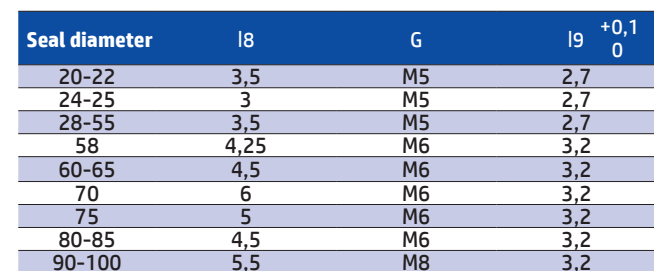
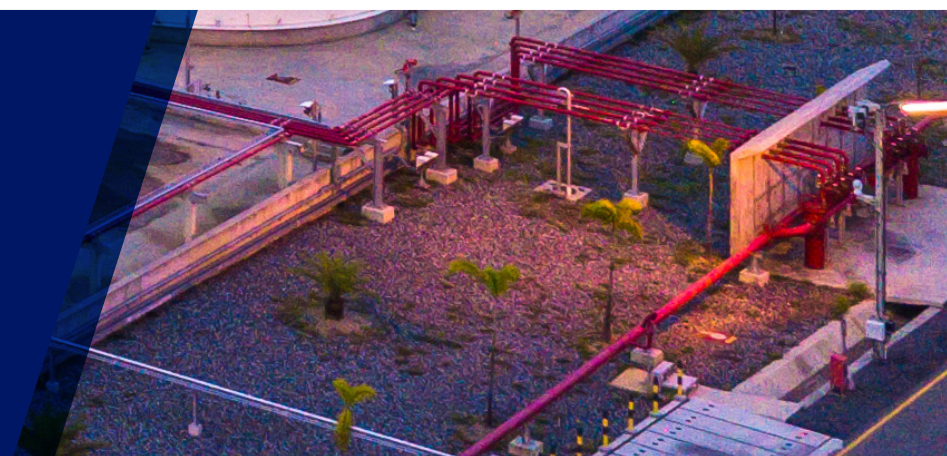


Silicon carbide sintered: **U31**

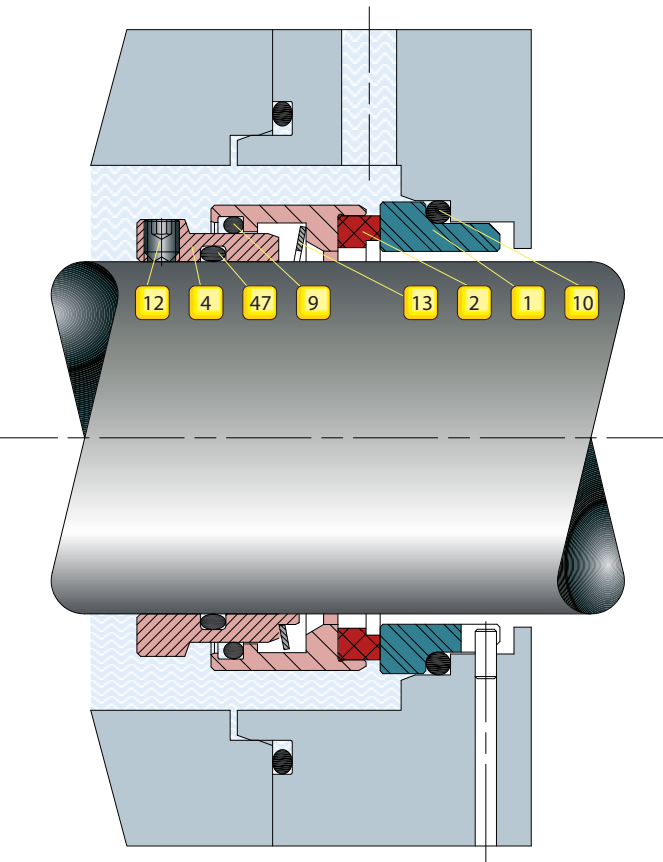


www.fluiten.com



# TBHA PACKED WITH TECHNOLOGY

The Fluiten TBHA Mechanical Seal brings together the results of the experience we have gained since 1962 in developing seals for pump manufacturers. It's developed for **ISO - ANSI pump manufacturers**, who need to optimize their machine production by orienting their choice of mechanical seal towards models that ensure top performance, are multipurpose and - of course - are very competitive price-wise. It is an important innovation on the "component" mechanical seal market. This progress was made possible by the modern production techniques available today.



| OPERATING CONDITIONS                                                                                                                                                                                     |             |                  |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|------------------|
| DIAMETER (mm)                                                                                                                                                                                            | SPEED (m/s) | PRESSURE (bar g) | TEMPERATURE (°C) |
| 100                                                                                                                                                                                                      | 20          | 50               | +250             |
| 20                                                                                                                                                                                                       | 0           | 0                | -50              |
| <b>Note:</b><br>The operating limits depend on the materials it is made from, which are chosen according to the operating conditions.<br>For choices and limits other than those shown, consult Fluiten. |             |                  |                  |

| CHARACTERISTICS                                                                                             |                                                                                                                    |                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
|  DIRTY & VISCOUS LIQUIDS |  BALANCED                       |  NOT WETTED SPRING               |
|  ENERGY SAVINGS          |  RESISTANT TO MECHANICAL STRESS |  BI-DIRECTIONAL                  |
|  UNIVERSAL APPLICATION   |  UNI EN 12756                   |  CAN BE FITTED ON STRAIGHT SHAFT |

## COMPONENT KEY

- 1

Stationary ring
- 2

Rotating ring
- 4

Sealing body
- 9

Rotating ring gasket
- 10

Stationary ring gasket
- 12

Set Screws
- 13

Spring
- 47

Seal body gasket

## ADVANTAGES

- SIMPLE CONSTRUCTION:** Our unique, patented "Double Function" spring, which has been tested in thousands of applications, provides the mechanical load on the rotating ring and drives it with high reliability even in the event of mechanical stress.

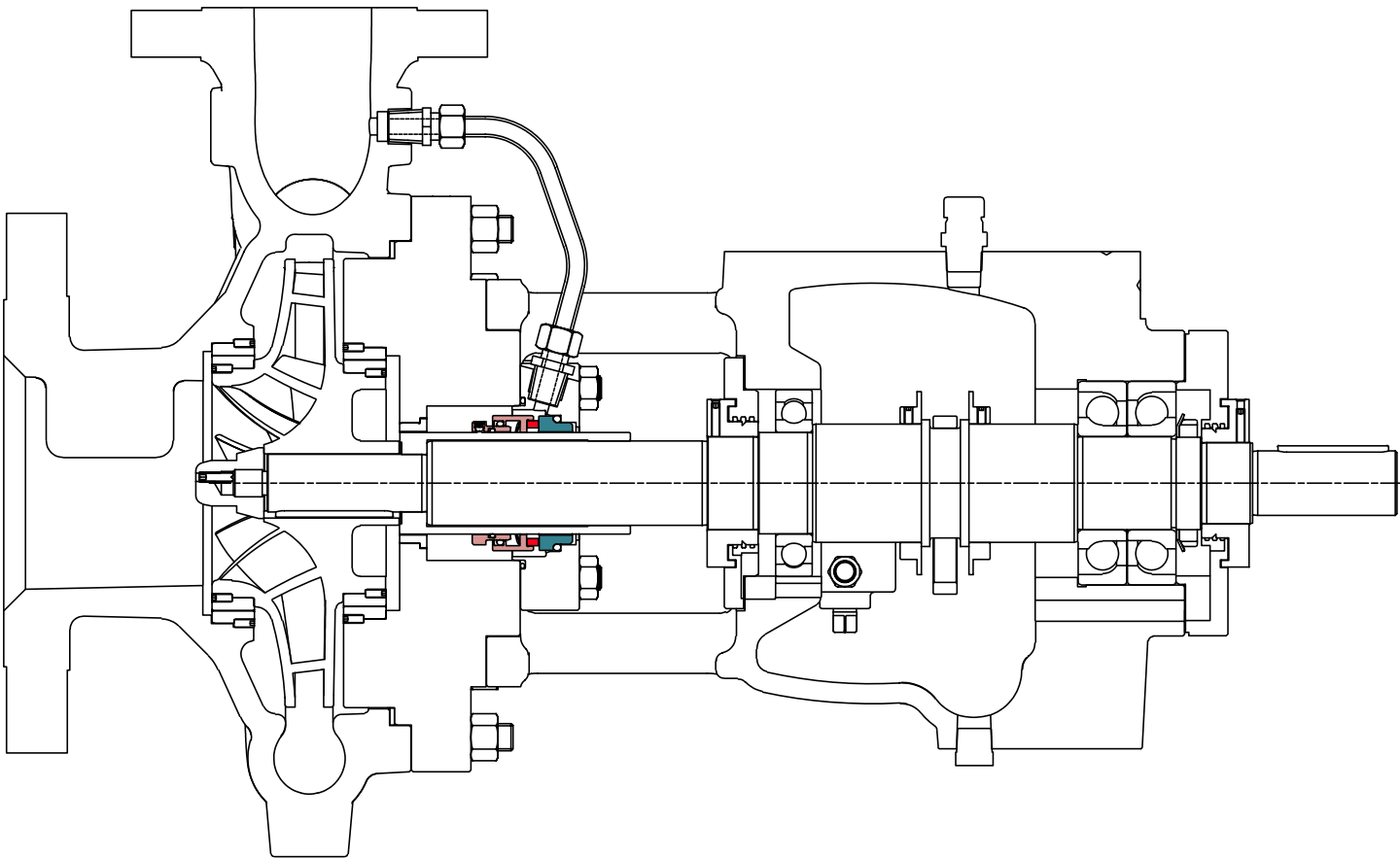
•**HIGH LIMITS WITH LOW ABSORPTION:** Hydraulic balancing minimizes the heat generated by the sealing surfaces even at high operating limits. The liquid film between the sealing surfaces remains stable even at high PxV (pressure x rotational speed) values and with unstable liquids.

•**SMOOTH SHAPE:** The spring maintains its elasticity even if the pumped liquid is viscous or contains solids because it is not in contact with them. The shape is designed to minimize areas where the liquid can stagnate and reduce the seal elasticity needed to tolerate shaft movement.
- UNI-EN 12756 STANDARD DIMENSIONS (formerly DIN 24960K):** Standardized dimensions allow equipment manufacturers and users to optimize their inventory and component interchangeability.

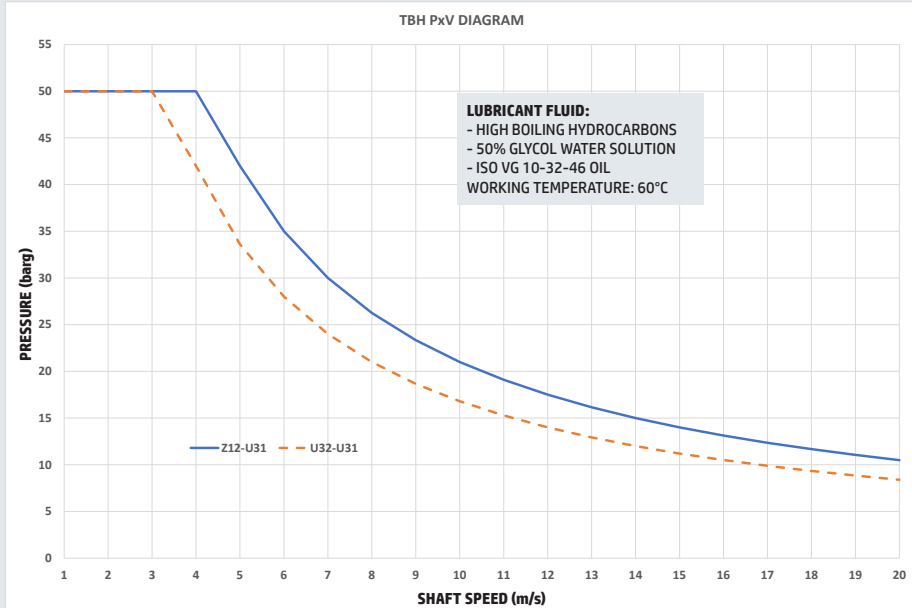
•**MATERIALS:** Our standard materials are suitable for a very wide range of uses, thus minimizing inventory and keeping operating costs low.

•**VERSATILITY:** The technical specifications of the TBH make it suitable for several uses. Standardizing the TBH on chemical plant pumps reduces operating costs.

•**ENERGY SAVING:** With "Fluigrad technology" sliding faces, the TBH seal ensures energy savings of up to 20% compared with other "component seals".



## TBHA SEAL PXV LIMITS



## CHOICE OF FLUSHING ACCORDING TO PERCENTAGE WEIGHT OF SOLIDS AND DENSITY

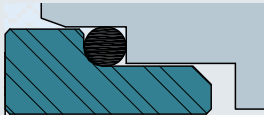
| % solids                                                                                                             | <8%                                | < 15%      | <20%       | <30%                  |
|----------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------------|-----------------------|
| Suggested sealing surface materials                                                                                  | Silicon Carbide vs Silicon Carbide |            |            |                       |
| Flushing plan                                                                                                        | Plan 11<br>Plan 01                 | Plan 03-61 | Plan 11-62 | Plan 32<br>Plan 32-62 |
| Alternative over 20% solids: Double seals<br>Alternative over 15% solids: Plan 02 / 55<br>( <i>contact Fluiten</i> ) |                                    |            |            |                       |



## MATERIALS

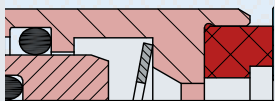
- 1

**STATIONARY RING**  
Sintered silicon carbide: **U31**  
ON REQUEST:  
  
AISI 316 with silicon carbide insert: **U32**  
Aisi 316 with tungsten carbide insert: **K22**



- 2

**ROTATING RING**  
  
AISI 316 with resin-impregnated graphite insert: **Z32**  
AISI 316 with alpha sintered silicon carbide insert: **U32**  
ON REQUEST:  
AISI 316 with metal-impregnated graphite: **Z12**  
Aisi 316 with carbide insert Tungsten: **K22**



- 9

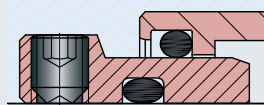
**O-RING**  
● Nitrile rubber: G  
Ethylene propylene: D  
Fluoroelastomer: V  
Perfluoroelastomer: G720
- 47
- 10

- 13

**SPRING** (outside the process)  
Duplex: E9
- 

- 4

**METALS PARTS**  
AISI 316: E
- 12



- Other materials are available on request