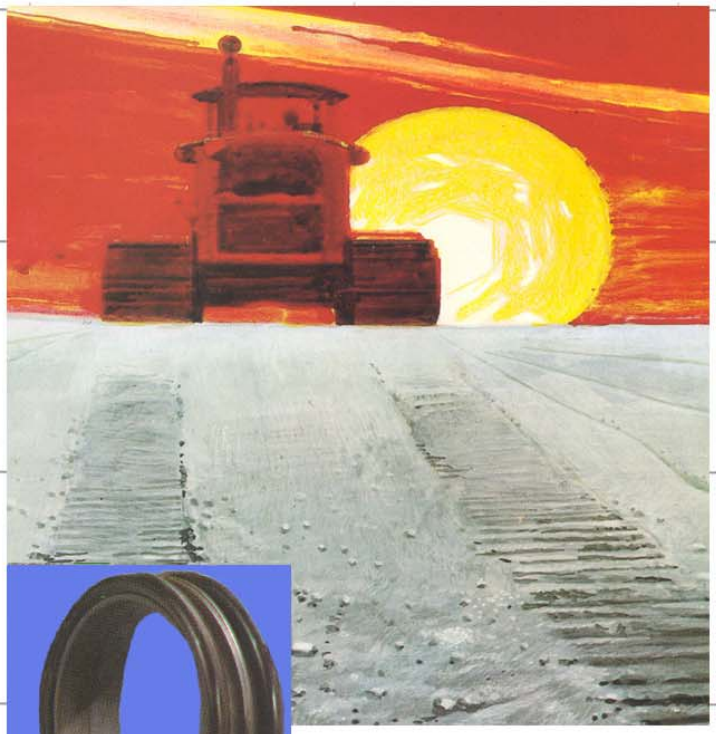


Floating Seals
ES Series

simrit®

Freudenberg-NOK

DISOGRIN
MERKEL

simrit®

FLOATING SEAL

ES series

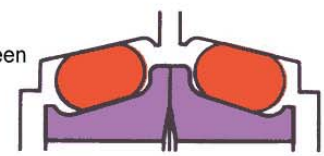
A bulldozer must endure extreme service conditions. The floating seals used in the undercarriage or drive components require, above all, strong seal performance to keep out dirt, grit, and water and toughness to operate without oil replenishment for a long period of time.
This results in longer periods of service between overhauls and a lower labor and maintenance cost.

Simrit floating seals is another product from your technology specialist for sealing products.

Tough Materials:

A. FLOATING SEAT MATERIAL:

The material of the floating seat is a special chrome molybdenum cast iron.



It is an exceptionally hard material with superior wear and corrosion resistance properties.

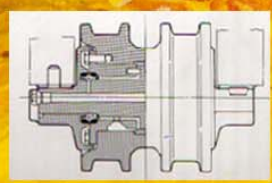
B. O-RING MATERIAL:

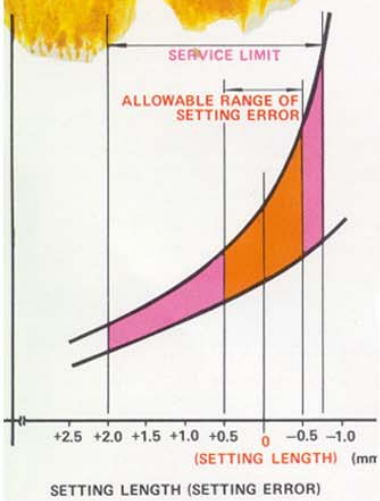
The O-ring material is a synthetic NBR rubber with excellent cold temperatures and pressure resistance properties. In addition, it has low compression set properties.

simrit®

RELIABLE SEAL ENDURANCE CHARACTERISTICS:

In laboratory tests under actual service conditions of track roller bearing assemblies at 1500 rpm. These floating seals showed wear of only 5/100 mm over a time period of 1000 hours using standard 90 wt gear oil as the lubricant. No deformation or deterioration of elasticity of the O-Rings were noticeable.





SETTING LENGTH (SETTING ERROR)

Simrit floating seals are designed to operate safely under these conditions:

Lubricant pressure within seal cavity:
1.5 kg/cmZ (max. 2 kg/cmZ)

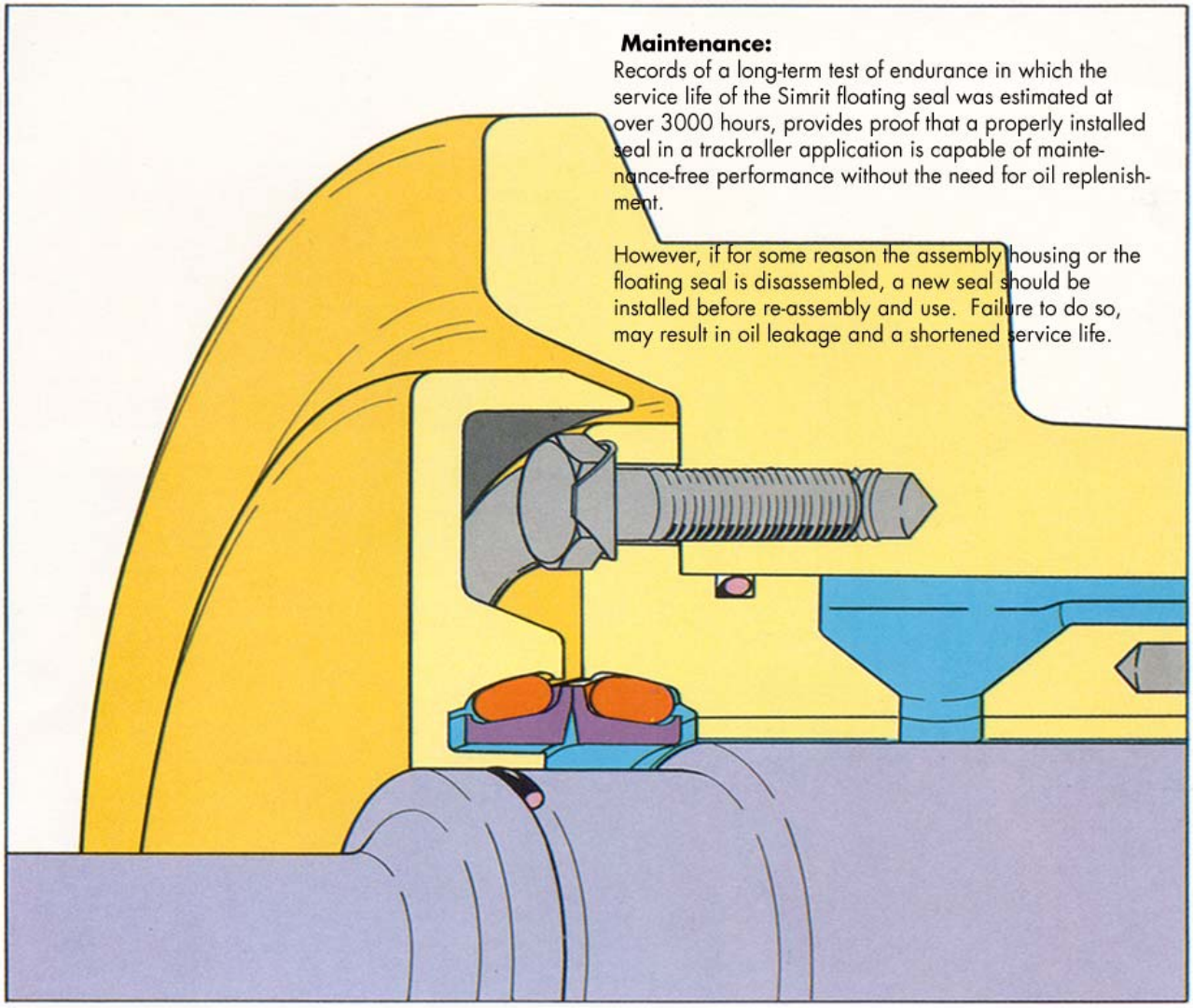
Circumferential Speed: 2 m/sec. max.

Range of temperatures:

-20 deg. C + 80 deg. C (standard materials)
-50 deg. C + 100 deg. C (special materials)

simrit®

INSTALLATION AND MAINTENANCE



Maintenance:
Records of a long-term test of endurance in which the service life of the Simrit floating seal was estimated at over 3000 hours, provides proof that a properly installed seal in a trackroller application is capable of maintenance-free performance without the need for oil replenishment.

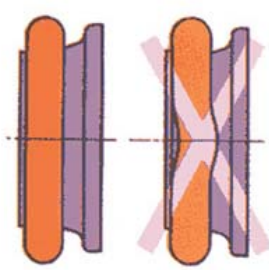
However, if for some reason the assembly housing or the floating seal is disassembled, a new seal should be installed before re-assembly and use. Failure to do so, may result in oil leakage and a shortened service life.

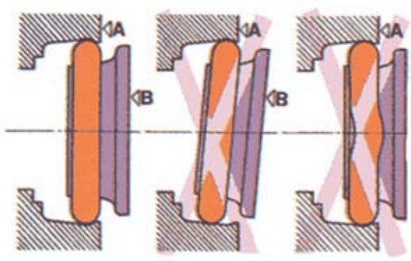
The Method of Installation:

First Step: Make sure that the insertion opening of the housing is clean and clear of burrs, scratches, and dust. The O-ring should be correctly fitted on the floating seat. Be careful not to distort the O-ring.

Second Step:

Install in the housing the floating seat fitted with the O-ring. At this time, confirm that the end of the housing (A) will be parallel to the sliding surface of the floating seat (B). If the O-ring comes out even partial; abnormal wear and deformation of the O-ring may occur, because of eccentric load on the circumference. This will shorten the service life of the seal, so please be careful not to neglect confirmation and that the seal is properly seated.





Third Step:

After insertion into the respective housings, make sure that the sliding surfaces are absolutley free of foreign matter. Then apply some lubricant oil lightly to the sliding surfaces.

Upon completing the seal installation continue with the prescribed assembly of the housings and fill the assembly with lubricating oil.

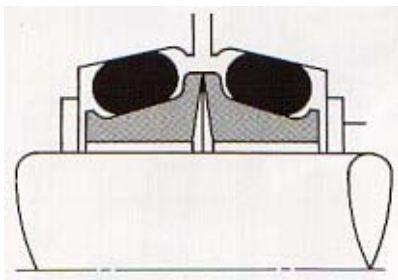
TYPE ES100 Mechanical Seal

The ES100 mechanical seal was developed as a seal for the track rollers used in construction machinery and vehicles. It is simple in construction, consisting of O-rings and floating seats made of special cast iron. Its sealing performance is dependent on the sealing capabilities and elastic distortion of the O-rings as the floating seats are supported by the O-rings. The seal effectively excludes sand, dirt, and water and is widely used in bulldozer and excavator undercarriage applications.

Construction

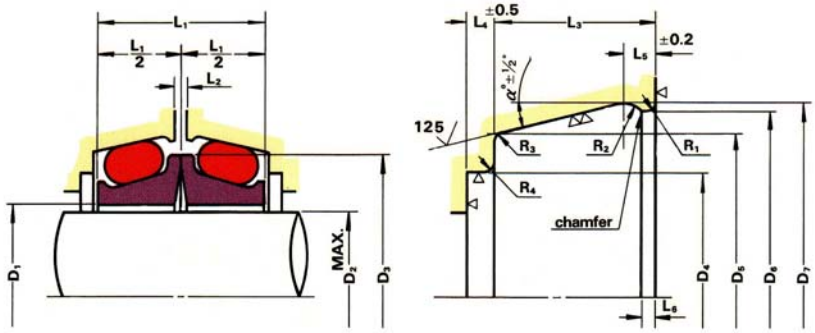
Floating Seat: *standard material - CRH1 (Cr content)*
optional material - CRH5 (Ni content)

O-ring: *standard material - NBR A402 (60 Shore A),*
NBR A627 (65 Shore A) low temperature
optional materials - FKM F201 (70 Shore A)



Specifications

Pressure / 2kg/cm^2 (max.)
Circumferential Speed / 3m/sec. (max.)
Temperature Range / -40°C ~ 90°C
Fluids / in:lubricating oil and out:soil, sand, muddy water, etc.
Sizes / f 45 ~ f 429 (mm)



Type ES100 Size List

λ exisiting tool (all other sizes tooling required)

dimensions in mm

FORMER CODE No.	DWG No.	D2	D1	D3	L1	D4	D5	D6	D7	L2	L3	L4	L5	L6	R1	R2	R3	R4	α
λ ----------	FS-0002929	35.0	38.0	51.0	20.0	46.0	51.2	53.0	53.7	3	9.0	2.0	1.6	0.4	0.2	2.0	1.0	0.5	10
λ 760S042FS	FS-0000144	42.0	45.0	58.0	21.0	53.4	58.7	60.8	61.6	3	10.0	2.0	1.8	0.5	0.3	2.5	1.0	0.5	10
λ 760S045FS	FS-0001892	45.0	48.0	62.0	25.0	58.0	64.4	67.2	68.0	3	12.0	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
λ 760S053FS	FS-0000217	53.0	56.0	70.0	25.0	66.0	72.5	75.2	76.0	3	12.0	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
λ 760S055FS	FS-0002350	55.0	58.0	75.0	27.0	67.0	75.2	78.6	79.4	3	13.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
λ ----------	FS-0000284	57.0	60.0	74.0	20.6	70.0	75.4	77.4	78.4	3	9.0	2.0	1.9	0.35	0.3	2.5	1.0	0.5	12
λ 760S060FS	FS-0003950	60.5	63.5	82.0	31.8	74.0	82.6	86.0	86.8	3	15.0	2.0	3.0	1.2	0.5	4.0	1.0	0.5	10
λ 760S061FS	FS-0000373	61.0	64.0	78.0	25.0	74.0	80.2	83.8	84.6	3	12.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	12
760S063FS	FS-9000767	63.0	66.0	86.0	28.0	78.0	85.8	89.2	90.0	3	14.0	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
----------	----------	63.5	67.5	86.5	31.8	78.0	87.0	90.0	91.0	3	14.5	2.5	2.8	0.6	0.3	5.0	1.0	0.5	10
λ 760S066FS	FS-0000446	66.0	69.0	84.0	24.0	78.5	85.7	88.6	89.6	3	11.0	2.0	1.9	0.35	0.3	2.5	1.0	0.5	12
760S067FS	FS-9000775	67.0	70.0	90.0	29.0	84.0	90.6	94.7	95.5	3	13.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	12
λ 760S070FS	FS-0002228	70.0	73.0	92.1	31.8	84.0	92.1	95.4	96.2	3	15.0	2.0	3.0	1.2	0.5	4.0	1.0	0.5	10
----------	----------	70.0	73.0	92.0	32.0	84.0	90.8	95.0	96.0	3	14.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	12
λ 760S073FS	FS-0001965	73.0	76.0	94.0	29.0	89.0	97.0	100.6	101.4	3	14.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
λ 760S077FS	FS-0000667	77.0	80.0	100.0	29.0	92.0	100.5	104.2	105.0	3	14.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
760S078FS	FS-9000783	77.0	80.0	100.0	29.0	92.0	99.6	103.2	104.0	3	14.5	2.0	2.0	0.5	0.3	3.0	1.0	0.5	10
----------	----------	79.0	82.0	98.0	26.0	91.0	98.9	101.3	102.3	3	12.5	2.0	2.8	0.6	0.5	5.0	1.0	0.5	10
λ ----------	FS-0002260	87.0	90.0	109.0	32.0	100.0	107.7	112.0	112.9	3	14.5	2.5	2.1	0.5	0.3	3.0	1.0	0.5	12
λ 760S087FS	FS-0005316	87.5	90.5	109.0	31.8	101.0	109.5	112.8	113.6	3	15.0	2.0	3.0	1.2	0.5	4.0	1.0	0.5	10
λ 760S092FS	FS-0002082	92.0	95.0	114.0	32.0	107.0	114.8	119.2	120.0	3	15.0	2.0	2.5	1.0	0.5	3.0	1.0	0.5	12
----------	----------	95.0	98.0	119.0	29.6	111.0	120.3	123.2	124.2	3	14.0	2.0	2.9	1.2	0.5	3.0	1.0	0.5	10
----------	----------	96.0	99.0	120.0	27.8	112.0	120.2	122.5	123.5	3	12.5	2.0	2.8	0.6	0.5	5.0	1.0	0.5	10
λ 760S097FS	FS-0002708	97.0	100.0	118.0	32.0	111.0	119.3	122.4	123.2	3	14.5	2.0	2.5	1.0	0.5	3.0	1.5	0.5	10
λ 760S099FS	FS-0002716	99.0	102.0	122.0	32.0	115.0	121.8	126.2	127.2	3	15.5	2.0	2.5	0.8	0.5	3.0	1.5	0.5	12
λ ----------	FS-0000926	99.0	102.0	118.0	27.0	112.0	119.9	123.0	124.0	3	12.0	2.0	2.0	0.4	0.3	3.0	1.0	0.5	12
760S106FS	FS-9000791	106.0	109.0	132.0	32.0	124.0	132.1	135.6	136.6	3	15.5	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
λ 760S107FS	FS-0002090	107.0	110.0	128.0	32.0	121.0	127.7	132.0	133.0	3	15.0	2.0	2.5	0.8	0.5	3.0	1.5	0.5	12
λ 760S112FS	FS-0001850	112.0	115.0	137.0	31.0	130.0	137.6	140.8	141.8	3	14.5	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
----------	----------	114.0	117.0	138.0	31.8	132.0	138.5	141.5	142.5	3	14.5	2.0	2.9	0.7	0.6	5.0	1.0	0.5	10
λ 760S117FS	FS-0001027	117.0	120.0	142.0	38.0	133.0	143.8	148.0	149.0	4	17.0	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
760S123FS	FS-9000805	124.0	127.0	145.0	31.8	138.0	146.3	149.4	150.2	4	14.0	2.0	2.5	1.0	0.5	3.0	1.5	0.5	10
760S124FS	FS-0005685	124.0	127.0	141.0	25.0	136.0	140.8	143.2	144.0	4	11.5	2.0	2.5	1.0	0.5	3.0	1.0	0.5	10
760S126FS	FS-9000201	127.0	130.0	152.0	38.4	144.0	153.4	158.0	159.0	3	18.5	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
760S127FS	----------	127.0	130.0	150.0	32.0	144.6	151.2	154.6	155.6	3	14.5	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
----------	----------	133.0	136.0	155.0	30.0	152.1	155.9	159.0	159.72	4	13.0	2.0	2.5	1.2	0.5	2.5	---	---	10.5
λ ----------	FS-0001132	134.0	137.0	153.0	30.0	152.1	155.9	159.0	159.72	4	13.0	2.0	2.5	1.2	0.5	2.5	---	---	10.5
λ 760S140FS	FS-0002392	140.0	143.0	157.0	25.0	152.0	156.7	158.9	159.7	4	11.5	2.0	2.5	1.0	0.5	3.0	1.0	0.5	10
760S143FS	FS-9001640	143.0	146.0	168.0	38.0	159.0	171.7	175.8	176.8	4	18.0	2.0	3.0	1.0	0.5	4.0	1.5	0.5	10
760S145FS	FS-0005480	145.0	148.0	170.0	31.0	164.0	171.3	174.6	175.6	4	15.0	2.0	2.5	0.8	0.5	3.0	1.5	0.5	10
760S147FS	FS-9000821	147.0	150.0	172.0	40.0	165.0	173.5	178.0	179.0	4	18.0	2.0	2.5	0.8	0.5	3.0	2.0	0.5	10
760S151FS	----------	151.0	154.0	168.0	25.0	164.0	167.8	170.2	171.0	4	11.5	2.0	2.5	0.8	0.5	3.0	1.0	0.5	10
λ ----------	FS-0002783	152.0	155.0	177.0	40.0	170.0	179.4	184.6	185.6	4	20.0	2.0	2.9	1.0	0.5	4.0	1.0	0.5	10.5
----------	----------	153.0	156.0	172.0	26.0	164.5	173.1	175.3	176.3	3	12.5	2.0	2.8	0.6	0.5	5.0	1.0	0.5	10
----------	----------	157.0	160.0	180.0	32.0	174.0	181.7	185.5	186.3	3	13.5	4.0	2.3	0.8	0.3	3.0	2.0	0.5	12
λ 760S160FS	FS-0002791	160.0	163.0	188.0	38.0	178.6	191.1	195.4	196.4	4	18.0	2.0	3.0	1.0	0.5	4.0	2.0	0.5	10
----------	----------	162.0	165.0	181.0	26.0	176.5	181.7	184.0	185.0	3	12.0	2.5	2.3	0.7	0.5	3.0	1.0	0.5	10
760S175FS	FS-9000040	175.0	178.0	200.0	38.0	192.0	205.0	209.6	210.6	4	19.0	2.0	3.0	1.0	0.5	4.0	2.0	0.5	10
760S179FS	FS-9000830	179.0	182.0	207.0	36.0	197.6	210.0	214.4	215.4	4	18.0	2.0	3.0	1.0	0.5	4.0	2.0	0.5	10
760S189FS	FS-0005944	189.0	192.0	215.0	33.0	207.0	216.0	219.8	220.8	4	16.5	2.0	3.0	1.0	0.5	4.0	2.0	0.5	10
λ 760S206FS	FS-0002007	206.0	209.0	234.0	42.0	224.0	236.6	241.6	242.6	4	19.5	2.0	3.0	1.0	0.5	4.0	2.0	0.5	10
λ 760S217FS	FS-0002813	217.0	220.0	246.0	41.0	236.0	248.3	253.6	254.6	4	20.5	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
760S220FS	FS-9000848	220.0	223.0	248.0	37.0	238.8	251.1	255.6	256.6	4	18.5	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
760S222FS	FS-9000856	222.0	225.0	252.0	37.0	241.0	252.1	257.0	258.0	4	19.0	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S236FS	FS-0001990	236.0	239.0	268.0	40.0	257.0	268.6	273.2	274.2	4	19.0	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S247FS	FS-0001604	247.0	250.0	276.0	44.0	266.0	278.4	283.6	284.6	4	20.5	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S262FS	FS-0001620	262.0	265.0	290.0	37.0	280.2	292.5	296.9	297.9	4	18.5	2.0	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S297FS	FS-0001663	297.0	300.0	328.0	40.0	315.0	327.1	332.0	333.0	4	19.5	2.5	3.0	1.0	0.5	4.0	2.0	1.0	10
760S315FS	FS-0005855	315.0	318.0	343.0	37.0	333.8	346.1	350.6	351.6	4	18.5	2.5	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S337FS	FS-0003135	337.0	340.0	369.0	40.4	358.0	369.0	373.8	374.8	4	19.0	2.5	3.0	1.0	0.5	4.0	2.0	1.0	10
----------	----------	347.0	350.0	376.0	44.0	360.0	380.0	385.0	386.0	6	22.0	3.0	5.0	3.0	1.0	4.0	1.0	1.0	10
----------	----------	357.0	360.0	386.0	50.0	380.0	390.0	395.0	396.0	6	22.0	3.0	5.0	3.0	---	4.0	2.0	1.0	10
λ 760S363FS	FS-0002015	363.0	366.0	391.0	37.0	381.8	394.0	398.5	399.5	4	18.5	2.5	3.0	1.0	0.5	4.0	2.0	1.0	10
λ 760S426FS	FS-0001736	426.0	429.0	454.0	37.0	444.6	456.9	461.3	462.3	4	18.5	2.5	3.0	1.0	0.5	4.0	2.0	1.0	10
----------	FS-0005839	455.0	460.0	494.0	60.0	486.5	495.6	501.0	504.2	3	32.0	4.0	8.0	4.7	---	4.0	1.0	0.5	10

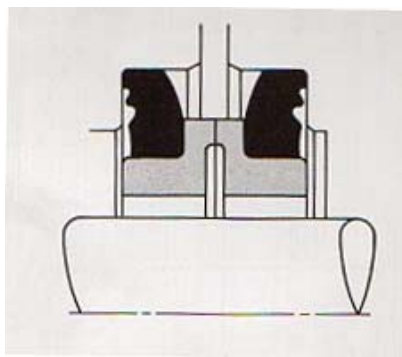
TYPE ES764 Mechanical Seal

This seal is a sister product of the type ES100 seal. Compared with the latter, a simpler design and housing construction can be achieved. As a results machinery, such as agricultural equipment which utilize these floating seals can be manufactured at less cost. In addition, the higher pressure capability of the ES764 offers the opportunity to expand the range of the type ES100 seal. The type ES764 utilizes an elastomeric packing with a wing-like form and floating seats made of special cast iron.

Construction

Floating Seat: *standard material - CRH1 (Cr content)*
optional material - CRH5 (Ni content)

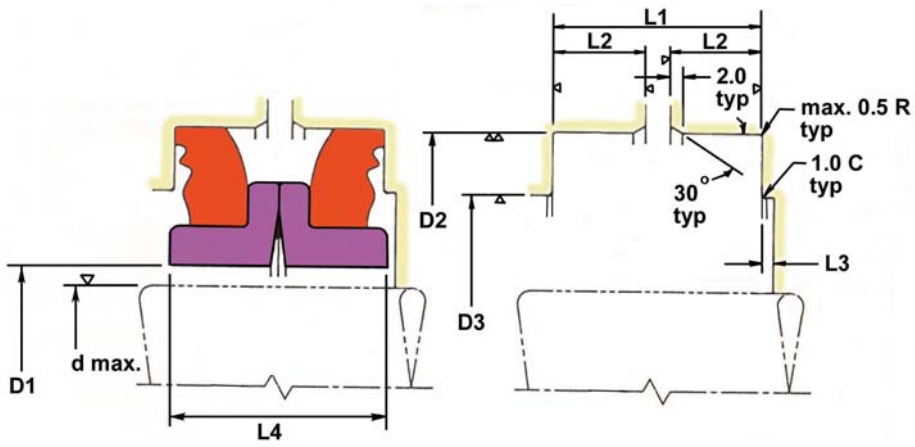
O-ring: *standard material - NBR A402 (60 Shore A),*
NBR A627 (65 Shore A) low temperature



Specifications

Pressure / 5kg/cm^2 (max.)
Circumferential Speed / 3m/sec. (max.)
Temperature Range / -40°C ~ 90°C
Fluids / in:lubricating oil and out:soil, sand, muddy water, etc.
Sizes / f 35 ~ f 439 (mm)

Type ES764
Size List



dimensions in mm

Nominal Dia.	DWG No.	d (max)	D1 (min)	D2 (± 0.07)	D3 (± 0.5)	L1 (± 0.5)	L2 (± 0.07)	L3 (min)	L4 (max)
35	FS-0005030	32.0	34.5	56.0	46.0	18.0	7.5	1.5	19.0
43	FS-0005049	40.0	42.5	64.0	54.0	18.0	7.5	1.5	19.0
46	FS-0004921	44.0	45.5	66.0	56.0	20.0	9.0	1.5	18.0
50	FS-9000163	47.0	49.5	72.0	61.0	15.0	6.5	1.5	17.5
53	FS-0004603	50.5	52.5	76.0	62.0	15.0	6.0	1.5	17.2
60	FS-0004611	57.0	59.5	86.0	73.0	20.0	8.5	1.5	21.0
73	FS-0004620	70.0	72.5	101.0	87.0	22.0	9.5	1.5	21.0
84	FS-0004930	82.0	84.0	114.3	97.36	25.81	12.06	0.38	23.0
105	FS-0004948	100.0	105.0	135.0	118.0	27.8	11.8	0.5	26.0
112	FS-0004654	109.0	111.4	152.4	131.4	33.5	15.0	0.0	28.0
148	FS-9003464	142.9	148.0	184.15	160.8	34.7	16.5	0.8	31.0
152	FS-0004662	149.0	152.0	192.0	172.0	31.0	14.0	2.5	32.0
239	FS-9003499	236.5	239.0	279.4	261.9	36.5	17.45	2.3	37.0