

## Industries Served

Agriculture  
Chemical  
Food  
Marine  
Petroleum  
Pharmaceutical

## Applications

- Suitable for all rotating machines, pumps, compressors in a wide variety of applications.
- For general acidic water applications (distilled water, with anti freeze, with detergent)

## Operating conditions

- **Temperature :**  
-20°C to +180°C  
depending on material choice
- **Pressure :**  
Up to 6 bar.
- **Speed :**  
Up to 10 m/s.
- **Diameter :**  
Ø 10 to 25mm  
Applications where space is limited.
- **Seats**  
Interchangeable suitable seats (type L)

## Benefits

### ▪ Compact design

The DR was developed from the PRR seal and although the overall length is slightly longer, the overall diameter is smaller than the PRR.

### ▪ Construction

One piece construction for rapid installation, recommended where space is at a premium.

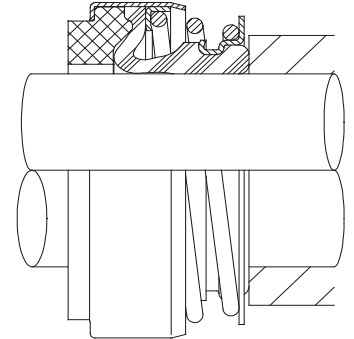
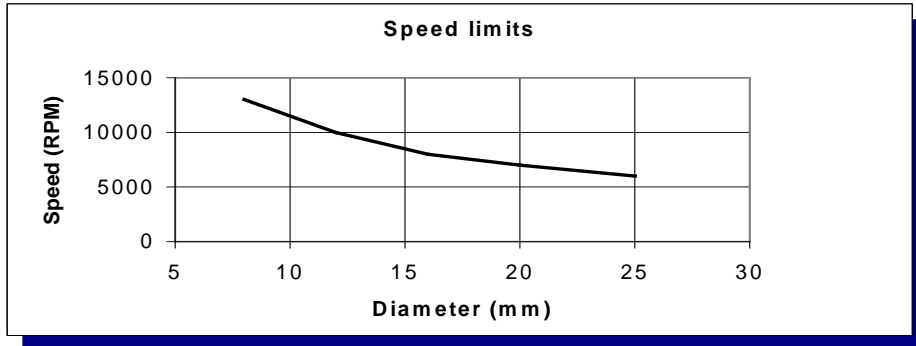
### ▪ Reliability

Self aligning by design :  
the seal will compensate for bearing play, vibrations and slight geometry defects of the system.

A large diameter helicoil spring avoids clogging and assures sealing.

### Pressure and speed limits

Pressure limits : 6 bar



### Multiplier factors for pressure/speed curves

	Selection consideration	Multiplier factor
Sealed fluid	Petrol, kerosene	× 1
	Water, Aqueous solution	× 1
	Lighter hydrocarbons	× 0.75
Face and seat materials	Carbon on silicon carbide	× 1
	Carbon on Aluminium oxide	× 0.8
	Silicon carbide on silicon carbide	× 0.6
Sealed fluid temperature	T < 80°C	× 1
	80°C < T < 120°C	× 0.8
	120°C < T < 180°C	× 0.4
Speed	< 3000 R.P.M.	× 1
	> 3000 R.P.M.	× 0.85

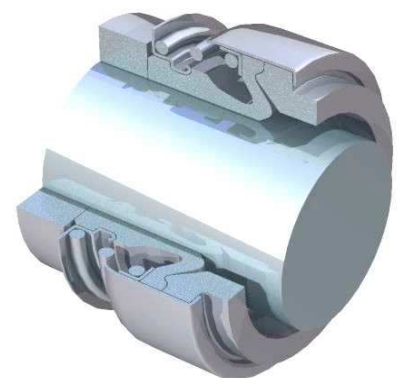


To know the maximum operating conditions, look at the limit curve in the abacus and multiply by the factor corresponding to the application

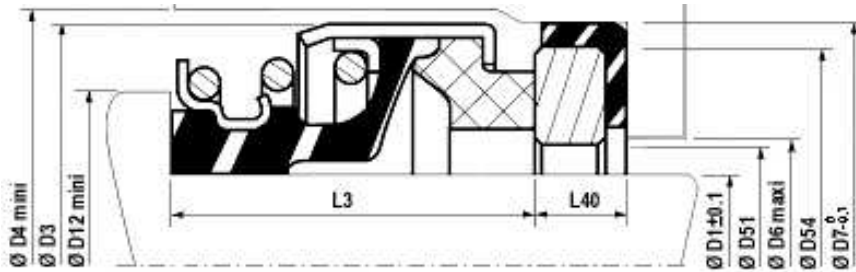
### Table 1. Material Identification codes

COMPONENTS	MATERIAL		
	Name	Material	Cyclam Code / DIN Code
Face	resin carbon		26 / B5
	Carbographite		52 or 54 / (B)
	Resin impregnated carbon		51* / B
	Silicon carbide		67 / Q1
	Tungsten carbide (option)		68 / U2
	Metal impregnated carbon (option)		53 / A
	Glass filled PTFE (option)		23 / Y1
Bellows & Seat ring	Nitrile		01 / P
	Ethylene propylene		10 / E
	Viton (heat resistant)		14 / V
	Viton (acid resistant) (option)		15 / V1
Metal components and spring	Molybdenum stainless steel		31 / G
Seat (counterface)	Molybdenum stainless steel		31 / G
	Aluminium oxide 99% (option)		41(ou42) / V
	Porous Silicon Carbide		64 / Q1
	Solid Silicon Carbide (option)		67 / Q1
	Tungsten carbide (option)		68 / U2

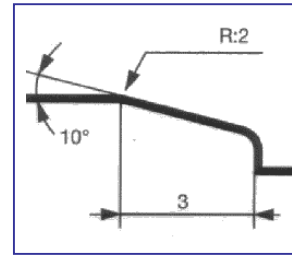
\* For machined carbon, this code will become 50.



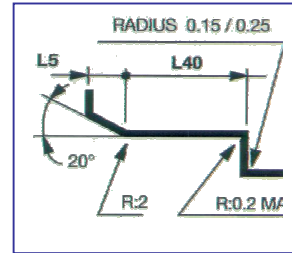
### Typical arrangement for internal fitting



DR Seal head with L Seat



Detail of end of shaft. To facilitate the fitting of the seal to the shaft, the assembly instructions must be observed.



Detail of housing for L type seat.

Table 2. Dimensions for DR type seals and L seats (mm)

D1	Dimension Code	Seal head					Seat								Seat name
		D3	D4	L3	Tolerances L3	D12	D6	D7	D51	D54	L5	L40	L60		
10	0100	24	26	11.5	±0.5	18	15	25	13	23	1,5	5	5	10-25-5	
11	0110	24	26	11.5	±0.5	18	17	26	13	23	1,5	8	6	12-26-8	
12	0120	24	26	11	±0.5	19	15	25	13	23	1,5	5	5	12-25-2	
12	0120	24	26	13.5	±0.5	19	17	26	13	23	1,5	5,5	5,2	12-26-5	
13	0130	28	31	12.15	±0.35	22	18	32	14	28,7	2	6	6	13-32-6	
14	0140	28	31	15.5	±0.5	22	19	32	17	27,2	2	8	7,5	14-32-8	
14	0140	32	35	13.15	±0.35	22	18	25	15,5	23	1,5	7	5	14-25-7	
15	0150	28	31	15.5	±0.5	22	19	32	17	27,2	2	8	7,5	16-32-8	
15	0150	32	35	13.15	±0.35	22	20	30	17	27,2	2	8	7	16-30-8	
16	0160	28	31	15.5	±0.5	22	18	29	16,5	27,2	1,5	5	5	16-29-5	
16	0160	32	35	13.25	±0.45	22	18	29	16,5	27,2	1,5	5	5	16-29-5	
17	0170	32	35	15	±0.5	25	22	32	19	28,7	2	6,5	6	18-32-7	
18	0180	32	35	15.5	±0.5	25	22	32	19	28,7	2	6,5	6	18-32-7	
19	0190	35	38	17.75	±0.75	25	23	37,25	20,8	33,2	2	10	6	20-37-10	
19	0190	39	42	13.65	±0.35	25	23	37,25	20,8	33,2	2	10	6	20-37-10	
20	0200	35	38	17.75	±0.75	28	34	45	21	42	2	7	8	20-45-7	
20	0200	39	42	13,65	±0.35	28	34	45	21	42	2	7	8	20-45-7	
22	0220	35	38	17.5	±0.75	30	27	38,1	23	33,9	2	10	6	22-38-10	
25	0250	42	45	13,65	±0.35	32	34	45	26	42	2	5,8	6	25-45-6	