

## Refineries and the Petrochemical Industry

The mechanical seals listed here are without exception "cartridge" seals, available in compliance with **API 682** and **customer-specific standards** and **adapted** to the respective unit.

More mechanical seals are available.

Mechanical seal type / Series:	Typical applications:	Technical data (physical parameters):
<b>Single mechanical seals</b>		
201 201 A 201 S	Pipeline-pumps; booster-pumps; crude oil, finished products, cavern pumps; loading area – diesel, petrol (gasoline), heating oil light/heavy; quenching water, alkaline solutions, condensate	p <sub>max</sub> : 70 / 130 bar t <sub>max</sub> : +200° C v <sub>max</sub> : 35 m/s
207 207 A 207 AS 207 S	Universal mechanical seals for volatile and non-volatile hydrocarbons, alkaline solutions, acids, oils Refinery standardisation (single mechanical seals up to 200° C)	p <sub>max</sub> : 50 bar t <sub>max</sub> : +200° C v <sub>max</sub> : 25 m/s
700 700 A 700 H	Hydrocarbons high t° range, hydrocarbon condensate, heavy heating oil, heavy gas oil, heat transfer oil	p <sub>max</sub> : 28 bar t <sub>max</sub> : +250 / 400° C v <sub>max</sub> : 25 m/s
<b>Double mechanical seals</b>		
351F	Compressor applications (liquid barrier fluid); LPG projects; cooling. Media: propane, butane, natural gas, HCL, mixed and process gases, ammonia, helium	p <sub>max</sub> : 25 / 50 bar t <sub>max</sub> : +100 / 200° C v <sub>max</sub> : 25 m/s
541	Mixer applications; top / bottom drives; polymeric solutions, butadiene	p <sub>max</sub> : 35 bar t <sub>max</sub> : +220° C v <sub>max</sub> : 10 m/s
581	Mixer applications; solids fuels, rocket fuel	p <sub>max</sub> : 35 bar t <sub>max</sub> : +220° C v <sub>max</sub> : 10 m/s
807 807 AS / HD 807 S	Transfer pumps, MOL pumps; universal double mechanical seal in the refinery area; TA-Luft (clean air act) environmental applications	p <sub>max</sub> : 35 bar t <sub>max</sub> : -100°C up to +200 / 250° C v <sub>max</sub> : 25 m/s
851 A 851 B 851 B / T	Highly and self-flammable medium, LPG, propylene, ethylene, propane, methane, C4, LNG, solvents (in connection with flare); toxic, highly-explosive media; aromatic hydrocarbons – benzene, toluene, xylene and such like	p <sub>max</sub> : 50 bar t <sub>max</sub> : -120° C up to +260° C v <sub>max</sub> : 25 m/s
875 875 A	High-temperature applications: slurry oil, hot oil, hot oil circulation, hot cracked products with catalyst, FCC plants, combi crackers, high-temperature bottom pumps; TA-Luft (clean air act) environmental applications etc.	p <sub>max</sub> : 28 bar t <sub>max</sub> : -40° C up to +400° C v <sub>max</sub> : 25 m/s
881 881 A 881 D (861)	Double mechanical seals (double balanced) for pumps in applications with particularly difficult conditions: solids, frequently changing operating conditions – main quench oil pumps; ethylene oxide, butadiene; LNG, TA-Luft (clean air act) applications	p <sub>max</sub> : 50/150 bar t <sub>max</sub> : -163° C up to +260° C v <sub>max</sub> : 35 m/s
887 887 A 887 S	Bitumen, waste oil processing, heavy gas oil, Vacuum tower bottom, residue applications combining elevated t° with slurries	p <sub>max</sub> : 50 bar t <sub>max</sub> : +320° C v <sub>max</sub> : 35 m/s

All mechanical seals can be supplied in versions **conforming to ATEX**. Dimensions shaft diameter: from 20 mm to 300 mm, also available in inch.

### Safety instructions relating to the field of application and the technical specifications:

The information in this pamphlet corresponds with the latest technological findings as well as comprehensive tests and experiences gained. However, please note that the technical specifications have a mutual influence upon each other and that our products can therefore not be used in the maximum range in terms of all the technical specifications at the same time. Amongst other things the temperature ranges stated are dependent upon the type of secondary seal, accessory equipment and the other technical parameters. In view of the variety of application options available and the technical facts and information they merely provide an indication of how to beneficially apply them and cannot be completely applied in every single case. We can therefore not be held liable for this information. We always recommend that you carry out tests prior to general use.