

## WEAR / GUIDE RING

## WRPA



### Features:

Guide ring WRPA is a pre-molded ring ready to the size.

### Composition:

SEAL COMBINATION	WEAR RING COMPOUND	TEMP. RANGE	SURFACE SPEED (Max.)
WRPA-01	PA01	-40 to 120°C	1 m/s

For compound detail please refer Royal seal compounds (section - III)

### Properties:

- High load bearing capacity.
- Low friction, free of stick slip
- High abrasion resistance.
- Low wear and high extrusion resistance.
- Resistance against cold flow.

### Application:

- Mobile Hydraulics
- Injection moulding machines
- Machine tools
- Material Handling Equipments
- Standard cylinders

### Operating limit:

Ultimate compressive strength	180 N/mm <sup>2</sup>
Load bearing capacity	40 N/mm <sup>2</sup> at 20 °C
	30 N/mm <sup>2</sup> at 100 °C
	(Permitted specific surface pressing*)

### Surface finish:

Roughness depth	R(max)	Ra
Sliding surface	≤ 2.5 μm	0.05-0.3 μm
Bottom of groove	≤ 6.3 μm	≤ 1.6 μm
Side of groove	≤ 15 μm	≤ 3μm



### Guide tolerances:

Width L (mm)	Thickness T (mm)
- 0.1 to - 0.6	- 0.03 to - 0.06

### Gap dimension:

The radial clearance S min controls the minimum metal to metal clearance between the gland and rod or bore and piston. S max control the maximum extrusion gap seen by a seal associated with the guide ring.

The radial clearance S and the given tolerances are guidelines. Use of the guide and tolerances are to be designed in accordance with the used seal. The radial clearance S given in the table of dimensions is to be seen exclusively as reference to the guide ring. The corresponding diameter of the seal housing is to be adjusted to the sealing component. The cut gap ' Z ' arising after fitting of guide ring is necessary to compensate the thermal expansion of polymer

### Installation:

Careful fitting of the Guide ring is a prerequisite for it's perfect functioning.

### Order format:

Please mention ROYAL order code in your order

Example: for Metric Size ØDN=090 and cross section 05.60 X 2.50

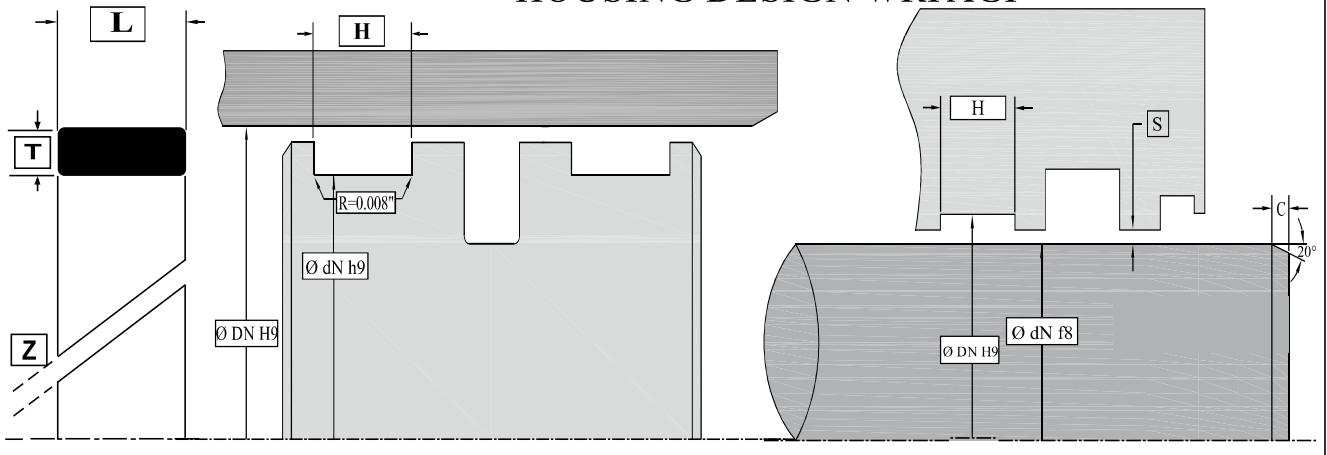
Order code is **WRPA01-M-090.00 X 085.00 X 05.60**

Example: for Imperial Size ØDN= 4.000" and cross section 0.500 X 0.125

Order code is **WRPA01-I-4.000 X 3.750 X 0.500**



### HOUSING DESIGN WRPAG



### ROYAL STANDARD SIZE LIST

#### IMPERIAL SIZES

CROSS SECTION (H X T)	RECOMMENDED UP TO DIA(inch) ØDN H9	GROOVE DIA(inch) ØdN h8	GROOVE WIDTH (inch) H (+0.008")	S(MAX.)	CUT GAP Z	ORDER CODE
0.115 X 0.062	1.000" - 2.000"	ØDN - 0.125	0.115	0.012	0.040" - 0.060"	WRPA01-I-ØDN X ØdN X 0.115
0.250 X 0.062	1.000" - 2.000"	ØDN - 0.125	0.250	0.012	0.040" - 0.060"	WRPA01-I-ØDN X ØdN X 0.250
0.375 X 0.062	1.000" - 3.000"	ØDN - 0.125	0.375	0.012	0.040" - 0.060"	WRPA01-I-ØDN X ØdN X 0.375
0.500 X 0.062	1.000" - 3.000"	ØDN - 0.125	0.500	0.012	0.040" - 0.080"	WRPA01-I-ØDN X ØdN X 0.500
0.750 X 0.062	1.000" - 4.000"	ØDN - 0.125	0.750	0.012	0.040" - 0.080"	WRPA01-I-ØDN X ØdN X 0.750
1.000 X 0.062	1.000" - 4.000"	ØDN - 0.125	1.000	0.016	0.080" - 0.140"	WRPA01-I-ØDN X ØdN X 1.000
0.165 X 0.125	1.000" - 4.000"	ØDN - 0.250	0.165	0.016	0.040" - 0.080"	WRPA01-I-ØDN X ØdN X 0.165
0.187 X 0.125	1.000" - 4.000"	ØDN - 0.250	0.187	0.016	0.040" - 0.080"	WRPA01-I-ØDN X ØdN X 0.187
0.250 X 0.125	1.000" - 6.000"	ØDN - 0.250	0.250	0.016	0.040" - 0.120"	WRPA01-I-ØDN X ØdN X 0.250
0.312 X 0.125	1.000" - 8.000"	ØDN - 0.250	0.312	0.016	0.040" - 0.120"	WRPA01-I-ØDN X ØdN X 0.312
0.375 X 0.125	2.000" - 12.000"	ØDN - 0.250	0.375	0.016	0.080" - 0.140"	WRPA01-I-ØDN X ØdN X 0.375
0.500 X 0.125	2.000" - 8.000"	ØDN - 0.250	0.500	0.020	0.080" - 0.140"	WRPA01-I-ØDN X ØdN X 0.500
0.625 X 0.125	2.000" - 10.000"	ØDN - 0.250	0.625	0.020	0.080" - 0.160"	WRPA01-I-ØDN X ØdN X 0.625
0.750 X 0.125	3.000" - 12.000"	ØDN - 0.250	0.750	0.020	0.080" - 0.160"	WRPA01-I-ØDN X ØdN X 0.750
0.875 X 0.125	3.000" - 12.000"	ØDN - 0.250	0.875	0.020	0.080" - 0.160"	WRPA01-I-ØDN X ØdN X 0.875
1.000 X 0.125	4.000" - 12.000"	ØDN - 0.250	1.000	0.020	0.120" - 0.200"	WRPA01-I-ØDN X ØdN X 1.000
1.250 X 0.125	4.000" - 13.000"	ØDN - 0.250	1.250	0.020	0.120" - 0.200"	WRPA01-I-ØDN X ØdN X 1.250
1.500 X 0.125	4.000" - 13.000"	ØDN - 0.250	1.500	0.020	0.120" - 0.200"	WRPA01-I-ØDN X ØdN X 1.500