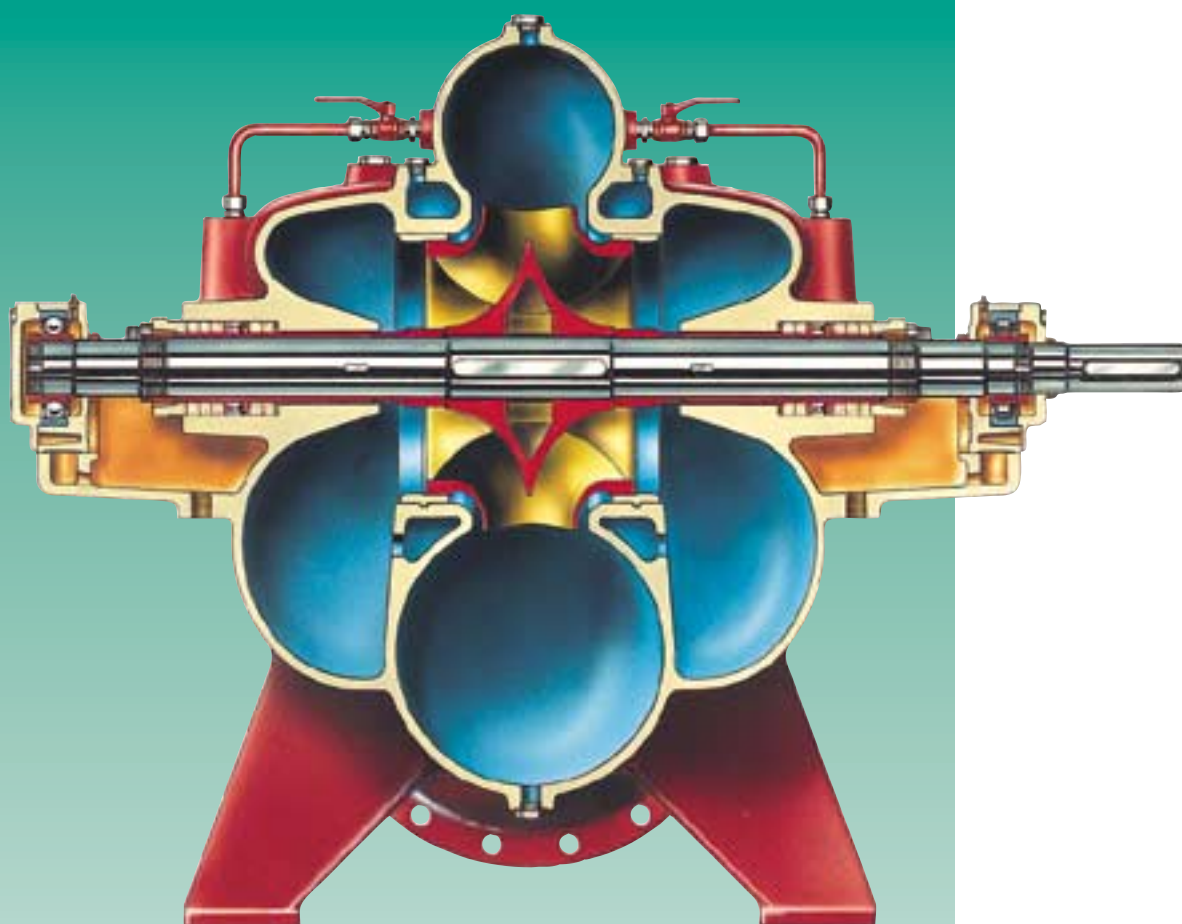


CP series

Split-casing centrifugal pumps



PUMPS

ITUR

DESCRIPTION

Axially split-chamber centrifugal pumps with double suction impellers. The balance of axial power provided by the design of the impeller and the two bearing supports located on either end of the shaft makes these pumps particularly hardwearing.

The horizontal layout, **with driving suction flanges, in line**, and located on the lower body, permit access to the inside of the pump without having to disconnect the pipes or the motor (*Figure 1*). The pump body has **renewable wear rings**.

Although the pump turns in one single direction, it can be manufactured with the shaft drive on either end, or on both ends, so that it can be driven by two motors in opposite directions.

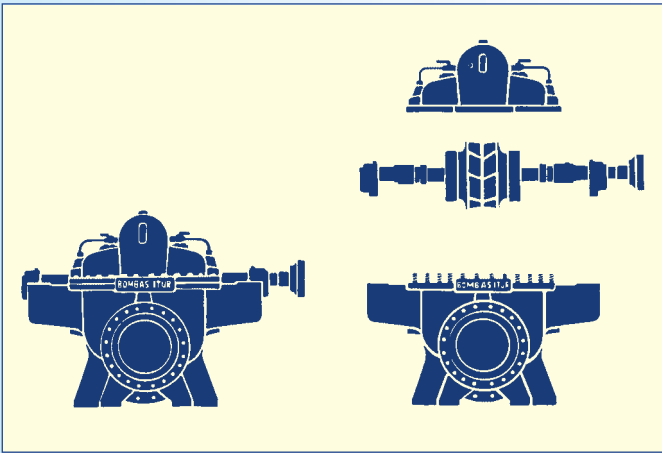


Figure 1.-

APPLICATIONS

Bombas ITUR's CP Series has been designed to pump average and very high flows, with generally clean liquids, meaning that it is exceedingly rapid in:

- **Construction and Public Works**

- Drinking water supply
 - Industrial water supply
 - Transfer of liquids

- **Installation of fire-fighting equipment**

- Equipment in keeping with Cefreven standards
 - Equipment in keeping with NFPA standards
 - Equipment in keeping with European standards

- **Industries**

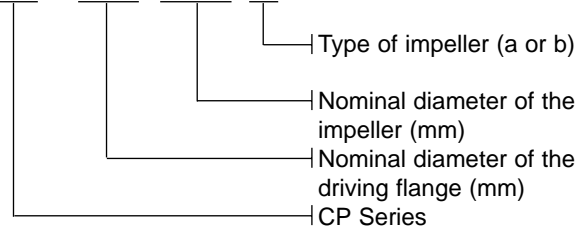
- Water-treatment plants
 - Cooling of power-stations
 - Paper mills (up to a consistency of 1.5%)

- **Agriculture**

- Irrigation
 - Transfer of liquids
 - Drainage

PUMP DENOMINATION

CP-150/310 A



EXTEND OF THE SERIES

The **CP Series** comprises a total of 16 different models split into 13 sizes, some of which accept two types of impeller.

Service limits:

- Size of the flanges : DN-125 to DN-900
- Maximum flow: 3.300 m³/hr
- Maximum head: 160 m.c.a.
- Maximum pressure: 16 bar
- Maximum speed: 3.600 r.p.m.
- Maximum temperature: 160 °C

CONSTRUCTION

Spiral **pump body**, axially divided into two parts: the lower part includes the suction and delivery flanges. The interior layout is carefully designed to gradually increase the speed of the fluid inside the pump.

Double-flow symmetric **impeller**, dynamically balanced. This is pulled by a key and is placed longitudinally on the shaft by means of **spacer bushings** fixed in place by lock nuts.

Body wear rings are renewable on the standard model. Rotation or axial movements are prevented by means of a keyway on the lower body. **Wear rings** can also be fitted to the impeller as an option.

Amplly dimensioned **bearings** on either end of the shaft. These are rigid ball bearings up to DN-300. As from DN-400, the drive side comes with cylindrical rollers and the opposite side with rigid ball bearings. For special work, a reinforced support is used on the side opposite to the drive, with parallel angular contact bearings.

Normally lubricated with **grease**. Sometimes, and depending on the work in hand, lubrication may be by **oil, with a constant level controller** and automatic reset.

Flanges DIN-2533 PN-16.

The shaft is made watertight by means of a **gasket** with end or blocking rings, located at either end on renewable sleeve. This can be optionally supplied with **mechanical locks**.



MATERIAL

There are 6 **standardised operations** with different material, depending on the use to which it is going to be put and the liquid to be pumped.

Ref.	Denomination	STANDARDISED PERFORMANCE			
		3700-GG-25		3721-IMPBRON	
		Material	DIN no. (*)	Material	DIN no. (*)
105	Pump body (upper and lower)	GG-25	0.6025	GG-25	0.6025
210	Pump-shaft	AISI-431B	1.4057	AISI-431B	1.4057
234	Double flow impeller	GG-25	0.6025	G-CuSn 10	2.1050.01
502	Wear rings	GG-25	0.6025	RG-7	2.1090.01
524	Shaft sleeve*	AISI-431B	1.4057	AISI-431B	1.4057

* When the sealing has been carried out by means of mechanical lock, the housing is AISI-316 for all operations.

For special, aggressive liquids, etc., where other materials are required: AISI 329, AISI 316L, AISI-904L, MONEL, HASTELLOY, consult our Technical Department.

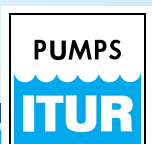
TECHNICAL SPECIFICATIONS

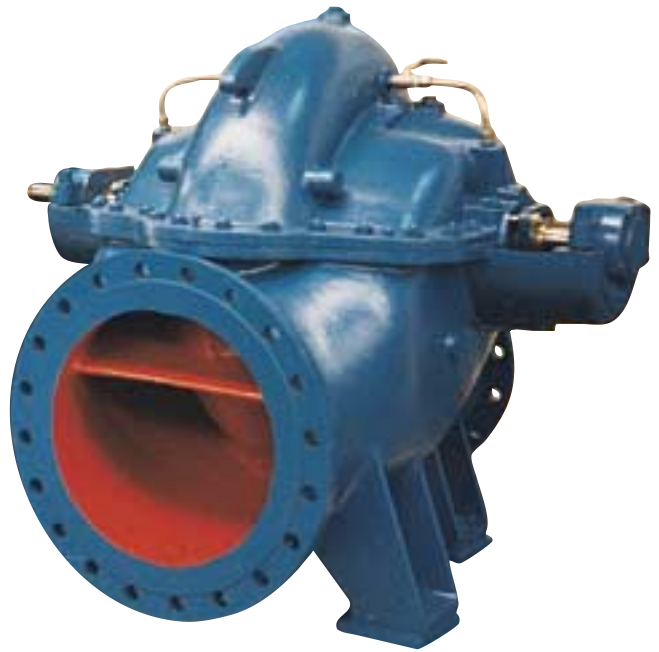
TYPE OF PUMP	Max. torque admitted by the shaft		Maximum speed		Critical speed r.p.m.	Moment of inertia (WP ²)			
			(V1)	(V2)		Without water		With water	
	kg.m	Lb.ft	r.p.m.	r.p.m.		kg.m ²	Lb.ft ²	kg.m ²	Lb.ft ²
CP-125/200 B	336	2.431	3.600	3.600	4.950	0,14	3,32	0,17	4,04
CP-125/250 A	336	2.431	3.000	3.600	4.130	0,25	5,93	0,30	7,12
CP-150/310 A	515	3.726	2.300	3.000	4.450	0,54	12,82	0,75	17,80
CP-150/400 A	515	3.726	1.800	1.800	3.790	0,96	22,79	1,49	35,37
CP-150/400 B	515	3.726	2.000	2.400	3.790	0,96	22,79	1,49	35,37
CP-150/430 A	336	2.431	1.700	1.700	3.440	1,31	31,10	1,89	44,86
CP-150/430 B	336	2.431	2.000	2.300	3.440	1,31	31,10	1,89	44,86
CP-150/500 A	1.039	7.517	1.500	1.800	3.920	1,97	46,76	2,94	69,79
CP-200/340 A	1.039	7.517	2.100	2.200	4.490	1,20	28,48	1,57	37,27
CP-200/400 A	1.039	7.517	1.800	2.100	4.330	1,90	45,10	2,55	60,53
CP-200/400 B	1.039	7.517	1.800	2.200	4.330	1,90	45,10	2,55	60,53
CP-200/500 A	1.761	12.740	1.450	1.800	3.470	3,80	90,20	5,03	119,40
CP-200/620 A	1.761	12.740	1.200	1.500	3.280	7,50	178,03	9,53	226,21
CP-250/400 A	1.761	12.740	1.800	1.800	3.910	2,68	63,61	3,64	86,40
CP-400/390 A	2.268	16.408	1.500	1.500	2.710	4,45	105,63	6,29	149,30
CP-500/510 B	3.558	25.741	1.200	1.200	2.230	13,80	327,57	19,50	462,87

(V1) = Maximum speed for all kinds of application in general. Continuous service.

(V2) = Maximum speed for intermittent services: fire-fighting service, sprinkler version, emergency services.

NOTE: Pumps ITUR operates on a policy of continuous improvement to the development of its models. Modifications may therefore be made to the specifications without warning.

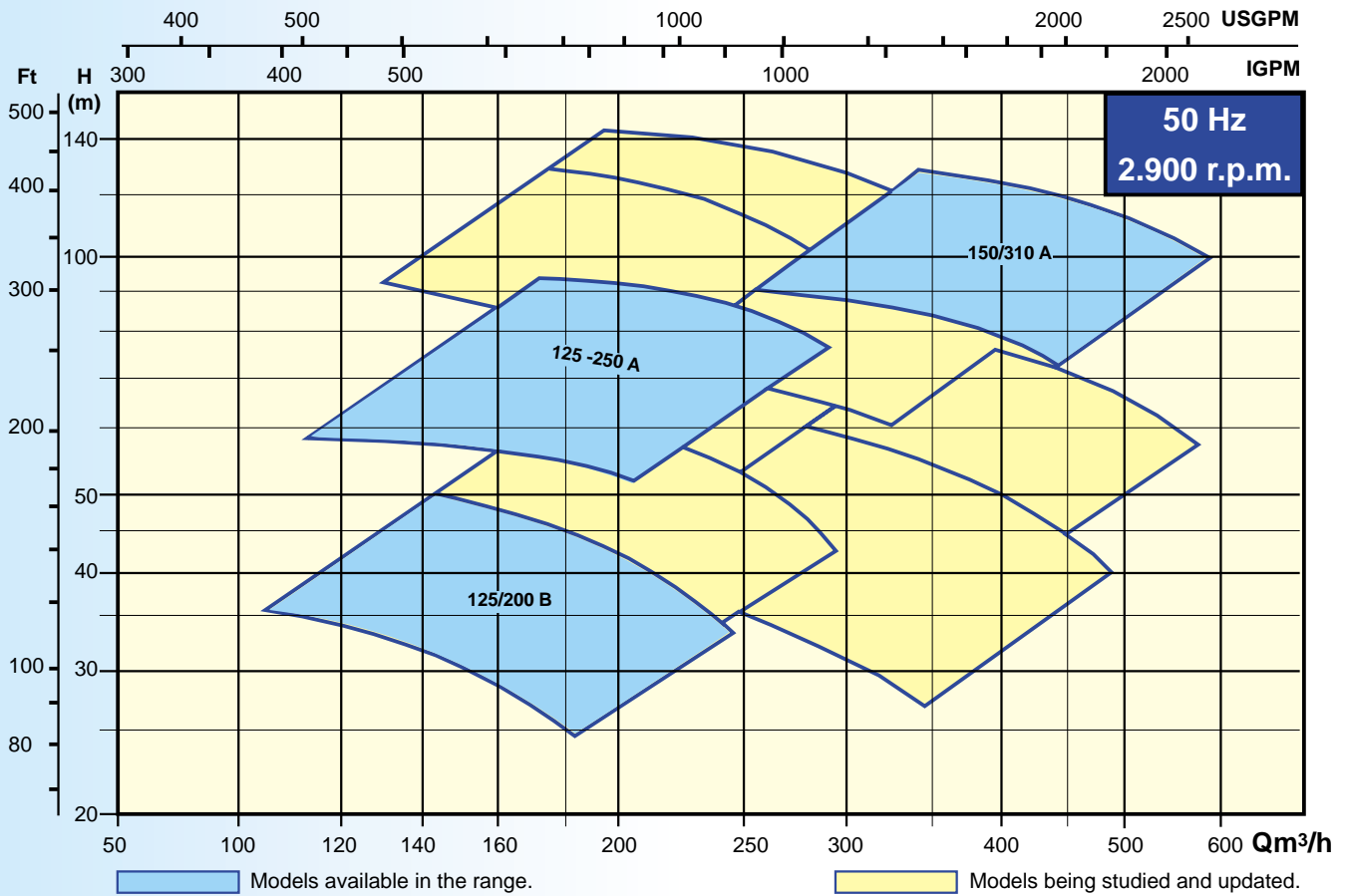


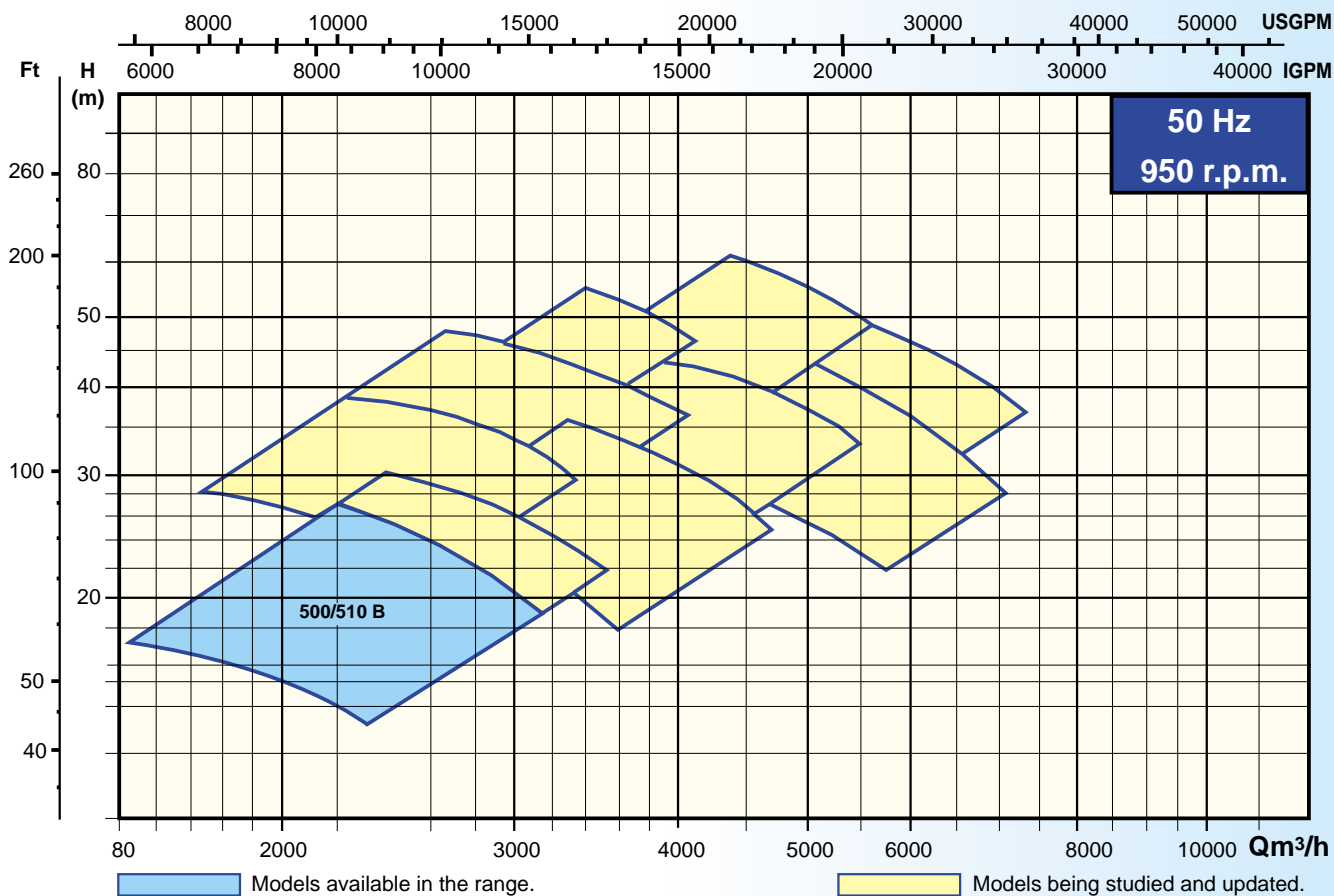
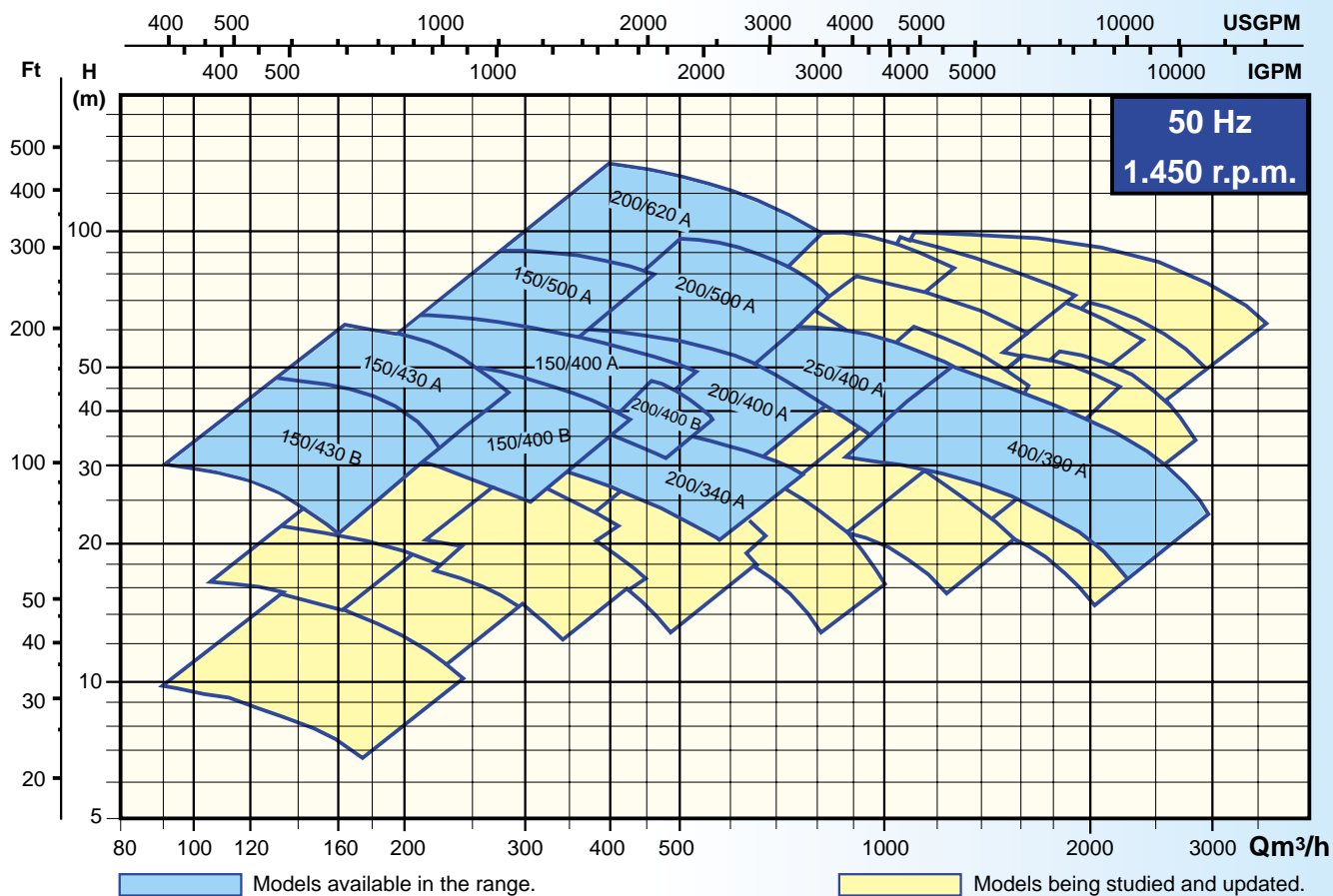


■ DIAGRAMS FOR SELECTING THE MODEL

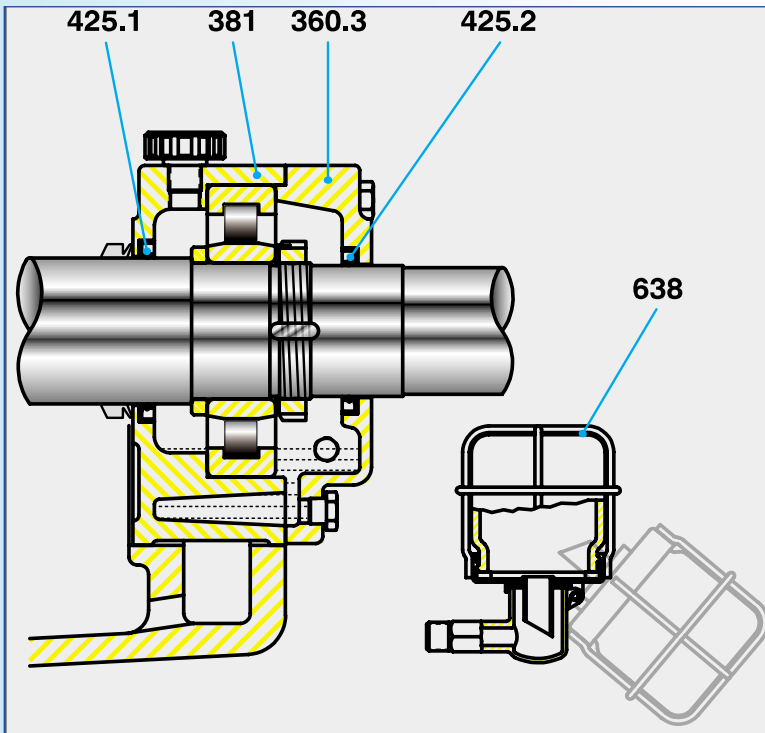
The following diagrams give the general rates of flow and head at 2,900, 1,450 and 950 r.p.m. corresponding to the CP pump models.

For more detailed information with yields, absorbed powers and required NPSH, consult our particular curves for each pump with its corresponding impeller.



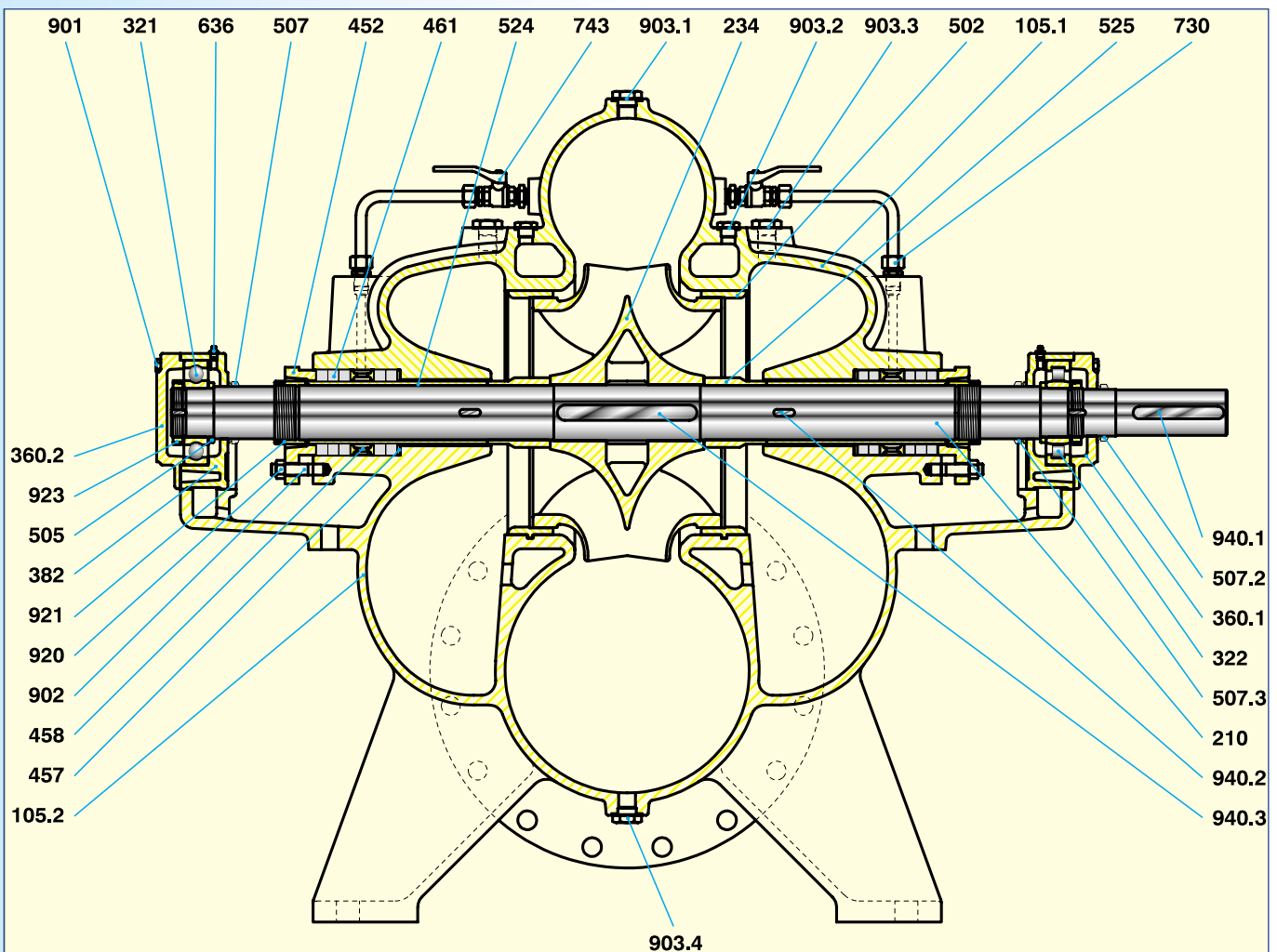


PUMP BREAKDOWN

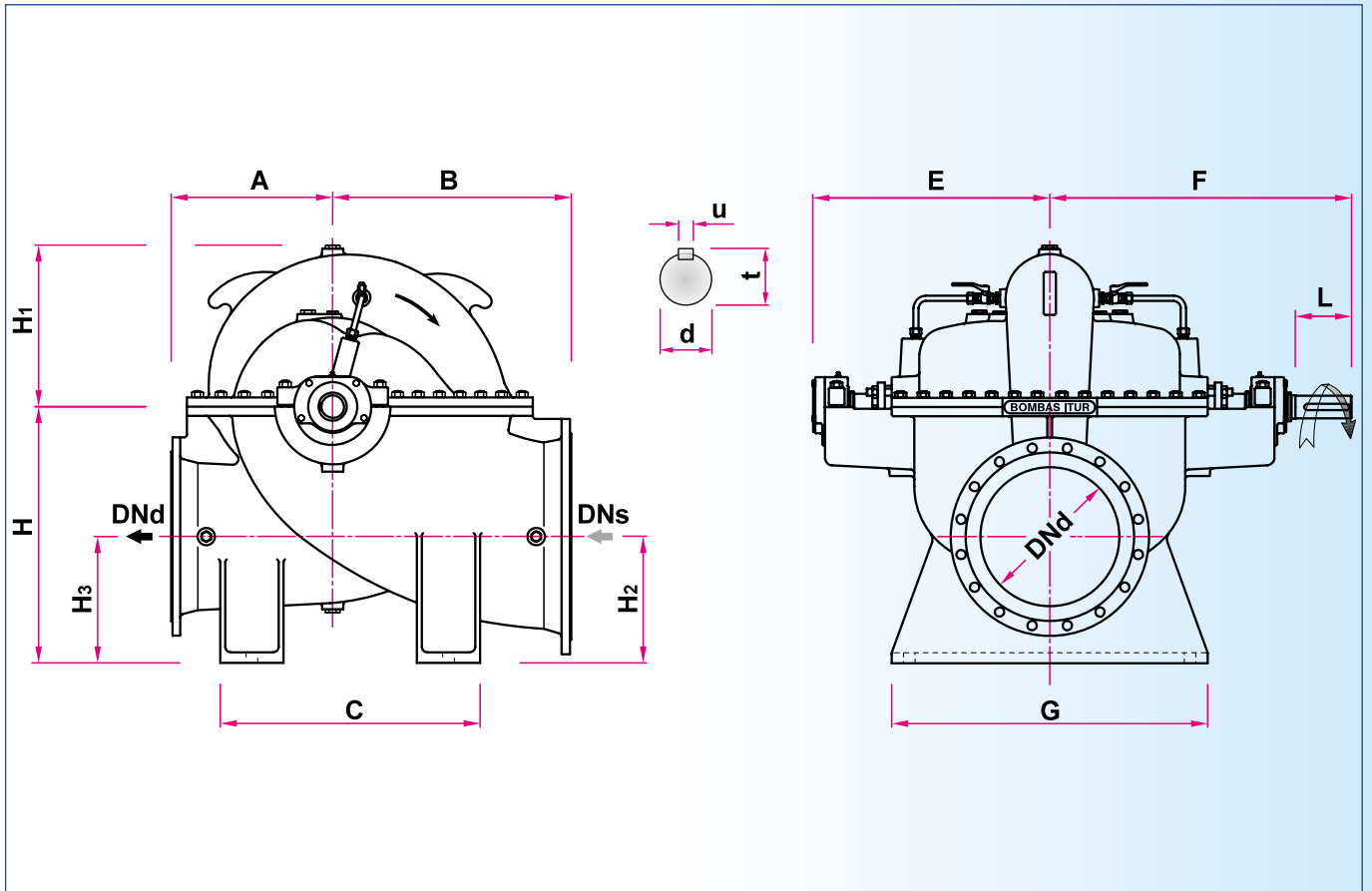


Ref.	Name of the part
105.1	Upper pump body
105.2	Lower pump body
210	Pump shaft
234	Double-flow impeller
321.1	Bearing opposite the drive
321.2	Bearing on the drive side
360.1	Bearing cap on drive side
360.2	Bearing cap opposite the drive
360.3	Bearing cap lubricated by oil
381	Bearing box
425.1	Retainer
425.2	Retainer
452	Stuffing box
458	Cage ring
461	Gasket
502	Body wear ring
524	Renewable sleeve
525	Distancing sleeve
638	Constant level lubricator
921	Shaft nut

Diagram of oil lubricated bearings.

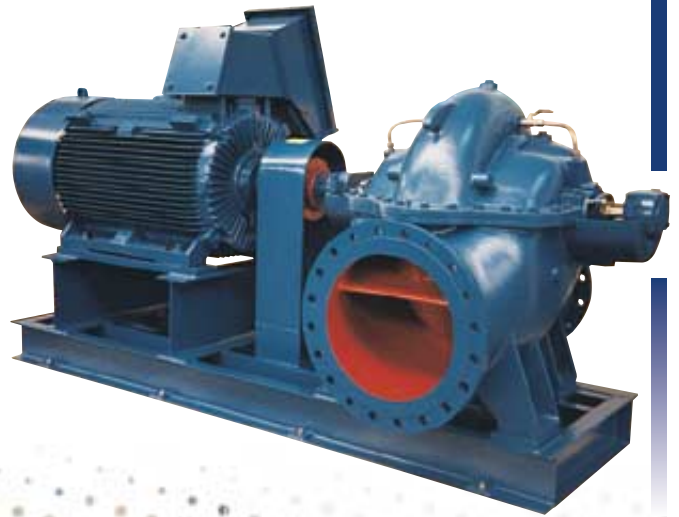
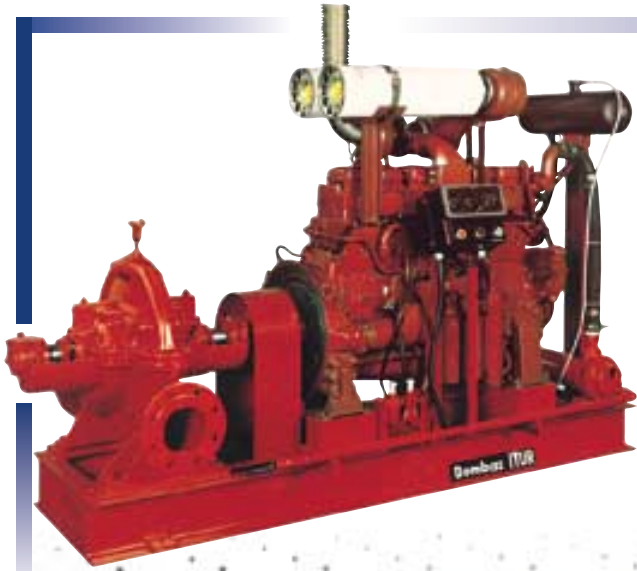


DIMENSIONS



SIZE OF PUMP	FLANGES		Dimensions in mm									
	DN _s	DN _d	A	B	C	E	F	G	H	H ₁	H ₂	H ₃
CP-125/200	150	125	300	300	400	380	465	300	300	175	150	150
CP-125/250	150	125	300	300	400	380	465	300	300	200	150	150
CP-150/310	200	375	375	375	500	410	510	360	400	260	200	200
CP-150/400	200	150	400	400	500	410	510	360	400	280	200	200
CP-150/430	200	150	400	400	600	380	465	300	350	280	150	150
CP-150/500	200	150	450	450	600	450	560	420	400	330	200	200
CP-200/340	250	200	400	400	600	450	560	420	450	300	210	210
CP-200/400	250	200	450	450	600	450	560	420	450	300	210	210
CP-200/500	250	200	450	450	600	530	655	420	450	370	285	285
CP-200/620	250	200	550	550	750	530	655	520	500	480	200	200
CP-250/400	300	250	550	550	650	530	655	450	550	500	250	250
CP-400/390	500	400	460	680	740	680	860	900	730	450	360	360
CP-500/510	600	500	550	850	950	820	1.025	1.100	900	560	425	425

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PUMPS

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