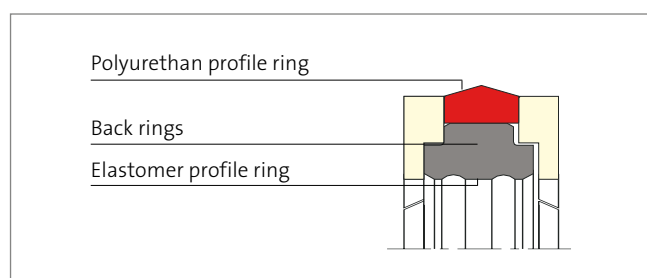


MERKEL COMPACT SEAL T 44



Merkel Compact Seal T 44, is a double-acting piston seal with a sealing element made of polyurethane, an elastomer activating element and two semi-active angle back rings



Application

The compact seal Merkel T 44 is predominantly used in mining applications. The seal can be pressurised on both sides in plungers, pushers, stamping and ancillary cylinders in self-advancing support system.

Material

Polyurethan profile ring

Material	Designation	Color
Polyurethan	93 AU V167	red

Back rings

Material	Designation
Polyacetal	POM PO202

Elastomer profile ring

Material	Designation
Nitrile rubber	NBR

VALUE TO THE CUSTOMER

- Very good protection against extrusion even with pressure peaks
- High resistance to abrasion
- High contact pressure due to rubber profile ring
- Good media resistance, particularly with regard to aqueous solutions



FEATURES AND BENEFITS

Operating conditions

Material	93 AU V167/NBR/POM
HFA fluids/waterr	+5 ... +60 °C
Pressure	250 MPa
Sliding speed	0,1 m/s

Surface finish

Peak-to-valley heights	R_a	R_{max}
Sliding surface	0,05 ... 0,3 μm	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove sides	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Material content M_r > 50 % to max. 90 %, with cut depth $c = R_z/2$ and reference line $Cr_{ef} = 0\%$

Tolerance recommendation and dimension d_2

When designing d_2 the admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account. Please consult our Technical Manual.

$\varnothing d$ [mm]	Profile [mm]	16 MPa			26 MPa			32 MPa			40 MPa		
		D	d	X_2	D	d	X_2	D	d	X_2	D	d	X_2
... 225	$\leq 11,0$ (BR 5,0 x 3,0)	H8	h9	1,1	H8	h9	0,8	H8	h9	0,6	H8	h9	0,5
... 350	$> 11,0$ (BR 7,5 x 5,0)	H8	h9	1,6	H8	h9	1,2	H8	h9	0,9	H8	h9	0,7

Tolerance recommendation for operating pressures up to 150 MPa on request.

Gap dimension X_2

The largest gap dimension occurring on the non-pressurised side of the seal in operation is of vital importance for the function of the seal.

Please consult our Technical Manual.

Profile recommendation

D [mm]	Profile [mm]	L [mm]
≤ 200	10	25
$> 200 \dots 400$	12,5	25
> 400	15	25

Design notes

Please note the general design remarks in our Technical Manual.

Installation & assembly

Reliable seal function is dependent on correct installation.

Please consult our Technical Manual.

FEATURES AND BENEFITS

Installation diagram

