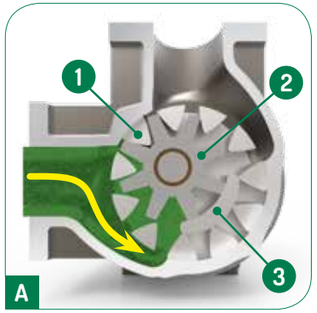
Operating principle and limits of use



The R internal gear pumps are self-priming positive displacement rotary pumps perfect for viscous liquids (0,5 to over 500.000 mm²/s) of any temperature (-60°C to 350°C), which can be corrosive, abrasive and dangerous for the environment. The pumps are used for transferring, dosing, processing, loading and unloading.
Two gears generate the flow: the rotor ❶ and the idler ❷. The rotor moves the internal idler. As the gears rotate, the liquid is drawn into the spaces created between the gears and smoothly moved toward the discharge port, where the divider ❸, called crescent, closes the free space between the two gears. When the gears mesh, the liquid is slowly forced out of the pump. The result is a constant and smooth flow with no pulsations with a capacity directly proportional to the rotation speed. This will avoid vibrations on fittings, valves or couplings, reducing the foaming or churning of the liquid.
The pump is equipped with one shaft seal or with magnetic coupling only, and has the possibility of a heating jacket around the casing in one cast. The full performance is available in either direction of rotation and the casing can be rotated and delivered with 90° or 180° (in-line) ports. A safety relief valve against over-pressure is incorporated in the pump. This is a heavy duty construction optimized for rare maintenance.

The pumps are available with ATEX certifications to fulfill the EU regulation "Directive 2014/34/EU" that regulates the security of use for equipment in potentially explosive atmospheres. We can supply ATEX certifications for the areas of Group II, categories 2GD (Zone 1) and 3GD (Zone 2) for the temperature classes T1/T2/T3 and T4.
By filling out a simple questionnaire, you can check the availability of the certificate for the specific request.
Further information is available on request.