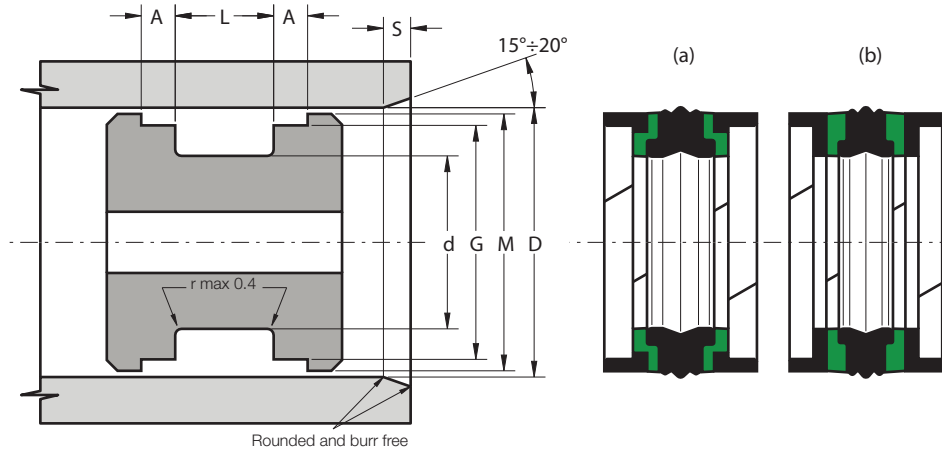
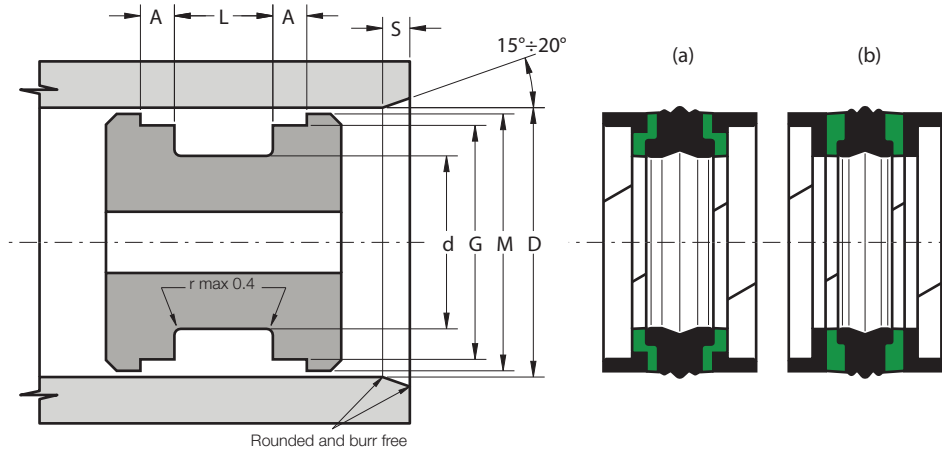


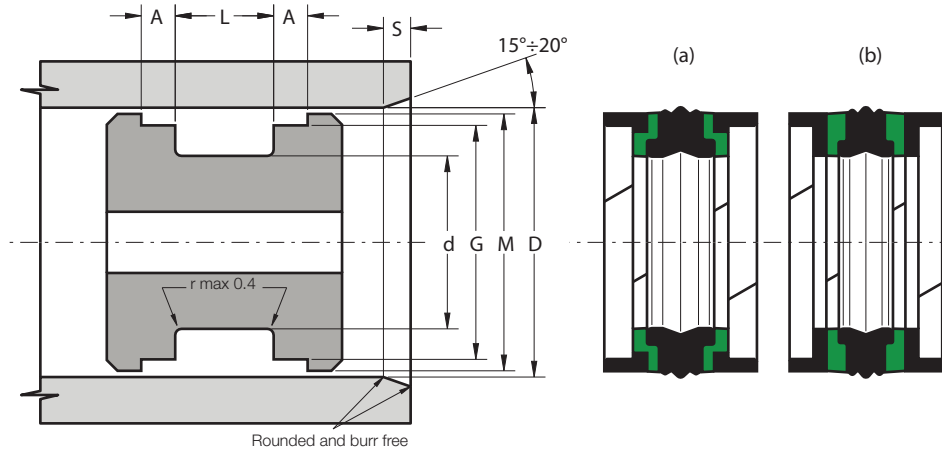
Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
KGD 20 11	20	11	13.5	2.10	17.00	19.0	(a)
KGD 25 15	25	15	16.4	6.35	21.45	23.5	(a)
KGD 25 15/A	25	15	12.0	4.00	21.00	23.0	(a)
KGD 25 15/B	25	15	12.5	4.00	22.00	24.0	(a)
KGD 25 16	25	16	13.5	2.10	22.00	24.0	(a)
KGD 25 17	25	17	10.0	4.00	22.00	24.0	(a)
KGD 25 17/A	25	17	13.5	3.20	21.00	24.0	(a)
KGD 30 17	30	17	15.4	6.35	26.50	29.0	(a)
KGD 30 21	30	21	13.5	2.10	27.00	29.0	(a)
KGD 32 22	32	22	16.4	6.35	28.50	30.5	(a)
KGD 32 22/A	32	22	15.5	2.60	28.00	31.0	(a)
KGD 32 22/C	32	22	12.5	4.00	29.00	31.0	(a)
KGD 32 24	32	24	15.5	3.20	28.00	31.4	(b)
KGD 32 24/A	32	24	10.0	4.00	29.00	31.0	(a)
KGD 35 25	35	25	16.4	6.35	31.40	33.5	(a)
KGD 35 25/A	35	25	15.5	2.60	31.00	34.0	(a)
KGD 40 24	40	24	18.4	6.35	35.40	38.5	(a)
KGD 40 26	40	26	15.5	2.60	36.00	39.0	(a)
KGD 40 30	40	30	16.4	6.35	35.40	38.5	(a)
KGD 40 30/A	40	30	12.5	4.00	36.00	38.0	(a)
KGD 40 30/B	40	30	12.5	4.00	37.00	39.0	(a)
KGD 40 32	40	32	15.5	3.20	36.00	39.4	(b)
KGD 40 32/A	40	32	10.0	4.00	37.00	39.0	(a)
KGD 40 32/T	40	32	15.5	3.20	36.00	39.4	(a)
KGD 45 29	45	29	18.4	6.35	40.40	43.7	(a)
KGD 45 31	45	31	15.5	2.60	41.00	44.0	(a)
KGD 45 35	45	35	16.4	6.35	40.40	43.5	(a)



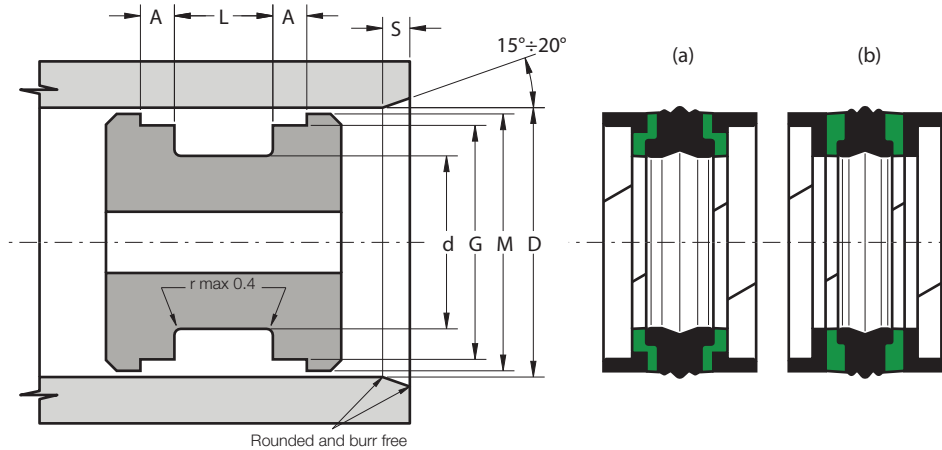
Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
KGD 50 34	50	34	18.4	6.35	45.40	48.5	(a)
KGD 50 34/A	50	34	20.5	3.10	46.00	49.0	(a)
KGD 50 35	50	35	20.0	5.00	46.00	48.5	(a)
KGD 50 38	50	38	20.5	4.20	46.00	49.4	(b)
KGD 50 38/T	50	38	20.5	4.20	46.00	49.4	(a)
KGD 50 40	50	40	12.5	4.00	47.00	49.0	(a)
KGD 55 39	55	39	18.4	6.35	50.36	53.5	(a)
KGD 55 39/A	55	39	20.5	3.10	51.00	54.0	(a)
KGD 55 43	55	43	20.5	4.20	51.00	54.4	(b)
KGD 55 45	55	45	12.5	4.00	52.00	54.0	(a)
KGD 60 44	60	44	18.4	6.35	55.40	58.5	(a)
KGD 60 44/A	60	44	20.5	3.10	56.00	59.0	(a)
KGD 60 48	60	48	20.5	4.20	56.00	59.4	(b)
KGD 63 47	63	47	18.4	6.35	58.40	61.5	(a)
KGD 63 47/A	63	47	20.5	3.10	59.00	62.0	(a)
KGD 63 47/B	63	47	19.4	6.35	58.40	61.5	(a)
KGD 63 48	63	48	20.0	5.00	59.00	61.5	(a)
KGD 63 51	63	51	20.5	4.20	59.00	62.4	(b)
KGD 63 51/T	63	51	20.5	4.20	59.00	62.4	(a)
KGD 63 53	63	53	12.5	4.00	60.00	62.0	(a)
KGD 65 49	65	49	20.5	3.10	61.00	64.0	(a)
KGD 65 50	65	50	18.4	6.35	60.40	63.5	(a)
KGD 70 50	70	50	22.4	6.35	64.20	68.3	(a)
KGD 70 54	70	54	20.5	3.10	66.00	69.0	(a)
KGD 70 55	70	55	20.0	5.00	66.00	68.5	(a)
KGD 70 58	70	58	20.5	4.20	66.00	69.4	(b)
KGD 70 58/T	70	58	20.5	4.20	66.00	69.4	(a)



Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
KGD 75 55	75	55	22.4	6.35	69.20	73.3	(a)
KGD 75 59	75	59	20.5	3.10	71.00	74.0	(a)
KGD 80 60	80	60	22.4	6.35	74.15	78.3	(a)
KGD 80 60/C	80	60	25.0	6.35	75.00	78.0	(a)
KGD 80 62	80	62	22.5	3.60	76.00	79.0	(a)
KGD 80 65	80	65	20.0	5.00	76.00	78.5	(a)
KGD 80 66	80	66	22.5	5.20	76.00	79.4	(b)
KGD 80 66/T	80	66	22.5	5.20	76.00	79.4	(a)
KGD 85 65	85	65	22.4	6.35	79.15	83.3	(a)
KGD 90 70	90	70	22.4	6.35	84.15	88.3	(a)
KGD 90 72	90	72	22.5	3.60	86.00	89.0	(a)
KGD 90 75	90	75	20.0	5.00	86.00	88.5	(a)
KGD 90 76	90	76	22.5	5.20	86.00	89.4	(b)
KGD 95 75	95	75	22.4	6.35	89.15	93.3	(a)
KGD 100 75	100	75	22.4	6.35	93.15	98.0	(a)
KGD 100 80	100	80	25.4	6.35	94.15	98.3	(a)
KGD 100 80/D	100	80	25.0	6.35	95.00	98.0	(a)
KGD 100 82	100	82	22.5	3.60	96.00	99.0	(a)
KGD 100 85	100	85	20.0	5.00	96.00	98.5	(a)
KGD 100 86	100	86	22.5	5.20	96.00	99.4	(b)
KGD 100 86/T	100	86	22.5	5.20	96.00	99.4	(a)
KGD 105 80	105	80	22.4	6.35	98.10	103.0	(a)
KGD 110 85	110	85	22.4	6.35	103.10	108.0	(a)
KGD 110 85/A	110	85	25.4	6.35	103.10	108.0	(a)
KGD 110 92	110	92	22.5	3.60	106.00	109.0	(a)
KGD 110 95	110	95	20.0	5.00	105.00	108.5	(a)
KGD 110 96	110	96	22.5	5.20	106.00	109.4	(b)



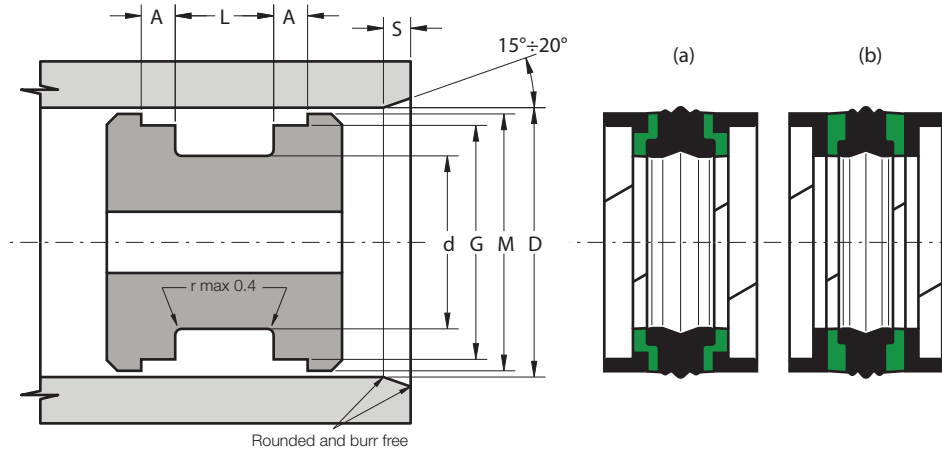
Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
KGD 115 90	115	90	22.4	6.35	108.10	113.0	(a)
KGD 120 95	120	95	22.4	6.35	113.10	118.1	(a)
KGD 120 106	120	106	22.5	5.20	116.00	119.4	(b)
KGD 120 106/T	120	106	22.5	5.20	116.00	119.4	(a)
KGD 125 100	125	100	25.4	6.35	118.10	123.0	(a)
KGD 125 100/A	125	100	32.0	10.00	119.00	123.0	(a)
KGD 125 103	125	103	26.5	5.10	121.00	124.0	(a)
KGD 125 105	125	105	25.0	6.35	120.00	123.0	(a)
KGD 125 105/A	125	105	25.4	6.35	119.10	123.3	(a)
KGD 125 108	125	108	26.5	7.20	121.00	124.4	(b)
KGD 130 105	130	105	25.4	9.50	122.60	127.5	(a)
KGD 130 105/A	130	105	25.4	6.35	123.10	128.0	(a)
KGD 135 110	135	110	25.4	9.50	127.60	132.5	(a)
KGD 135 110/A	135	110	25.4	6.35	128.10	133.0	(a)
KGD 140 115	140	115	25.4	9.50	132.60	137.5	(a)
KGD 140 115/A	140	115	25.4	6.35	133.00	138.0	(a)
KGD 140 118	140	118	26.5	5.10	136.00	139.0	(a)
KGD 140 120	140	120	25.0	6.35	135.00	138.0	(a)
KGD 140 123	140	123	26.5	7.20	136.00	139.4	(b)
KGD 145 120	145	120	25.4	9.50	137.60	142.5	(a)
KGD 145 120/A	145	120	25.4	6.35	138.30	142.95	(a)
KGD 150 125	150	125	25.4	9.50	142.60	147.5	(a)
KGD 150 125/A	150	125	25.4	6.35	143.00	148.0	(a)
KGD 150 128	150	128	25.4	5.10	146.00	149.0	(a)
KGD 150 128/A	150	128	26.5	5.10	146.00	149.0	(a)
KGD 160 130	160	130	25.4	6.35	153.00	157.5	(a)
KGD 160 130/A	160	130	25.4	9.50	152.60	157.5	(a)



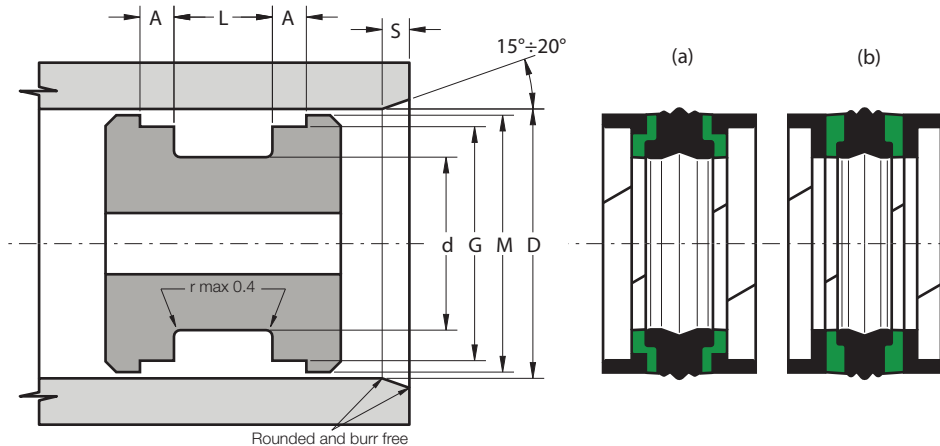
Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
KGD 160 135	160	135	25.4	9.50	152.60	157.5	(a)
KGD 160 140	160	140	25.0	6.35	155.00	158.0	(a)
KGD 165 140	165	140	25.4	9.50	157.60	162.5	(a)
KGD 170 145	170	145	25.4	12.70	161.70	167.1	(a)
KGD 175 150	175	150	25.4	12.70	166.70	172.1	(a)
KGD 180 150	180	150	35.4	6.35	172.90	177.9	(a)
KGD 180 155	180	155	25.4	12.70	171.70	177.1	(a)
KGD 185 160	185	160	25.4	12.70	176.70	182.1	(a)
KGD 190 165	190	165	25.4	12.70	181.70	187.0	(a)
KGD 200 170	200	170	36.0	12.50	192.00	197.0	(a)
KGD 200 170/A	200	170	35.4	6.35	193.00	198.0	(a)
KGD 200 175	200	175	25.4	12.70	191.60	197.0	(a)
KGD 210 185	210	185	25.4	12.70	201.60	207.0	(a)
KGD 220 190	220	190	35.4	6.35	212.70	217.9	(a)
KGD 220 195	220	195	25.4	12.70	211.60	217.0	(a)
KGD 225 200	225	200	25.4	12.70	216.60	222.0	(a)
KGD 230 205	230	205	25.4	12.70	221.60	227.0	(a)
KGD 240 215	240	215	25.4	12.70	231.60	237.0	(a)
KGD 250 220	250	220	35.4	6.35	242.90	247.9	(a)
KGD 250 225	250	225	25.4	12.70	241.60	247.0	(a)

### Inch sizes

KGD 1750 1125	44.45	28.57	19.05	6.35	39.87	43.12	(a)
KGD 2000 1375	50.80	34.92	19.05	6.35	46.23	49.48	(a)
KGD 2000 1500	50.80	38.10	14.91	6.35	46.25	49.53	(a)
KGD 2000 1625	50.80	41.27	11.10	3.81	46.27	49.19	(a)



Part.	D <sup>H10</sup>	d <sup>+0.1</sup>	L <sup>+0.2</sup>	A <sup>±0.1</sup>	G <sup>-0.05</sup>	M <sup>±0.2</sup>	Tp.
<b>KGD 2375 1750</b>	60.33	44.45	19.05	6.35	55.73	58.98	(a)
<b>KGD 2500 1875</b>	63.50	47.62	19.05	6.35	58.90	62.12	(a)
<b>KGD 2500 2000</b>	63.50	50.80	14.91	6.35	58.95	62.23	(a)
<b>KGD 2500 2125</b>	63.50	53.97	11.10	3.81	59.00	62.12	(a)
<b>KGD 2625 2000</b>	66.67	50.80	19.05	6.35	62.1	65.27	(a)
<b>KGD 3000 2250</b>	76.20	57.15	23.79	6.35	70.40	74.50	(a)
<b>KGD 3000 2500</b>	76.20	63.50	14.91	6.35	70.46	74.68	(a)
<b>KGD 3500 2750</b>	88.90	69.85	23.79	6.35	83.08	87.22	(a)
<b>KGD 4000 3250</b>	101.60	82.55	23.79	6.35	95.78	99.92	(a)



### DESCRIPTION

Double acting piston seal with wear rings

### MATERIAL OF SEAL RING

Type: Nitril Rubber NBR  
 Designation: RUBSEAL 75  
 Hardness: 75 °ShA

### MATERIAL OF ANTI-EXTRUSION RINGS

Type: Thermoplastic polyester resin  
 Designation: SEALITE 63  
 Hardness: 63 °ShD

### MATERIAL OF GUIDE RINGS

Type: Acetal resin with glass fibre  
 Designation: BEARITE

### MAIN FEATURES

The piston seal type KGD is composed of:

- A sealing rubber element with low permanent deformation which assures good sealing performance. Three compact and small seal edges ensure perfect fluid control and concentrate load against the dynamic surface. The cavities between the external seal edges keep small quantities of fluid reducing friction and wear. The special geometry of static side guaranties a wide contact area and prevents distortion inside the groove during installation
- Two anti-extrusion rings with stabilizers to avoid the rotation of the rubber element. A special geometry of grooves assures that pressure loads the energizing seal element without any risk of extrusion of it.
- Two angular wear rings which guide the piston in the cylinder tube and support radial loads. Special grooves ensure that pressure loads the energizing seal element in all work conditions

- Good sealing performance as well as at low pressure
- Simple one-part piston design
- High resistance against extrusion
- Good guide of piston and gap balancing
- Perfect fluid control
- Good mechanical stability at high temperature
- Easy installation without expensive auxiliaries
- Good temperature resistance
- Easy installation on a solid piston

### FIELD OF APPLICATION

Pressure	≤ 400 bar
Speed	≤ 0.5 m/s
Temperature	-40°C ÷ +110°C
Fluids	Hydraulic oils (mineral oil based). <i>For other fluids contact our technical department</i>

### SURFACE ROUGHNESS

Dynamic surface	Ra ≤ 0.3 µm	Rt ≤ 2.5 µm
Static surface	Ra ≤ 1.6 µm	Rt ≤ 6.3 µm

### LEAD-IN CHAMFERS

D	S MIN
• less 100	5 mm
• 100÷200	7 mm
• over 200	10 mm

- to avoid damaging the sealing lips during installation, housing must have rounded chamfers. Sharp edges and burrs within the installation area of the seal must be removed