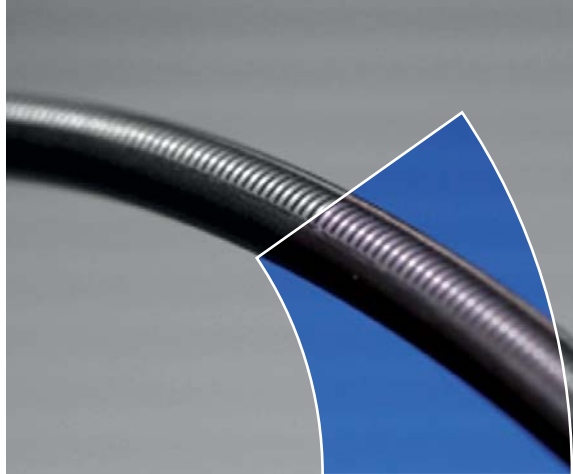


## SPECIAL SEALING SYSTEMS



### SELF-ENERGIZED SEALS SPETOACTIV® R, P

#### Service parameters

T (°C)	-200 ÷ +870	260*
P <sub>max</sub> (bar)	10 000	350*
Q <sub>max</sub> (MPa)	indefinite	

#### Ordering:

- please indicate the fixing dimensions and sealing conditions. The type, material and dimensions are custom-made

#### Availability:

- for flanges according to AS 1895
- according to American Military Norm USA MS 9141, MS 9142÷9205, MS 9371÷MS 9376

#### General information

#### Widely used in:

metal gaskets SPETOACTIV® are used in extremely difficult applications and when the the seating space is limited (due to limitation of weight or dimensions of the joint) or at the highest service requirements; these are aeroplane jet engines, rocket engines, nuclear power engineering, oil and gas industry; SPETOACTIV® based on on PTFE with additional metal spring element are used instead of elastomeric o-rings to seal the bearings, in the valves, plunger pumps, mechanical seals and in static applications, where, due to the temperature, medium, volume or speed of relative movement the solution of higher reliability are demanded; self-energized PTFE gaskets are also used in the static applications, because of the lower requirements as per the flange face surface finish compared to metal equivalents. All SPETOACTIV® gaskets need to be installed in the special flange arrangements or require an adaptor.

#### Materials of SPETOACTIV® P

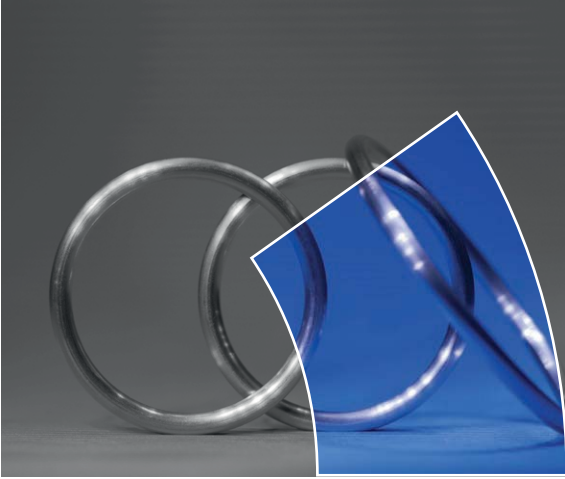
jacket material	min. temperatures°C	max. temperatures°C
virgin PTFE	-250	200
PTFE + graphite	-150	230
PTFE + MoS <sub>2</sub> glass fibre	-150	260
PTFE +60% bronze	-150	290
PTFE + carbon	-150	270

#### Materials of SPETOACTIV® R


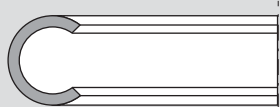

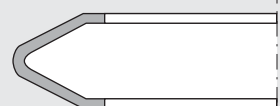
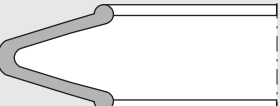
jacket material	available types	max. temperatures°C
304	R-0	430
316	R-0	430
321	R-0	430
347	R-0	430
Alloy 718	R-C, R-E, R-0, R-U	650
Hastelloy C	R-C	760
Waspaloy	R-C, R-E, R-U	870

\* – please contact SPETECH if the specified values are higher

## SPECIAL SEALING SYSTEMS



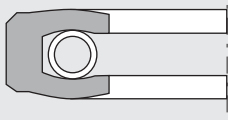
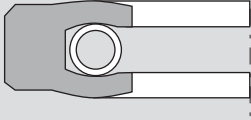
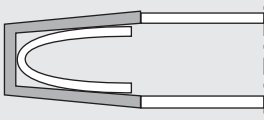
### SELF-ENERGIZED SEALS SPETOACTIV® R, P

Designation	Sketch	Description
SPETOACTIV® R-O		<b>SPETOACTIV® R-O</b> gasket (metal o-ring) is applied in very rigid joints where the requirements for the tightness are high; gaskets may be delivered in sizes up to 5000 mm; easy to install; may be additionally coated with PTFE, silver, lead, which facilitates forming on the flange face; manufactured as interannly pressurized and non-pressurized to increase contact stress, made of various materials and in different dimension standards; may be used (when the dimensions of the joint arrangement is appropriate) in installations with external and internal pressure; <b>SPETOACTIV® R-O</b> may also work in the triangle flange arrangement and seal three surfaces.
SPETOACTIV® R-C		<b>SPETOACTIV® R-C</b> gasket (metal C-ring) is one of the most popular self-energized gaskets manufactured in dimensions up to 3000 mm; used in uneven flange faces; available in different materials, sizes and with various coatings; this solution can be applied for service conditions (depending on the material used) up to 870°C and 170MPa; relatively good resilience; depending on the load the appropriate construction of the gasket should be chosen, due to the fact that C-ring's service depends on the direction of the pressure; in special styles gaskets may be equipped with the inner metal spring increasing initial loads and tightness, so that they may be applied at low pressures.
SPETOACTIV® R-CS		The <b>SPETOACTIV® R-CS</b> gasket (so-called metal C-ring with a spring) is equipped with an internal spring increasing initial pressure, and consequently the tightness and the possibility to work with low and high pressure, it has got durable, high flexible recovery.
SPETOACTIV® R-U		<b>SPETOACTIV® R-U</b> gasket (metal U-ring) can be applied at low initial loads, has good recovery characteristics, ability to compensate for the uneven and flauty flange faces, so may be installed in the low rigidity joints; manufactured in many material types up to the diameter of 1200 mm, usually without the coating; for service conditions up to 870°C and 80MPa; like R-C i R-E styles, R-U gaskets care should be taken in order to choose appropriate construction due to the service requirements. <b>SPETOACTIV® R-UM</b> solid metal style is also available.
SPETOACTIV® R-UM		

## SPECIAL SEALING SYSTEMS



### SELF-ENERGIZED SEALS SPETOACTIV® R, P

Designation	Sketch	Description
SPETOACTIV® P-20		<b>SPETOACTIV® P-20</b> is a gasket manufactured from PTFE (or modified PTFE) with a special spring used in both static and quasi-static applications; choice of material is determined by service conditions and gaskets may work in pressure up to 55Mpa and temperatures from -250°C to +270°C; thanks to the internal spring it does not lose its recovery, therefore it is not affected by temperature and pressure fluctuations; special style with silicone o-ring instead of metal spring reducing non-active area of the gasket; direction of the pressure determines gasket's construction
SPETOACTIV® P-24		<b>SPETOACTIV® P-24</b> is a gasket similar to <b>SPETOACTIV® P-20</b> but applied in higher pressures, thus different external profile; may be manufactured from various kinds of modified PTFE, therefore can work in temperatures from -250°C to 270°C, maximum working pressure – 140 MPa.
SPETOACTIV® P-28		<b>SPETOACTIV® P-28</b> gasket is used in cryogenic technologies up to the pressure of 35Mpa; it is only a static gasket of good elastic recovery; its spring has the construction compensating for the thermal shrinkage of the polymer material; may be delivered in many material options in dimensions up to 1200mm; the direction of the pressure acting on the gasket should be considered while its construction is engineered.