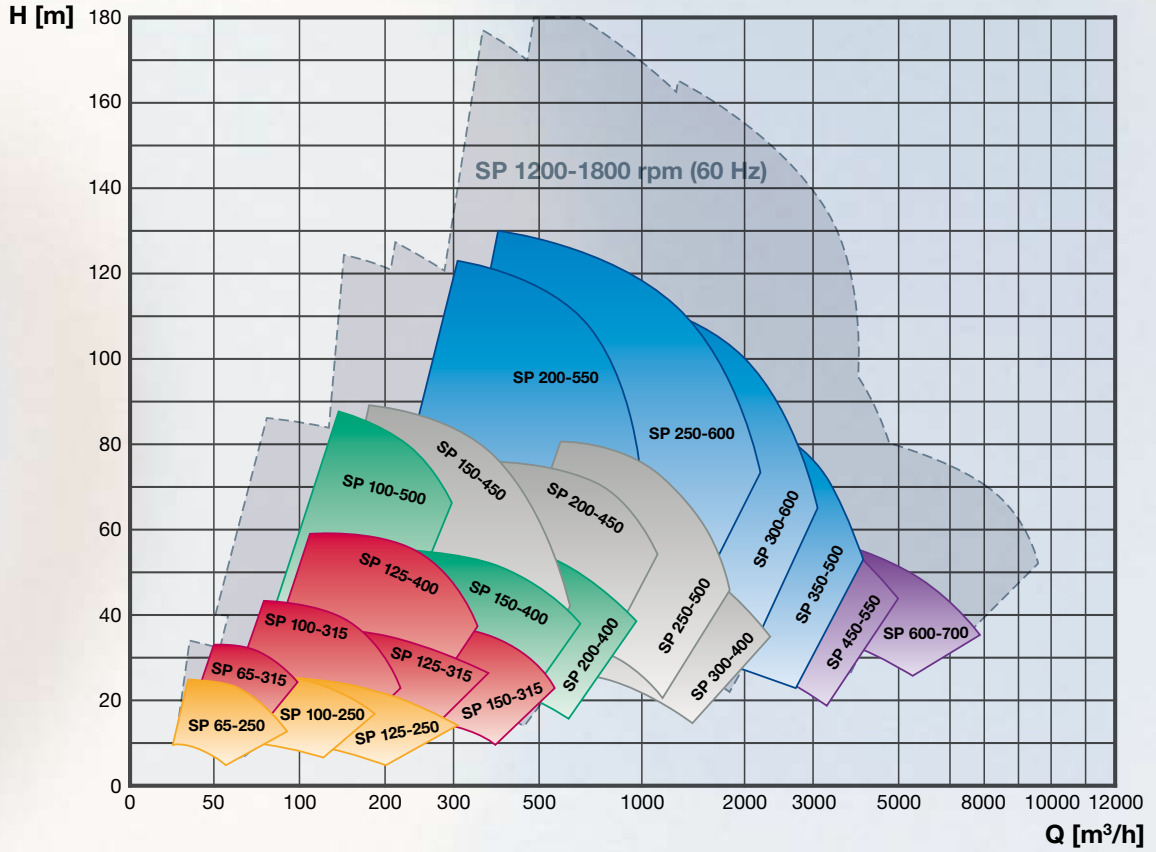


## Vee-belt drive

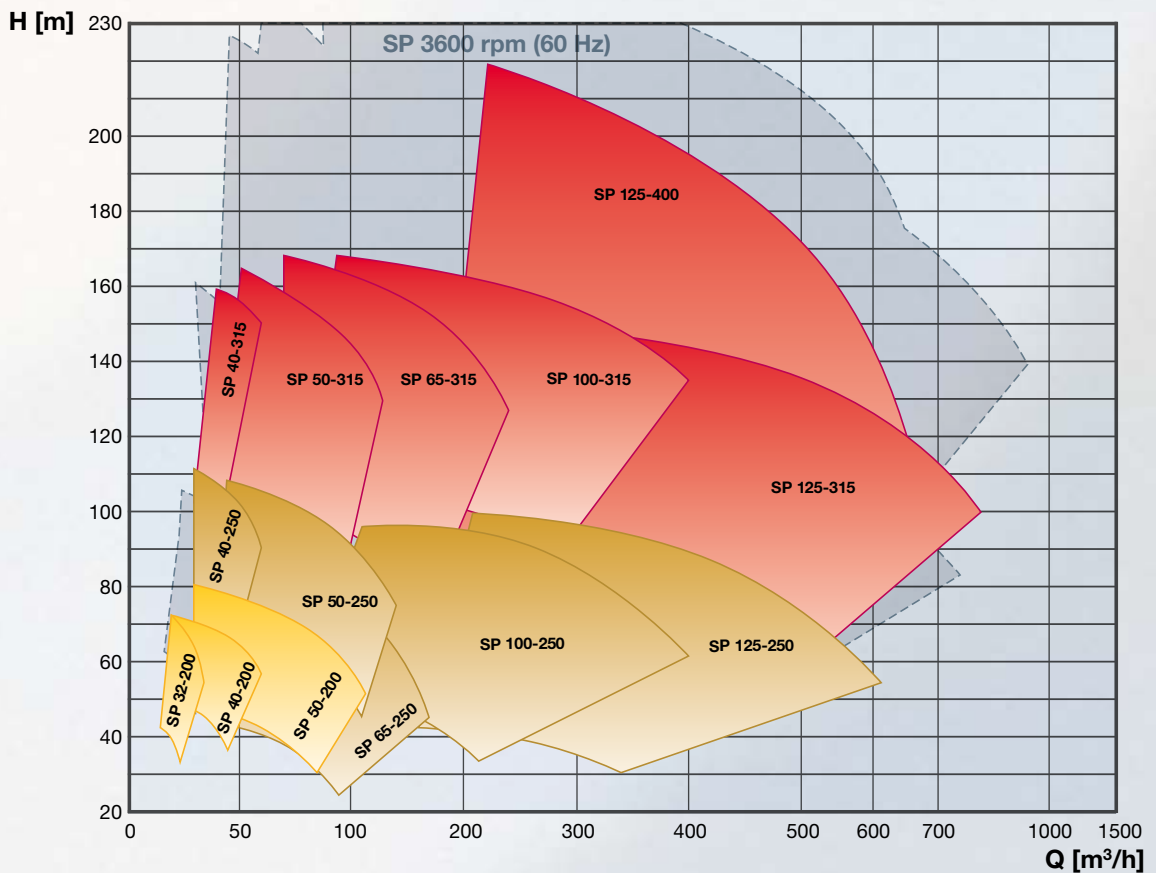
- Pump assembly can be equipped with a Vee-belt drive.

# Capacity Ranges for Our SP Series Centrifugal Pumps

Characteristic curves  $n = 1000-1500 \text{ 1/min (50Hz)}$



Characteristic curves  $n = 3000 \text{ 1/min (50Hz)}$



# Close to Customers



● Andritz Group locations

[www.andritz.com/pumps](http://www.andritz.com/pumps)

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Internet: <http://www.andritz.com/pumps>

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