



**Gabbioneta Pumps®**  
Heavy Duty Process Pumps  
**DH-DDH Range**

## General information

The DH and DDH range heavy duty process pumps are horizontal, between bearings with radial split casing and single (DH range) or double (DDH range) suction impeller designed for full compliance with latest edition of API 610 Standard.

DH pumps are designed with two single suction back to back impellers, which assure adequate axial thrust balance, while DDH pumps employ a balancing drum on the second stage impeller.

A wide range of sizes and material combination complete the variety of the offered products.

## Main design features:

- Geometry of pump components optimised through hydraulic, structural, thermal and dynamic F.E.M. analysis to guarantee high product reliability.
- Ample balancing line from 2nd. stage to suction maintain stuffing box pressures within limits easily acceptable by any type of balanced mechanical seals.
- Centreline casing mounting for high temperature stability
- Rotor operates far from its critical speeds.
- Deep stuffing boxes integrally cast with pump casing, in accordance to API 682 Std., suitable to accept any type of mechanical or packing seals.
- Labyrinths and deflectors at both bearing housing covers to maximise protection against dirt
- Suction and discharge nozzles, integrally cast with the casing, are arranged in in-line position
- Three bearings arrangements available:
  - Ball Radial / Ball Thrust
  - Sleeve Radial / Ball Thrust
  - Sleeve Radial / Tilting Pads Thrust (Kingsbury Type).

## Options

The following pump designs can be provided:

- For extremely low NPSH duties, a number of DH/ DDH pumps can be equipped with inducers.
- Steam jacketed casing for special applications.
- Replaceable stuffing box cooling or heating jackets.
- Double shaft extension.
- Cylindrical fit at coupling shaft end.
- Special bearing isolators at either bearing housing ends.
- 'CARB' or hydrodynamic line bearing for high temperature application.
- Oil mist lubrication system (pure or purge).
- Forced feed lubrication system.
- Temperature and/or vibration detection and monitoring equipment.
- Baseplate available with three point gimbals mounting (FP50 services).

## Main pumps applications refer to heavy duties on

- Oil & Gas
- Fluid transportation
- Refineries
- Petrochemical plants
- "Hot" charge

## Operating data

### DH Capacity

up to 350 m<sup>3</sup>/h (1500 USgpm)

### DDH Capacity

up to 2000 m<sup>3</sup>/h (8800 USgpm)

### Head

up to 760 m (2500 feet)

### Temperature

from — 30°C (-20°F) to 455°C (850°F)

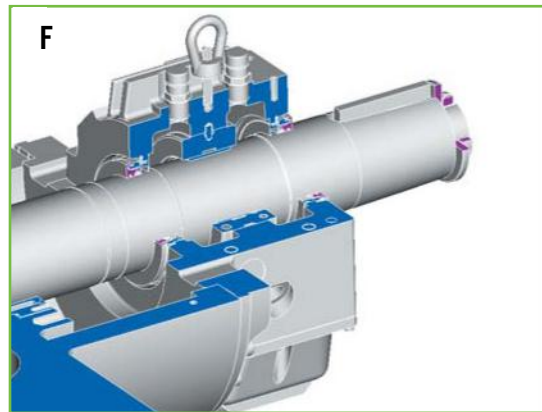
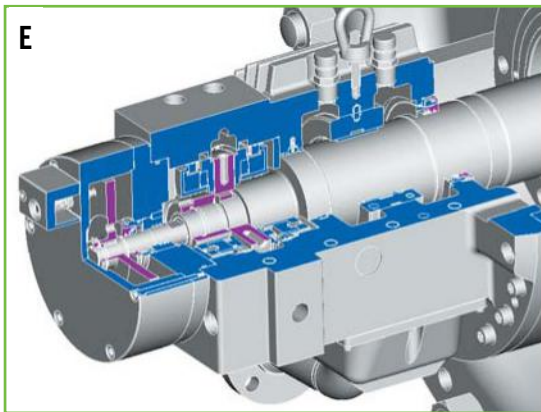
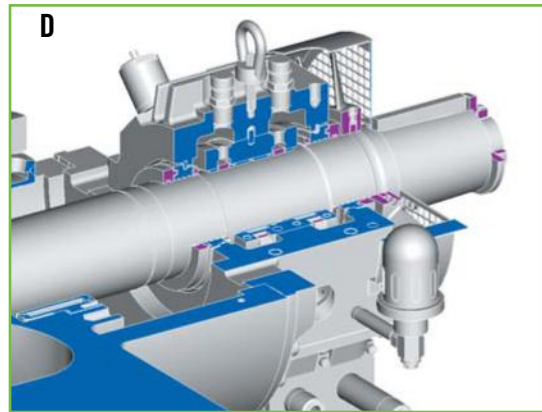
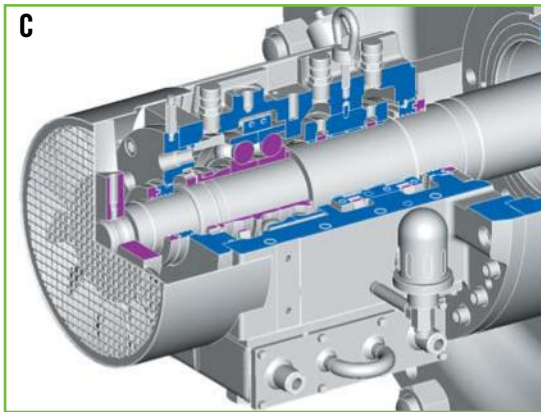
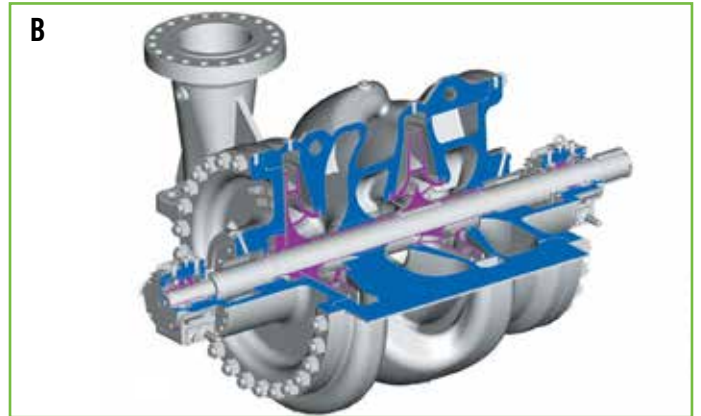
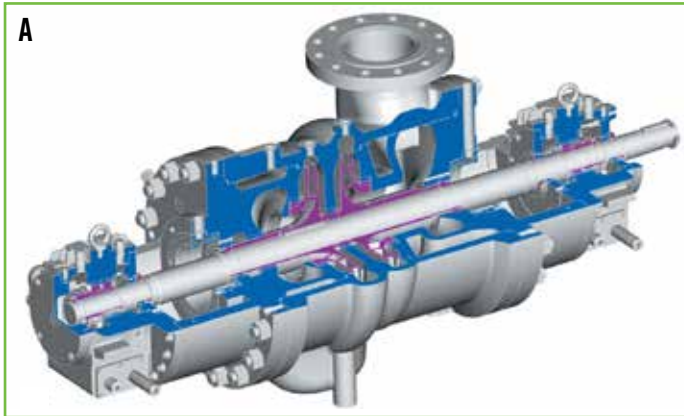
### Design working pressure

up to 150 barg (2200 psig)

### Rotational speed

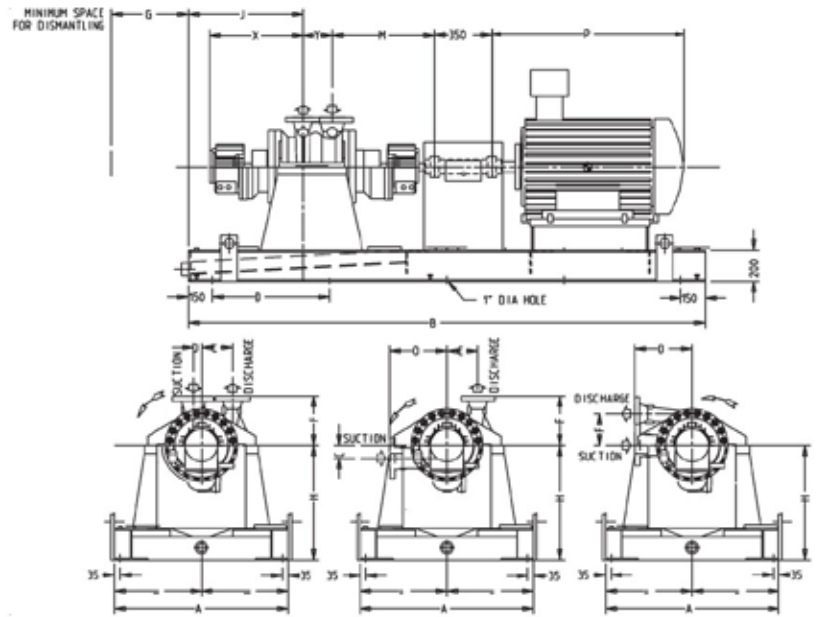
up to 3800 rpm





- A. DH pump Ball-Ball
- B. DDH pump Ball-Ball
- C. Sleeve-Ball NDE
- D. Sleeve-Ball DE
- E. Sleeve-Kingsbury NDE
- F. Sleeve-Kingsbury DE

## DH Overall dimensions

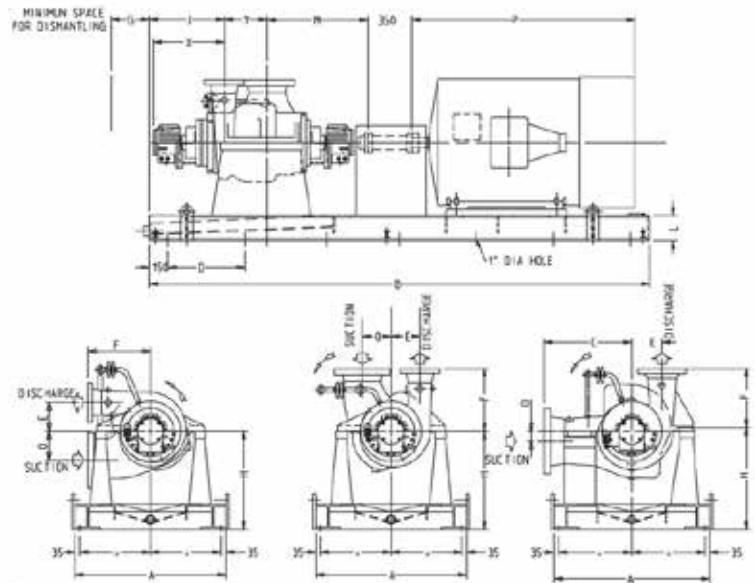


PUMP TYPE	NOZZLE SIZE		A	C	D	E	F	G	H	X			Y	M	O	J
	Suct.	Disch.								B/B	S/B	S/K				
300/25 TT	3"	2"	1060	-	715	175	330	1100	800	634	852	872	140	700	-	800
300/25 SS	3"	2"	1060	-	715	-	175	1100	800	634	852	872	140	700	300	800
320/50 TT	3"	2"	1060	-	715	175	300	1100	800	634	852	872	140	700	-	800
320/80 TT	4"	3"	1060	-	715	190	300	1100	800	660	878	898	180	710	-	800
320/100 TT	6"	4"	1060	-	715	200	370	1100	800	653	871	891	205	685	127	800
330/25 TT	3"	2"	1060	-	715	175	330	1100	800	634	852	872	140	700	-	800
330/25 SS	3"	2"	1060	-	715	-	175	1100	800	634	852	872	140	700	300	800
360/50 TT	3"	2"	1060	-	715	190	350	1100	800	635	853	873	140	705	-	800
360/80 TT	4"	3"	1060	-	715	200	350	1100	800	660	878	898	180	710	-	800
360/80 ST	6"	3"	1060	-	715	200	350	1100	800	660	878	898	180	710	420	800
360/100 TT	6"	4"	1060	-	715	210	350	1100	800	665	873	893	255	660	120	800
360/100 ST	6"	4"	1060	120	715	210	350	1100	800	655	873	893	255	660	500	800
360/150 TT	8"	6"	1060	-	715	210	400	1100	800	667	885	905	305	660	120	800
360/150 ST	8"	6"	1060	120	715	210	400	1100	800	667	885	905	305	660	550	800
400/50 TT	4"	2"	1060	-	715	230	380	1100	800	659	877	897	190	725	-	800
400/50 SS	4"	2"	1060	-	715	-	230	1100	800	659	877	897	190	725	380	800
400/80 TT	4"	3"	1240	-	715	240	400	1100	800	690	908	928	215	720	-	800
400/100 TT	6"	4"	1240	-	715	230	400	1100	800	639	857	877	215	700	120	800
400/150 TT	8"	6"	1240	-	715	245	450	1100	800	646	864	884	205	695	175	800

### General notes

1. All dimensions are in mm. Do not use for construction unless certified.
2. TT, ST, SS respectively means top-top, side-top, side-side
3. Dimensions B and P vary with driver selection.
4. Dimension X relative to Sleeve-Kingsbury configuration does not include the coaxial lube oil pump.
5. The specified quantity of vent and drain outlets may not be equal to number of holes, as some of them may be connected together

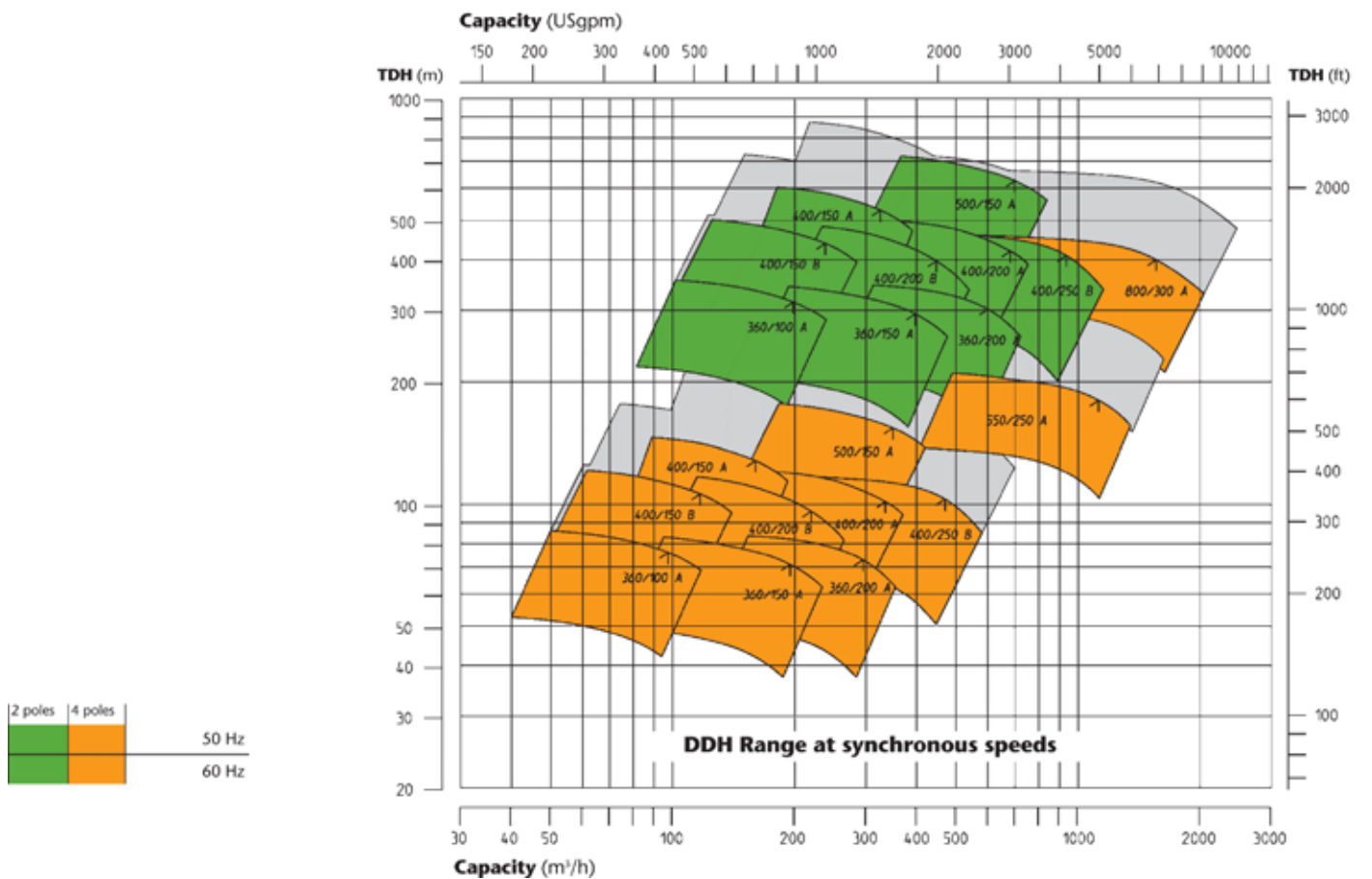
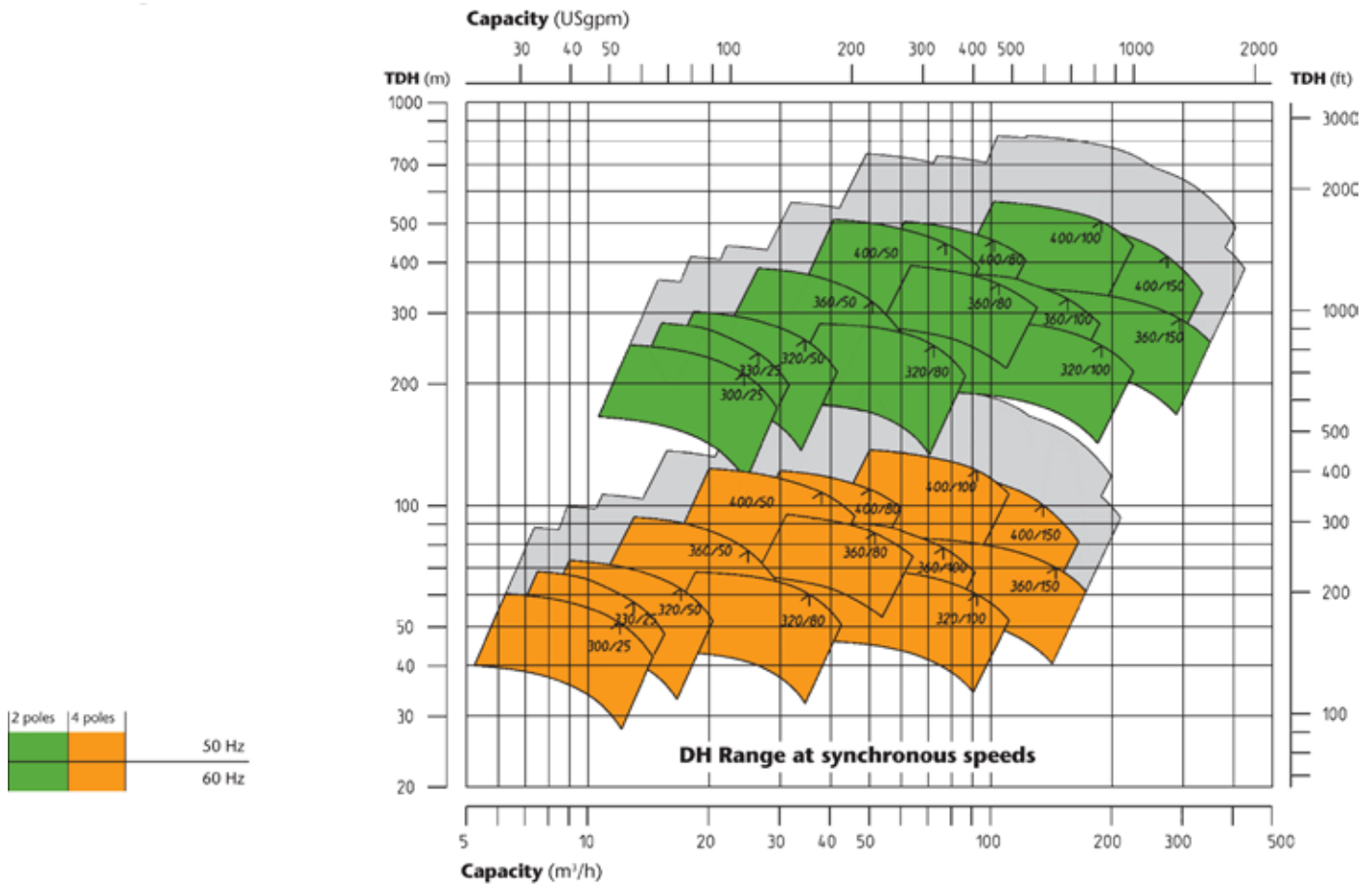
## DDH Overall dimensions



PUMP TYPE	NOZZLE SIZE		A	C	D	E	F	G	H	X			Y	M	O	J	L
	Suct.	Disch.								B/B	S/B	S/K					
360/100 TT	8"	4"	1240	-	715	215	400	1900	800	539	757	-	230	730	200	800	200
360/100 SS	8"	4"	1240	-	715	215	500	1900	800	539	757	-	230	730	200	800	200
360/150 TT	10"	6"	1240	-	715	230	500	1900	800	558	776	-	340	820	230	800	200
360/150 ST	10"	6"	1240	550	715	230	500	1900	800	558	776	-	340	820	200	800	200
360/200 ST	12"	8"	1390	700	715	240	600	1900	800	557	775	754	380	875	0	800	200
400/150 TT	10"	6"	1390	-	715	265	550	1900	800	559	777	756	340	835	250	800	200
400/150 ST	10"	6"	1390	550	715	265	550	1900	800	559	777	756	340	835	250	800	200
400/200 A TT	12"	8"	1390	-	715	265	630	1900	800	566	784	763	370	870	300	800	200
400/200 A ST	12"	8"	1545	750	715	265	630	1900	800	566	784	763	380	870	300	800	200
400/200 B TT	10"	8"	1240	-	715	250	550	1900	800	556	774	753	290	770	200	800	200
400/200 B ST	10"	8"	1240	550	715	250	550	1900	800	556	774	753	290	770	200	800	200
400/250 TT	12"	10"	1390	-	715	300	550	1900	800	556	774	753	362	855	300	800	200
500/150 TT	10"	6"	1545	-	715	325	550	1900	800	549	767	746	310	790	200	800	200
500/150 ST	10"	6"	1545	700	715	325	550	1900	800	549	767	746	310	790	200	800	200
500/250 TT	14"	10"	1800	-	715	400	700	1900	800	601	819	-	440	865	350	900	200
800/300 TT*	16"	12"	2100	-	715	500	800	2300	1100	653	895	881	600	1050	500	900	240

\* C.C.W rotation from coupling side

# Coverage Chart



## A century of experience

Since the foundation of the company in 1897, Gabbioneta Pumps® has been engaged in design and manufacture of high quality centrifugal pumps.

The products and the markets served progressively changed from water to chemical industry and finally, in the last thirty years, to API 610 heavy duty pumps for refinery and petrochemical industries.

Product development is based on a thorough interchange of marketing and operating experience within the company and in close cooperation with project and plant engineers.

Manufacturing is carried out in a factory equipped with several modern CNC machines and machine tools. Special note has to be given to the machining centers where pump casings can be machined completely with only two settings.

In-house facilities are designed to meet the performance and NPSH testing requirements of all pumps manufactured in the company in full compliance with API 610 Standards.

A quality assurance system certified in accordance with ISO 9001 ensures Gabbioneta Pumps® are of the highest quality.





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[www.trilliumflow.com](http://www.trilliumflow.com) Certified: ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007