

Design

A robust assembly designed specifically for one piece pistons, the AB Seals DA double acting seal uses a rubber sealing element that has proved itself in service to be extremely wear resistant and capable of working most effectively in a wide range of medium duty applications. The seal is also suitable for two piece pistons. The assembly comprises a rubber sealing element, two split support rings and two split L-shaped bearings, one of each located either side of the seal. The nitrile rubber sealing element is designed with multi-lips for efficient dynamic sealing with minimal low pressure friction and, when pressurised, be protected from extrusion damage by the extending lips of the support ring. The support ring is manufactured from a tough, flexible polymer and scarf cut for assembly. Both the L-shaped bearings and support rings are grooved to ensure that the fluid pressure properly energises the sealing element and to prevent the possibility of any pressure trapping within the seal assembly.

NB: Some part numbers have housing sizes to meet ISO 6547.



Features

- Well proven design
- Long life economic sealing and guiding solution.

Material

- Main Seal - NBR 75
- Support Ring - PUB
- Bearing - DEL

Application

- Truck cranes
- Forklift and handling machinery
- Agriculture equipment
- Mobile hydraulics
- Machine tools
- Standard cylinder

Technical details

Operating Conditions

Maximum speed

Temperature Range

Maximum Pressure

Metric

0.5m/sec

-30

400 bar

inch

1.5ft/sec

-22

6000 p.s.i

Surface roughness

Dynamic Sealing Face ØD1

static sealing face Ød2

static housing faces L1

umRa

0.1<> 0.4

1.6 max

3.2 max

umRt

4 max

10 max

16 max

Uin CLA

4<>16

63 max

125 max

UIN RMS

5<>18

70 max

140 max

Chamfers & RadII

Groove section <5 mm

Min Chamfer C mm

Max Fillet rad r1 mm

Max Fillet rad r2 mm

5

2.4

0.4

0.4

7.5

4

0.4

0.4

8

5

0.4

0.4

10

5

0.4

0.4

12.5

6.5

0.8

0.8

15

7.5

0.8

0.8

Tolerance

mm

ØD1

H9

Ød1

h9

Ød2

h9

Ød3

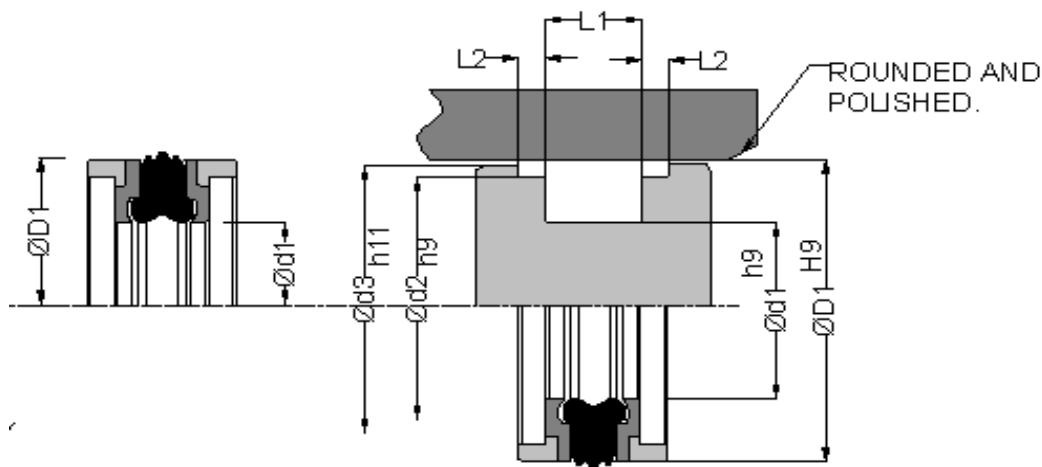
h11

L1

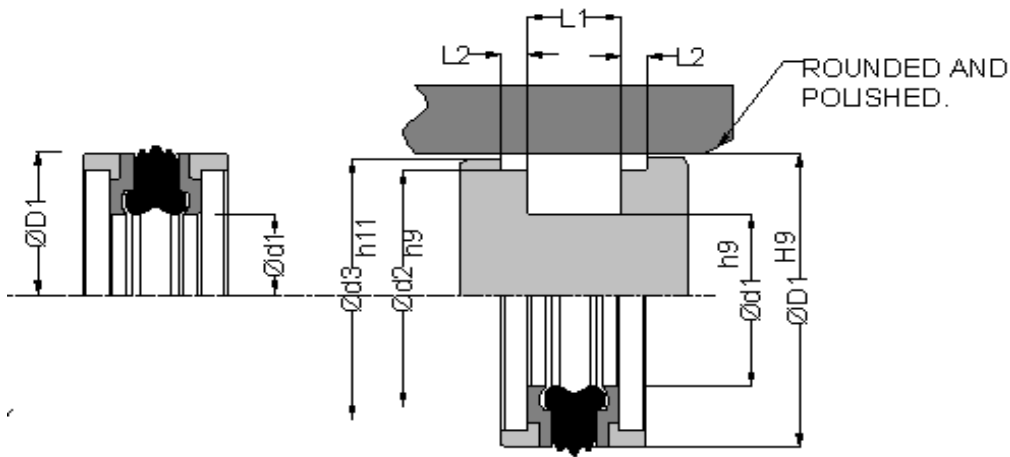
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L2

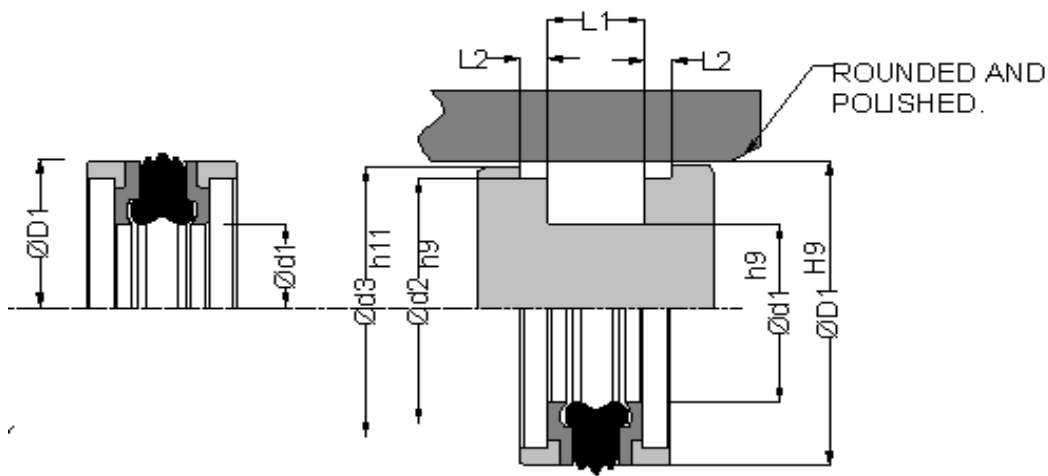
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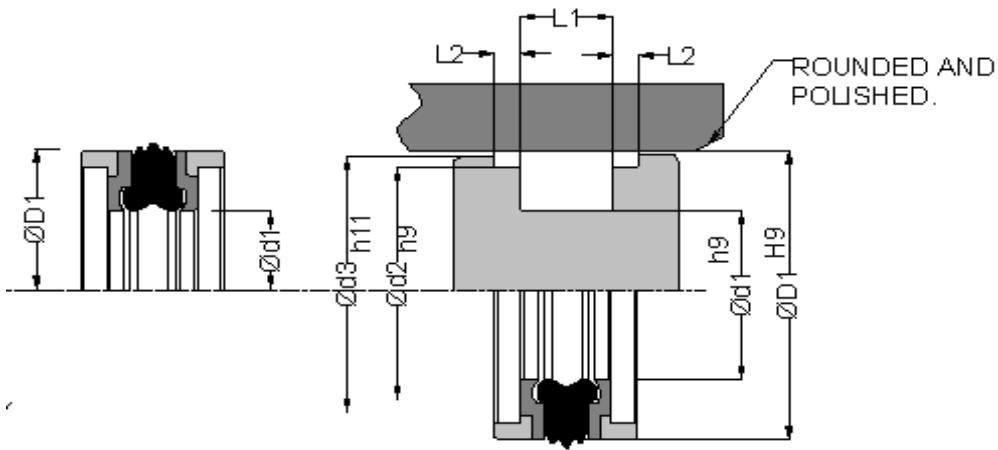
$\varnothing D1$	TOL H9	$\varnothing d1$	TOL h9	$\varnothing d2$	TOL h9	$\varnothing d3$	TOL h11	L1 0.2	L2 0.1	PART NO.
20	0.05 0	11	0 -0.04	17	0 -0.04	19	0 -0.13	13.5	2.1	DA-20X11X13.5
25	0.05 0	15	0 -0.04	21	0 -0.05	24	0 -0.13	12	4	DA-25X15X12
25	0.05 0	16	0 -0.04	22	0 -0.05	24	0 -0.13	13.5	2.1	DA-25X16X13.5
30	0.05 0	17	0 -0.04	27	0 -0.05	29	0 -0.13	15.4	6.35	DA-30X17X15.4
30	0.05 0	21	0 -0.05	27	0 -0.05	29	0 -0.13	13.5	2.1	DA-30X21X13.5
32	0.06 0	22	0 -0.05	28	0 -0.07	31	0 -0.16	15.5	2.6	DA-32X22X15.5
32	0.06 0	22	0 -0.05	28.5	0 -0.05	30.5	0 -0.16	16.4	6.35	DA-32X22X16.4
35	0.06 0	25	0 -0.05	31	0 -0.06	34	0 -0.16	15.5	2.6	DA-35X25X15.5
35	0.06 0	25	0 -0.05	31.4	0 -0.06	33.5	0 -0.16	16.4	6.35	DA-35X25X16.4
40	0.06 0	24	0 -0.05	35.4	0 -0.06	38.5	0 -0.16	18.4	6.35	DA-40X24X18.4
40	0.06 0	26	0 -0.05	36	0 -0.06	39	0 -0.16	15.5	2.6	DA-40X26X15.5
40	0.06 0	30	0 -0.05	37	0 -0.06	39	0 -0.16	12.5	4	DA-40X30X12.5
40	0.06 0	30	0 -0.05	35.4	0 -0.06	38.5	0 -0.16	16.4	6.35	DA-40X30X16.4
45	0.06 0	29	0 -0.05	40.4	0 -0.06	43.5	0 -0.16	18.4	6.35	DA-45X29X18.4
45	0.06 0	31	0 -0.06	41	0 -0.06	44	0 -0.16	15.5	2.6	DA-45X31X15.5
45	0.06 0	35	0 -0.06	40.4	0 -0.06	43.5	0 -0.16	16.4	6.35	DA-45X35X16.4



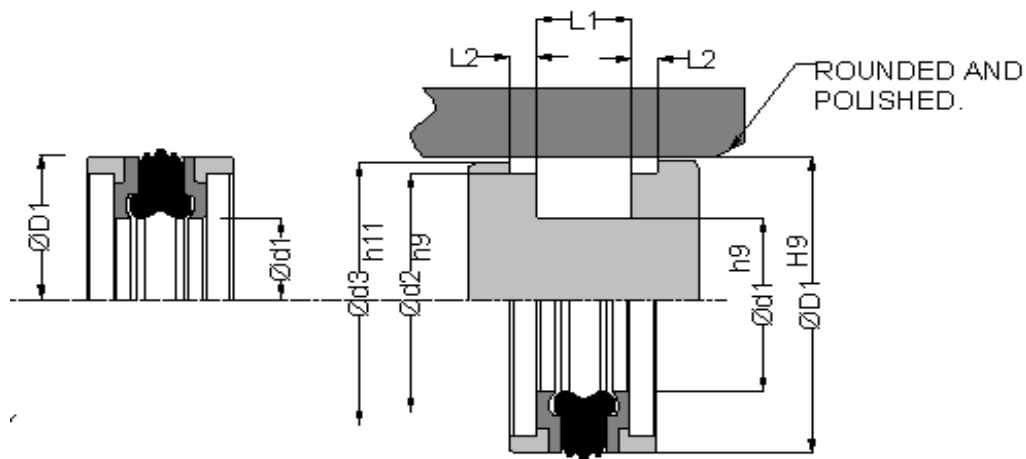
ØD1	TOL H9	Ød1	TOL h9	Ød2	TOL h9	Ød3	TOL h11	L1 0.2	L2 0.1	PART NO.
50	0.06 0	34	0 -0.06	45.4	0 -0.06	48.5	0 -0.16	18.4	6.35	DA-50X34X18.4
50	0.06 0	34	0 -0.06	46	0 -0.06	49	0 -0.16	20.5	3.1	DA-50X34X20.5
50	0.06 0	38	0 -0.06	46	0 -0.06	49.4	0 -0.16	20.5	4.2	DA-50X38X20.5
50	0.06 0	40	0 -0.06	47	0 -0.06	49	0 -0.16	12.5	4	DA-50X40X12.5
55	0.07 0	39	0 -0.06	50.36	0 -0.07	53.5	0 -0.19	18.4	6.35	DA-55X39X18.4
55	0.07 0	39	0 -0.06	51	0 -0.07	54	0 -0.19	20.5	3.1	DA-55X39X20.5
60	0.07 0	44	0 -0.06	55.4	0 -0.07	58.5	0 -0.19	18.4	6.35	DA-60X44X18.4
60	0.07 0	44	0 -0.06	56	0 -0.07	59	0 -0.19	20.5	3.1	DA-60X44X20.5
60	0.07 0	48	0 -0.06	56	0 -0.07	59.4	0 -0.19	20.5	4.2	DA-60X48X20.5
63	0.07 0	47	0 -0.06	58.4	0 -0.07	61.5	0 -0.19	18.4	6.35	DA-63X47X18.4
63	0.07 0	47	0 -0.06	58.4	0 -0.07	61.5	0 -0.19	19.4	6.35	DA-63X47X19.4
63	0.07 0	47	0 -0.06	59	0 -0.07	62	0 -0.19	20.5	3.1	DA-63X47X20.5
63	0.07 0	51	0 -0.07	59	0 -0.07	62.4	0 -0.19	20.5	4.2	DA-63X51X20.5
63	0.07 0	53	0 -0.07	60	0 -0.07	62	0 -0.19	12.5	4	DA-63X53X12.5
65	0.07 0	49	0 -0.07	61	0 -0.07	64	0 -0.19	20.5	3.1	DA-65X49X20.5
65	0.07 0	50	0 -0.07	60.4	0 -0.07	63.5	0 -0.19	18.4	6.35	DA-65X50X18.4
70	0.07 0	50	0 -0.07	64.2	0 -0.07	68.3	0 -0.19	22.4	6.35	DA-70X50X22.4



$\varnothing D1$	TOL H9	$\varnothing d1$	TOL h9	$\varnothing d2$	TOL h9	$\varnothing d3$	TOL h11	L1 0.2	L2 0.1	PART NO.
70	0.07 0	54	0 -0.07	66	0 -0.07	69	0 -0.19	20.5	3.1	DA-70X54X20.5
70	0.07 0	58	0 -0.07	66	0 -0.07	69.4	0 -0.19	20.5	4.2	DA-70X58X20.5
75	0.07 0	55	0 -0.07	69.2	0 -0.07	73.3	0 -0.19	22.4	6.35	DA-75X55X22.4
75	0.07 0	59	0 -0.07	71	0 -0.07	74	0 -0.19	20.5	3.1	DA-75X59X20.5
80	0.07 0	60	0 -0.07	74.15	0 -0.07	78.3	0 -0.19	22.4	6.35	DA-80X60X22.4
80	0.07 0	62	0 -0.07	76	0 -0.07	79	0 -0.19	22.5	3.6	DA-80X62X22.5
80	0.07 0	66	0 -0.07	76	0 -0.07	79.4	0 -0.19	22.5	5.2	DA-80X66X22.5
85	0.09 0	65	0 -0.07	79.15	0 -0.07	83.3	0 -0.22	22.4	6.35	DA-85X65X22.4
90	0.09 0	70	0 -0.07	84.15	0 -0.09	88.3	0 -0.22	22.4	6.35	DA-90X70X22.4
90	0.09 0	72	0 -0.07	86	0 -0.09	89	0 -0.22	22.5	3.6	DA-90X72X22.5
90	0.09 0	76	0 -0.07	86	0 -0.09	89.4	0 -0.22	22.5	5.2	DA-90X76X22.5
95	0.09 0	75	0 -0.07	89.15	0 -0.09	93.3	0 -0.22	22.4	6.35	DA-95X75X22.4
100	0.09 0	75	0 -0.07	93.15	0 -0.09	98	0 -0.22	22.4	6.35	DA-100X75X22.4
100	0.09 0	80	0 -0.07	95	0 -0.09	98	0 -0.22	25	6.3	DA-100X80X25
100	0.09 0	82	0 -0.09	96	0 -0.09	99	0 -0.22	22.5	3.6	DA-100X82X22.5
100	0.09 0	85	0 -0.09	96	0 -0.09	98.5	0 -0.22	20	5	DA-100X85X20



ØD1	TOL H9	Ød1	TOL h9	Ød2	TOL h9	Ød3	TOL h11	L1 0.2	L2 0.1	PART NO.
100	0.09 0	86	0 -0.09	96	0 -0.09	99.4	0 -0.22	22.5	5.2	DA-100X86X22.5
105	0.09 0	80	0 -0.07	98.1	0 -0.09	103	0 -0.22	22.4	6.35	DA-105X80X22.4
110	0.09 0	85	0 -0.09	103.1	0 -0.09	108	0 -0.22	22.4	6.35	DA-110X85X22.4
110	0.09 0	92	0 -0.09	106	0 -0.09	109	0 -0.22	22.5	3.6	DA-110X92X22.5
115	0.09 0	90	0 -0.09	108.1	0 -0.09	113	0 -0.22	22.4	6.35	DA-115X90X22.4
120	0.09 0	95	0 -0.09	113.1	0 -0.09	118	0 -0.22	22.4	6.35	DA-120X95X22.4
125	0.1 0	100	0 -0.09	118.1	0 -0.09	123	0 -0.25	25.4	6.35	DA-125X100X25.4
125	0.1 0	103	0 -0.09	121	0 -0.09	124	0 -0.25	26.5	5.1	DA-125X103X26.5
125	0.1 0	105	0 -0.09	120	0 -0.09	123	0 -0.25	25	6.3	DA-125X105X25
130	0.1 0	105	0 -0.09	123.1	0 -0.1	128	0 -0.25	25.4	6.35	DA-130X105X25.4
130	0.1 0	105	0 -0.09	122.6	0 -0.1	128	0 -0.25	25.4	9.5	DA-130X105X25.4
135	0.1 0	110	0 -0.09	127.6	0 -0.1	133	0 -0.25	25.4	9.5	DA-135X110X25.4
140	0.1 0	115	0 -0.09	133	0 -0.1	138	0 -0.25	25.4	6.35	DA-140X115X25.4
140	0.1 0	115	0 -0.09	132.6	0 -0.1	138	0 -0.25	25.4	9.5	DA-140X115X25.4
145	0.1 0	120	0 -0.09	137.6	0 -0.1	143	0 -0.25	25.4	9.5	DA-145X120X25.4
150	0.1 0	125	0 -0.1	142.6	0 -0.1	148	0 -0.25	25.4	9.5	DA-150X125X25.4
155	0.1 0	130	0 -0.1	147.6	0 -0.1	153	0 -0.25	25.4	9.5	DA-155X130X25.4



$\varnothing D1$	TOL H9	$\varnothing d1$	TOL h9	$\varnothing d2$	TOL h9	$\varnothing d3$	TOL h11	L1 0.2	L2 0.1	PART NO.
160	0.1 0	130	0 -0.1	152.6	0 -0.1	158	0 -0.25	25.4	9.5	DA-160X13025.4
160	0.1 0	130	0 -0.1	153	0 -0.1	158	0 -0.25	25.4	6.35	DA-160X13025.4
160	0.1 0	135	0 -0.1	152.6	0 -0.1	158	0 -0.25	25.4	9.5	DA-160X135X25.4
165	0.1 0	140	0 -0.1	157.6	0 -0.1	163	0 -0.25	25.4	9.5	DA-165X140X25.4
170	0.1 0	145	0 -0.1	161.7	0 -0.1	168	0 -0.25	25.4	12.7	DA-170X145X25.4
175	0.1 0	150	0 -0.1	166.7	0 -0.1	173	0 -0.25	25.4	12.7	DA-175X150X25.4
180	0.1 0	150	0 -0.1	172.95	0 -0.1	178	0 -0.25	35.4	6.35	DA-180X150X35.4
180	0.1 0	155	0 -0.1	171.7	0 -0.1	178	0 -0.25	25.4	12.7	DA-180X155X25.4
185	0.12 0	160	0 -0.1	176.7	0 -0.1	183	0 -0.25	25.4	12.7	DA-185X160X25.4
190	0.12 0	165	0 -0.1	181.7	0 -0.12	188	0 -0.29	25.4	12.7	DA-190X165X25.4
195	0.12 0	170	0 -0.1	186.7	0 -0.12	193	0 -0.29	25.4	12.7	DA-195X170X25.4
200	0.12 0	175	0 -0.1	191.6	0 -0.12	198	0 -0.29	25.4	12.7	DA-200X175X25.4
230	0.12 0	205	0 -0.1	221.6	0 -0.12	227	0 -0.29	25.4	12.7	DA-230X205X25.4
250	0.12 0	225	0 -0.1	241.6	0 -0.12	247	0 -0.29	25.4	12.7	DA-250X225X25.4