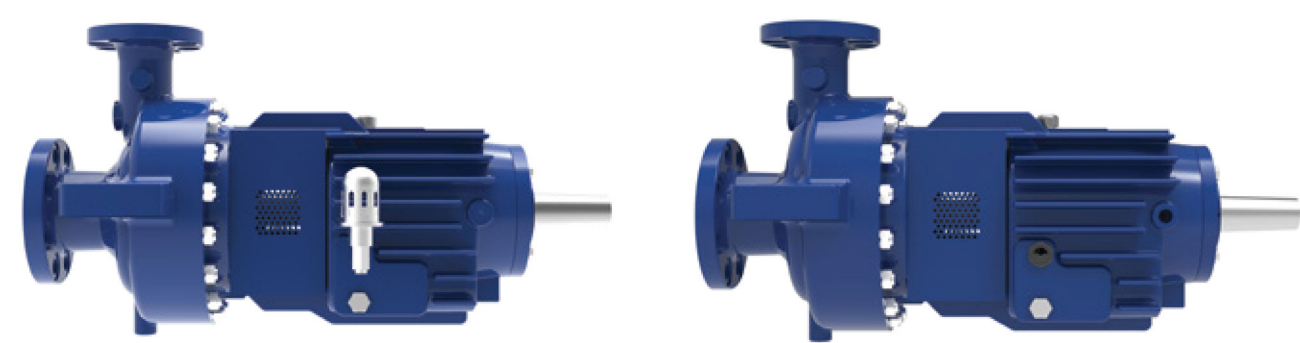


HORIZONTAL SINGLE-STAGE OVERHUNG PUMPS

API-610 TYPE: OH2
TERMOMECCANICA PUMP MODEL: AP



KEY FEATURES:

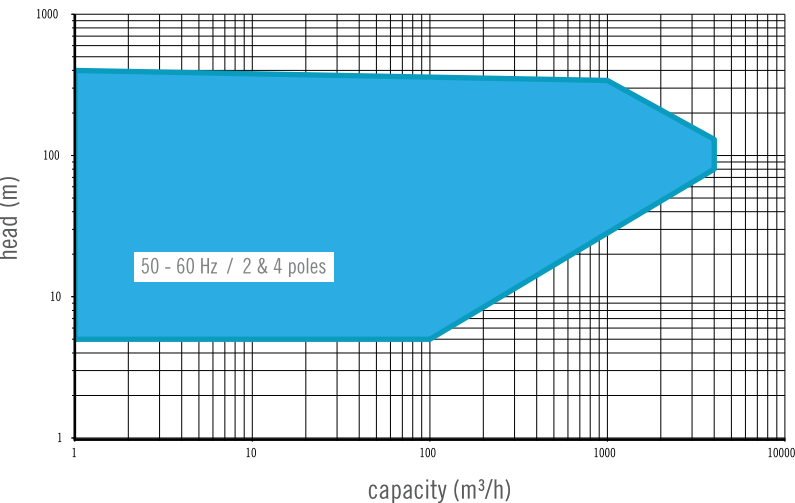
- Single-stage, single-suction radial impeller, end/top centrifugal pumps
- Thanks to the back pull-out arrangement, maintenance activities are made easier and can be carried out without disconnecting the piping or removing the driver
- Center-line assembly, large diameter shaft and very stiff bearing casing assure proper alignment of the rotating parts during the most critical conditions
- Seal chamber according to API 682 for any mechanical seal configuration and API 610 seal flushing plan
- Coke crusher can be provided upon request

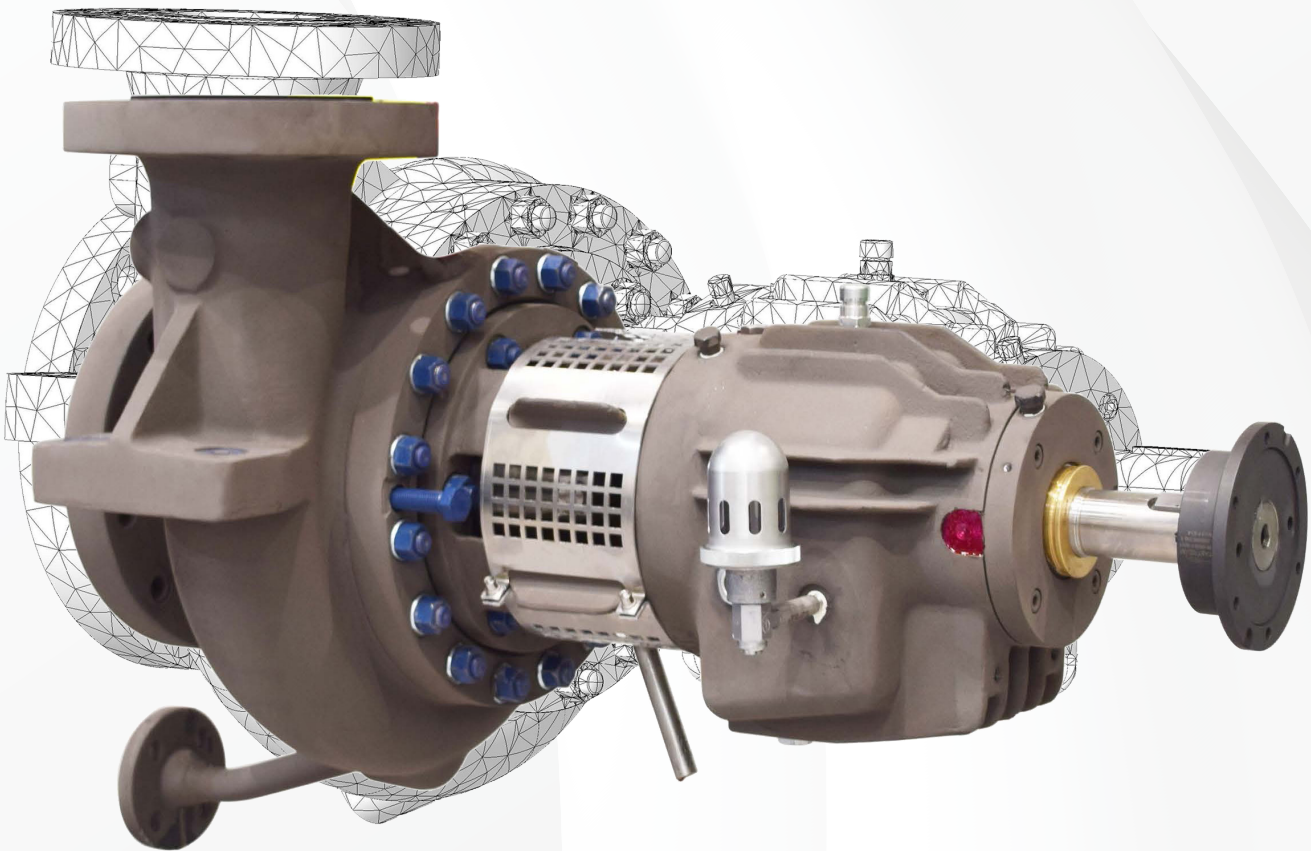
MAIN APPLICATIONS:

- Heavy duty services in Oil & Gas processing
- Boiler circulation & other high temperature industrial services
- Water market & general auxiliary pumping systems

OPERATING RANGE

- | | | | |
|----------------|-------|-------------------------|-----------------|
| • Capacity: | up to | 4,000 m ³ /h | 17,611 gpm |
| • Head: | up to | 400 m | 1,300 ft. |
| • Pressure: | up to | 100 bar | 1,450 psig |
| • Temperature: | range | -100 to +450 °C | -150 to +840 °F |





Gabbioneta Pumps®
Heavy Duty Process Pumps
R Range

General information

The R range heavy duty process pumps are horizontal, radially split, centerline supported, single entry overhung impeller pumps, designed in a back pull-out configuration according to the latest edition of API 610 Std.

Main design features:

- Pump components geometry optimised through hydraulic, structural, thermal and dynamic f.e.m. analysis to guarantee high product reliability.
- Back pull-out construction for easy maintenance procedures.
- Choice of multiple impellers for optimum efficiency over a wide operating range. Coverage includes more than 100 different hydraulics.
- Twin volute configuration to minimise radial loads and shaft deflections (over 2" discharge nozzle size).
- Centreline feet mounting for high temperature stability.
- The best Hydraulics among previous R and PA have been integrated.
- Shaft flexibility index fully in compliance with API 610, Annex K.
- Bearing housing intrinsically contamination free, even in case of mechanical seal failure.
- Fan cooling and/or finned bearing bracket.
- Casing, bearing frame and baseplate stiff enough to assure minimum shaft deflections under heavy nozzle load conditions (extended life for seal and bearing).
- Wear rings and balance holes optimised for an extended life under the most adverse suction conditions (duplex angular contact or roller thrust bearings applicable).
- Seals and sealing systems in accordance with API 682 Standard
- Baseplate overall dimensions according to API 610 Recommendation.
- A wide range of sizes and material combinations complete the variety of the offered product.

Options

The following pump designs can be provided:

- Casing and cover with full cooling or heating jackets
- Semi-open impellers suitable for high viscosity liquids or where significant quantities of solid are present
- Inducer to reduce NPSH requirements
- Stuffing box cooling water or heating jacket, easily accessible for inspection and mechanical cleaning
- Standard or special bearing isolators at both bearing housing ends
- Oil mist lubrication system (pure or purge)
- Water cooling for bearing bracket
- Baseplate available with three point gimbals mounting (FPSO services)
- If required, magnetic driven pumps in compliance with API 685 Std. can be evaluated for all executions.

Main pumps applications refer to heavy duties on

- Oil & Gas
- Refineries
- Petrochemical and chemical plants
- Feedwater and power plant

Operating data

Capacity

up to 2500 m³/h (11000 Gpm)

Head

up to 380 m (1200 feet)

Temperature

from -100°C (-150°F) to 450°C (850°F)

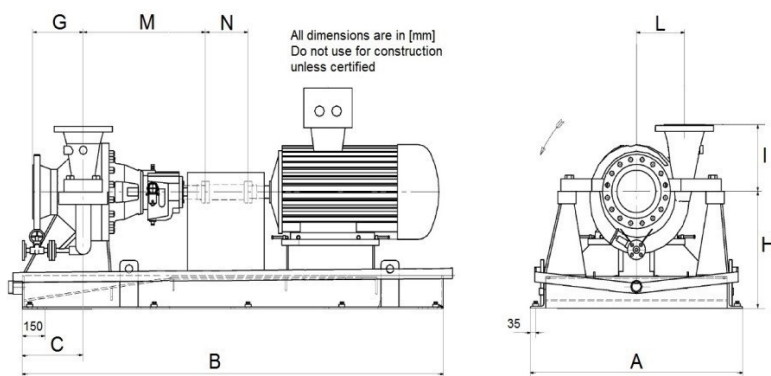
Design working pressure

up to 210 barg (3000 Psig)

Rotational speed

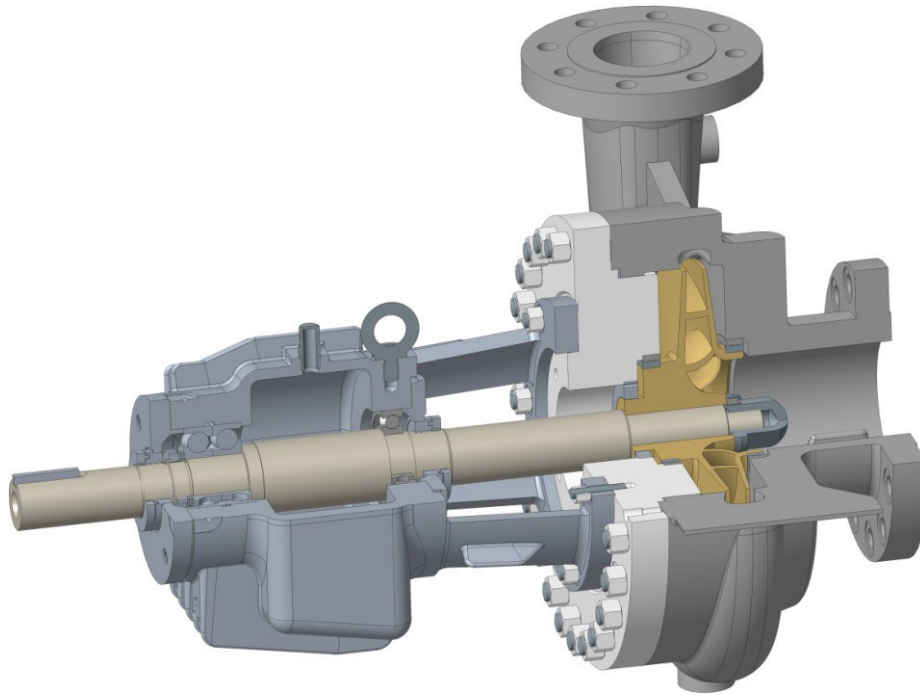
up to 3800 rpm

Overall dimensions

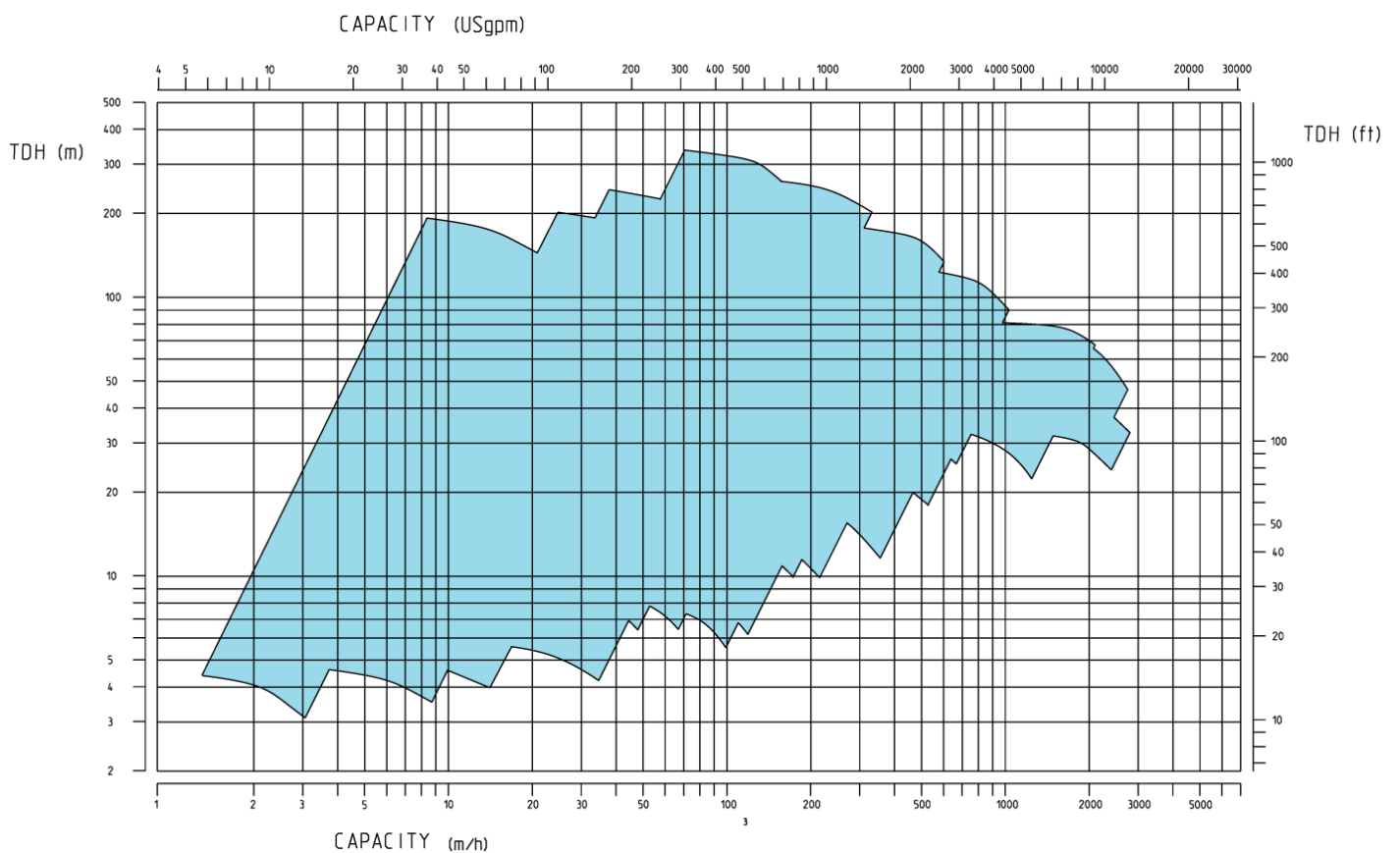


PUMP SIZE	NOZZLE SIZE	H [mm]	C [mm]	M [mm]	N [mm]	G [mm]	I [mm]	L [mm]	A [mm]	Distance between anchor bolts [mm]
R 150/25	3"/2"	650	420	570	140	150	250	0	755	615 715 770
R 150/38	3"/2"	650	420	570		150	250	0	755	
R 175/25	3"/2"	650	420	570		150	250	0	755	
R 175/38	3"/2"	650	420	570		150	250	0	755	
R 175/80	4"/3"	650	420	585		200	250	120	755	
R 200/25	3"/2"	650	420	570		150	260	0	755	
R 200/38	3"/2"	650	420	570		150	260	0	755	
R 210/25	1.5"/1"	650	480	570		95	200	120	755	
R 210/40	2"/1.5"	650	470	570		115	220	125	755	
R 225/25	3"/2"	650	420	570		150	260	0	755	
R 225/50	3"/2"	650	420	570		150	260	0	755	
R 200/50	4"/2"	640	420	650		170	225	125	910	
R 200/80	6"/3"	640	420	650		210	240	147	910	
R 250/25	4"/2"	640	420	650		170	280	0	910	
R 250/38	4"/2"	640	420	650		170	280	0	910	
R 250/80	6"/3"	640	420	650		210	270	165	910	
R 260/40	2"/1.5"	640	480	640		140	215	160	910	
R 260/40B	3"/1.5"	640	500	640		125	260	0	910	
R 260/50	3"/2"	640	490	640		155	240	165	910	
R 260/80	4"/3"	640	480	640		180	270	140	910	
R 275/25	4"/2"	640	420	650		170	280	0	910	
R 275/50	4"/2"	640	420	650		170	280	0	910	
R 300/25	4"/2"	640	420	650		170	320	0	910	
R 300/38	4"/2"	640	420	650		170	320	0	910	
R 300/50	4"/2"	640	420	650		170	280	165	910	
R 320/25	3"/1"	640	490	640		150	260	190	910	
R 325/25	4"/2"	640	420	640		170	320	0	910	
R 325/50	4"/2"	640	420	640		170	320	0	910	
R 200/100	6"/4"	650	420	695		210	285	160	910	
R 250/100	6"/4"	650	420	695		210	285	180	1060	
R 260/100	6"/4"	650	510	685		220	280	195	1060	
R 260/100A	6"/4"	650	490	695		220	280	180	1060	
R 300/80	6"/3"	650	420	695		210	295	185	1060	
R 320/50	3"/2"	650	500	685		170	280	185	910	
R 320/80	4"/3"	650	500	685		175	300	205	1060	
R 350/25	4"/2"	650	420	685		185	350	0	910	
R 350/50	4"/2"	650	420	685		185	350	0	910	
R 375/25	4"/2"	650	420	685		185	350	0	910	
R 375/50	4"/2"	650	420	685		185	350	0	910	
R 400/50	3"/2"	650	510	685		200	350	0	1060	
R 400/50A	3"/2"	650	500	695		200	320	200	1060	
R 250/150	8"/6"	710	420	740	200	250	335	200	1060	
R 300/100	6"/4"	710	420	740		210	310	200	1060	
R 300/150	8"/6"	710	420	740		250	335	220	1060	
R 300/200	10"/8"	750	420	740		290	360	250	1240	
R 320/100	6"/4"	710	500	720		195	320	210	1060	

PUMP SIZE	NOZZLE SIZE	H [mm]	C [mm]	M [mm]	N [mm]	G [mm]	I [mm]	L [mm]	A [mm]	Distance between anchor bolts [mm]
R 320/100A	6"/4"	710	510	720	200	200	295	215	1060	
R 320/150	8"/6"	710	520	740		200	440	0	1240	
R 350/200	10"/8"	750	420	740		260	350	260	1240	
R 360/80	6"/3"	710	420	740		210	330	215	1060	
R 360/100	6"/4"	710	420	740		210	345	225	1060	
R 400/100	6"/4"	710	510	730		260	330	260	1240	
R 400/100A	6"/4"	710	520	730		230	350	265	1240	
R 430/50	4"/2"	710	420	740		170	350	230	1060	
R 430/80	6"/3"	730	420	740		210	365	245	1060	
R 550/100	6"/4"	780	420	740		230	420	290	1240	
R 320/200A	10"/8"	680	530	760		275	430	240	1240	615 715 770
R 320/200B	10"/8"	680	550	770		290	430	240	1240	
R 360/150	8"/6"	730	420	760		250	370	240	1240	
R 360/200	10"/8"	750	420	755		290	390	260	1240	
R 400/150A	8"/6"	680	520	750		250	450	0	1390	
R 400/150	8"/6"	680	520	750		265	400	285	1390	
R 400/250	12"/10"	680	580	760		300	400	315	1390	
R 400/300	14"/12"	860	420	770		300	450	335	1545	
R 405/200	10"/8"	680	540	750		328	400	315	1390	
R 405/250	12"/10"	690	560	760		350	440	335	1545	
R 430/100	6"/4"	730	420	760		210	380	255	1240	
R 450/150	8"/6"	680	570	760		250	400	305	1390	
R 480/50	6"/2"	730	420	760		230	405	255	1240	
R 505/200A	10"/8"	680	540	750		330	520	330	1390	
R 620/100	6"/4"	700	520	760		265	650	0	1545	
R 620/150	8"/6"	700	540	760		300	675	0	1545	
R 430/150	8"/6"	760	420	820	280	250	405	270	1240	
R 450/200	10"/8"	680	540	830		300	400	295	1390	
R 450/250	12"/10"	840	420	830		300	450	335	1390	
R 480/100	6"/4"	780	420	830		230	420	290	1240	
R 505/100	6"/4"	680	510	820		200	500	0	1390	
R 530/150	10"/6"	680	530	840		275	450	250	1390	
R 530/200	10"/8"	840	420	840		250	500	325	1545	
R 610/100	8"/4"	680	560	840		330	500	335	1390	
R 700/150	8"/6"	750	550	830		305	600	390	1700	
R 700/150S	8"/6"	760	560	830		270	600	415	1545	
R 450/300	14"/12"	740	580	855		325	505	380	1545	
R 500/300	14"/12"	770	610	845		300	550	380	1545	
R 500/350	14"/14"	770	600	845		305	550	380	1545	
R 505/150A	8"/6"	690	520	855		270	520	300	1390	
R 505/150	8"/6"	690	510	865		250	550	0	1390	
R 505/300	14"/12"	810	570	855		350	550	440	1900	
R 505/350	16"/14"	810	570	865		380	630	440	1900	
R 510/250	12"/10"	900	420	845		360	570	380	1545	
R 600/250	12"/10"	720	560	845		300	600	380	1545	
R 610/200	10"/8"	730	560	845		300	600	390	1545	
R 700/150A	8"/6"	760	540	845		290	715	0	1700	
R 700/200	10"/8"	820	580	820		450	625	450	1800	
R 700/200A	10"/8"	820	580	820		450	625	450	1900	



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.



Gabbioneta Test Room – R pumps benches



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www.trilliumflow.com Certified: ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007