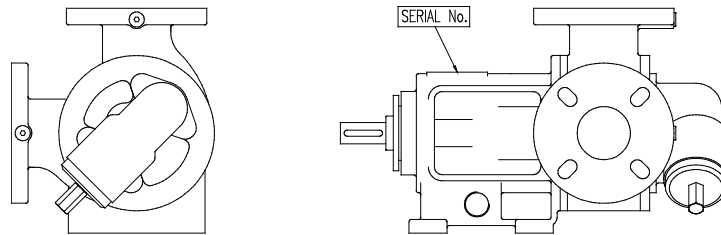


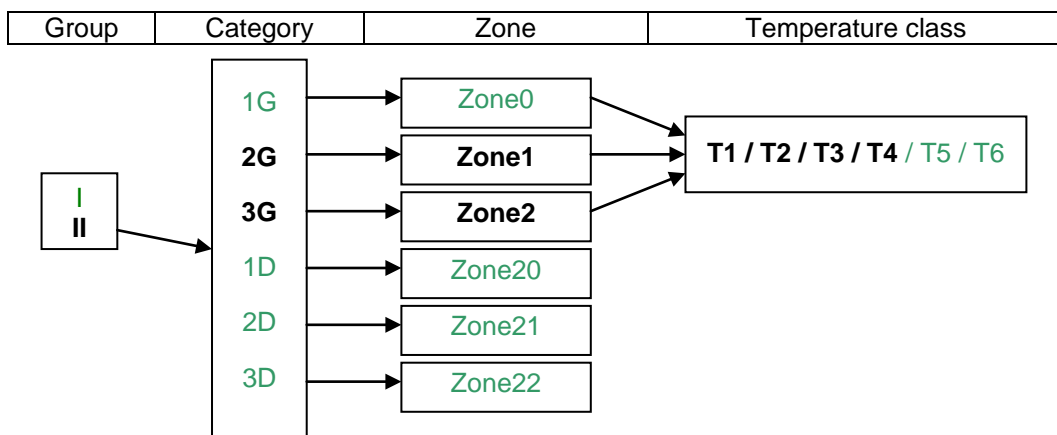
INFO FOR ATEX



To avoid risk of explosions in an Ex-Zone, when you mount a **R** internal gear pump you have to check the following information:

1. Ex - Zone

1.1 The **R** internal gear pumps can be used in the zones and categories signed in bold:



2. ATEX requirements

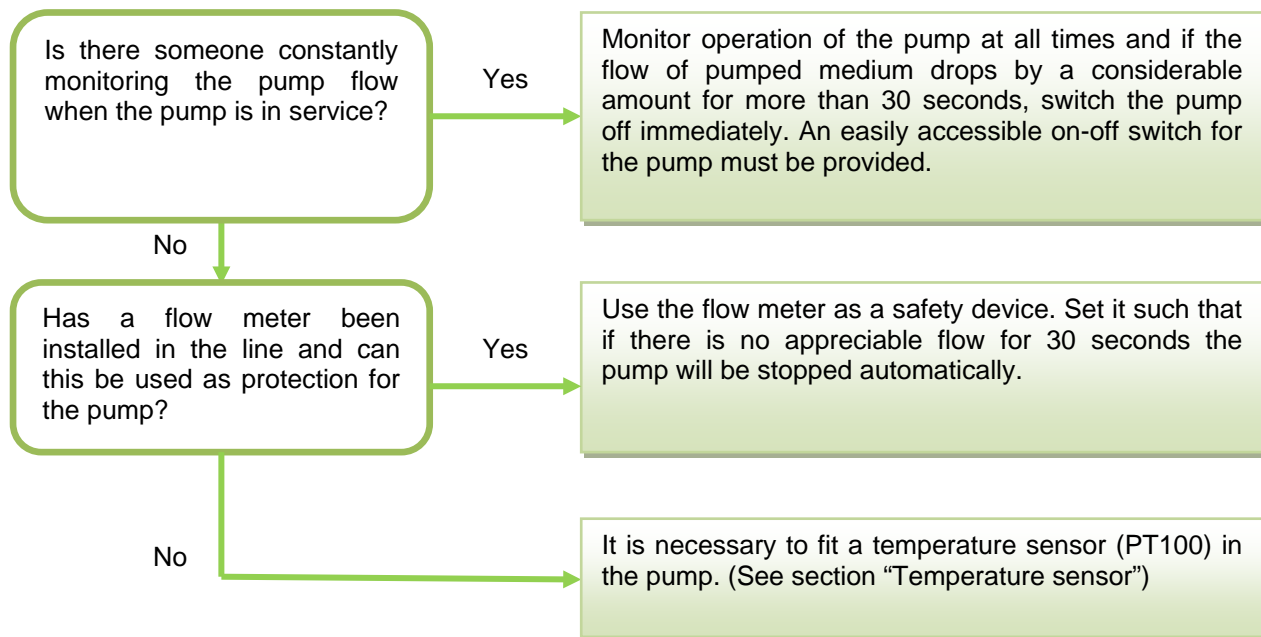
- 2.1 By pumps with mechanical seals, these can leak. If the pumped liquid is inflammable, in the outside of the pump you have to declare a Zone 1 (Category 2).
- 2.2 Pumps with packing seal cannot prime flammable liquids.
- 2.3 The pump can be blocked by solids. It is therefore necessary to mount an automatic switch on the electric motor (PTC if used with inverter).
- 2.4 Use the pump only in the authorized performances levels indicated in these instructions, in the technical data sheet and in the performance curve! The liquid must never be pumped on the limit of vaporization, crystallization, polymerization or solidification. If the pump has to be used in a different duty not indicated in the request form (for which the pump was produced), please check the compatibility and ask for authorization of use to the manufacturer!
- 2.5 The pump materials must be compatible with the pumped liquid. The pump producer is not responsible if the pump is used with not compatible liquids.
- 2.6 The operating temperature of the pump must not exceed the values below mentioned. If a pumped medium is capable of reaching this temperature, it is not permitted to put the pump into service. A temperature sensor can be used for checking. On request other measures can be advised by the manufacturer. This will be indicated specifically in the technical data sheet.

Temperature class according to DIN EN 13463-1	Maximum operating temperature* for pump with		
	Packing seal °C	Mechanical seal °C	Magnetic coupling °C
T1	200(300)	150	200
T2	200(240)	150	200
T3	140	150	160
T4	75	95	105

* Over 140°C the pump has to be painted with high temperature paint.

() H. version of the pump

- 2.7 The R internal gear pump is a volumetric pump. It is not allowed to regulate the flow by closing the suction or discharge side or by regulating the pressure. Flow regulation can be achieved only through speed changing or an external by-pass line.
- 2.8 It is not permitted to start the pump with closed suction and/or discharge line. The pump owner should take the necessary safety measures to avoid this situation. To secure the pump against a closed discharge line you can use the internal safety valve (+Y). Never use the internal safety valve as a standard by-pass line. As an alternative you can use an external by-pass line. This by-pass line has to be large enough, always able to work and preferably returning to the suction tank.
- 2.9 Measures as listed below must be taken against long dry running or against long operation of the safety valve:



3. Supplement Atex requirements for magnetic driven pumps

- 3.1 With R magnetic driven internal gear pumps the port position and the flow direction can not be changed afterwards.
- 3.2 It is necessary to check the magnetic coupling with an temperature sensor (Type PT100).
- 3.3 If the starting torque of the pump is near or exceeds the torque limit of the magnetic coupling it is necessary to use a soft-start device or a frequency converter.

4. Temperature sensor

- 4.1 The sensor monitors temperature changes in the pumped medium. A temperature increase typical with closed pressure line or abnormal wear in the pump can be monitored. When the limit temperature is exceeded, the sensor trips to shut off power to the pump drive and the pump stops.

- 4.2 The shut off device and associated wiring are not included in the scope of supply of the pump. The pump owner is required to have this installed himself by a suitably qualified technician.
- 4.3 Open the cover of the temperature sensor. There you will find the transmitter. Victor Pumps delivers the temperature sensor with integrated transmitter regulated as follows:

Temperature range	OUT-Signal	Current
0-150 °C	4 - 20 mA, linear	8 - 30 VDC