

**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 m<sup>3</sup>/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)

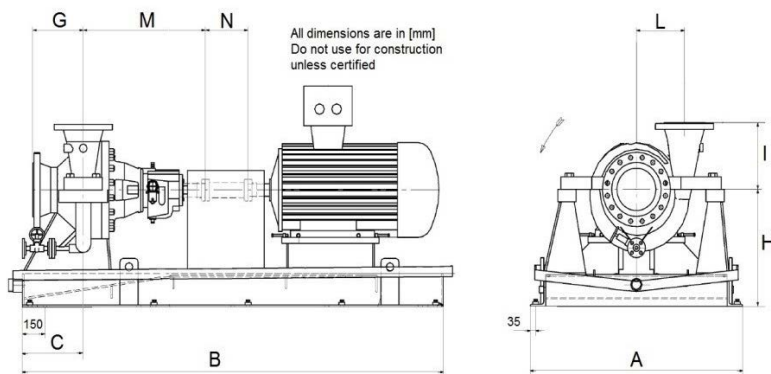
---

### Rotational speed

up to 3800 rpm

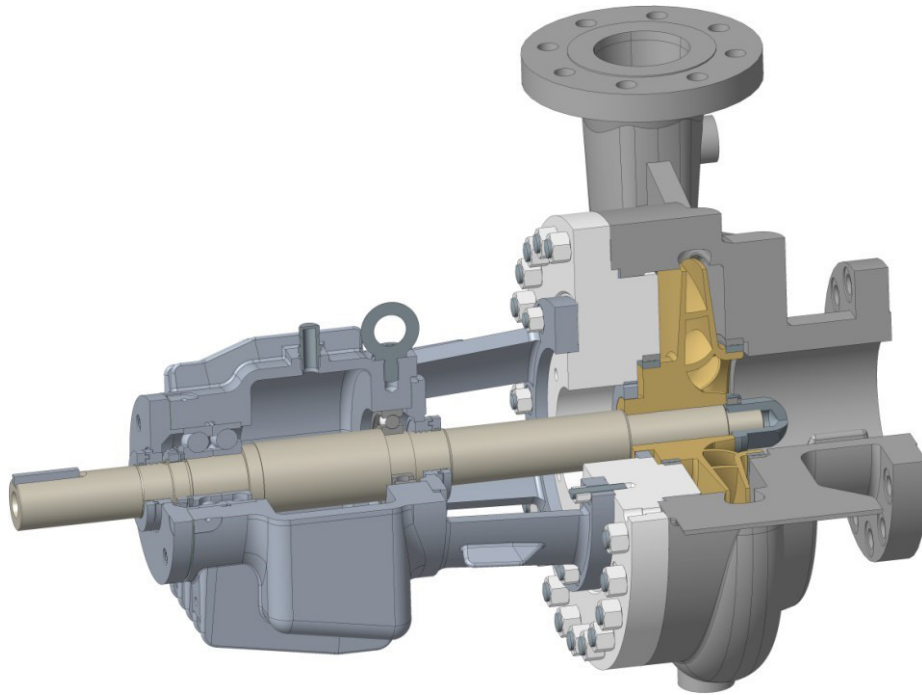
---

## Overall dimensions

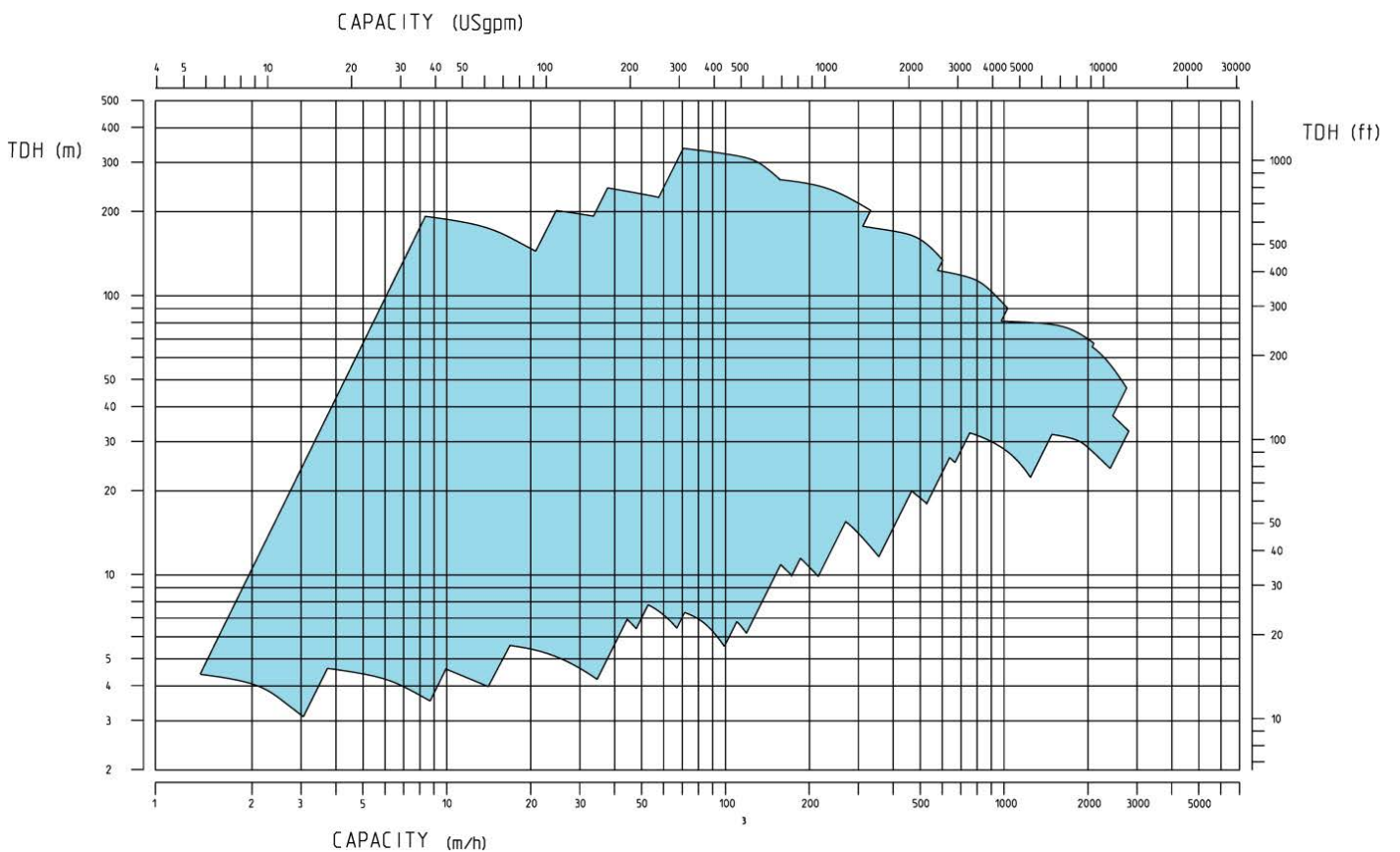


| PUMP SIZE  | NOZZLE SIZE | H [mm] | C [mm] | M [mm] | N [mm] | G [mm] | I [mm] | L [mm] | A [mm] | Distance between anchor bolts [mm] |
|------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|------------------------------------|
| R 150/25   | 3"/2"       | 650    | 420    | 570    | 140    | 150    | 250    | 0      | 755    | 615<br>715<br>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    | 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   | 615<br>715<br>770                  |
| 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   |                                    |
| 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    | 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**



**Trillium Pumps Italy S.r.l.**  
**Società Unipersonale**

Gaetana Agnesi 1, 20834 Nova Milanese (MB), Italy  
T: +39 0362 17331; Fax: +39 0362 1733209; E: [gabbioneta.sales@trilliumflow.com](mailto:gabbioneta.sales@trilliumflow.com)

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