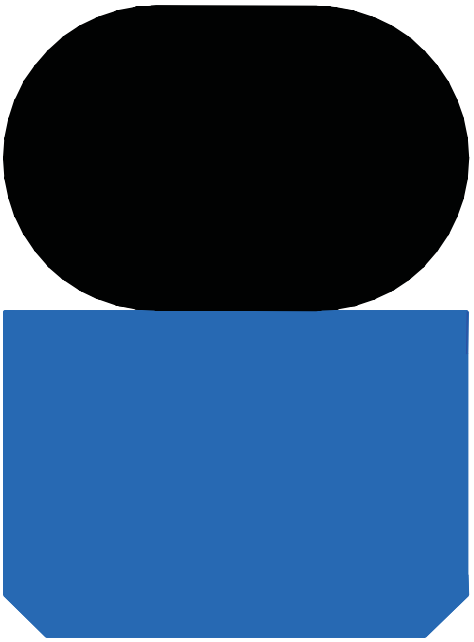
O.L. Seals A/S

Rod Seals

Kefloy SlipRing® Type 2521-



Double acting rod seal for reciprocating movements.

Offers excellent wear resistance and low friction.

SlipRing® Type 2521-

Is a double acting rod seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. To avoid extrusion and ease installation SlipRing® type 2521- is chamfered.
SlipRing® type 2521- is available in a Standard series, a Light Duty series, and a Heavy Duty series.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

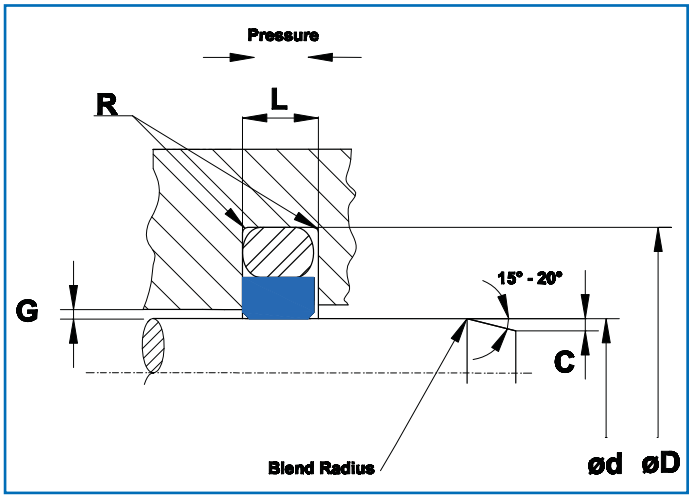
Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example

Rod diameter: 15.0 mm

Part no 25211-0150-13
SlipRing® Type
Series
Rod dia. x 10
Compound no
O-Ring size 18.72 x 2.62
O-Ring to be ordered separately



Installation dimensions

Notches

In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25214-2200-13N

Type No.	Standard Series Rod dia.	Light Series Rod dia.	Heavy Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	f8/h9	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25210	3-7.9	8-18.9	-	d+4.9	2.2	0.4	0.30	0.20	0.15	0.7	d+2.0	1.78
25211	8-18.9	19-37.9	3-7.9	d+7.3	3.2	0.6	0.40	0.25	0.15	1.0	d+3.4	2.62
25212	19-37.9	38-199.9	8-18.9	d+10.7	4.2	1.0	0.40	0.25	0.20	1.3	d+5.1	3.53
25213	38-199.9	200-255.9	19-37.9	d+15.1	6.3	1.3	0.50	0.30	0.20	2.0	d+6.9	5.33
25214	200-255.9	256-649.9	38-199.9	d+20.5	8.1	1.8	0.60	0.35	0.25	2.5	d+9.5	6.99
25215	256-649.9	650-999.9	200-255.9	d+24.0	8.1	1.8	0.60	0.35	0.25	2.5	d+13.0	6.99
25216	650-999.9	≥ 1000	256-649.9	d+27.3	9.5	2.5	0.70	0.50	0.60	3.0	d+14.0	8.40
25217	≥1000		650-999.9	d+38.0	13.8	3.0	1.00	0.70	0.60	3.5	d+18.0	12.00

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

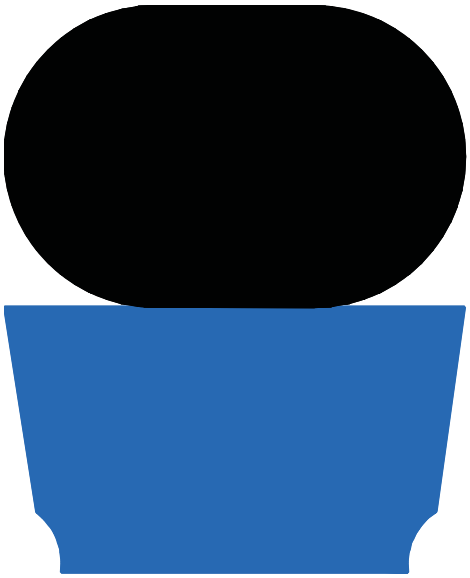
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy SlipRing® “A” Type 2611-



Double acting rod seal for reciprocating movements.

Recommended for light applications.

Offers excellent wear resistance and low friction.

SlipRing® A Type 2611-

Is a double acting rod seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® A is pressure responsive. SlipRing® A can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. To avoid extrusion SlipRing® A type 2611- is furnished with a special chamfer.
SlipRing® A type 2611- is available in a Standard series, a Light Duty series, and a Heavy Duty series.

Working Range

Pressure
Up to 20 MPa. For pressures exceeding 20 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good sealing efficiency
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design according to ISO 7425/2
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
Air, dry or lubricated	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

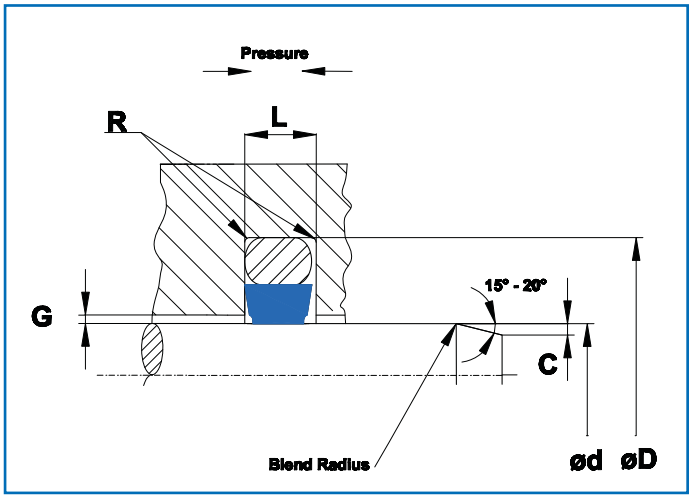
Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
Rod diameter: 180.0 mm

Part no 26113-1800-13
SlipRing® A Type
Series
Rod dia. x 10
Compound no
O-Ring size 183.52 x 5.33
O-Ring to be ordered separately



Installation dimensions

Type No.	Standard Series Rod dia.	Light Series Rod dia.	Heavy Series Rod dia.	D Groove diam.	L Groove width	R Ra-dius	G Radial gap			C Cham-fer	B O-ring ID	O-ring Cross section
	f8/h9	f8/h9	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
26110	3-7.9	8-18.9	-	d+4.9	2.2	0.4	0.30	0.20	0.15	0.7	d+2.0	1.78
26111	8-18.9	19-37.9	3-7.9	d+7.3	3.2	0.6	0.40	0.25	0.15	1.0	d+3.4	2.62
26112	19-37.9	38-199.9	8-18.9	d+10.7	4.2	1.0	0.40	0.25	0.20	1.3	d+5.1	3.53
26113	38-199.9	200-255.9	19-37.9	d+15.1	6.3	1.3	0.50	0.30	0.20	2.0	d+6.9	5.33
26114	200-255.9	256-649.9	38-199.9	d+20.5	8.1	1.8	0.60	0.35	0.25	2.5	d+9.5	7.00
26115	256-649.9	650-999.9	200-255.9	d+24.0	8.1	1.8	0.60	0.35	0.25	2.5	d+13.0	7.00
26116	650-999.9	≥ 1000	256-649-9	d+27.3	9.5	2.5	0.70	0.50	0.60	3.0	d+14.0	8.40
26117	≥1000		650-999.9	d+38.0	13.8	3.0	1.00	0.70	0.60	3.5	d+18.0	12.00

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

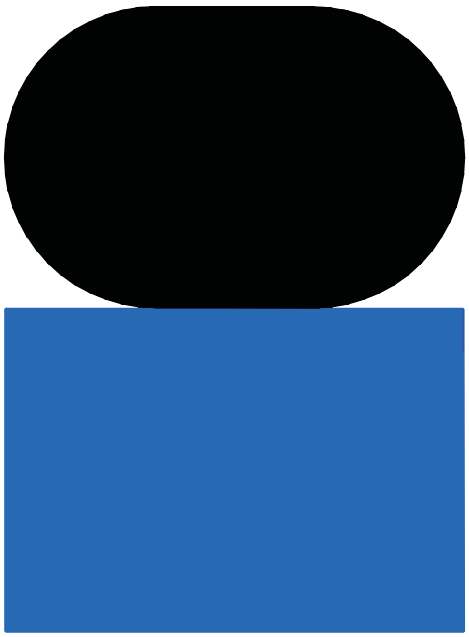
Note
In some countries seals similar to SlipRing® "A" are patented. Therefore SlipRing® "A" should not be used in these areas.

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy SlipRing® Type 2531-



Double acting rod seal for reciprocating movements.

Recommended for light applications.

Offers excellent wear resistance and low friction.

SlipRing® Type 2531-

Is a double acting rod seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. SlipRing® type 2631- is available in a Standard series, a Light Duty series, and a Heavy Duty series.

Working Range

Pressure
Up to 20 MPa. For pressures exceeding 20 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRIng® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

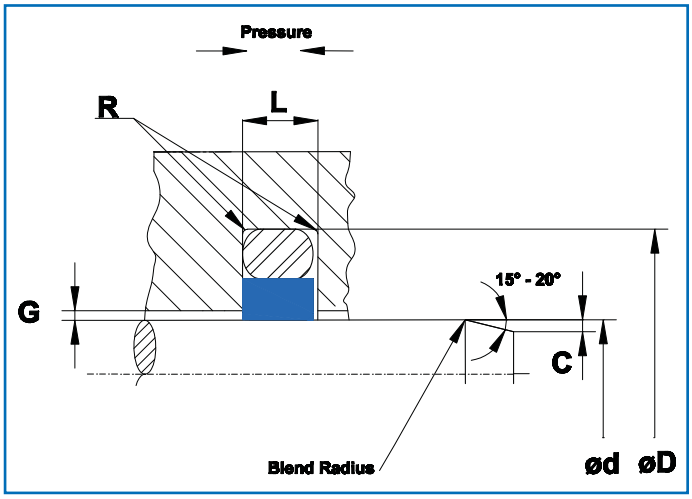
Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example

Rod diameter: 63.0 mm

Part no 25313-0630-13N
SlipRing® Type
Series
Rod dia. x 10
Compound no
O-Ring size 69.22 x 5.33
O-Ring to be ordered separately



Installation dimensions

Notches

In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25314-10000-13N

Type No.	Standard Series Rod dia.	Light Series Rod dia.	Heavy Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	f8/h9	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25310	3-7.9	8-18.9	-	d+4.9	2.2	0.4	0.30	0.20	0.15	0.7	d+2.0	1.78
25311	8-18.9	19-37.9	3-7.9	d+7.3	3.2	0.6	0.40	0.25	0.15	1.0	d+3.4	2.62
25312	19-37.9	38-199.9	8-18.9	d+10.7	4.2	1.0	0.40	0.25	0.20	1.3	d+5.1	3.53
25313	38-199.9	200-255.9	19-37.9	d+15.1	6.3	1.3	0.50	0.30	0.20	2.0	d+6.9	5.33
25314	200-255.9	256-649.9	38-199.9	d+20.5	8.1	1.8	0.60	0.35	0.25	2.5	d+9.5	6.99
25315	256-649.9	650-999.9	200-255.9	d+24.0	8.1	1.8	0.60	0.35	0.25	2.5	d+13.0	6.99
25316	650-999.9	≥ 1000	256-649-9	d+27.3	9.5	2.5	0.70	0.50	0.60	3.0	d+14.0	8.40
25317	≥1000		650-999.9	d+38.0	13.8	3.0	1.00	0.70	0.60	3.5	d+18.0	12.00

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

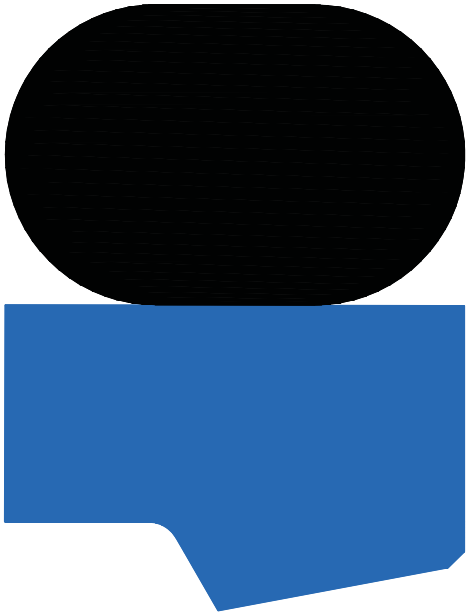
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy SharpSeal® type 2511-



Very efficient single acting rod seal for reciprocating movements.

The design of the seals concentrate the sealing force at the sealing edge.

Offers excellent leakage control over the whole pressure range.

SharpSeal® Type 2511-

Is a very efficient SINGLE ACTING rod seal. The design of the seal concentrates the sealing forces on the sealing edge. This ensures an excellent leakage control over the whole pressure range. The sealing edge virtually scrapes the sealing surface dry. Where a completely dry sealing surface is required, it is possible to install SharpSeals® in tandem. The SharpSeal® ensures automatic pressure relief between the two seals. Ventilation between the seals is not necessary.
SharpSeal® consists of an outer sliding part of Kefloy® energized by a rubber O-Ring. SharpSeal® is pressure responsive.
SharpSeal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
SharpSeal® type 2611- is available in a Standard series, a Light Duty series, and a Heavy Duty series.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Very good sealing efficiency
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	SharpSeal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 85
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

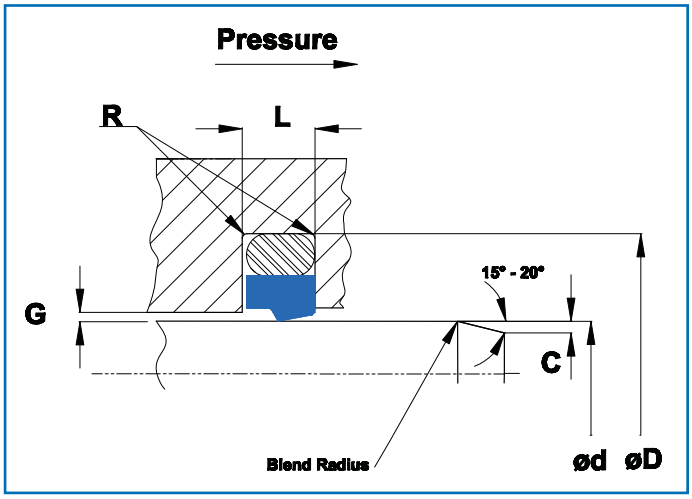
O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Rod diameter: 30.1 mm

Part no 25112-0301-13
SharpSeal® Type
Series
Rod dia. x 10
Compound no
O-Ring size 34.52 x 3.53
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Rod dia.	Light Series Rod dia.	Heavy Series Rod dia.	D Groove diam.	L Groove width	R Ra-dius	G Radial gap			C Cham-fer	B O-ring ID	O-ring Cross section
	f8/h9	f8/h9	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25110	3-7.9	8-18.9	-	d+4.9	2.2	0.4	0.30	0.20	0.15	0.7	d+2.0	1.78
25111	8-18.9	19-37.9	3-7.9	d+7.3	3.2	0.6	0.40	0.25	0.15	1.0	d+3.4	2.62
25112	19-37.9	38-199.9	8-18.9	d+10.7	4.2	1.0	0.40	0.25	0.20	1.3	d+5.1	3.53
25113	38-199.9	200-255.9	19-37.9	d+15.1	6.3	1.3	0.50	0.30	0.20	2.0	d+6.9	5.33
25114	200-255.9	256-649.9	38-199.9	d+20.5	8.1	1.8	0.60	0.35	0.25	2.5	d+9.5	6.99
25115	256-649.9	650-999.9	200-255.9	d+24.0	8.1	1.8	0.60	0.35	0.25	2.5	d+13.0	6.99
25116	650-999.9	≥ 1000	256-649-9	d+27.3	9.5	2.5	0.70	0.50	0.60	3.0	d+14.0	8.40
25117	≥1000		650-999.9	d+38.0	13.8	3.0	1.00	0.70	0.60	3.5	d+18.0	12.00

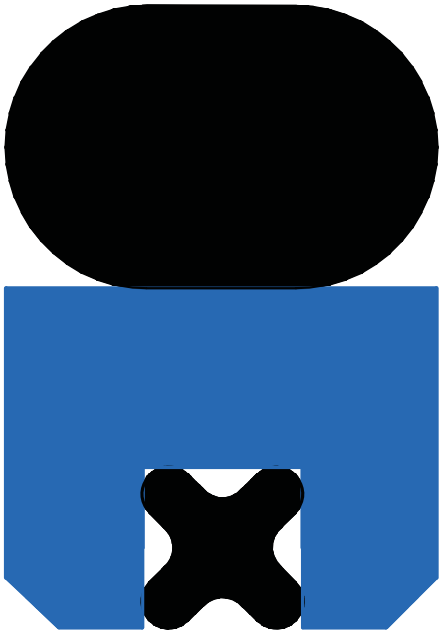
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy BX-Seal® Type 2601-



Very efficient double acting rod seal for reciprocating applications.

Consists of a rubber Quad ring integrated in a Kefloy SlipRing

Offers excellent leakage control over the whole pressure range.

Used to seal gases from liquids.

BX-Seal® Type 2601-

Is a double acting rod seal. It combines the excellent wear resistance of Kefloy® with the sealing capacity of rubber. It consists of a dynamic sliding ring of Kefloy® furnished with a rubber X-Ring and a rubber O-Ring energizing element. BX-Seal® is pressure responsive.
BX-Seal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
The unique design where an X-Ring is integrated in the sliding ring combines the sealing efficiency of rubber with the wear resistance of Kefloy®.

Working Range

Pressure
Up to 60 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-30°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 3 m/sec. Frequency: Up to 5 HZ. BX-Seal® should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-High sealing efficiency.
-Good wear resistance
-Low friction
-No stick-slip
-Separate fluid / fluid or fluid / gas.
-Small installation space.
-Simple groove design according to ISO 7425/1
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	BX-Seal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

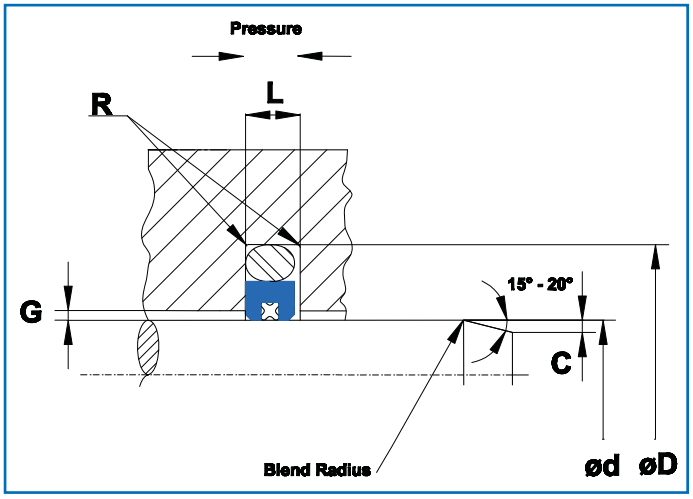
Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example
Rod diameter: 220.0 mm

Part no 26014-2200-13N
BX-Seal® Type
Series
Rod dia. x 10
Compound no
O-Ring size 227.97 x 7.00
X-Ring size 221.92 x 2.62
O-Ring and X-Ring to be ordered separately



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the BX-Seals® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order BX-Seals® with notches – add suffix “N” behind the compound code.
Example: 26014-2200-13N

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section	X-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.			
26012	19-37.9	d+11.0	4.2	1.0	0.25	0.15	0.10	1.3	d+5.1	3.53	1.78
26013	38-199.9	d+15.5	6.3	1.3	0.30	0.20	0.15	2.0	d+6.9	5.33	1.78
26014	200-255.9	d+21.0	8.1	1.8	0.30	0.20	0.15	2.5	d+9.5	7.00	2.62
26015	256-649.9	d+24.5	8.1	1.8	0.30	0.20	0.15	2.5	d+13.0	7.00	2.62
26016	650-999.9	d+28.0	9.5	2.5	0.45	0.30	0.25	3.0	d+14.0	8.40	3.53

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

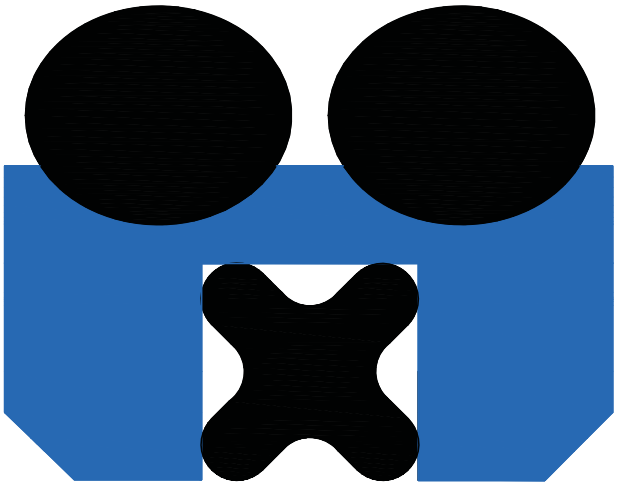
X-Ring Size
X-Ring cross section according to installation dimensions.
X-Ring I.D. not bigger than d+3%
X-Ring I.D. not smaller than d

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy OX-Seal® Type 2603-



Very efficient double acting rod seal for reciprocating applications.

Consists of a rubber Quad ring integrated in a Kefloy SlipRing energized by two O-Rings.

Offers excellent leakage control over the whole pressure range.

Used to seal gases from liquids.

OX-Seal® Type 2603-

Is a double acting rod seal. It combines the excellent wear resistance of Kefloy® with the sealing capacity of rubber. It consists of a dynamic sliding ring of Kefloy® furnished with a rubber X-Ring and two rubber O-Ring energizing elements. OX-Seal® is pressure responsive.
OX-Seal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
The unique design where an X-Ring is integrated in the sliding ring combines the sealing efficiency of rubber with the wear resistance of Kefloy®.

Working Range

Pressure
Up to 60 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-30°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 3 m/sec. Frequency: Up to 5 HZ. OX-Seal® should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-High sealing efficiency.
-Good wear resistance
-Low friction
-No stick-slip
-Separate fluid / fluid or fluid / gas.
-Small installation space.
-Simple groove design.
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	OX-Seal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) 70 Shore A At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

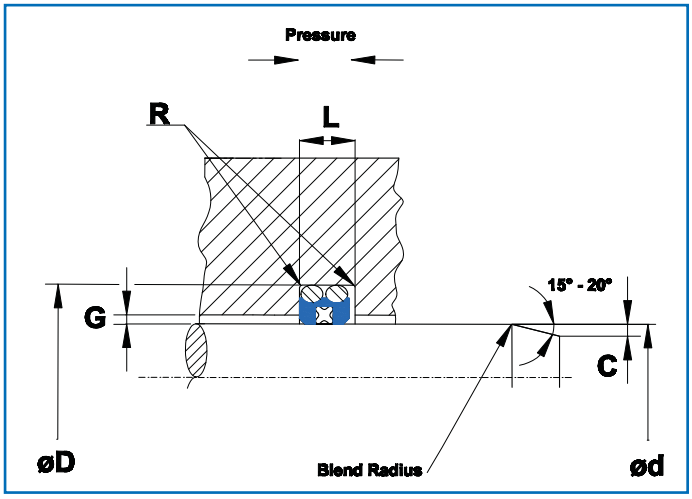
Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example
Rod diameter: 550.0 mm

Part no 26034-5500-13N
OX-Seal® Type
Series
Rod dia. x 10
Compound no
O-Ring size 557.66 x 7.00 (2 pcs.)
X-Ring size 557.61 x 5.33
O-Ring and X-Ring to be ordered separately



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the OX-Seals® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order OX-Seal® with notches – add suffix “N” behind the compound code.
Example: 26033-2200-13N

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section	X-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.			
26031	40-79.9	d+10.0	6.3	0.6	0.3	0.2	0.15	1.3	d+4.5	2.62	1.78
26032	80-132.9	d+13.0	8.3	1.0	0.4	0.3	0.15	2.0	d+7.0	3.53	2.62
26033	133-462.9	d+18.0	12.3	1.2	0.4	0.3	0.2	2.5	d+9.0	5.33	3.53
26034	463-700.0	d+31.0	16.3	1.8	0.5	0.4	0.3	2.5	d+19.0	6.99	5.33

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

X-Ring Size
X-Ring cross section according to installation dimensions.
X-Ring I.D. not bigger than d+3%
X-Ring I.D. not smaller than d

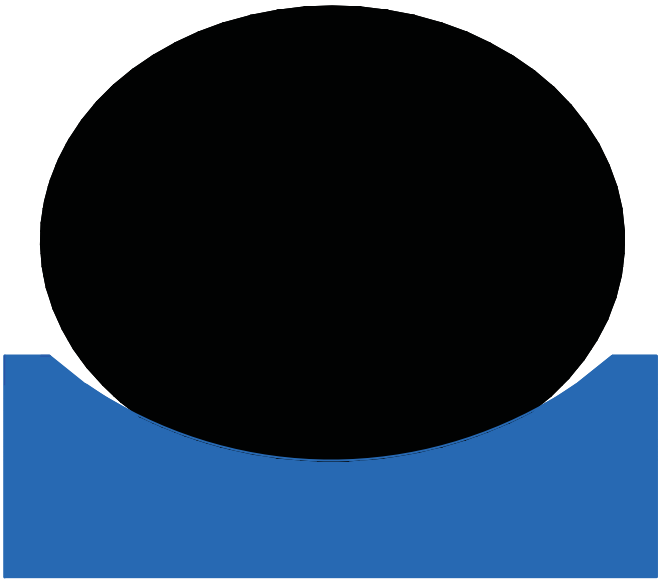
Note
In some countries seals similar to OX-Seals are patented. Therefore OX-Seals should not be used in these areas.

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2541-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2541-

O-Cap® type 2541 is a double acting rod seal. It uses the same groove dimensions as O-Rings according to British and American standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.
There is a range of O-Caps® for British and American standard O-Rings.

O-Cap® is pressure responsive.
O-Cap® for American and British standard O-Ring groove for O-Ring with no back-up rings
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

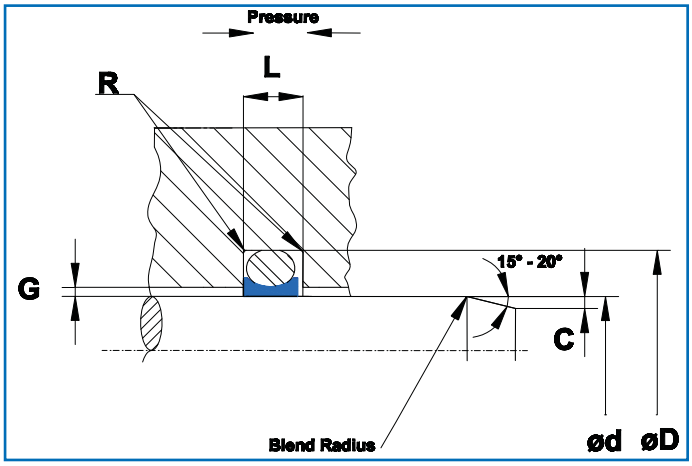
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap for Swedish standard O-Ring groove
For O-Ring with two back-up rings

Rod diameter: 110.0 mm

Part no 25413-1100-25
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 110.49 x 5.33
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example:25413-1100-25N.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25410	4-9.9	d+2.90	2.40	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	1.78
25411	10-19.9	d+4.50	3.60	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	2.62
25412	20-39.9	d+6.20	4.80	0.6	0.25	0.20	0.15	0.08	1.30	d+0.5	3.53
25413	40-119.9	d+9.40	7.10	0.8	0.35	0.25	0.20	0.10	2.00	d+1.0	5.33
25414	120-649.9	d+12.20	9.50	0.8	0.50	0.30	0.25	0.15	2.50	d+1.0	6,99

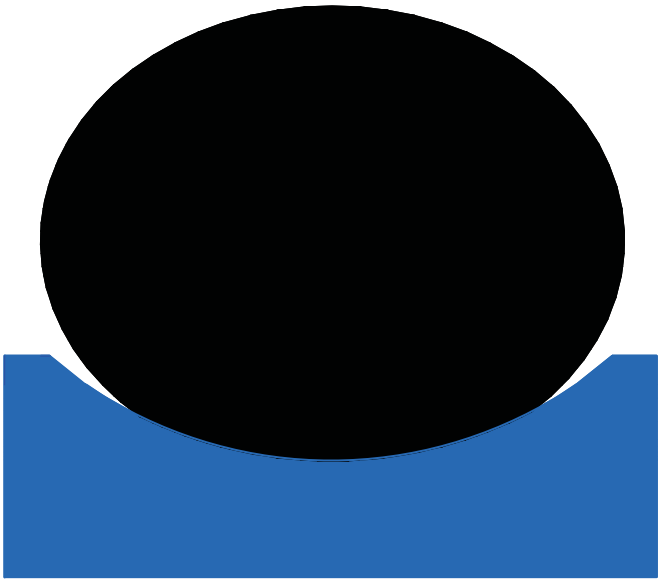
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d+3%
O-Ring I.D. not smaller than d-5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2543-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2543-

O-Cap® type 2543- is a double acting rod seal. It uses the same groove dimensions as O-Ring + 1 Buck-Up Ring according to British and American standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

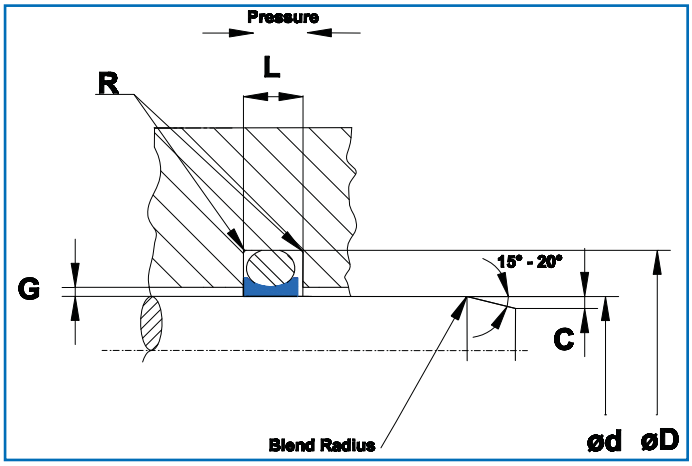
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap for British and American standard O-Ring groove for O-Ring with one back-up ring.

Rod diameter: 20.3 mm

Part no 25432-0203-90
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 20.22 x 3.53
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25432-0203-90N.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25430	4-9.9	d + 2.90	3.80	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	1.78
25431	10-19.9	d + 4.50	4.60	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	2.62
25432	20-39.9	d +6.20	5.70	0.6	0.25	0.20	0.15	0.08	1.30	d+0.5	3.53
25433	40-119.9	d+9.40	8.50	0.8	0.35	0.25	0.20	0.10	2.00	d+1.0	5.33
25434	120-649.9	d+12.20	11.20	0.8	0.50	0.30	0.25	0.15	2.50	d+1.0	6,99

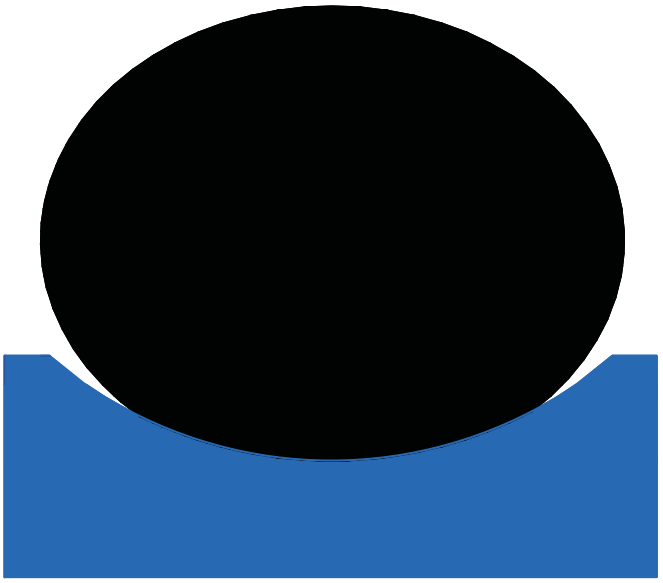
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d+1 as possible.
O-Ring I.D. not bigger than (d+1) +3%
O-Ring I.D. not smaller than (d+1) -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2545-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2545-

O-Cap® type 2545- is a double acting rod seal. It uses the same groove dimensions as O-Ring + 2 Buck-Up Rings according to British and American standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

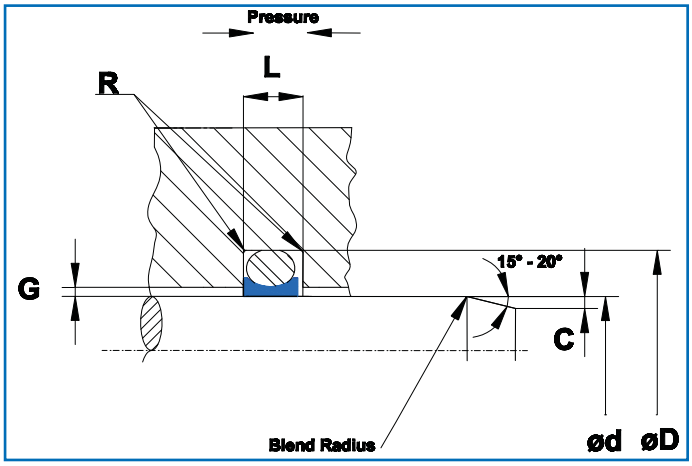
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap for American and British standard O-Ring groove for O-Ring with two back-up rings

Rod diameter: 355.8 mm

Part no 25455-3558-32
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 354.97 x 7.00
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 2455-3558-32N.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25450	4-9.9	d+2.90	5.20	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	1.78
25451	10-19.9	d+4.50	6.20	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	2.62
25452	20-39.9	d+6.20	7.70	0.6	0.25	0.20	0.15	0.08	1.30	d+0.5	3.53
25453	40-119.9	d+9.40	10.80	0.8	0.35	0.25	0.20	0.10	2.00	d+1.0	5.33
25454	120-649.9	d+12.20	14.70	0.8	0.50	0.30	0.25	0.15	2.50	d+1.0	6,99

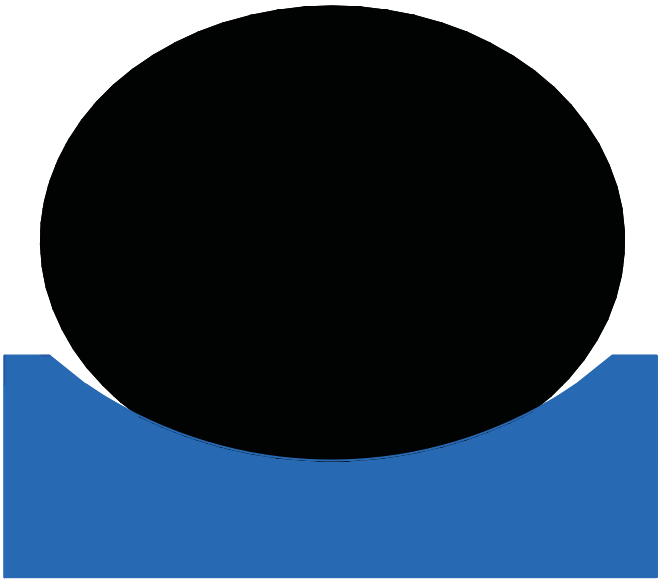
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d+1 as possible.
O-Ring I.D. not bigger than (d+1) +3%
O-Ring I.D. not smaller than (d+1) -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2551-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2551-

O-Cap® type 2551- is a double acting rod seal. It uses the same groove dimensions as O-Rings according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example

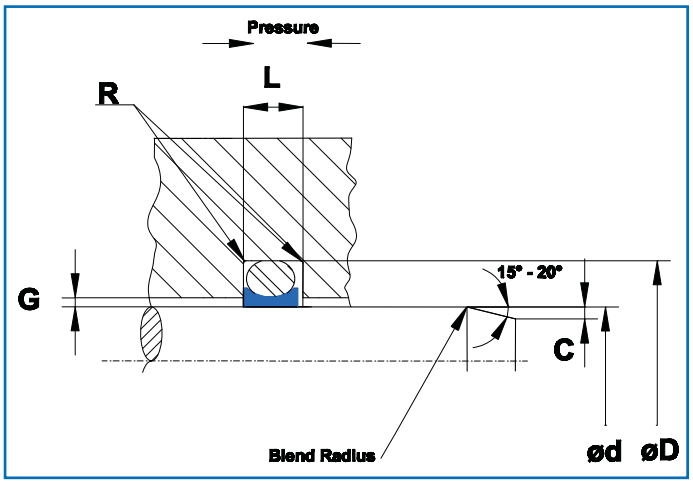
O-Cap for Swedish standard O-Ring groove for O-Ring with no back-up ring

Rod diameter: 45.0 mm

Part no 25511-0450-11
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 44.2 x 3.0
O-Ring to be ordered separately

Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.



Installation Dimensions

Notches

In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25511-0450-11.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25510	4-19.9	d+4.00	3.20	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	2.40
25511	20-45.9	d+5.00	4.00	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	3.00
25512	46-145.9	d+10.00	7.50	0.6	0.25	0.20	0.15	0.08	1.30	d+1.0	5.70
25513	146-250.9	d+15.00	11.00	0.8	0.35	0.25	0.20	0.10	2.00	d+1.5	8.40

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d+3%
O-Ring I.D. not smaller than d-5%

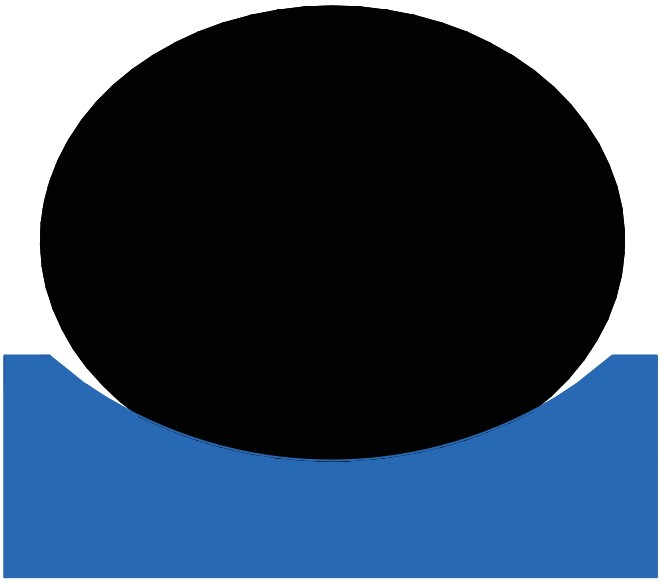
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2553-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2553-

O-Cap® type 2553- is a double acting rod seal. It uses the same groove dimensions as O-Ring +1 Back-Up Ring according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example

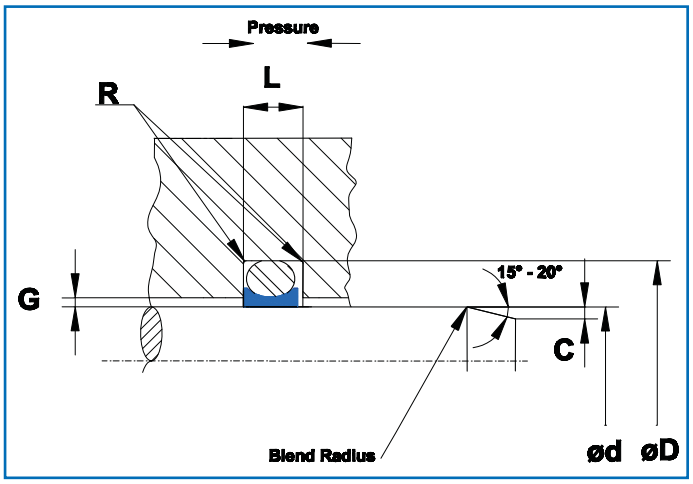
O-Cap for Swedish standard O-Ring groove for O-Ring with one back-up ring.

Rod diameter: 92.7 mm

Part no 25532-0927-25
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 89.1 x 5.7
O-Ring to be ordered separately

Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.



Installation Dimensions

Notches

In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25532-0927-25N.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25530	4-19.9	d+4.00	4.60	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	2.40
25531	20-45.9	d+5.00	5.40	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	3.00
25532	46-145.9	d+10.00	9.30	0.6	0.25	0.20	0.15	0.08	1.30	d+1.0	5.70
25533	146-250.9	d+15.00	13.20	0.8	0.35	0.25	0.20	0.10	2.00	d+1.5	8.40

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d+1 as possible.
O-Ring I.D. not bigger than (d+1) +3%
O-Ring I.D. not smaller than (d+1) -5%

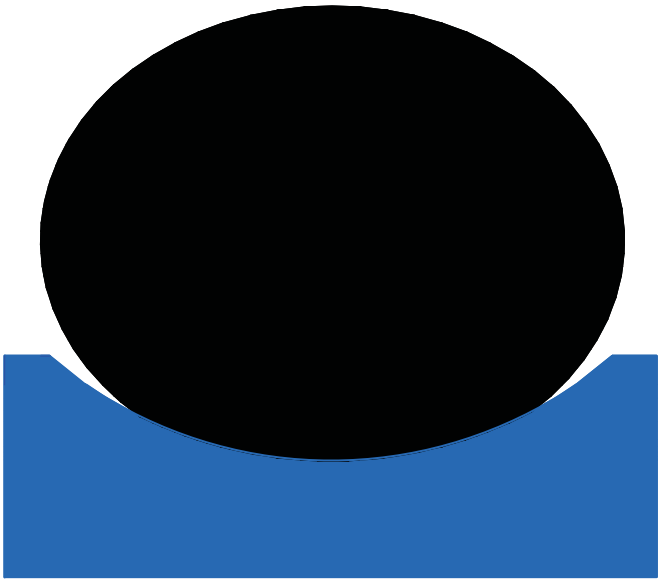
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy O-Cap® Type 2555-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2555-

O-Cap® type 2555- is a double acting rod seal. It uses the same groove dimensions as O-Ring +2 Back-Up Ring according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example

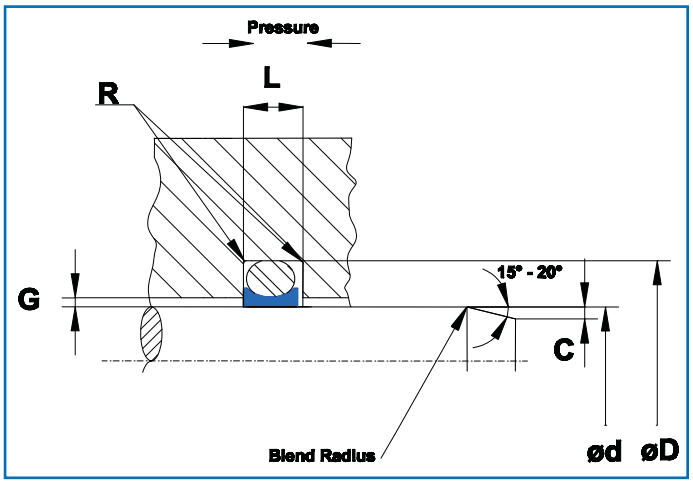
O-Cap for Swedish standard O-Ring groove
For O-Ring with two back-up rings.

Rod diameter: 175.0 mm

Part no 25553-1750-90
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 174.1 x 8.4
O-Ring to be ordered separately

Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.



Installation Dimensions

Notches

In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25553-1750-90N.

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25550	4-19.9	d+4.00	6.00	0.4	0.10	0.10	0.08	0.05	0.70	d+0.0	2.40
25551	20-45.9	d+5.00	6.80	0.4	0.15	0.15	0.10	0.07	1.00	d+0.5	3.00
25552	46-145.9	d+10.00	11.10	0.6	0.25	0.20	0.15	0.08	1.30	d+1.0	5.70
25553	146-250.9	d+15.00	15.40	0.8	0.35	0.25	0.20	0.10	2.00	d+1.5	8.40

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d+1 as possible.
O-Ring I.D. not bigger than (d+1) +3%
O-Ring I.D. not smaller than (d+1) -5%

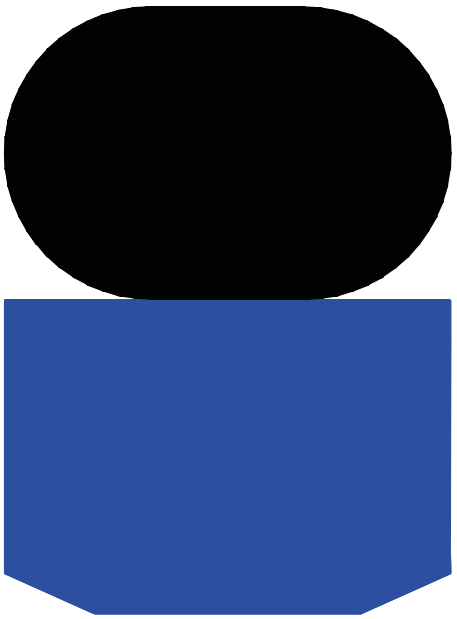
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy SlipRing® Type 2533-



Double acting rod seal for reciprocating movements.

Offers excellent wear resistance and low friction.

SlipRing® Type 2533-

Is a double acting rod seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
SlipRing type 2533- is an old design and should not be used for new constructions.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

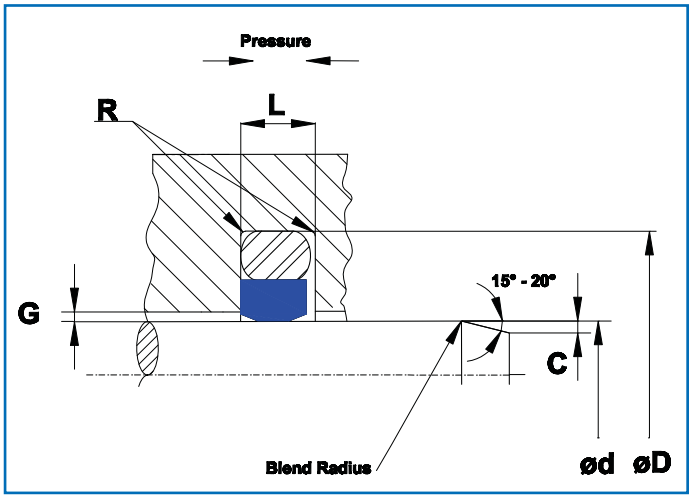
Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
Rod diameter: 370 mm

Part no 25336-3700-22
SlipRing® Type
Series
Rod dia. x 10
Compound no
O-Ring size 380.37 x 7.00
O-Ring to be ordered separately



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25334-2900-13N

Type No.	Standard Series Rod dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	f8/h9	H9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25330	3-9.9	d+4.00	2.0	0.5	0.30	0.20	0.15	0.7	d+1.0	1.78
25331	10-17.9	d+6.00	2.85	0.5	0.40	0.25	0.15	1.0	d+1.5	2.62
25332	18-37.9	d+7.50	3.8	0.8	0.40	0.25	0.20	1.3	d+1.5	3.53
25333	38-110.0	d+12.50	5.6	1.3	0.50	0.30	0.20	2.0	d+3.0	5.33
25334	115-150.0	d+15.00	7.55	1.5	0.60	0.35	0.25	2.5	d+9.5	6.99
25335	155-230.0	d+18.00	7.55	1.5	0.60	0.35	0.25	2.5	d+9.5	6.99
25336	240-380.0	d+24.00	7.55	1.5	0.70	0.50	0.60	3.0	d+9.5	6.99

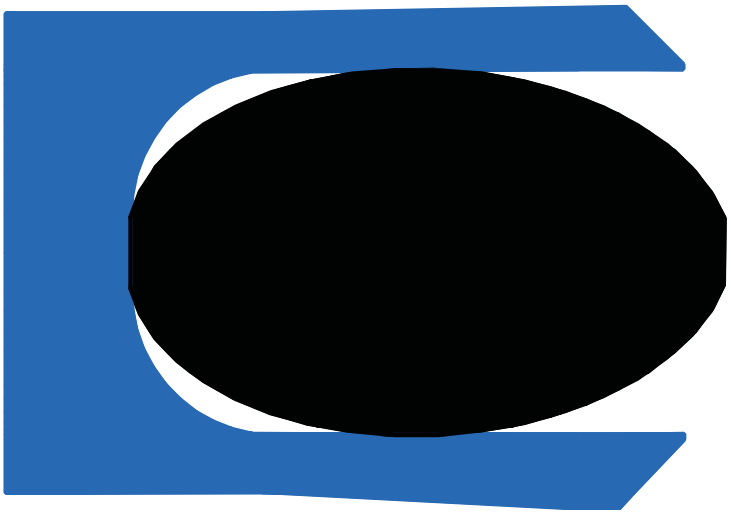
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

Kefloy C-Cap® type 2607-



Single acting rod seal. For reciprocating and static applications.

Consists of a jacket of Kefloy energized by a rubber O-Ring.

C-Cap® Type 2607-

Is a SINGLE ACTING rod seal.

It is basically a U-Cup energized by a rubber O-Ring.

C-Cap® is pressure responsive.
C-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 5 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	SharpSeal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 85
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

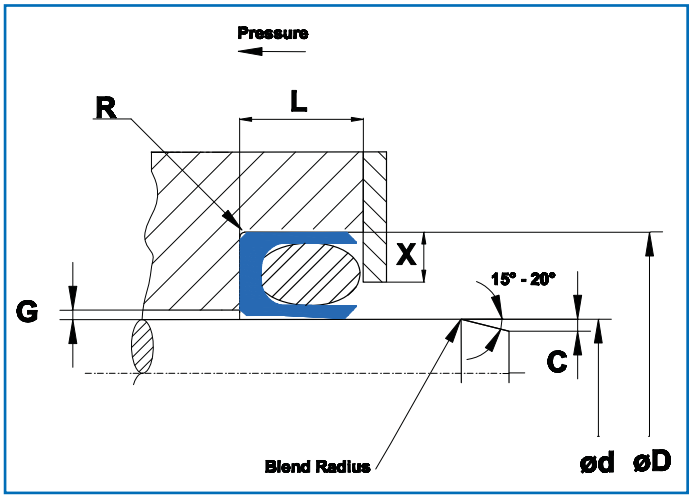
Seal Selection Guide

Sealing efficiency
Due to the design of the seal, the sealing efficiency is rather low. The seal should not be used for reciprocating applications where a dry cylinder is required.

Installation
As the seal is rather rigid it will in most cases require a split groove.

Ordering Example
Rod diameter: 105.7 mm

Part no 26072-1057-90
C-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 104.37 x 3.53
O-Ring to be ordered separately



Installation dimensions

To order C-Cap® with notches – add suffix “N” be-hind the compound code.
Example: 26073-4220-13N

C-Cap Part no	ød Rod dia.	øD Groove dia.	L Groove width	R Radius	G Radial gap		C Chamfer	O-ring ID	O-ring cross sec.
	f7	H8	+ 0.2 - 0	Max.	20MPa (200 bar)	40MPa (400 bar)			
26070	10-70	ød+4.8	3.4	0.2	0.2	0.10	1.3	ød	1.78
26071	18-110	ød+6.4	4.5	0.3	0.3	0.15	2.0	ød	2.62
26072	38-120	ød+10.0	6.8	0.4	0.4	0.20	2.5	ød	3.53
26073	115-500	ød+12.8	9.0	0.6	0.5	0.25	3.0	ød	5.33

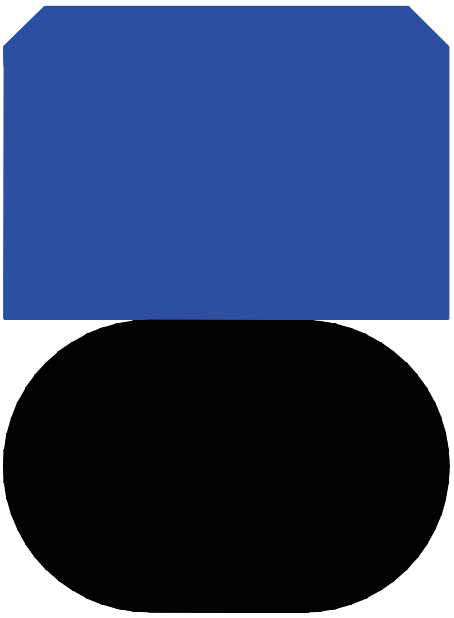
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to ød as possible.
O-Ring I.D. not bigger than ød +3%
O-Ring I.D. not smaller than ød -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy SlipRing® Type 2522-



Double acting piston seal for reciprocating movements.

Offers excellent wear resistance and low friction.

SlipRing® Type 2522-

Is a double acting piston seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. To avoid extrusion and ease installation SlipRing® type 2522- is chamfered.
SlipRing® type 2522- is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

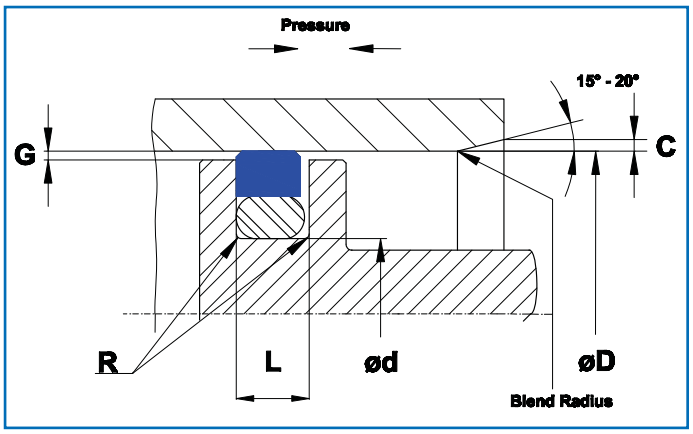
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.

Ordering Example
Piston diameter: 253.7 mm

Part no 25224-2537-13
SlipRing® Type
Series
Piston dia. x 10
Compound no
O-Ring size 227.97 x 7.00
O-Ring to be ordered separately

Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25223-1175-13N

Type No.	Standard Series Piston dia.	Light Series Piston dia.	Heavy Series Piston dia.	d Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	H9	H9	H9	h9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25220	8-14.9	15-39.9	-	D-4.9	2.2	0.4	0.30	0.20	0.15	0.7	ød	1.78
25221	15-39.9	40-79.9	8-14.9	D-7.5	3.2	0.6	0.40	0.25	0.15	1.0	ød	2.62
25222	40-79.9	80-132.9	15-39.9	D-11.0	4.2	1.0	0.40	0.25	0.20	1.3	ød	3.53
25223	80-132.9	133-329.9	40-79.9	D-15.5	6.3	1.3	0.50	0.30	0.20	2.0	ød	5.33
25224	133-329.9	330-669.9	80-132.9	D-21.0	8.1	1.8	0.60	0.35	0.25	2.5	ød	6.99
25225	330-669.9	670-999.9	133-329.9	D-24.5	8.1	1.8	0.60	0.35	0.25	3.0	ød	6.99
25226	670-999.9	≥1000	330-669.9	D-28.0	9.5	2.5	0.70	0.50	0.30	3.5	ød	8.40
25227	≥1000		670-999.9	D-38.0	13.8	3.0	1.00	0.70	0.60	4.0	ød	12.00

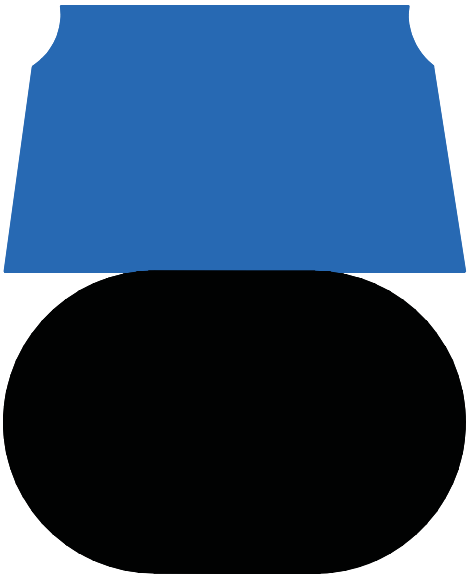
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy SlipRing® “A” Type 2612-



Double acting piston seal for reciprocating movements.

Recommended for light applications.

Offers excellent wear resistance and low friction.

SlipRing® A Type 2612-

Is a double acting piston seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® A is pressure responsive. SlipRing® A can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. To avoid extrusion SlipRing® A type 2612- is furnished with a special chamfer.
SlipRing® A type 2612- is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 20 MPa. For pressures exceeding 20 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good sealing efficiency
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design according to ISO 7425/2
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Piston Seals

Kefloy SlipRing® "A" Type 2612-

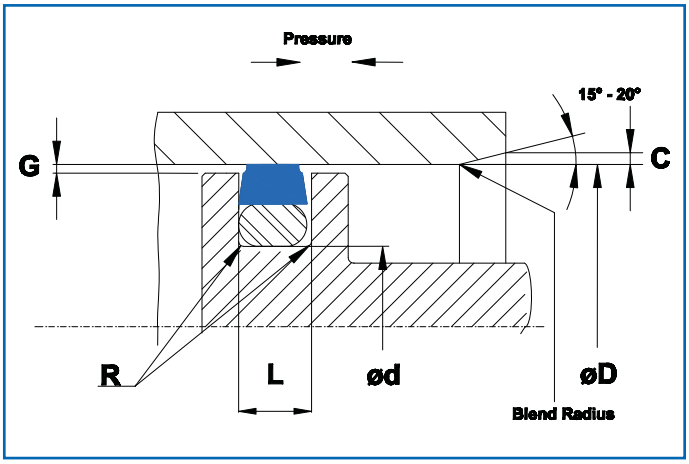
Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.

Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Piston diameter: 317.4 mm

Part no 26124-3174-13
SlipRing® A Type
Series
Piston dia. x 10
Compound no
O-Ring size 291.47 x 7.00
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Piston dia.	Light Series Piston dia.	Heavy Series Piston dia.	d Groove diam.	L Groove width	R Ra-dius	G Radial gap			C Cham-fer	B O-ring ID	O-ring Cross section
	H9	H9	H9	h9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
26120	8-14.9	15-39.9	-	D-4.9	2.2	0.4	0.40	0.30	0.20	0.7	ød	1.78
26121	15-39.9	40-79.9	8-14.9	D-7.5	3.2	0.6	0.60	0.50	0.30	1.0	ød	2.62
26122	40-79.9	80-132.9	15-39.9	D-11.0	4.2	1.0	0.70	0.50	0.30	1.3	ød	3.53
26123	80-132.9	133-329.9	40-79.9	D-15.5	6.3	1.3	0.80	0.60	0.40	2.0	ød	5.33
26124	133-329.9	330-669.9	80-132.9	D-21.0	8.1	1.8	0.80	0.60	0.40	2.5	ød	6.99
26125	330-669.9	670-999.9	133-329.9	D-24.5	8.1	1.8	0.90	0.70	0.50	3.0	ød	6.99
26126	670-999.9	≥1000	330-669.9	D-28.0	9.5	2.5	1.00	0.80	0.60	3.5	ød	8.40
26127	≥1000		670-999.9	D-38.0	13.8	3.0	1.20	0.90	0.70	4.0	ød	12.00

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

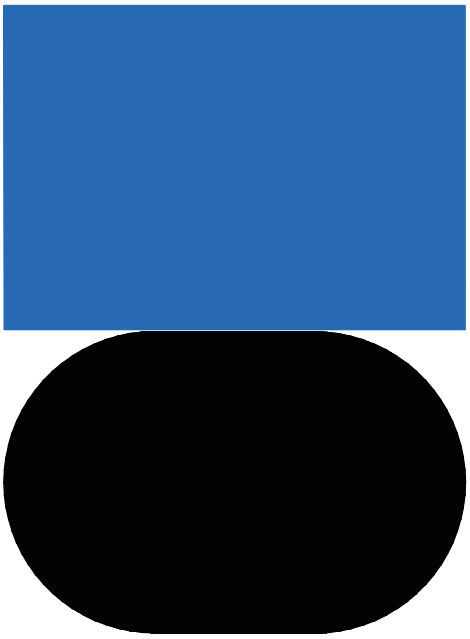
Note
In some countries seals similar to SlipRing® "A" are patented. Therefore SlipRing® "A" should not be used in these areas.

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy SlipRing® Type 2532-



Double acting piston seal for reciprocating movements.

Recommended for light applications.

Offers excellent wear resistance and low friction.

SlipRing® Type 2532-

Is a double acting piston seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids. SlipRing® type 2532- is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 20 MPa. For pressures exceeding 20 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

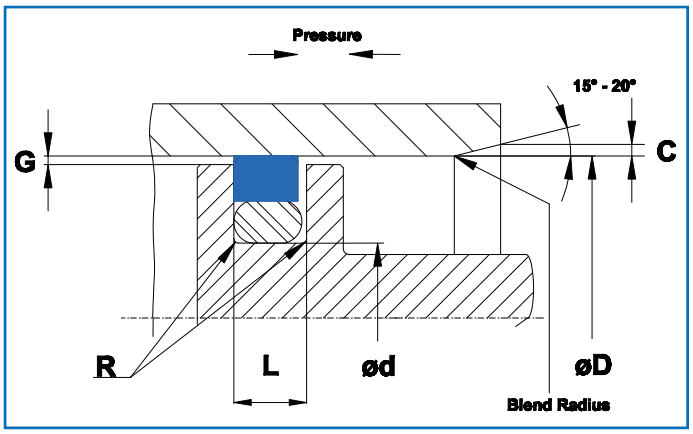
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.

Ordering Example
Piston diameter: 236.8 mm

Part no 25324-2368-13N
SlipRing® Type
Series
Piston dia. x 10
Compound no
O-Ring size 215.27 x 7.00
O-Ring to be ordered separately

Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25321-0180-22N

Type No.	Standard Series Piston dia.	Light Series Piston dia.	Heavy Series Piston dia.	d Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	H9	H9	H9	h9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25320	8-14.9	15-39.9	-	D-4.9	2.2	0.4	0.30	0.20	0.15	0.7	ød	1.78
25321	15-39.9	40-79.9	8-14.9	D-7.5	3.2	0.6	0.40	0.25	0.15	1.0	ød	2.62
25322	40-79.9	80-132.9	15-39.9	D-11.0	4.2	1.0	0.40	0.25	0.20	1.3	ød	3.53
25323	80-132.9	133-329.9	40-79.9	D-15.5	6.3	1.3	0.50	0.30	0.20	2.0	ød	5.33
25324	133-329.9	330-669.9	80-132.9	D-21.0	8.1	1.8	0.60	0.35	0.25	2.5	ød	6.99
25325	330-669.9	670-999.9	133-329.9	D-24.5	8.1	1.8	0.60	0.35	0.25	3.0	ød	6.99
25326	670-999.9	≥1000	330-669.9	D-28.0	9.5	2.5	0.70	0.50	0.60	3.5	ød	8.40
25327	≥1000		670-999.9	D-38.0	13.8	3.0	1.00	0.70	0.60	4.0	ød	12.00

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy SharpSeal® Type 2512-

Very efficient single acting piston seal for reciprocating movements.

The design of the seals concentrate the sealing force at the sealing edge.

Offers excellent leakage control over the whole pressure range.

SharpSeal® Type 2512-

Is a very efficient SINGLE ACTING piston seal. The design of the seal concentrates the sealing forces on the sealing edge. This ensures an excellent leakage control over the whole pressure range. The sealing edge virtually scrapes the sealing surface dry. Where a completely dry sealing surface is required, it is possible to install SharpSeals® in tandem. The SharpSeal® ensures automatic pressure relief between the two seals. Ventilation between the seals is not necessary.
SharpSeal® consists of an outer sliding part of Kefloy® energized by a rubber O-Ring. SharpSeal® is pressure responsive.
SharpSeal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
SharpSeal® type 2512- is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. SharpSeal® should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Very good sealing efficiency
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	SharpSeal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 85
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series

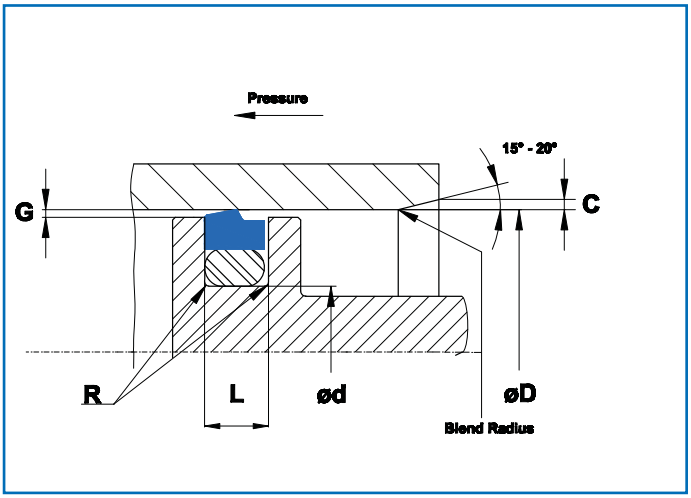
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series

Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series

Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example

Piston diameter: 663.7 mm

Part no 25125-6637-13
SharpSeal® Type
Series
Piston dia. x 10
Compound no
O-Ring size 633.48 x 7.00
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Piston dia.	Light Series Piston dia.	Heavy Series Piston dia.	d Groove diam.	L Groove width	R Ra-dius	G Radial gap			C Cham-fer	B O-ring ID	O-ring Cross section
	H9	H9	H9	h9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25120	8-16.9	17-26.9	-	D-4.9	2.2	0.4	0.30	0.20	0.15	0.7	ød	1.78
25121	17-26.9	27-59.9	8-16.9	D-7.3	3.2	0.6	0.40	0.25	0.15	1.0	ød	2.62
25122	27-59.9	60-199.9	17-26.9	D-10.7	4.2	1.0	0.40	0.25	0.20	1.3	ød	3.53
25123	60-199.9	200-255.9	27-59.9	D-15.1	6.3	1.3	0.50	0.30	0.20	2.0	ød	5.33
25124	200-255.9	256-649.9	60-199.9	D-20.5	8.1	1.8	0.60	0.35	0.25	2.5	ød	6.99
25125	256-669.9	650-999.9	200-255.9	D-24.0	8.1	1.8	0.60	0.35	0.25	2.5	ød	6.99
25126	670-999.9	≥ 1000	256-649-9	D-27.3	9.5	2.5	0.70	0.50	0.60	3.0	ød	8.40
25127	≥1000		650-999.9	D-38.0	13.8	3.0	1.00	0.70	0.60	3.5	ød	12.00

O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

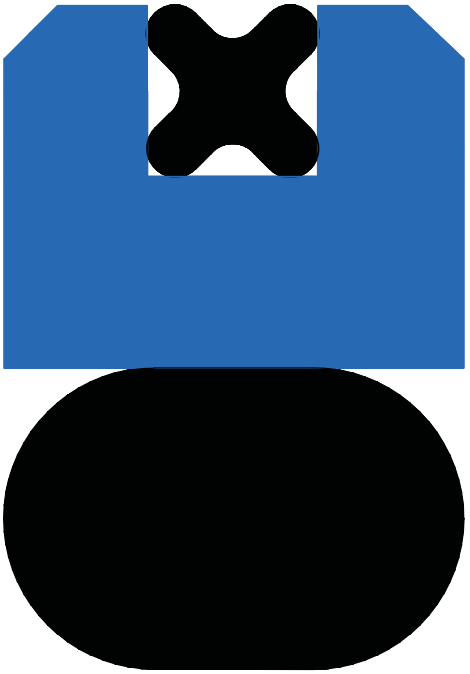
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy BX-Seal® Type 2602-



Very efficient double acting piston seal for reciprocating applications.

Consists of a rubber Quad ring integrated in a Kefloy SlipRing.

Offers excellent leakage control over the whole pressure range.

Used to seal gases from liquids.

BX-Seal® Type 2602-

Is a double acting piston seal. It combines the excellent wear resistance of Kefloy® with the sealing capacity of rubber. It consists of a dynamic sliding ring of Kefloy® furnished with a rubber X-Ring and a rubber O-Ring energizing element. BX-Seal® is pressure responsive.
BX-Seal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
The unique design where an X-Ring is integrated in the sliding ring combines the sealing efficiency of rubber with the wear resistance of Kefloy®.

Working Range

Pressure
Up to 60 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 3 m/sec. Frequency: Up to 5 HZ. BX-Seal® should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-High sealing efficiency.
-Good wear resistance
-Low friction
-No stick-slip
-Separate fluid / fluid or fluid / gas.
-Small installation space.
-Simple groove design according to ISO 7425/1
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	BX-Seal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) 70 Shore A At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

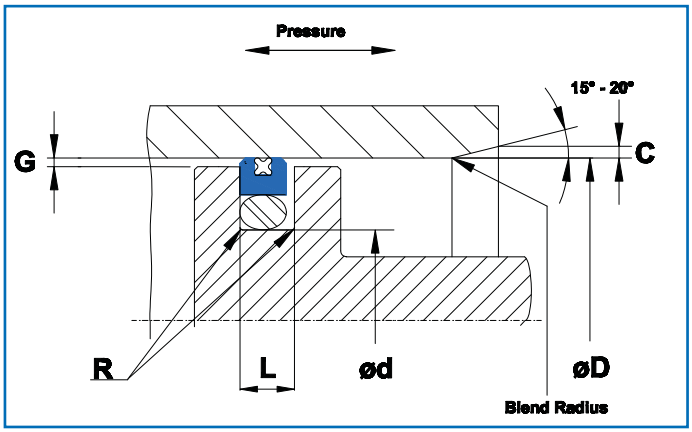
Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example
Piston diameter: 252.8 mm

Part no 26025-2528-13N
BX-Seal® Type
Series
Piston dia. x 10
Compound no
O-Ring size 227.97 x 7.00
X-Ring size 240.97 x 2.62
O-Ring and X-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the BX-Seals® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order BX-Seal® with notches – add suffix “N” behind the compound code.
Example: 26023-1300-13N

Type No.	ØD Bore dia.	Ød Groove dia.	L Groove width	R Ra-dius	G Radial gap		C Cham-fer	G Radial gap			B O-ring id	O-ring Cross section	X-ring Cross section
	H10	h10	+ 0.2 - 0	Max.	Max.	Min.	Min.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)			
26022	15-79.9	øD-11.0	4.2	0.7	0.6	0.1	1.3	0.25	0.15	0.10	Ød	3.53	1.78
26023	40-132.9	øD-15.5	6.3	0.7	0.6	0.1	2.0	0.20	0.15	0.15	Ød	5.33	1.78
26024	80-259.9	øD-21.0	8.1	1.2	0.8	0.2	2.5	0.30	0.20	0.15	Ød	7.00	2.62
26025	133-259.9	øD-24.5	8.1	1.5	0.8	0.2	3.0	0.30	0.20	0.15	Ød	7.00	2.62
26026	260-469.9	øD-28.0	9.5	2.0	1.2	0.4	3.5	0.45	0.30	0.25	Ød	8.40	3.53
26027	470-700	øD-35.0	11.5	3.0	1.4	0.6	4.0	0.55	0.40	0.35	Ød	10.0	5.33

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

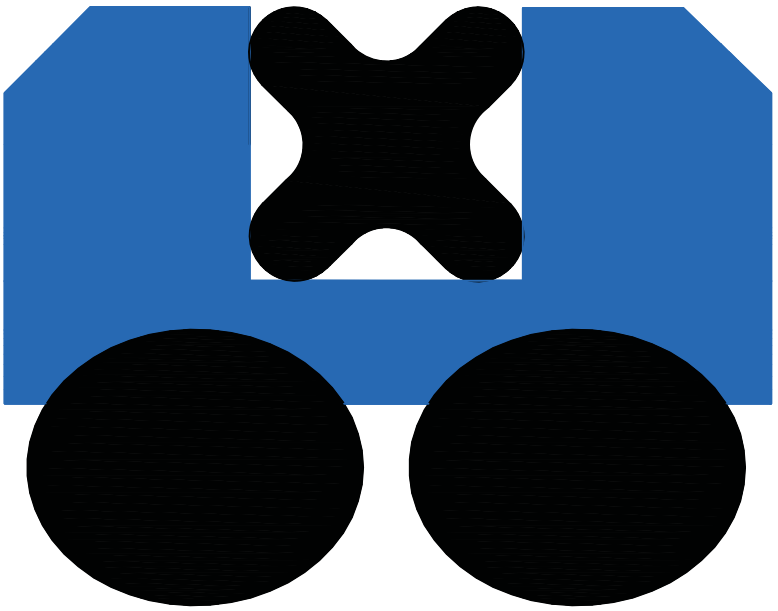
X-Ring Size
X-Ring cross section according to installation dimensions.
X-Ring I.D. as close to dia. B as possible.
X-Ring I.D. not smaller than B -10%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy OX-Seal® type 2604-



Very efficient double acting piston seal for reciprocating applications.

Consists of a rubber Quad ring integrated in a Kefloy SlipRing energized by two O-Rings.

Offers excellent leakage control over the whole pressure range.

Used to seal gases from liquids.

OX-Seal® Type 2604-

Is a double acting piston seal. It combines the excellent wear resistance of Kefloy® with the sealing capacity of rubber. It consists of a dynamic sliding ring of Kefloy® furnished with a rubber X-Ring and two rubber O-Ring energizing elements. OX-Seal® is pressure responsive. OX-Seal® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
The unique design where an X-Ring is integrated in the sliding ring combines the sealing efficiency of rubber with the wear resistance of Kefloy®.

Working Range

Pressure
Up to 60 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-30°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 3 m/sec. Frequency: Up to 5 HZ. OX-Seal® should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-High sealing efficiency.
-Good wear resistance
-Low friction
-No stick-slip
-Separate fluid / fluid or fluid / gas.
-Small installation space.
-Simple groove desig.
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	OX-Seal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) 70 Shore A At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

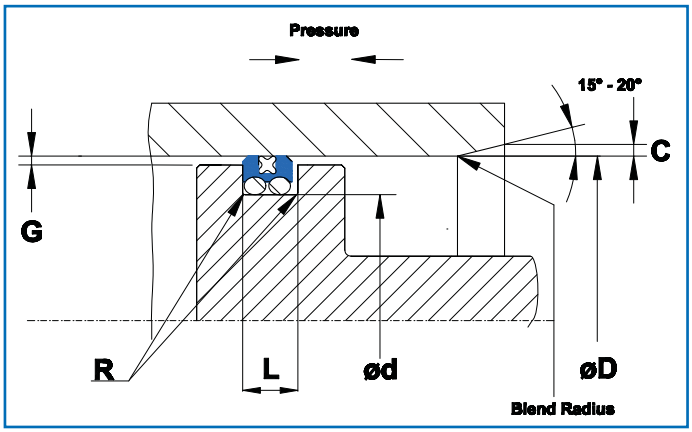
Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Ordering Example
Piston diameter: 652.0 mm

Part no 26044-6520-13N
OX-Seal® Type
Series
Piston dia. x 10
Compound no
O-Ring size 608.08 x 7.00 (2 pcs.)
X-Ring size 633.48 x 5.33
O-Ring and X-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the OX-Seals® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order OX-Seal® with notches – add suffix “N” behind the compound code.
Example: 26043-4570-13N

OX-Seal Part no.	ØD Bore dia.	Ød Groove dia.	L Groove width	R Radius	G Radial gap System pressure			C Chamfer	. B O-ring ID	O-ring Cross section	X-ring Cross sectiom
	H9	h9	+ 0.2 - 0		10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min			
26041	40-79.9	øD-10.0	6.3	0.6	0.3	0.2	0.15	1.0	Ød	2.62	1.78
26042	80-132.9	øD-13.0	8.3	1.0	0.4	0.3	0.15	1.3	Ød	3.53	2.62
26043	133-462.9	øD-18.0	12.3	1.2	0.4	0.3	0.2	2.0	Ød	5.33	3.53
26044	463-700.0	øD-31.0	16.3	1.8	0.5	0.4	0.3	2.5	Ød	6.99	5.33

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

X-Ring Size
X-Ring cross section according to installation dimensions.
X-Ring I.D. as close to dia. B as possible.
X-Ring I.D. not smaller than B -10%

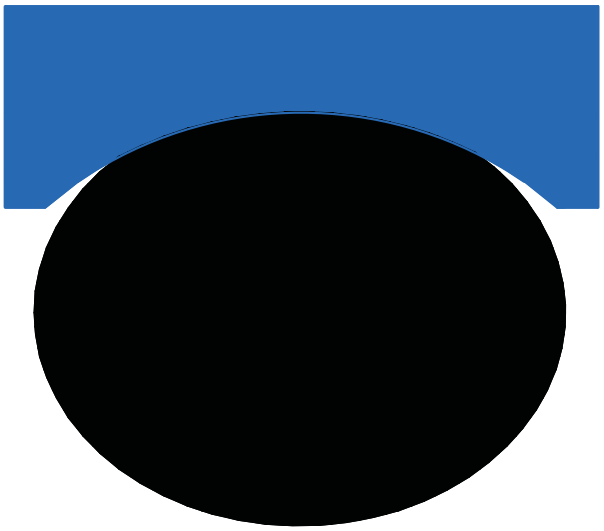
Note
In some countries seals similar to OX-Seals are patented. Therefore OX-Seals should not be used in these areas.

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2542-



Double acting piston seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2542-

O-Cap® is a double acting piston seal using the same groove dimensions as an O-Ring. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.
O-Cap® for British and American standard O-Ring groove for O-Ring with no back-up rings.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

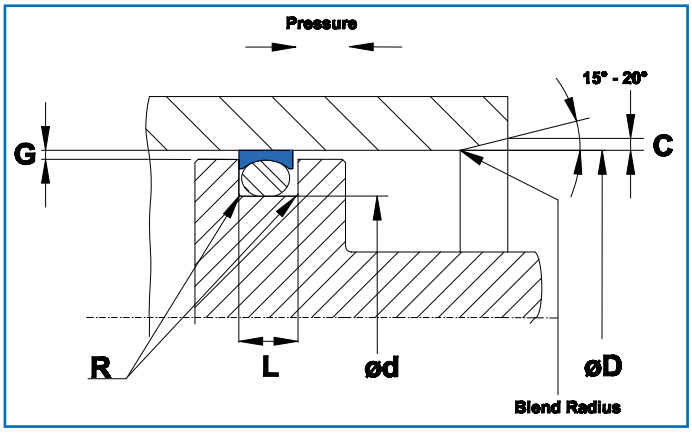
Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for Swedish standard O-Ring groove
For O-Ring with two back-up rings

Piston diameter: 112.9 mm

Part no 25423-1129-32
O-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 100.97 x 5.33
O-Ring to be ordered separately



Installation Dimension

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25423-1129-32N.

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	O-ring Cross section
	H9	h9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.	
25420	5-13.9	D-2.90	2.40	0.4	0.10	0.10	0.08	0.05	1.40	1.78
25421	14-24.9	D-4.50	3.60	0.4	0.15	0.15	0.10	0.07	1.80	2.62
25422	25-45.9	D-6.20	4.80	0.6	0.25	0.20	0.15	0.08	2.40	3.53
25423	46-124.9	D-9.40	7.10	0.8	0.35	0.25	0.20	0.10	3.20	5.33
25424	125-669.9	D-12.20	9.50	0.8	0.50	0.30	0.25	0.15	4.00	6.99

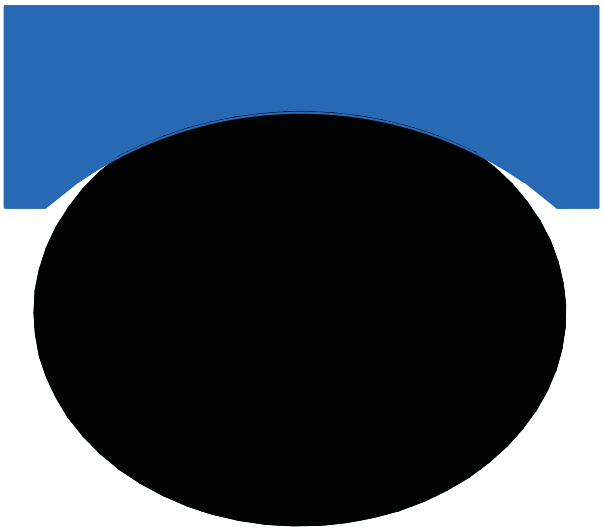
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2544-



Double acting piston seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2544-

O-Cap® type 2544 is a double acting piston seal. It uses the same groove dimensions as O-Ring + 1 Back-up Ring according to British and American standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

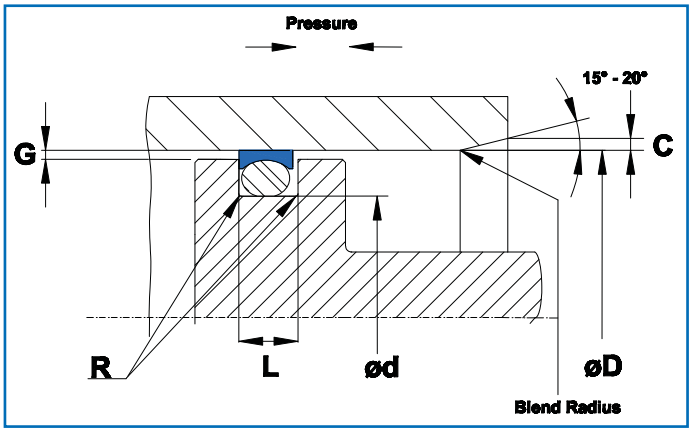
Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for British and American standard O-Ring groove for O-Ring with one back-up ring.

Piston diameter: 252.4 mm

Part no 25444-2524-25
O-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 240.67 x 7.00
O-Ring to be ordered separately



Installation Dimension

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25444-2524-25N

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	O-ring Cross section
	H9	h9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.	
25440	5-13.9	D-2.90	3,80	0.4	0.10	0.10	0.08	0.05	1.40	1.78
25441	14-24.9	D-4.50	4,60	0.4	0.15	0.15	0.10	0.07	1.80	2.62
25442	25-45.9	D-6.20	5,70	0.6	0.25	0.20	0.15	0.08	2.40	3.53
25443	46-124.9	D-9.40	8,50	0.8	0.35	0.25	0.20	0.10	3.20	5.33
25444	125-669.9	D-12.20	11,20	0.8	0.50	0.30	0.25	0.15	4.00	6.99

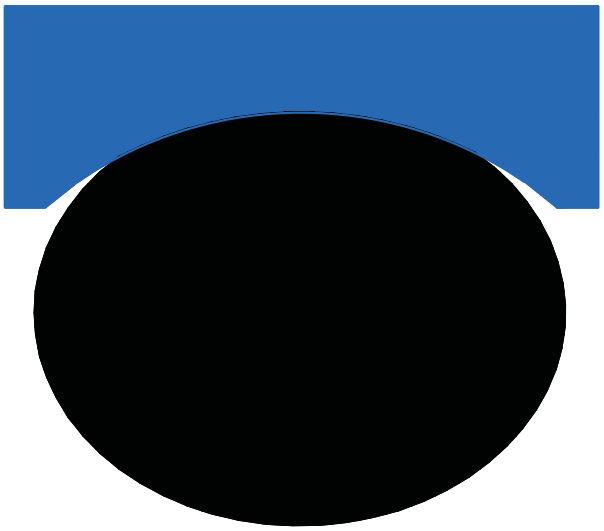
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2546-



Double acting piston seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for British Standard and American Standard O-ring grooves.

O-Cap® Type 2546-

O-Cap® type 2546- is a double acting piston seal. It uses the same groove dimensions as O-Ring + 2 Back-Up Rings according to British and American standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits British standard and American standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

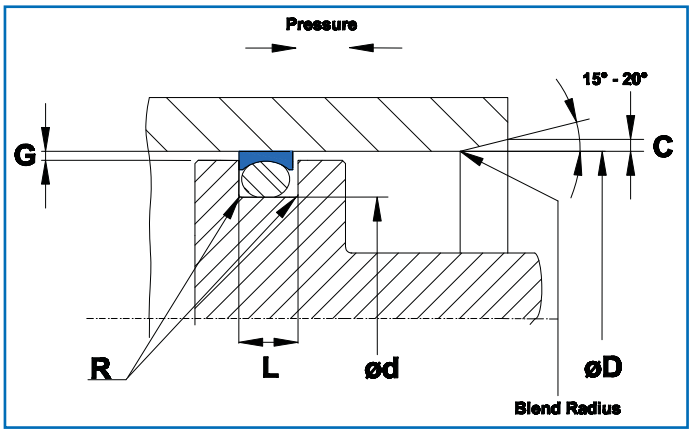
Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for British and American standard O-Ring groove for O-Ring with two back-up rings

Piston diameter: 95.7 mm

Part no 25463-0957-25
O-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 94.62 x 5.33
O-Ring to be ordered separately



Installation Dimension

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25463-0957-25.

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	O-ring Cross section
	H9	h9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.	
25460	5-13.9	D-2.90	5,30	0.4	0.10	0.10	0.08	0.05	1.40	1.78
25461	14-24.9	D-4.50	6,20	0.4	0.15	0.15	0.10	0.07	1.80	2.62
25462	25-45.9	D-6.20	7,70	0.6	0.25	0.20	0.15	0.08	2.40	3.53
25463	46-124.9	D-9.40	10,80	0.8	0.35	0.25	0.20	0.10	3.20	5.33
25464	125-669.9	D-12.20	14,70	0.8	0.50	0.30	0.25	0.15	4.00	6.99

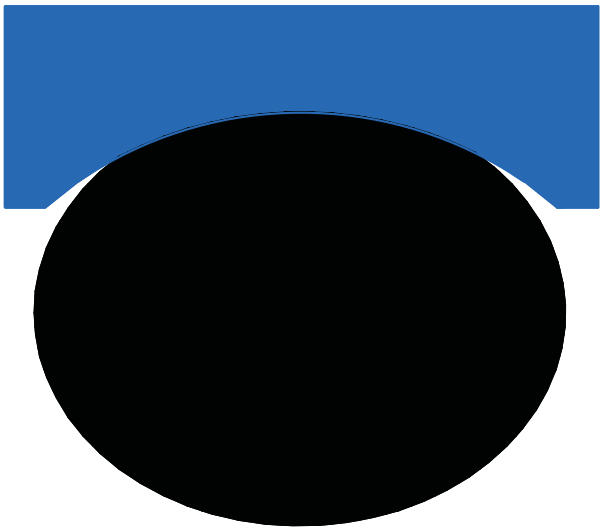
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2552-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2552-

O-Cap® type 2552- is a double acting piston seal. It uses the same groove dimensions as O-Rings according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

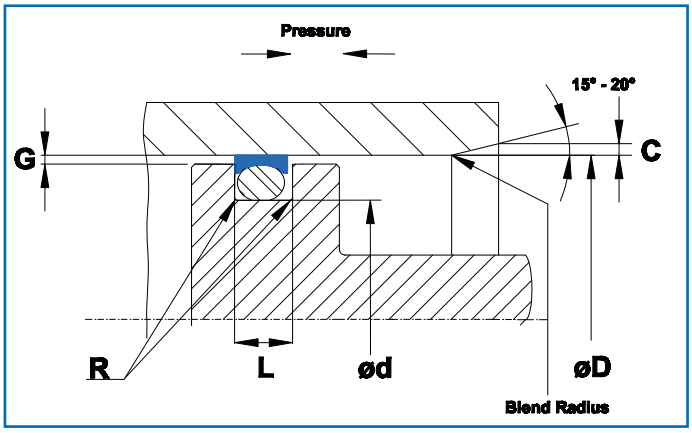
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the Light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for Swedish standard O-Ring groove for O-Ring with no back-up ring

Piston diameter: 155.5 mm

Part no 25523-1555-32
O-Cap® Type
Series
Rod dia. x 10
Compound no
O-Ring size 144.3 x 5.7
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25523-1555-32N.

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	H9	h 9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25520	8-24.9	D - 4.0	3.20	0.4	0.10	0.10	0.08	0.05	0.70	ød	2.40
25521	25-54.9	D - 5.0	4.00	0.4	0.15	0.15	0.10	0.07	1.00	ød	3.00
25522	55-159.9	D -10.0	7.50	0.6	0.25	0.20	0.15	0.08	1.30	ød	5.70
25523	160-265.9	D-15.0	11.00	0.8	0.35	0.25	0.20	0.10	2.00	ød	8.40

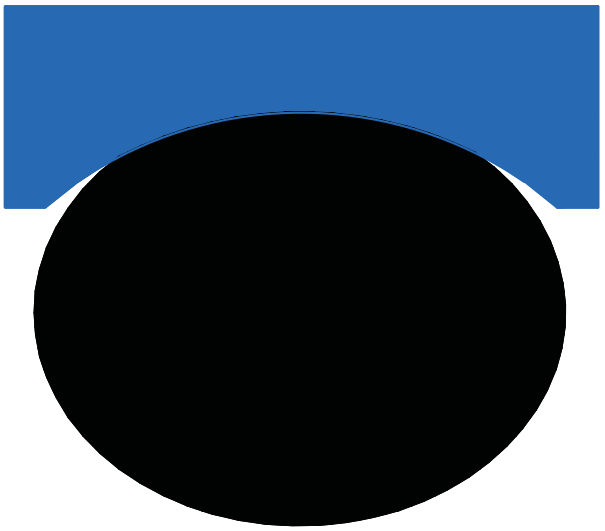
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d+3%
O-Ring I.D. not smaller than d-5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2554-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2554-

O-Cap® type 2554- is a double acting piston seal. It uses the same groove dimensions as O-Ring + 1 Back-Up Ring according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

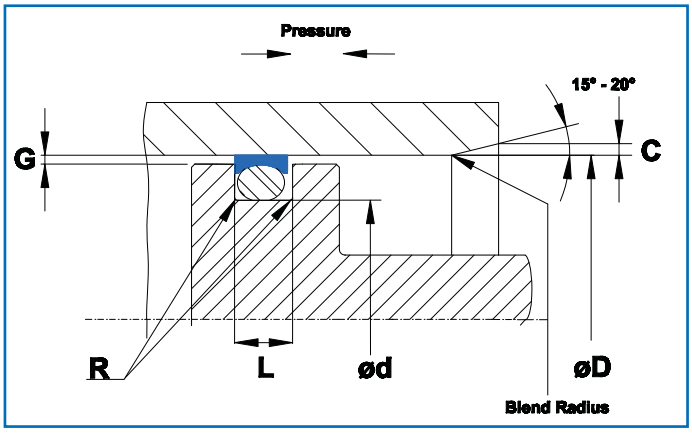
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the Light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for Swedish standard O-Ring groove for O-Ring with one back-up ring.

Piston diameter: 7.2 mm

Part no 25540-0072-32
O-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 3.3 x 2.4
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the O-Cap® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order O-Cap® with notches – add suffix “N” behind the compound code.
Example: 25540-0072-32N.

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	H9	h 9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25540	8-24.9	D-4.00	4.60	0.4	0.10	0.10	0.08	0.05	0.70	ød	2.40
25541	25-54.9	D-5.00	5.40	0.4	0.15	0.15	0.10	0.07	1.00	ød	3.00
25542	55-159.9	D-10.00	9.30	0.6	0.25	0.20	0.15	0.08	1.30	ød	5.70
25543	160-265.9	D-15.00	13.20	0.8	0.35	0.25	0.20	0.10	2.00	ød	8.40

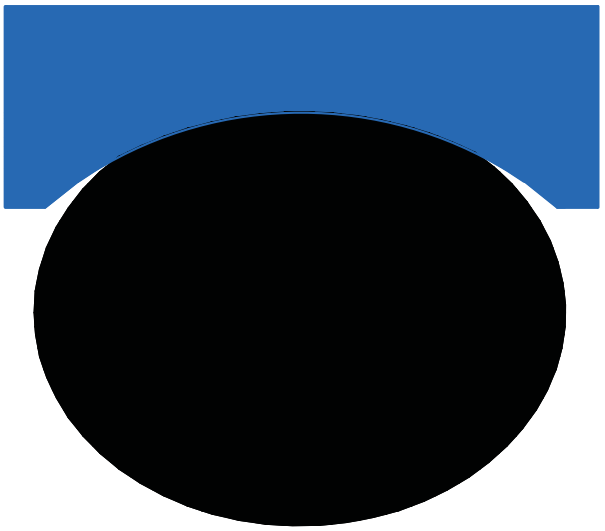
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d+3%
O-Ring I.D. not smaller than d-5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy O-Cap® Type 2556-



Double acting rod seal for reciprocating movements.

Consists of a thin ring of Kefloy energized by a rubber O-ring.

Eliminates frictional problems of O-rings.

Designed for Swedish Standard and Japanese Standard O-ring grooves.

O-Cap® Type 2556-

O-Cap® type 2556- is a double acting piston seal. It uses the same groove dimensions as O-Ring + 2 Back-Up Rings according to Swedish and Japanese standard. It consists of a Kefloy® ring energized by a rubber O-Ring. The O-Cap® is designed to eliminate the frictional - and wear problems, which may occur with rubber O-Rings.

O-Cap® is pressure responsive.
O-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
O-Cap® is designed to replace rubber O-Rings where they cause frictional - or wear problems.
O-Caps® should not be used for new designs.

Working Range

Pressure
Up to 35 MPa. For pressures exceeding 35 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C, though limited by O-ring. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Fits Swedish standard O-Ring grooves
-Small installation dimensions
-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	O-Cap® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

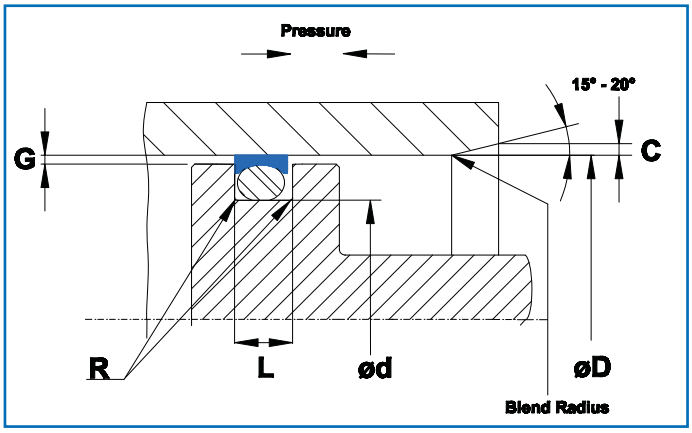
Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the Light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
O-Cap® for Swedish standard O-Ring groove for O-Ring with two back-up rings

Piston diameter: 37.7 mm

Part no 25561-0377-32
O-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 32.2 x 3.0
O-Ring to be ordered separately



Installation Dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25561-0377-32N.

Type No.	Standard Series Bore diam	d Groove diam.	L Groove width	R Radius	G Radial gap				C Chamfer	B O-ring ID	O-ring Cross section
	H9	h 9	+0.2 -0	Max.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	35MPa (350 bar)	Min.		
25560	8-24.9	D – 4.00	6.00	0.4	0.10	0.10	0.08	0.05	0.70	ød	2.40
25561	25-54.9	D – 5.00	6.80	0.4	0.15	0.15	0.10	0.07	1.00	ød	3.00
25562	55-159.9	D -10.00	11.10	0.6	0.25	0.20	0.15	0.08	1.30	ød	5.70
25563	160-265.9	D-15.00	15.40	0.8	0.35	0.25	0.20	0.10	2.00	ød	8.40

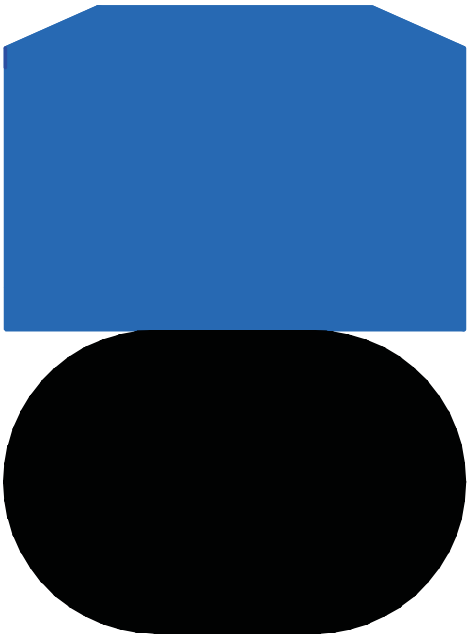
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d+3%
O-Ring I.D. not smaller than d-5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy SlipRing® Type 2534-



Double acting piston seal for reciprocating movements.

Offers excellent wear resistance and low friction.

SlipRing® Type 2534-

Is a double acting piston seal consisting of an outer sliding part of Kefloy® energized by a rubber O-Ring. SlipRing® is pressure responsive. SlipRing® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.
SlipRing® type 2534- is an old design and should not be used for new constructions.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Available for all diameters up to 2.500 mm
-Compatible with virtually all fluids

Material Selection Guide

Fluid	Mating surface	SlipRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Steel, hardened Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Steel, hardened Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, dry or lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

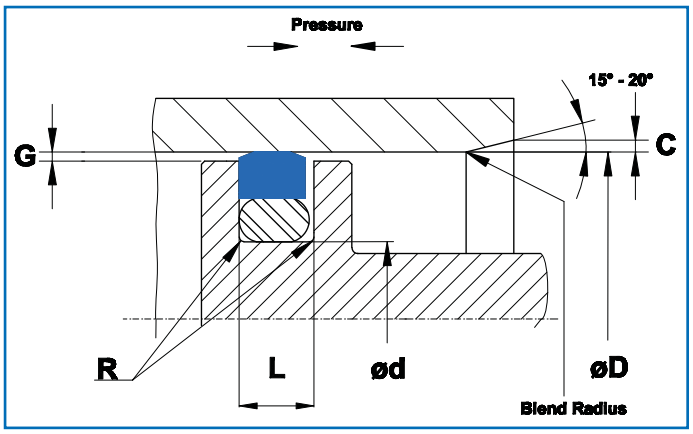
Standard Series
For most double acting applications the Standard Series is the best choice.
Can be used for single acting applications where the fluid is a gas.

Light Duty Series
Where very low friction is required, the Light Duty Series is recommended.
Where space limitations make it necessary the Light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
Piston diameter: 75.4 mm

Part no 25343-0754-22
SlipRing® Type
Series
Piston dia. x 10
Compound no
O-Ring size 62.87 x 5.33
O-Ring to be ordered separately



Installation dimensions

Notches
In systems with rapid pressure changes, e.g. power steering systems, it is necessary to furnish the SlipRings® with sidewall notches. The notches ensure a quick seal response to pressure changes.

To order SlipRing® with notches – add suffix “N” behind the compound code.
Example: 25344-4220-13N

Type No.	Standard Series Piston dia.	D Groove diam.	L Groove width	R Radius	G Radial gap			C Chamfer	B O-ring ID	O-ring Cross section
	H9	h9	+0.2 -0	Max.	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	Min.		
25340	7-12.9	D – 4.0	2.0	0.5	0.30	0.20	0.15	0.7	ød	1.78
25341	16-25.9	D – 6.0	2.85	0.5	0.40	0.25	0.15	1.0	ød	2.62
25342	27-44.9	D-7.5	3.8	0.8	0.40	0.25	0.20	1.3	ød	3.53
25343	50-125.9	D-12.5	5.6	1.3	0.50	0.30	0.20	2.0	ød	5.33
25344	130-170.9	D-15.0	7.55	1.5	0.60	0.35	0.25	2.5	ød	6.99
25345	180-220.9	D-18.0	7.55	1.5	0.60	0.35	0.25	3.0	ød	6.99
25346	240-410.9	D-24.0	7.55	1.5	0.70	0.50	0.60	3.5	ød	6.99

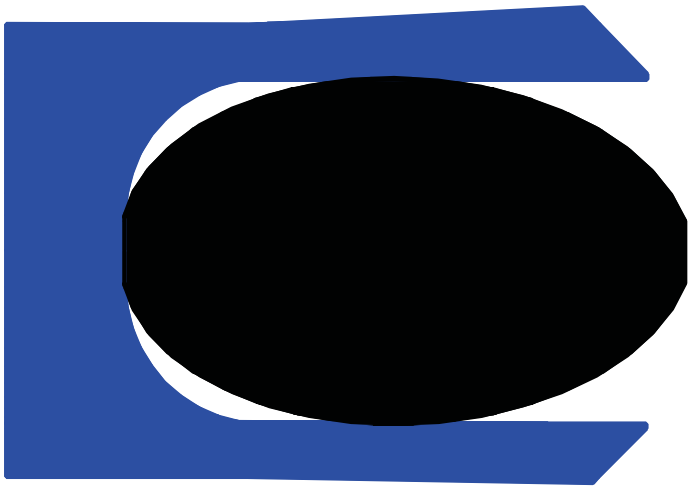
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to groove dia. d as possible.
O-Ring I.D. not bigger than groove dia. d +3%
O-Ring I.D. not smaller than groove dia. d -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

Kefloy C-Cap® type 2608-



Single acting piston seal. For reciprocating and static applications.

Consists of a jacket of Kefloy energized by a rubber O-ring.

C-Cap® Type 2608-

Is a SINGLE ACTING piston seal.

It is basically a U-Cup energized by a rubber O-ring.

C-Cap® is pressure responsive.
C-Cap® can be used with a great variety of fluids. Kefloy® is compatible with virtually all fluids.

Working Range

Pressure
Up to 80 MPa. For pressures exceeding 40 MPa, please contact your O.L. Seals distributor.

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 5 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

-Good wear resistance
-Low friction
-No stick-slip
-Simple groove design
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	SharpSeal® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 85
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease Other mineral oils Water, cold Water hydraulic Air, lubricated	NBR (Buna N) At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

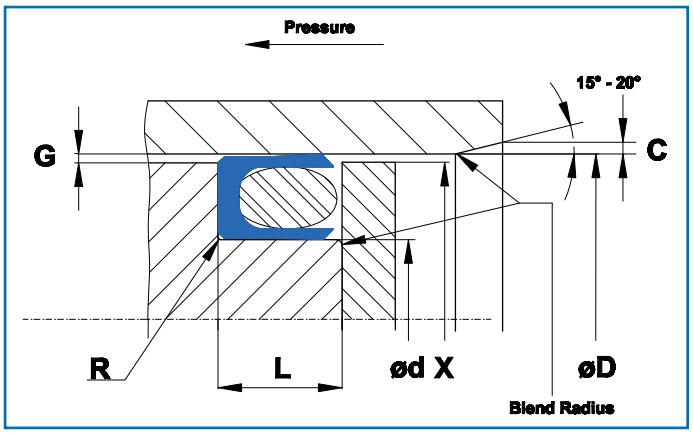
Seal Selection Guide

Sealing efficiency
Due to the design of the seal, the sealing efficiency is rather low. The seal should not be used for reciprocating applications where a dry cylinder is required.

Installation
As the seal is rather rigid it will in most cases require a split groove.

Ordering Example
Piston diameter: 250.0 mm

Part no 26083-2500-22
C-Cap® Type
Series
Piston dia. x 10
Compound no
O-Ring size 234.32 x 5.33
O-Ring to be ordered separately



Installation dimensions

To order C-Cap® with notches – add suffix “N” behind the compound code.
Example: 26083-4220-13N

C-Cap Part no.	ØD Bore dia.	Ød Groove dia.	S Groove depth	L Groove width	R Radius	G Radial gap		C Chamfer	O-ring Id	O-ring cross sec.
	H8	f7	+ 0 - 0.05	+ 0.2 - 0	Max.	20MPa (200 bar)	40MPa (400 bar)	Min.		
26080	15-75	øD - 4.8	2.4	3.4	0.2	0.2	0.10	1.1	ød+	1.78
26081	25-125	øD - 6.4	3.2	4.5	0.3	0.3	0.15	1.4	ød+	2.62
26082	45-130	øD - 10.0	5.0	6.8	0.4	0.4	0.20	1.9	ød+	3.53
26083	125-500	øD - 13.8	6.4	9.0	0.6	0.5	0.25	2.7	ød+	5.33

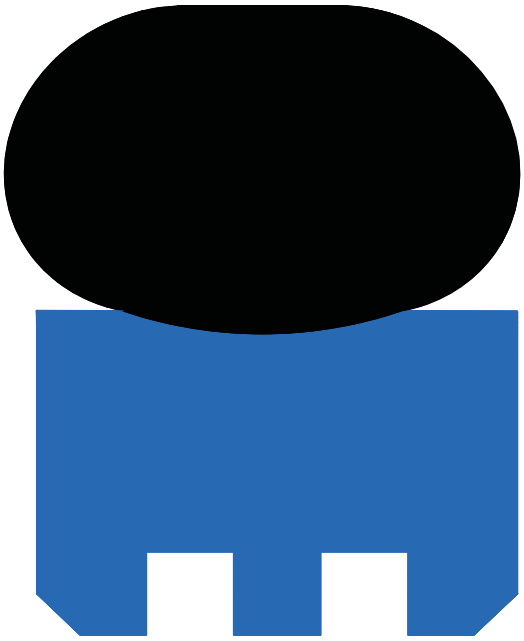
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to ød as possible.
O-Ring I.D. not bigger than ød +3%
O-Ring I.D. not smaller than ød -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rotary Seals

Kefloy TurnRing® type 2571-



Rotating double acting seal for rods and shafts. Pressure up to 30 MPa.

High wear resistance. Small installation dimensions.

TurnRing® Type 2571-

Is a double acting shaft seal for rotating applications. TurnRing® consists of a dynamic seal ring of Kefloy®; energized by a rubber O-Ring.
The sliding surface of the Kefloy® ring is furnished with one or two grooves (depending on the series). The grooves ensure good lubrication and reduce friction.
The rear face of the Kefloy® ring has a concave shape. This ensures a good contact to the O-Ring and prevents the seal from turning with the shaft. The seal design ensures an efficient leakage control over the entire pressure range from 0 to 30 MPa.
The non stick-slip properties of the Kefloy® compounds ensure a smooth operation. The small installation dimensions allow a compact design of the hardware. This is a major advantage in e.g. swivel joints with many ports.
TurnRing® is pressure responsive and is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 30 MPa. For pressures exceeding 30 MPa, please contact your O.L. Seals distributor.

Temperature
-40°C to +180°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Continuous up to 2 m/sec. Intermittent up to 5 m/sec.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a shaft with a big diameter transfers the heat better than a shaft with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

-High pressure
-Very good sealing efficiency
-Excellent wear resistance
-Moderate friction
-No stick-slip
-No vulcanisation to mating surface
-Simple groove design
-Small installation dimensions
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	TurnRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 28 Kefloy® 66 Kefloy® 85 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 40 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

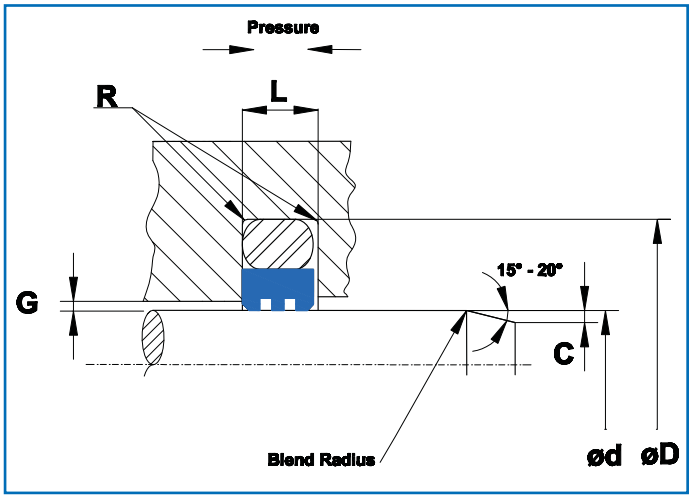
O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most applications the Standard Series is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Shaft diameter: 145.6 mm

Part no 25713-1456-66N
TurnRing® Type
Series
Shaft dia. x 10
Compound no
Side wall notch (compulsory)
O-Ring size 151.77 x 5.33
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Rod dia.	Light Series Rod dia	Heavey Series Rod dia.	d groove diam.	L Groove width	R radius	G Radial		C chamfer	B O-ring ID	O-ring Cross section
	f8/h 9	f8/h 9	f8/h 9	H 9	+0.2 -0	max	10MPa (100 bar)	20MPa (200 bar)	Min.		
25710	6-18.9	19-37.9	-	d + 4.9	2.2	0.4	0.15	0.10	0.7	d+2.0	1.78
25711	19-37.9	38-199.9	6-18.9	d + 7.3	3.2	0.6	0.20	0.15	1.0	d+3.4	2.62
25712	38-199.9	200-255.9	19-37.9	d +10.7	4.2	1.0	0.25	0.20	1.3	d+5.1	3.53
25713	200-255.9	256-649.9	38-199.9	d+15.1	6.3	1.3	0.30	0.25	2.0	d+6.9	5.33
25714	256-649.9	650-999.9	200-255.9	d+20.5	8.1	1.8	0.30	0.25	2.5	d+9.5	6.99
25715	650-999.9	-	256-649.9	d+28.0	9.5	2.5	0.45	0.30	3.0	d+14.0	8.40

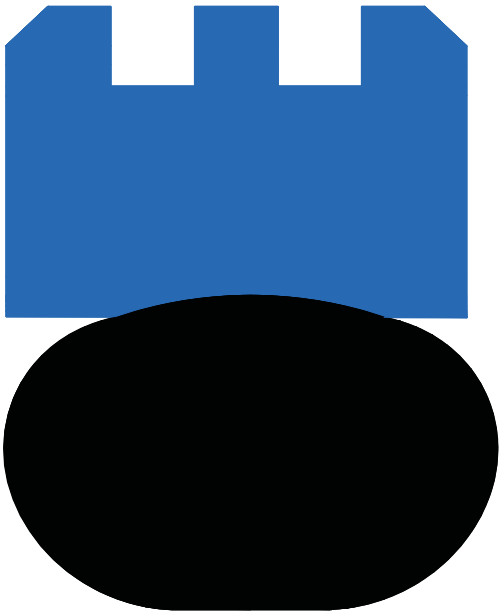
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rotary Seals

Kefloy TurnRing® type 2572-



Rotating double acting seal for bore. Pressure up to 30 MPa.

High wear resistance. Small installation dimensions.

TurnRing® Type 2572-

Is a double acting piston seal for rotating applications. TurnRing® consists of a dynamic seal ring of Kefloy®; energized by a rubber O-Ring.
The sliding surface of the Kefloy® ring is furnished with one or two grooves (depending on the series). The grooves ensure good lubrication and reduce friction.
The rear face of the Kefloy® ring has a concave shape. This ensures a good contact to the O-Ring and prevents the seal from turning with the piston. The seal design ensures an efficient leakage control over the entire pressure range from 0 to 30 MPa.
The non stick-slip properties of the Kefloy® compounds ensure a smooth operation. The small installation dimensions allow a compact design of the hardware. This is a major advantage in e.g. swivel joints with many ports.
TurnRing® is pressure responsive.
TurnRing® is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 30 MPa. For pressures exceeding 30 MPa, please contact your O.L. Seals distributor.

Temperature
-40°C to +180°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Continuous up to 2 m/sec. Intermittent up to 5 m/sec.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a piston with a big diameter transfers the heat better than a piston with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

-High pressure
-Very good sealing efficiency
-Excellent wear resistance
-Moderate friction
-No stick-slip
-No vulcanisation to mating surface
-Simple groove design
-Small installation dimensions
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	TurnRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 28 Kefloy® 66 Kefloy® 85 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 40 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

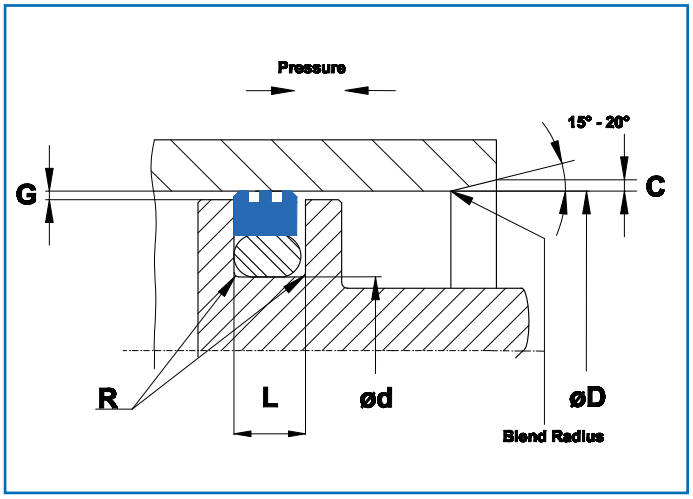
O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most applications the Standard Series is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Bore diameter: 563.4 mm

Part no 25724-5634-22N
TurnRing® Type
Series
Bore dia. x 10
Compound no
Side wall notch (compulsory)
O-Ring size 532.26 x 7.00
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Piston dia.	Light Series Piston dia	Heavey Series Piston dia.	d groove diam.	L Groove width	R radius	G Radial		C cham-fer	B O-ring ID	O-ring Cross section
	H 9	H 9	H 9	h 9	+0.2 -0	max	10MPa (100 bar)	20MPa (200 bar)	Min.		
25720	8-39.9	40-79.9	-	D - 4.9	2.2	0.4	0.15	0.10	0.7	d	1.78
25721	40-79.9	80-132.9	8-39.9	D - 7.5	3.2	0.6	0.20	0.15	1.0	d	2.62
25722	80-132.9	133-329.9	40-79.9	D-11.0	4.2	1.0	0.25	0.20	1.3	d	3.53
25723	133-329.9	330-669.9	80-132.9	D-15.5	6.3	1.3	0.30	0.25	2.0	d	5.33
25724	330-669.9	670-999.9	133-329.9	D-21.0	8.1	1.8	0.30	0.25	2.5	d	6.99
25725	670-999.9	-	330-669.9	D-28.0	9.5	2.5	0.45	0.30	3.0	d	8.40

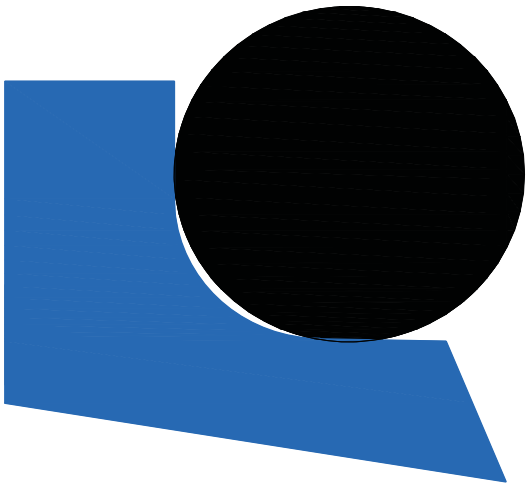
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Scrapers

Kefloy WypeRing® type 2561-



Very tough and efficient single acting rod scraper.

High wear resistance.

WypeRing® Type 2561

Is a highly efficient single acting scraper. It consists of a scraping ring of Kefloy® plus a rubber O-ring. The O-Ring ensures a firm contact between the scraping lip and the piston rod.

Working Range

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec.
Frequency: Up to 5 HZ.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

- Very good scraping efficiency
- Good wear resistance
- Low friction
- No stick-slip
- Simple groove design
- Compatible with virtually all fluids
- ISO/DIN 6195 Type D installation dimensions
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	WypeRing® 1 compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

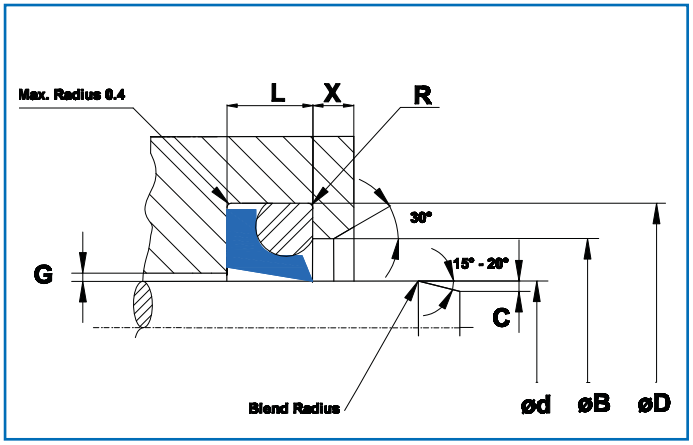
Seal Selection Guide

Installation Instructions
WypeRing® can be installed in split or in closed grooves. Installation in closed grooves is possible for relatively big diameters only. Below table shows the diameter limits.

WypeRing® 2 Series No.	Rod Diameter d
25610	≥ 30
25611	≥ 30
25612	≥ 30
25613	≥ 40
25614	≥ 110
25615	≥ 140

Ordering Example
Rod diameter: 52.0 mm

Part no 25611-0520-13
WypeRing® Type
Series
Rod dia. x 10
Compound no
O-Ring size 53.62 x 2.62
O-Ring to be ordered separately



Installation dimensions

Type No.	Ød [1] Rod dia. Recomm.	Rod dia. Available	ØD Groove dia.	ØB Dia.	L Groove width	X	R Radius	O-Ring ID	O-Ring Cross section
	f8/h8	f8/h8	H9	H11	+ 0.20 - 0.0	min.	± 0.10		
25610	6 -11.9	6-64.9	ød + 4.8	ød + 1.5	3.7	2.0	0.4	ød + 2.2	1.78
25611	12-64.9	6-250.9	ød + 6.8	ød + 1.5	5.0	2.0	0.7	ød + 3.0	2.62
25612	65-250.9	12-420.9	ød + 8.8	ød + 1.5	6.0	3.0	1.0	ød + 3.2	3.53
25613	251-420.9	65-650.9	ød + 12.2	ød + 2.0	8.4	3.0	1.2	ød + 3.8	5.33
25614	421-650.9	251-2500	ød + 16.0	ød + 2.0	11.0	4.0	1.5	ød + 4.8	6.99
25615	651-2500	421-2500	ød + 20.0	ød + 2.5	14.0	5.0	2.0	ød + 6.2	8.4 [2]

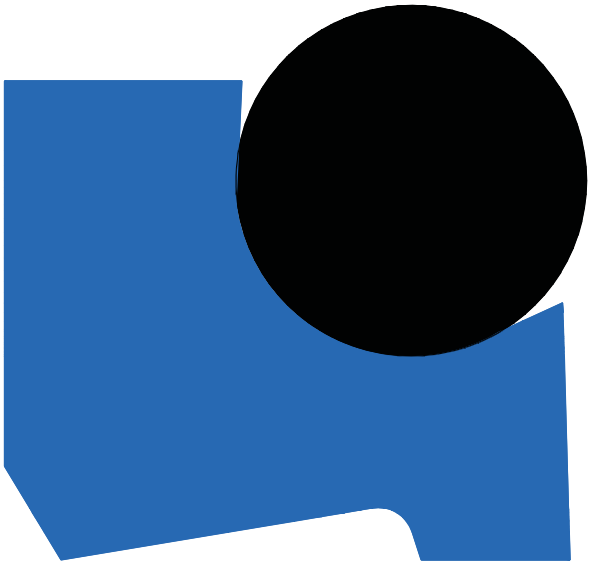
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Scrapers

Kefloy WypeRing® type 2563-



Very tough and efficient double acting rod scraper.

High wear resistance.

WypeRing® 2 Type 2563-

Is a highly efficient double acting scraper. It consists of a scraping ring with one external and one internal scraping lip plus an O-ring. The O-Ring ensures a firm contact between the scraping lips and the piston rod.
The external scraping lip wipes the retracting piston rod free from all kinds of dirt, mud, ice etc. The internal lip retains the residual oil film, which may pass under the rod seal.
WypeRing® 2 Type 2563- is designed to replace WypeRing® Type 2561- where a double acting WypeRing® is preferred. For new constructions we recommend to use WypeRing® 5 Type 2565-.

Working Range

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

- Dual scraping effect; act as secondary seal.
- Very good scraping efficiency
- Good wear resistance
- Low friction
- No stick-slip
- Simple groove design
- Compatible with virtually all fluids
- ISO/DIN 6195 Type D installation dimensions

Material Selection Guide

Fluid	Mating surface	WypeRing® 2 compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

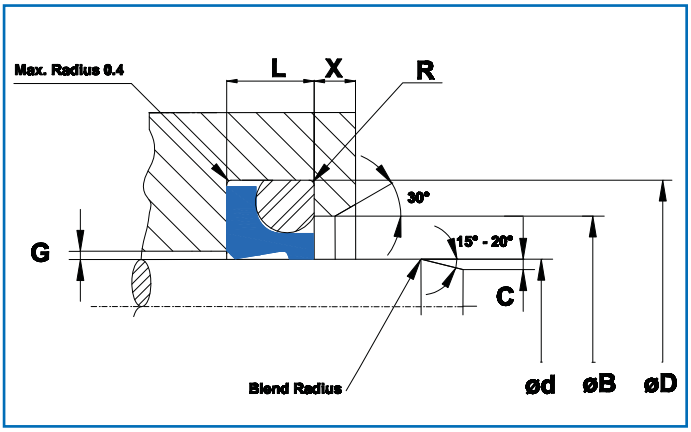
Seal Selection Guide

Installation Instructions
WypeRing® 2 can be installed in split or in closed grooves. Installation in closed grooves is possible for relatively big diameters only. Below table shows the diameter limits.

WypeRing® 2 Series No.	Rod Diameter d
25630	≥ 30
25631	≥ 30
25632	≥ 30
25633	≥ 40
25634	≥ 110
25635	≥ 140

Ordering Example
Rod diameter: 338.0 mm

Part no 25633-3380-32
WypeRing® 2 Type
Series
Rod dia. x 10
Compound no
O-Ring size 329.57 x 5.33
O-Ring to be ordered separately



Installation dimensions

Type No.	Ød [1] Rod dia. Recomm.	Rod dia. Available	ØD Groove dia.	ØB Dia.	L Groove width	X	R Radius	O-Ring ID	O-Ring Cross section
	f8/h8	f8/h8	H9	H11	+ 0.20 - 0.0	min.	± 0.10		
25630	6 -11.9	6-64.9	ød + 4.8	ød + 1.5	3.7	2.0	0.4	ød + 2.2	1.78
25631	12-64.9	6-250.9	ød + 6.8	ød + 1.5	5.0	2.0	0.7	ød + 3.0	2.62
25632	65-250.9	12-420.9	ød + 8.8	ød + 1.5	6.0	3.0	1.0	ød + 3.2	3.53
25633	251-420.9	65-650.9	ød + 12.2	ød + 2.0	8.4	3.0	1.2	ød + 3.8	5.33
25634	421-650.9	251-2500	ød + 16.0	ød + 2.0	11.0	4.0	1.5	ød + 4.8	6.99
25635	651-2500	421-2500	ød + 20.0	ød + 2.5	14.0	5.0	2.0	ød + 6.2	8.4 [2]

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Scrapers

Kefloy WypeRing® 5 type 2565-

Very tough and efficient double acting rod scraper.

High wear resistance.

WypeRing® 5 Type 2565-

Is a highly efficient double acting scraper. It consists of a scraping ring with one external and one internal scraping lip plus an O-ring. The O-Ring ensures a firm contact between the scraping lips and the piston rod.
The external scraping lip wipes the retracting piston rod free from all kinds of dirt, mud, ice etc.
The internal lip retains the residual oil film, which may pass under the rod seal.

Working Range

Temperature
-50°C to + 200°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec.
Frequency: Up to 5 HZ.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Advantages

- Dual scraping effect; act as secondary seal.
- Very good scraping efficiency
- Good wear resistance
- Low friction
- No stick-slip
- Simple groove design
- Compatible with virtually all fluids
- ISO/DIN 6195 Type D installation dimensions

Material Selection Guide

Fluid	Mating surface	WypeRing® 5 compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

O-Ring manufacturer's recommendation for the actual fluid should always be followed.

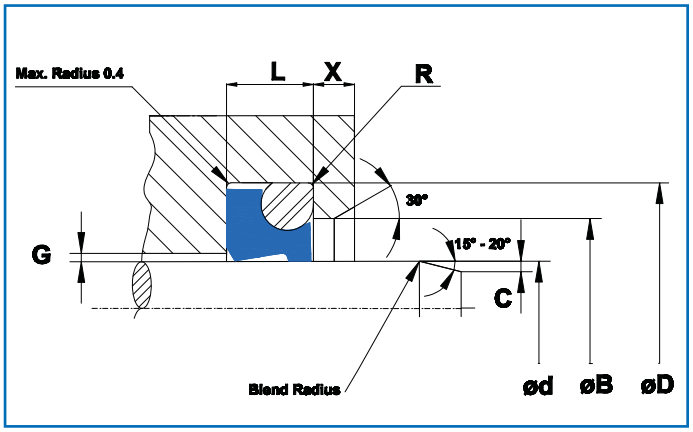
Seal Selection Guide

Installation Instructions
WypeRing® 5 can be installed in split or in closed grooves. Installation in closed grooves is possible for relatively big diameters only. Below table shows the diameter limits.

WypeRing® 5 Series No.	Rod Diameter d
25650	≥ 30
25651	≥ 40
25652	≥ 70
25653	≥ 100
25654	≥ 140
25655	≥ 180

Ordering Example
Rod diameter: 250.0 mm

Part no 25653-2500-13
WypeRing® 5 Type
Series
Rod dia. x 10
Compound no
O-Ring size 253.37 x 5.33
O-Ring to be ordered separately



Installation dimensions

Type No.	Ød [1] Rod dia. Recomm.	ØD Groove dia.	ØB Dia.	L Groove width	X	R Radius	O-Ring ID	O-Ring Cross section
	f8/h8	H9	H11	+ 0.20 - 0.0	min.	Max.		
25650	6 -39.9	ød + 7.6	ød + 1.5	4.2	3.0	0.6	ød + 2.5	2.62
25651	40-69.9	ød + 8.8	ød + 1.5	6.3	3.0	0.6	ød + 3.5	2.62
25652	70-139.9	ød + 12.2	ød + 2.0	8.1	4.0	0.8	ød + 4.0	3.53
25653	140-399.9	ød + 16.0	ød + 2.5	9.5	5.0	1.3	ød + 5.0	5.33
25654	400-649.9	ød + 24.0	ød + 2.5	14.0	8.0	1.5	ød + 6.0	6.99
25655	650-999.9	ød + 27.3	ød + 2.5	16.0	10.0	2.5	ød + 7.0	8.4

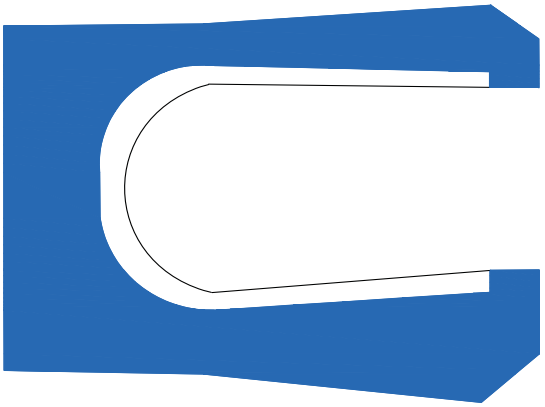
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

MupuSeal® Type 3041- and Type 3043-



Spring energized rod seal for dynamic applications

MupuSeal® Type 3041- and Type 3043-

Are single acting spring energized rod seals for dynamic applications.
MupuSeal® consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hastelloy® is a registered trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal type 3041- and type 3043- have asymmetric design of the sealing lips. The inner lip is designed for the dynamic motion against the rod. The outer lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 45 MPa in standard execution. For pressures exceeding 45 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- Low friction
- No stick-slip
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

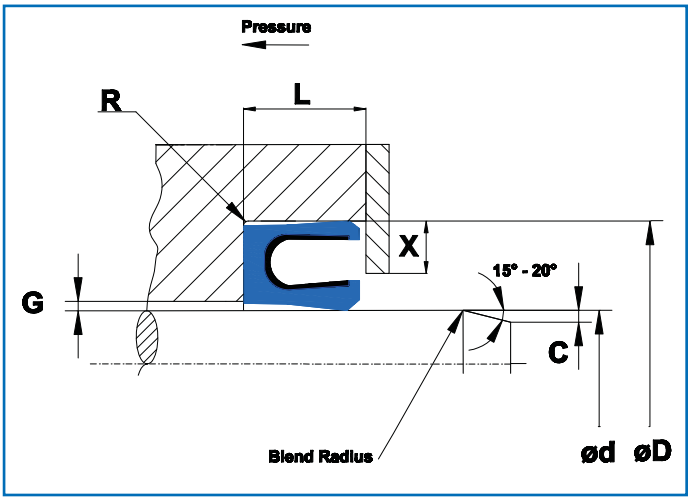
Seal Selection Guide

Ordering Example

Rod diameter: 39.3 mm

Part no 30412-0393-90-E
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

** As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.*



Installation dimensions for MupuSeal Dynamic type 3041- (With standard groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30410	000	3.0	ød+2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	3 - 9.99
30411	100	8.0	ød+4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	10 - 19.99
30412	200	12.0	ød+6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	20 - 39.99
30413	300	20.0	ød+9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	40 - 119.99
30414	400	35.0	ød+12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.15	120 - 629.99
30415	500	80.0	ød+19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630 –

Installation dimensions for MupuSeal type 3043- (With extended groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30430	000	3.0	ød+2.9	3.80	0.4	0.4	0.25	0.15	0.10	0.07	3 - 9.99
30431	100	8.0	ød+4.5	4.65	0.4	0.6	0.35	0.20	0.15	0.08	10 - 19.99
30432	200	12.0	ød+6.2	5.70	0.6	0.7	0.50	0.25	0.20	0.10	20 - 39.99
30433	300	20.0	ød+9.4	8.50	0.8	0.8	0.60	0.30	0.25	0.12	40 - 119.99
30434	400	35.0	ød+12.2	11.20	0.8	0.9	0.90	0.50	0.40	0.20	120 - 629.99
30435	500	80.0	ød+19.0	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 –

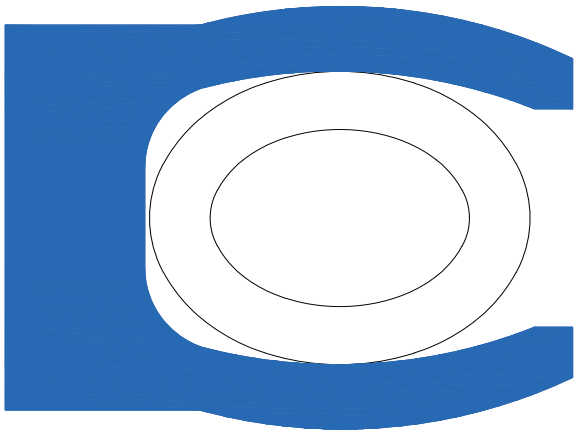
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rod Seals

MupuSeal® R Type 3061-



Spring energized rod seal for static applications

MupuSeal® R Type 3061-

Is a single acting spring energized rod seal for static and semi dynamic applications.
MupuSeal® R consists of a jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276;	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hastelloy® is a registered trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal® R has symmetric sealing lips. The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications and applications with a very little movement.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-120°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static or semi static applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

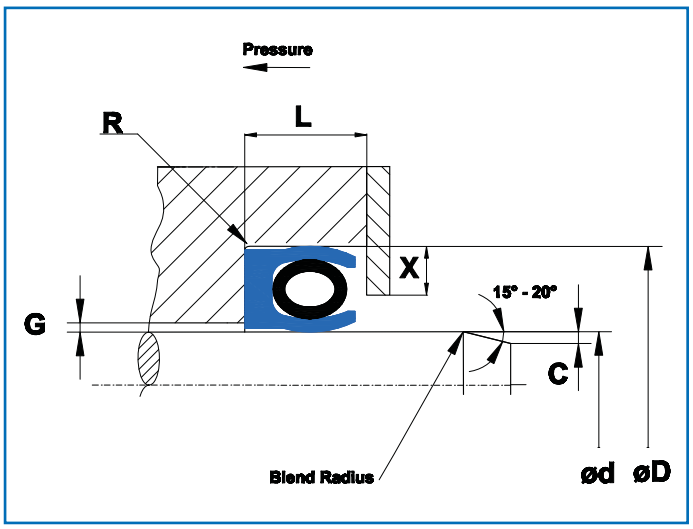
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Rod diameter: 98.7 mm

Part no 30614-0987-32-E
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material



Installation dimensions for MupuSeal R type 3061- (With standard groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30610	000	3.0	ød+2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	3 - 9.99
30611	100	8.0	ød+4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	10 - 19.99
30612	200	12.0	ød+6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	20 - 39.99
30613	300	20.0	ød+9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	40 - 119.99
30614	400	35.0	ød+12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.15	120 - 629.99
30615	500	80.0	ød+19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630-

Installation dimensions for MupuSeal R type 3063- (With extended groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30630	000	3.0	ød+2.90	3.80	0.4	0.4	0.25	0.15	0.10	0.07	3 - 9.99
30631	100	8.0	ød+4.50	4.65	0.4	0.6	0.35	0.20	0.15	0.08	10 - 19.99
30632	200	12.0	ød+6.20	5.70	0.6	0.7	0.50	0.25	0.20	0.10	20 - 39.99
30633	300	20.0	ød+9.40	8.50	0.8	0.8	0.60	0.30	0.25	0.12	40 - 119.99
30634	400	35.0	ød+12.20	11.20	0.8	0.9	0.90	0.50	0.40	0.20	120 - 629.99
30435	500	80.0	ød+19.00	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 -

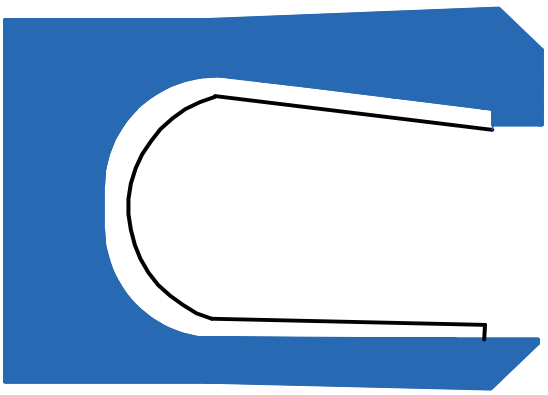
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

MupuSeal® Type 3042- and Type 3044-



Spring energized piston seal for dynamic applications

MupuSeal® Type 3042- and type 3044-

Are single acting spring energized piston seals for dynamic applications.
MupuSeal® consists of jacket of a Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hastelloy® is a registered trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal type 3042- and type 3044- have asymmetric design of the sealing lips. The outer lip is designed for the dynamic motion against the bore. The inner lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 45 MPa in standard execution. For pressures exceeding 45 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Frequency: Up to 5 HZ. Should not be used for rotating or oscillating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- Low friction
- No stick-slip
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

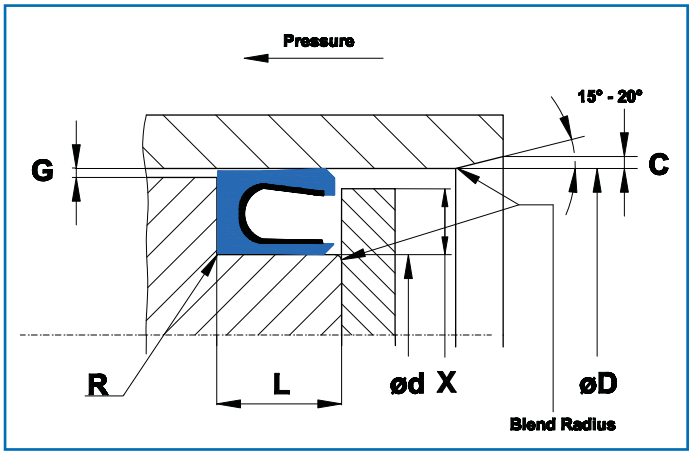
For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Piston diameter: 85.5 mm

Part no 30423-0855-40-H
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

** As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.*



Installation dimensions for MupuSeal type 3042- (With standard groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30420	000	6.0	øD-2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	6 - 13.99
30421	100	13.0	øD-4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	14 - 24.99
30422	200	18.0	øD-6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	25 - 45.99
30423	300	28.0	øD-9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	46 - 124.99
30424	400	45.0	øD-12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.12	125 – 629.99
30425	500	100.0	øD-19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630 -

Installation dimensions for MupuSeal type 3044- (With extended groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30440	000	6.0	øD-2.90	3.80	0.4	0.4	0.25	0.15	0.10	0.07	6 - 13.99
30441	100	13.0	øD-4.50	4.65	0.4	0.6	0.35	0.20	0.15	0.08	14 - 24.99
30442	200	18.0	øD-6.20	5.70	0.6	0.7	0.50	0.25	0.20	0.10	25 - 45.99
30443	300	28.0	øD-9.40	8.50	0.8	0.8	0.60	0.30	0.25	0.12	46 - 124.99
30444	400	45.0	øD-12.20	11.20	0.8	0.9	0.90	0.50	0.40	0.20	125 – 629.99
30445	500	100.0	øD-19.00	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 -

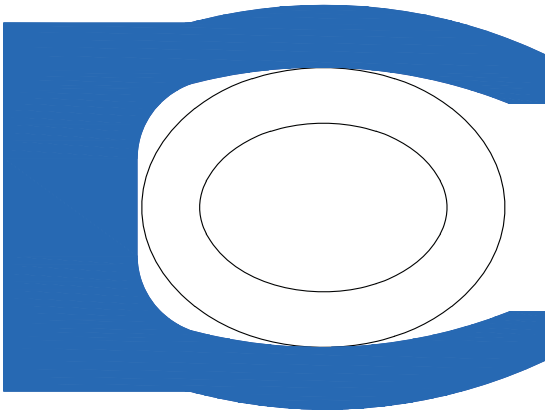
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Piston Seals

MupuSeal® Type 3062- and type 3064-



Spring energized piston seal for static applications

MupuSeal® Type 3062- and type 3064-

Is a single acting spring energized piston seal for static and semi dynamic applications.
MupuSeal® R consists of a jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hastelloy® is a registered trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal® R has symmetric sealing lips. The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications and applications with a very little movement.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-120°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static or semi static applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

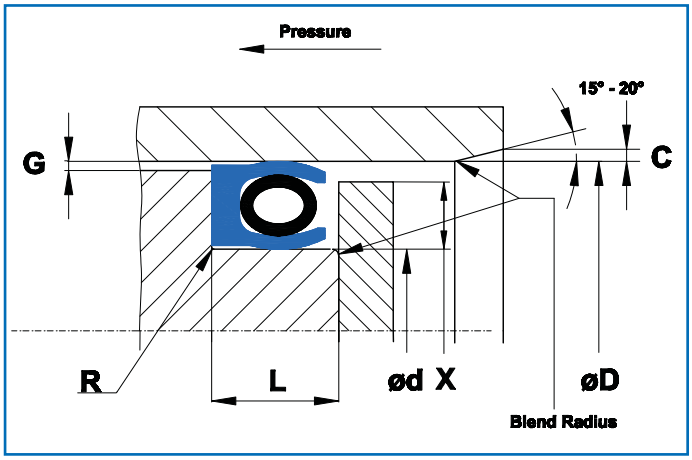
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 32 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Piston diameter: 55.3 mm

Part no 30624-0553-13-S
MupuSeal® type
Series
Piston dia. x 10
Jacket compound no
Spring material



Installation dimensions for MupuSeal type 3062- (With standard groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30620	000	6.0	øD-2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	6 - 13.99
30621	100	13.0	øD-4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	14 - 24.99
30622	200	18.0	øD-6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	25 - 45.99
30623	300	28.0	øD-9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	46 - 124.99
30624	400	45.0	øD-12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.12	125 – 629.99
30625	500	100.0	øD-19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630 -

Installation dimensions for MupuSeal type 3064- (With extended groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30640	000	6.0	øD-2.90	3.80	0.4	0.4	0.25	0.15	0.10	0.07	6 - 13.99
30641	100	13.0	øD-4.50	4.65	0.4	0.6	0.35	0.20	0.15	0.08	14 - 24.99
30642	200	18.0	øD-6.20	5.70	0.6	0.7	0.50	0.25	0.20	0.10	25 - 45.99
30643	300	28.0	øD-9.40	8.50	0.8	0.8	0.60	0.30	0.25	0.12	46 - 124.99
30644	400	45.0	øD-12.20	11.20	0.8	0.9	0.90	0.50	0.40	0.20	125 – 629.99
30645	500	100.0	øD-19.00	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 -

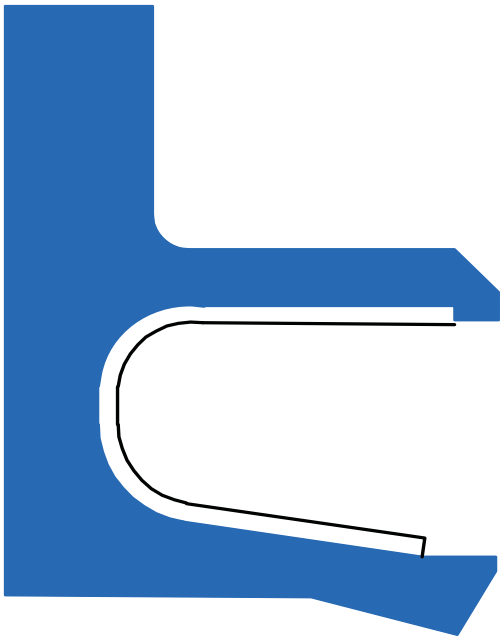
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rotary Seals

MupuSeal® Roto Type 3031-



Spring energized rod seal for rotating applications

MupuSeal® Roto Type 3031-

MupuSeal® Roto is a single acting spring energized rod seal for rotating applications.
MupuSeal® Roto consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring. The jacket is at the heel furnished with a flange. To prevent the seal from rotating with the rod the flange is clamped into the groove.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; ISO 5832-7; NACE MR-01-75

Hastelloy® is a trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal® Roto has asymmetric design of the sealing lips. The thick and strong dynamic inner lip is designed for the rotation against the rod. The outer lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-100°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a shaft with a big diameter transfers the heat better than a shaft with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- No stick-slip
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32 Kefloy® 40
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Standard Series
For most applications the Standard Series is the best choice.

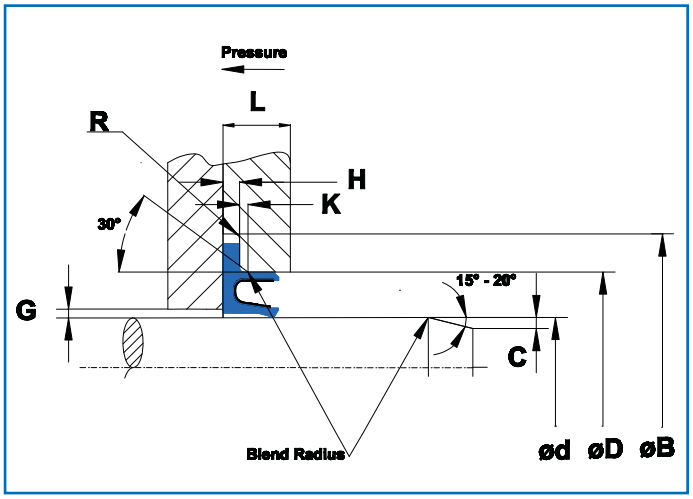
Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
Rod diameter: 455.0 mm

Part no 30314-4550-25-E-(D)
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

* As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.



Installation dimensions

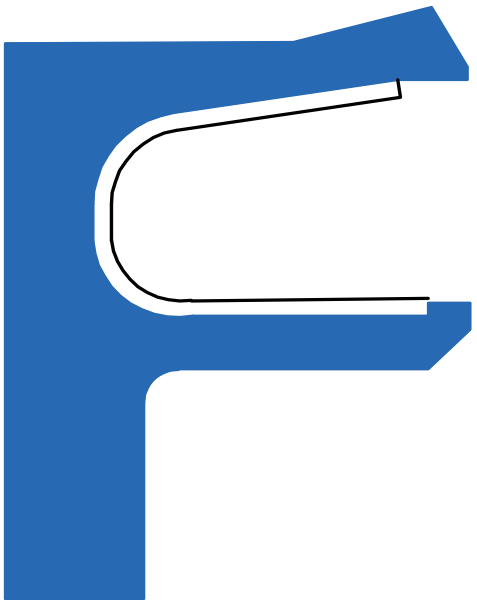
MupuSeal Rotary Cross section		Ød Rod	øD Groove	ØB	L	H	R	K	G	Recomm. dia/cross
Part no.	Series	Min. dia. f8/h9	Dia. H9	Dia. H10	Min.		Max.		Max.	
30311	100	8.0	ød+5.0	ød+9.0	3.6	0.85	0.3	0.8	0.13	8.0 -19.9
30312	200	12.0	ød+7.0	ød+12.5	4.8	1.35	0.4	1.1	0.15	20 - 39.99
30313	300	20.0	ød+10.5	ød+17.5	7.1	1.8	0.5	1.4	0.17	40 - 119.99
30314	400	35.0	ød+14.0	ød+22.0	9.5	2.8	0.5	1.6	0.25	120 -

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Rotary Seals

MupuSeal® Roto Type 3032-



Spring energized Piston seal for rotating applications

MupuSeal® Roto Type 3032-

MupuSeal® Roto is a single acting spring energized piston seal for rotating applications. MupuSeal® Roto consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring. The jacket is at the heel furnished with a flange. To prevent the seal from rotating with the piston the flange is clamped into the groove.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; ISO 5832-7; NACE MR-01-75

Hastelloy® is a trademark of Haynes International
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal® Roto has asymmetric design of the sealing lips. The thick and strong dynamic outer lip is designed for the rotation against the cylinder. The inner lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-100°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- No stick-slip
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32 Kefloy® 40
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Standard Series
For most applications the Standard Series is the best choice.

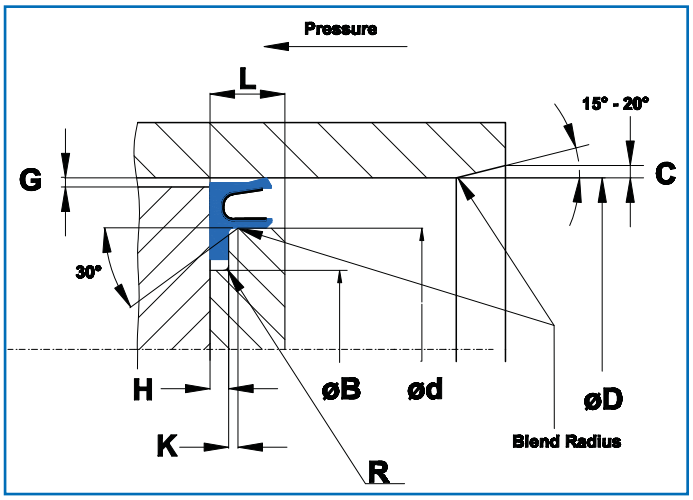
Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.

Ordering Example
Piston diameter: 65.2 mm

Part no 30321-0652-25-S-(D)
MupuSeal® type
Series
Piston dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

* As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.



Installation dimensions

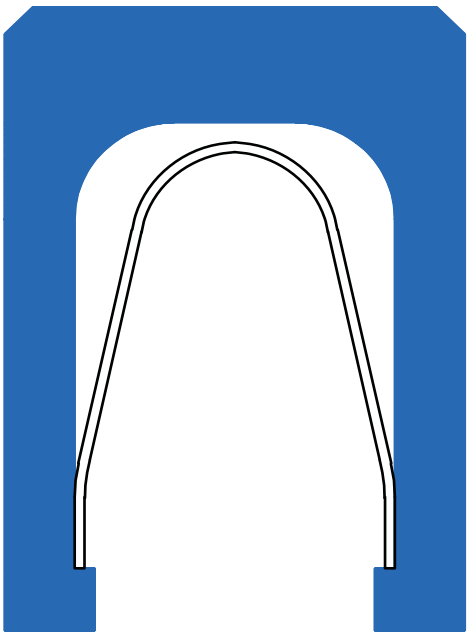
MupuSeal Rotary Cross section		Ød Rod	øD Groove	ØB	L	H	R	K	G	Recomm. dia/cross
Part no.	Series	Min. dia. f8/h9	Dia. H9	Dia. H10	Min.		Max.		Max.	
30321	100	14.0	ØD-5.0	Ød-9.0	3.6	0.85	0.3	0.8	0.13	14.0 -24.9
30322	200	18.0	ØD-7.0	Ød-12.5	4.8	1.35	0.4	1.1	0.15	25 - 45.99
30323	300	28.0	ØD-10.5	Ød-17.5	7.1	1.80	0.5	1.4	0.17	46 - 124.99
30324	400	45.0	ØD-14.0	Ød-22.0	9.5	2.80	0.5	1.6	0.25	125 -

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Flange Seals

MupuSeal® Type 3051-



Spring energized flange seal for internal pressure

MupuSeal® Type 3051-

Is a spring energized flange seal for internal pressure and dynamic applications. MupuSeal® consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy® is a trademark of Haynes International Inc.
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

The flexible V-spring gives a good spring force which ensures the sealing capacity. MupuSeal® is designed for dynamic applications at moderate speeds. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 45 MPa in standard execution. For pressures exceeding 45 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal® is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example

Groove outside diameter: 213.5 mm

Part no 30513-2135-28-H

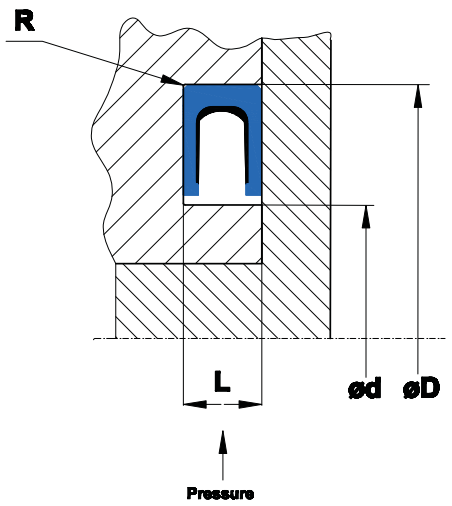
MupuSeal® type

Series

Groove dia. x 10

Jacket compound no

Spring material



Installation dimensions

MupuSeal Face Cross section		Outer dia. øD Groove	Inner dia. ød	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. H11	dia.	+0.15 -0	Toll.	Max.	
30511	100	32.0	øD-7.20	2.25	+0.03/-0	0.4	32 - 44.99
30512	200	45.0	øD-9.60	3.10	+0.05/-0	0.6	45 - 99.99
30513	300	80.0	øD-14.20	4.70	+0.08/-0	0.8	100 - 199.99
30514	400	110.0	øD-19.00	6.10	+0.10/-0	0.8	200 - 999.99
30515	500	400.0	øD-30.00	9.50	+0.20/-0	0.8	1000 -

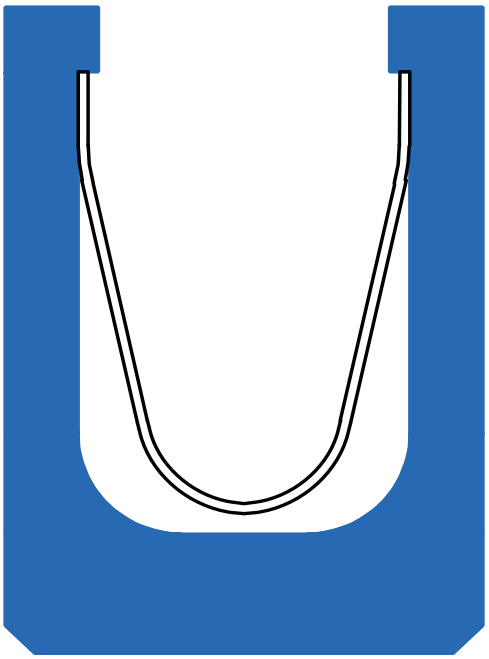
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Flange Seals

MupuSeal® Type 3052-



Spring energized flange seal for external pressure

MupuSeal® Type 3052-

Is a spring energized flange seal for external pressure and dynamic applications. MupuSeal® consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy® is a trademark of Haynes International Inc.
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

The flexible V-spring gives a good spring force which ensures the sealing capacity. MupuSeal® is designed for dynamic applications at moderate speeds. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 45 MPa in standard execution. For pressures exceeding 45 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal® is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

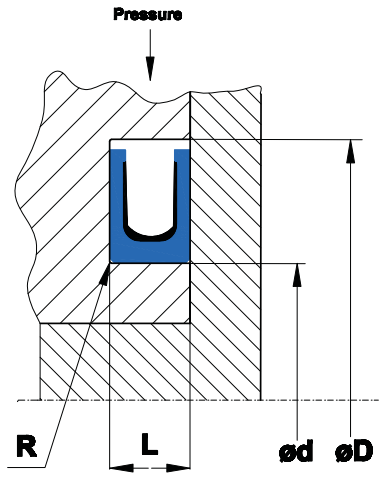
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Groove inner diameter: 83.7 mm

Part no 30522-0837-40-S
MupuSeal® type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Inner dia. ød Groove	Outer dia. øD	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. h11	dia.	+0,15 -0	Toll.	Max.	
30521	100	40.0	ød+7.20	2.25	+0.05/-0	0.4	40 – 49.99
30522	200	45.0	ød+9.60	3.10	+0.08/-0	0.6	50 – 99.99
30523	300	80.0	ød+14.20	4.70	+0.10/-0	0.8	100 – 199.99
30524	400	110.0	ød+19.00	6.10	+0.15/-0	0.8	200 – 999.99
30525	500	400.0	Ød+30.00	9.50	+0.20/-0	0.8	1000 –

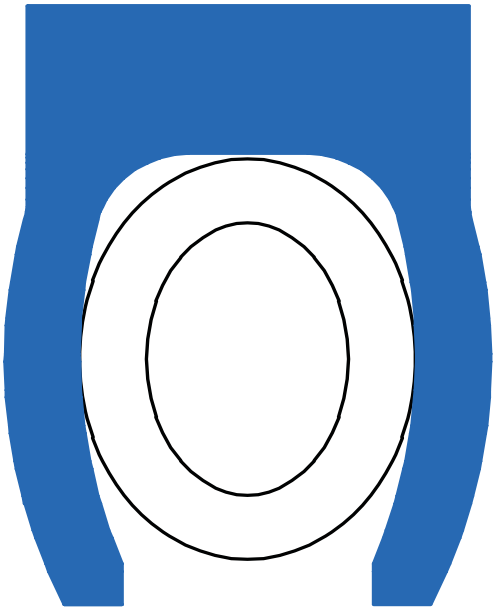
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Flange Seals

MupuSeal® R Type 3071-



Spring energized flange seal for internal pressure

MupuSeal® R Type 3071-

Is a spring energized flange seal for internal pressure and static applications. MupuSeal® R consists of a jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy® is a trademark of Haynes International Inc.
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-200°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static and semi dynamic applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

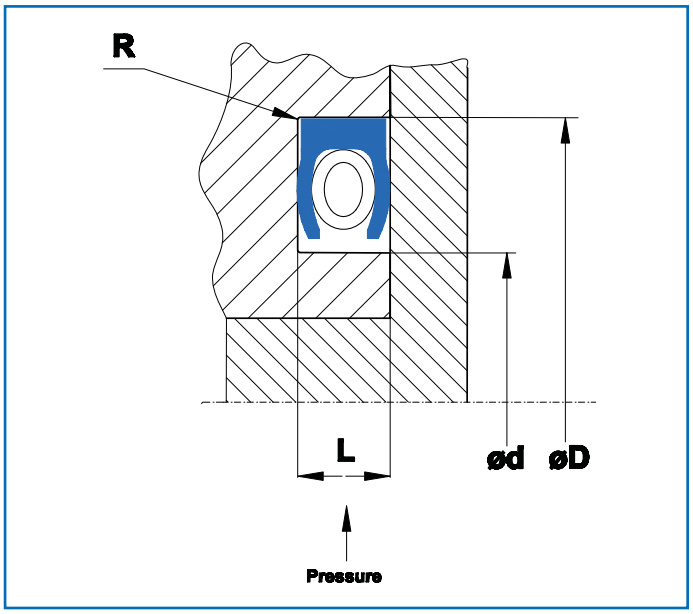
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Groove outside diameter: 422.7 mm

Part no 30714-4227-32-H
MupuSeal® R type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Outer dia. øD Groove	Inner dia. ød	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. H11	dia.	+0,15 -0	Toll.	Max.	
30710	000	10.0	øD-4.80	1.45	+0,03/-0	0.4	12 – 13.99
30711	100	13.0	øD-7.20	2.25	+0,03/-0	0.4	14 – 24.99
30712	200	18.0	øD-9.60	3.10	+0.05/-0	0.6	25 – 45.99
30713	300	28.0	øD-14.20	4.70	+0.08/-0	08	46 – 124.99
30714	400	45.0	øD-19.00	6.10	+0,10/-0	0.8	125 – 999.99
30715	500	110.0	øD-30.00	9.50	+0.20/-0	0.8	1000 –

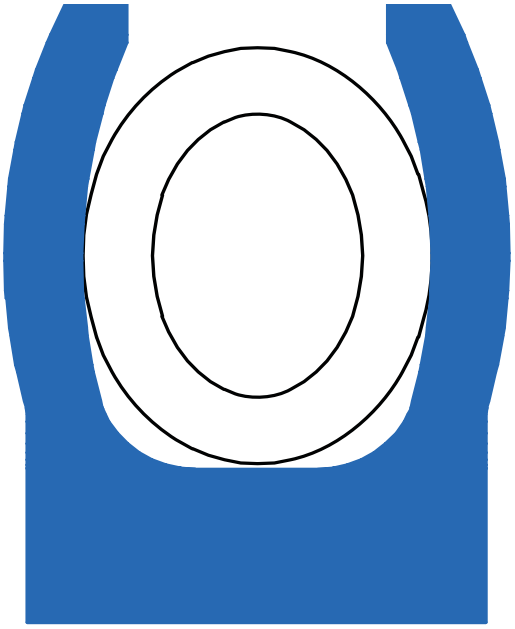
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Flange Seals

MupuSeal® R Type 3072-



Spring energized flange seal for external pressure

MupuSeal® R Type 3072-

Is a spring energized flange seal for external pressure and static applications. MupuSeal® R consists of a jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy® C-276	EN ISO 15156; NACE MR-01-75
• Elgiloy®	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy® is a trademark of Haynes International Inc.
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-200°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static and semi dynamic applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

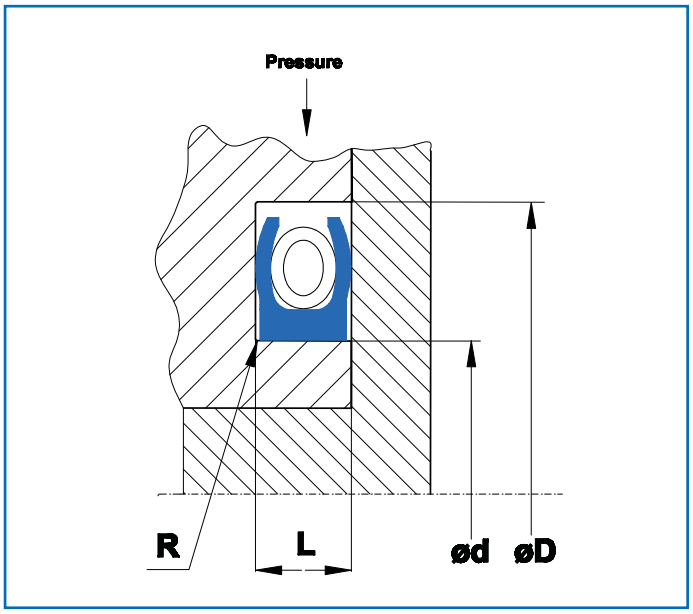
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Groove inside diameter: 85.8 mm

Part no 30722-0858-32-S
MupuSeal® R type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Nom. dia. ød	øD	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. h11	dia.		Toll.	Max.	
30720	000	3.0	ød+4.80	1.45	+0.03/-0	0.4	3 – 9,99
30721	100	8.0	ød+7.20	2.25	+0.05/-0	0.4	10 – 19.99
30722	200	12.0	ød+9.60	3.10	+0.08/-0	0.6	20 – 39.99
30723	300	20.0	ød+14.20	4.70	+0.10/-0	0.8	40 – 119.99
30724	400	35.0	ød+19.00	6.10	+0.15/-0	0.8	120 – 999.99
30725	500	80.0	ød+30.00	9.50	+0.20/-0	0.8	1000 –

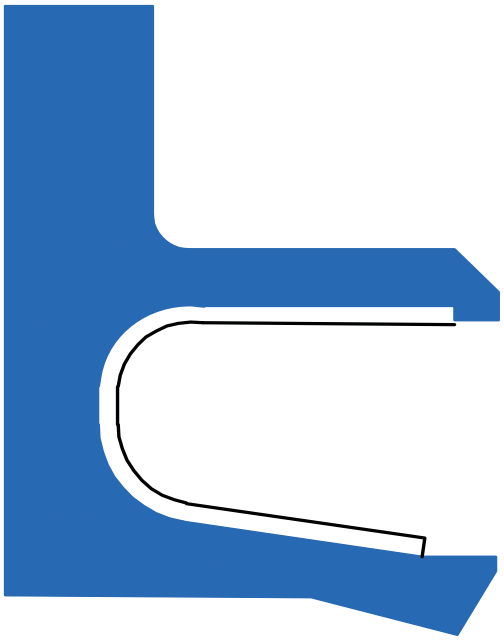
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Seals

MupuSeal® Roto Type 3031-



MupuSeal® Roto Type 3031-

MupuSeal® Roto is a single acting spring energized rod seals for rotating applications. MupuSeal® Roto consists of jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring. The jacket is at the heel furnished with a flange. To prevent the seal from rotating with the rod the flange is clamped into the groove.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301 DIN 1.4310
• Hasteloy™	C-276
• Elgiloy™	ASTM F1058; ISO 5832-7; NACE MR-01-75

Hastelloy™ is a trademark of Haynes International
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

MupuSeal® Roto has asymmetric design of the sealing lips. The thick and strong dynamic inner lip is designed for the rotation against the rod. The outer lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-100°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a shaft with a big diameter transfers the heat better than a shaft with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- No stick-slip
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32 Kefloy® 40
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

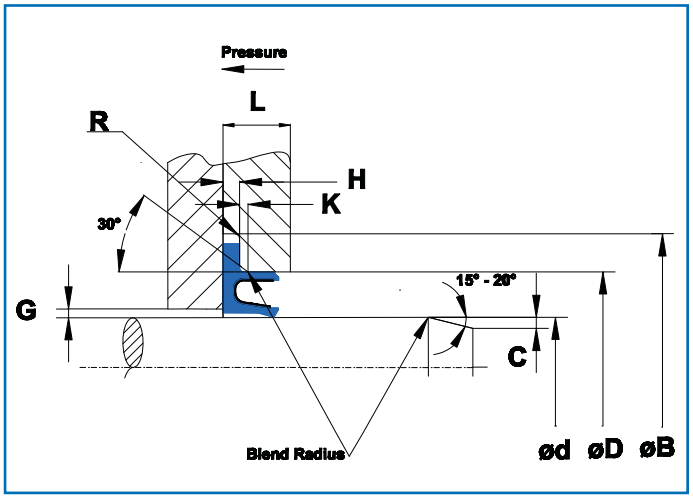
For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Standard Series
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Rod diameter: 455.0 mm

Part no 30314-4550-25-E-(D)
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

* As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.

Installation dimensions

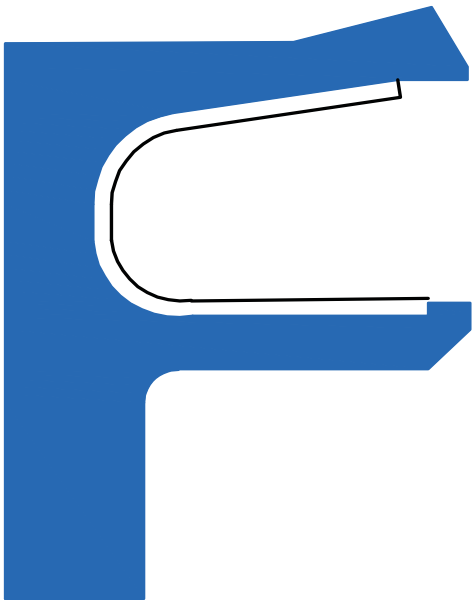
MupuSeal Rotary Cross section		Ød Rod	øD Groove	ØB	L	H	R	K	G	Recomm. dia/cross
Part no.	Series	Min. dia. f8/h9	Dia. H9	Dia. H10	Min.		Max.		Max.	
30311	100	8.0	ød+5.0	ød+9.0	3.6	$0.85\ ^{+0}/_{-0.10}$	0.3	0.8	0.13	8.0 -19.9
30312	200	12.0	ød+7.0	ød+12.5	4.8	$1.35\ ^{+0}/_{-0.15}$	0.4	1.1	0.15	20 - 39.99
30313	300	20.0	ød+10.5	ød+17.5	7.1	$1.8\ ^{+0}/_{-0.20}$	0.5	1.4	0.17	40 - 119.99
30314	400	35.0	ød+14.0	ød+22.0	9.5	$2.8\ ^{+0}/_{-0.20}$	0.5	1.6	0.25	120 -

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Seals

MupuSeal® Roto Type 3032-



MupuSeal® Roto Type 3032-

MupuSeal® Roto is a single acting spring energized piston seals for rotating applications. MupuSeal® Roto consists of jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring. The jacket is at the heel furnished with a flange. To prevent the seal from rotating with the piston the flange is clamped into the groove.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301 DIN 1.4310
• Hasteloy™	C-276
• Elgiloy™	ASTM F1058; ISO 5832-7; NACE MR-01-75

Hastelloy™ is a trademark of Haynes International
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

MupuSeal® Roto has asymmetric design of the sealing lips. The thick and strong dynamic inner lip is designed for the rotation against the piston. The outer lip is designed to give maximum sealing efficiency against the groove.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-100°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- No stick-slip
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 32 Kefloy® 40
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

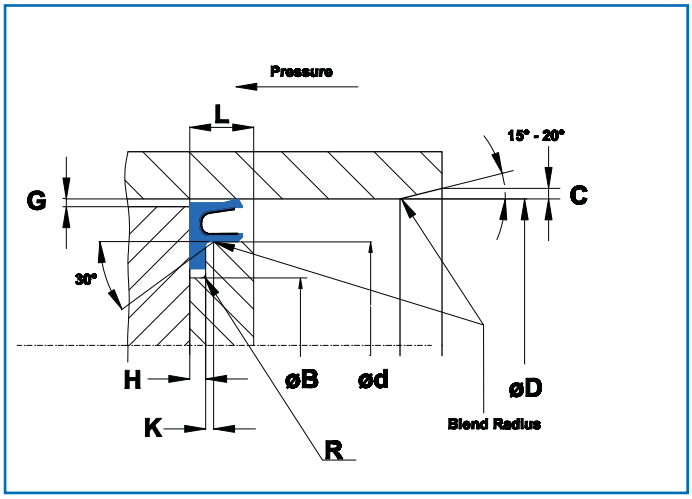
For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Standard Series
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Piston diameter: 65.2 mm

Part no 30321-0652-25-S-(D)
MupuSeal® type
Series
Piston dia. x 10
Jacket compound no
Spring material
Sil-Clean * (Option)

* As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.

Installation dimensions

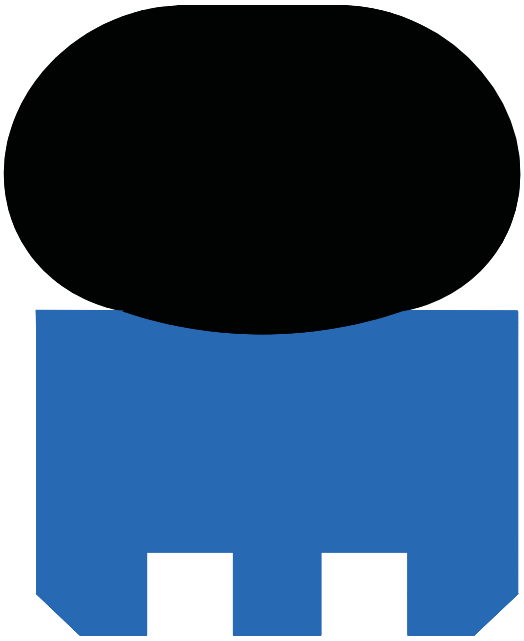
MupuSeal Rotary Cross section		Ød Rod	øD Groove	ØB	L	H	R	K	G	Recomm. dia/cross
Part no.	Series	Min. dia. f8/h9	Dia. H9	Dia. H10	Min.		Max.		Max.	
30321	100	14.0	ØD-5.0	Ød-9.0	3.6	$0.85\ ^{+0}/_{-0.10}$	0.3	0.8	0.13	14.0 -24.9
30322	200	18.0	ØD-7.0	Ød-12.5	4.8	$1.35\ ^{+0}/_{-0.15}$	0.4	1.1	0.15	25 - 45.99
30323	300	28.0	ØD-10.5	Ød-17.5	7.1	$1.8\ ^{+0}/_{-0.20}$	0.5	1.4	0.17	46 - 124.99
30324	400	45.0	ØD-14.0	Ød-22.0	9.5	$2.8\ ^{+0}/_{-0.20}$	0.5	1.6	0.25	125 -

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

O-Ring Energized Seals

Kefloy TurnRing® type 2571-



Rotating double acting seal for rods and shafts. Pressure up to 30 MPa.

High wear resistance. Small installation dimensions.

O-Ring Energized Seals

Kefloy TurnRing® type 2571-

TurnRing® Type 2571-

Is a double acting shaft seal for rotating applications. TurnRing® consists of a dynamic seal ring of Kefloy®; energized by a rubber O-Ring.
The sliding surface of the Kefloy® ring is furnished with one or two grooves (depending on series). The grooves ensure good lubrication and reduce friction.
The rear face of the Kefloy® ring has a concave shape. This ensures a good contact to the O-Ring and prevents the seal from turning with the shaft. The seal design ensures an efficient leakage control over the entire pressure range from 0 to 30 MPa.
The non stick-slip properties of the Kefloy® compounds ensure a smooth operation. The small installation dimensions allow a compact design of the hardware. This is a major advantage in e.g. swivel joints with many ports.
TurnRing® is pressure responsive and is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 30 MPa. For pressures exceeding 30 MPa, please contact your O.L. Seals distributor.

Temperature
-40°C to +180°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Continuous up to 2 m/sec. Intermittent up to 5 m/sec.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a shaft with a big diameter transfers the heat better than a shaft with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

-High pressure
-Very good sealing efficiency
-Excellent wear resistance
-Moderate friction
-No stick-slip
-No vulcanisation to mating surface
-Simple groove design
-Small installation dimensions
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	TurnRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 28 Kefloy® 66 Kefloy® 85 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 40 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

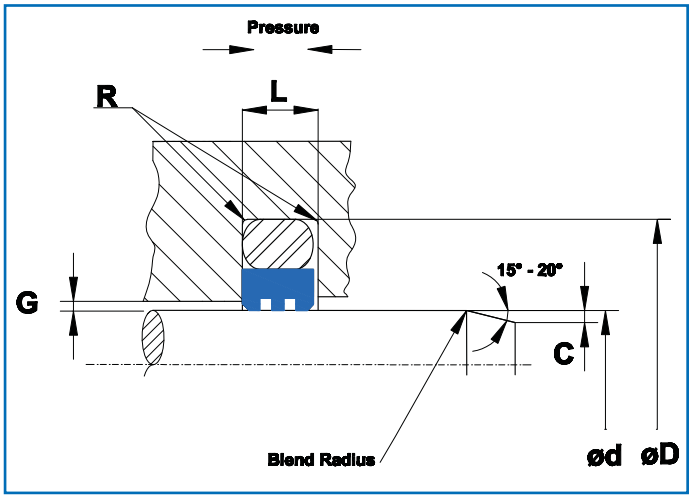
O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Shaft diameter: 145.6 mm

Part no 25713-1456-66N
TurnRing® Type
Series
Shaft dia. x 10
Compound no
Side wall notch (compulsory)
O-Ring size 151.77 x 5.33
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Rod dia.	Light Series Rod dia	Heavey Series Rod dia.	d groove diam.	L Groove width	R radius	G Radial		C chamfer	B O-ring ID	O-ring Cross section
	f8/h 9	f8/h 9	f8/h 9	H 9	+0.2 -0	max	10MPa (100 bar)	20MPa (200 bar)	Min.		
25710	6-18.9	19-37.9	-	d + 4.9	2.2	0.4	0.15	0.10	0.7	d+2.0	1.78
25711	19-37.9	38-199.9	6-18.9	d + 7.3	3.2	0.6	0.20	0.15	1.0	d+3.4	2.62
25712	38-199.9	200-255.9	19-37.9	d +10.7	4.2	1.0	0.25	0.20	1.3	d+5.1	3.53
25713	200-255.9	256-649.9	38-199.9	d+15.1	6.3	1.3	0.30	0.25	2.0	d+6.9	5.33
25714	256-649.9	650-999.9	200-255.9	d+20.5	8.1	1.8	0.30	0.25	2.5	d+9.5	6.99
25715	650-999.9	-	256-649.9	d+28.0	9.5	2.5	0.45	0.30	3.0	d+14.0	8.40

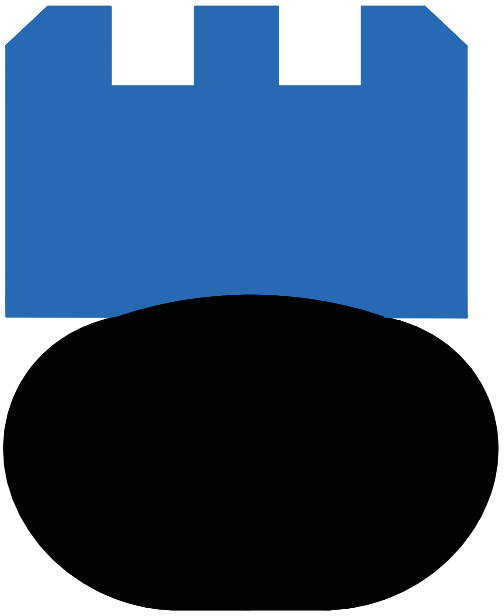
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

O-Ring Energized Seals

Kefloy TurnRing® type 2572-



Rotating double acting seal for bore. Pressure up to 30 MPa.

High wear resistance. Small installation dimensions.

O-Ring Energized Seals

Kefloy TurnRing® type 2572-

TurnRing® Type 2572-

Is a double acting piston seal for rotating applications. TurnRing® consists of a dynamic seal ring of Kefloy®; energized by a rubber O-Ring.
The sliding surface of the Kefloy® ring is furnished with one or two grooves (depending on series). The grooves ensure good lubrication and reduce friction.
The rear face of the Kefloy® ring has a concave shape. This ensures a good contact to the O-Ring and prevents the seal from turning with the piston. The seal design ensures an efficient leakage control over the entire pressure range from 0 to 30 MPa.
The non stick-slip properties of the Kefloy® compounds ensure a smooth operation. The small installation dimensions allow a compact design of the hardware. This is a major advantage in e.g. swivel joints with many ports.
TurnRing® is pressure responsive.
TurnRing® is available in Standard series, Light Duty series and Heavy Duty series.

Working Range

Pressure
Up to 30 MPa. For pressures exceeding 30 MPa, please contact your O.L. Seals distributor.

Temperature
-40°C to +180°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Continuous up to 2 m/sec. Intermittent up to 5 m/sec.

Fluids
Kefloy® is compatible with virtually all Fluids – liquids as well as gases. By selecting the right compound for the O-Ring energizer, it is possible to cover almost all fluids.

Application limits
Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a piston with a big diameter transfers the heat better than a piston with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.

Advantages

-High pressure
-Very good sealing efficiency
-Excellent wear resistance
-Moderate friction
-No stick-slip
-No vulcanisation to mating surface
-Simple groove design
-Small installation dimensions
-Compatible with virtually all fluids
-Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	TurnRing® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 28 Kefloy® 66 Kefloy® 85 Kefloy® 90
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 40 Kefloy® 90
	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Fluid	O-Ring compound
Hydraulic oil Motor oil Grease	NBR (Buna N)
Other mineral oils Water, cold Water hydraulic Air, lubricated	At temperatures above 120°C use Viton O-Rings
Water, hot Steam	EPDM
Synthetic hydraulic fluids	Special compounds

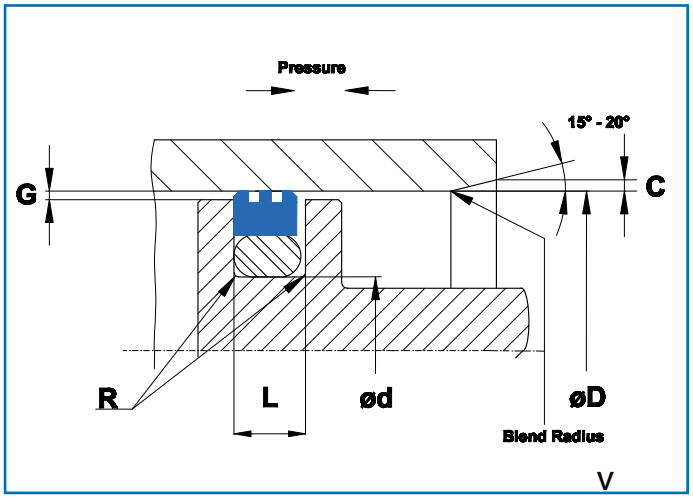
O-Ring manufacturer's recommendation for the actual fluid should always be followed.

Seal Selection Guide

Standard Series
For most single acting applications the Standard Series installed in tandem is the best choice.

Light Duty Series
Where very low friction is required, Light Duty Series is recommended.
Where space limitations make it necessary the light Duty Series should be chosen.

Heavy Duty Series
Where a very long service life is required the Heavy Duty Series should be chosen.



Ordering Example
Bore diameter: 563.4 mm

Part no 25724-5634-22N
TurnRing® Type
Series
Bore dia. x 10
Compound no
Side wall notch (compulsory)
O-Ring size 532.26 x 7.00
O-Ring to be ordered separately

Installation dimensions

Type No.	Standard Series Piston dia.	Light Series Piston dia	Heavey Series Piston dia.	d groove diam.	L Groove width	R radius	G Radial		C cham-fer	B O-ring ID	O-ring Cross section
	H 9	H 9	H 9	h 9	+0.2 -0	max	10MPa (100 bar)	20MPa (200 bar)	Min.		
25720	8-39.9	40-79.9	-	D - 4.9	2.2	0.4	0.15	0.10	0.7	d	1.78
25721	40-79.9	80-132.9	8-39.9	D - 7.5	3.2	0.6	0.20	0.15	1.0	d	2.62
25722	80-132.9	133-329.9	40-79.9	D-11.0	4.2	1.0	0.25	0.20	1.3	d	3.53
25723	133-329.9	330-669.9	80-132.9	D-15.5	6.3	1.3	0.30	0.25	2.0	d	5.33
25724	330-669.9	670-999.9	133-329.9	D-21.0	8.1	1.8	0.30	0.25	2.5	d	6.99
25725	670-999.9	-	330-669.9	D-28.0	9.5	2.5	0.45	0.30	3.0	d	8.40

O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. B as possible.
O-Ring I.D. not bigger than B +3%
O-Ring I.D. not smaller than B -5%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Guide Rings

GuideStrip®

GuideStrip®

Is a very efficient guide for piston and piston rod. The use of GuideStrip ensures an accurate and smooth travel of sliding parts. It prevents metal-to-metal contact and scoring of the surfaces. Precise guiding and preservation of perfect surfaces are essential for trouble free functioning of the seals.
GuideStrip also protects the seal against diesel effect and, to some degree, prevents possible contamination from reaching the seal.

GuideStrip is available in a range of standard dimensions and at special dimensions at request.

Working Range

Load capacity
Depends on temperature. Dimensioning of GuideStrip is described below.

Temperature range
-50°C to + 180°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Reciprocating up to 15 m/sec. Rotating up to 1 M/sec. Frequency up to 10 HZ.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound, it is possible to cover almost all fluids.

Availability

GuideStrips are delivered either in fixed lengths or in coils. Special thicknesses and widths are delivered on request.

Advantages

- Precise guiding
- Good wear resistance
- High load capacity
- Low friction
- No stick-slip
- Damping of vibrations
- Prevent migration of dirt
- Simple groove design
- Easy to install
- Compatible with virtually all fluids
- Available for all diameters
- Available in widths up to 100 mm

Material Selection Guide

Fluid	Mating surface	GuideStrip® compound
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 81
Water Water hydraulic Steam Non lubricating fluids	Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 90
Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 22 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

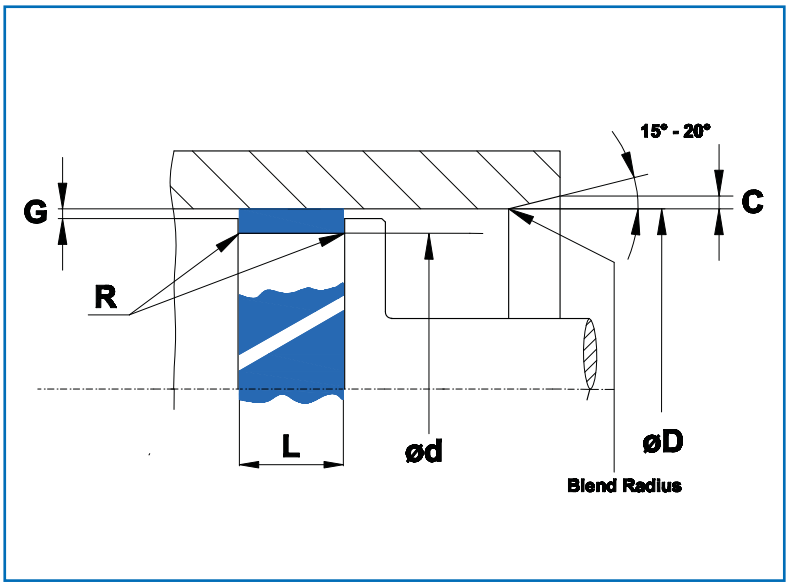
Seal Selection Guide

GuideStrip for Piston
Ordering Example

Piston diameter:	150.0 mm
GuideStrip width:	19.5 mm
GuideStrip Thickness:	2.5 mm
Fluid:	Oil
Mating surface:	Steel

Part no	P-25-195-1500A-13
Piston	
GuideStrip thickness x 10	
GuideStrip width x 10	
Bore diameter x 10	
Cut type	
Compound no	

GuideStrip length:
L = 3.115 x (150.0 - 2.5) -1.0 = 458.5 mm

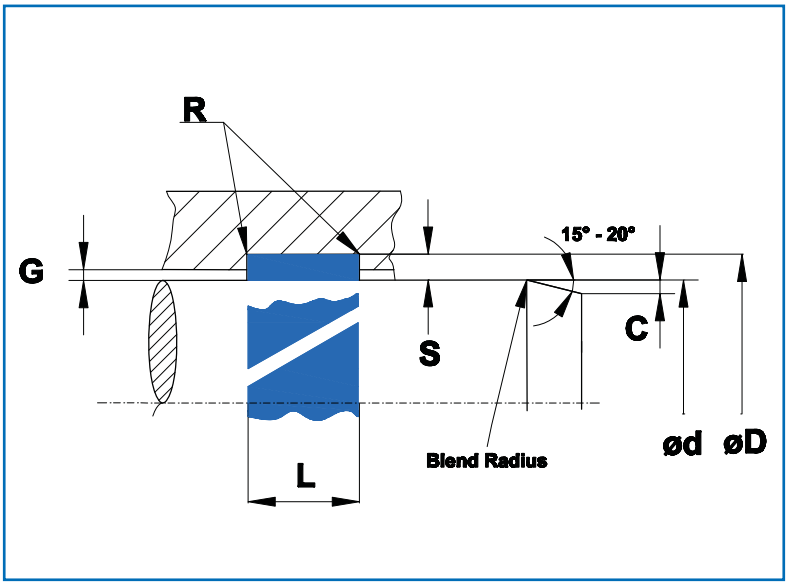


GuideStrip for Rod
Ordering Example

Rod diameter:	50.8 mm
GuideStrip width:	9.5 mm
GuideStrip Thickness:	2.0 mm
Fluid:	Water
Rod material:	Hard chromed steel

Part no	R-20-095-0508Z-22
Rod	
GuideStrip thickness x 10	
GuideStrip width x 10	
Rod diameter x 10	
Cut type	
Compound no	

GuideStrip length:
L = 3.115 x (50.8 + 2.0) -1.0 = 163.5 mm



Ordering example on GuideStrip

25-145-13	Standard type.
25-145-13C	with chamfered edges.
25-145-13D	With chamfers and diamond pattern on both side.

Ordering example on GuideStrip in cutting length

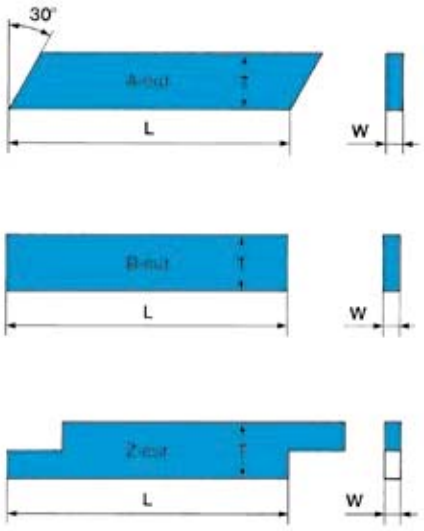
S-25-095-Z-13D-162.30 L = 162.30 mm

Dimensioning of GuideStrip

When calculating the force a GuideStrip can carry, use formula:

F = d x T x Ps

F: Force carrying capacity of one GuideStrip
d: Internal diameter of GuideStrip
T: Width of GuideStrip
Ps: Specific load capacity of GuideStrip material at the actual working temperature. Is found from Load-Temperature diagram.



Example:
Guidetrip R-25-148-0800A-13
Working temperature 80°C

d = 80 mm
T = 14,8 mm
Ps = 10 N/mm2
F = 80 mm x 14,8 mm x 10 N/mm2 = 11.840 N

Deformation
Deformation under load is found from Load-Deformation diagram.

Friction
Coefficient of friction is influenced by a great number of factors such as surface finish,
fluid, load and velocity.
As a rule the following coefficients of friction can be used:
Lubricated applications: μ = 0,08
Unlubricated applications: μ = 0,12

Calculation of length
To allow for thermal expansion GuideStrip is made slightly shorter than the circumference
of the part they guide. This leaves a smal gap X.

Internal applications (for rod)
L = 3,115 (ød + W) – 1,0
ød = Rod diameter W = GuideStrip thickness

External applications (for bore)
L = 3,115 (øD - W) – 1,0
øD = Bore diameter W = GuideStrip thickness

Angle cut Type A *But cut Type B* *Z-cut Type Z*

Cut Types
GuideStrip can be furnished with three different types of cut – A, B or Z.
A: Angle cut 30° – For reciprocating applications
B: But cut 90° – For rotating applications.
Z: Step cut – For special applications.

GuideStrip Thickness
For ease of installation thin sections of GuideStrip should be used for small diameters.
For diameters below 25 mm, GuideStrip thickness of 1,5 mm is recommended.
For diameters below 40 mm, GuideStrip thickness of 2,0 mm is recommended.

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

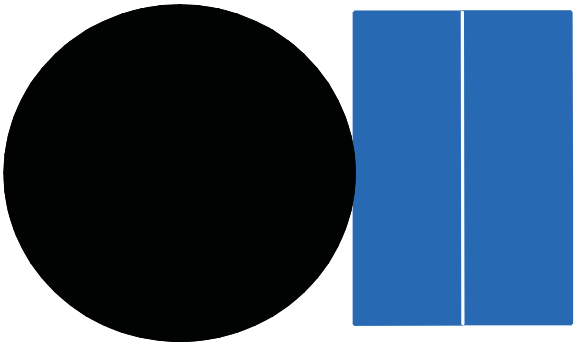
Installation dimensions

GuideStrip	W GuideStrip thickness	T GuideStrip Width	S Groove Depth	L Groove Width	R Radius	G Radial Gap	D Extern. Dia.	D Intern. dia
Type no.				+0.2/-0	Max.		H8	h8
15-030	1.5	3.0	1.5	3.2	0.3	See clearance for actual seal.	d+3.0	D-3.0
20-040	2.0	4.0	2.0	4.2	0.3		d+4.0	D-4.0
20-054		5.4		5.6				
20-061		6.1		6.3				
20-079		7.9		8.1				
20-095		9.5		9.7				
20-148		14.8		15.0				
20-195		19.5		20.0				
20-245		24.5		25.0				
20-295		29.5		30.0				
20-395		39.5		40.0				
20-495		49.5		50.0				
25-040	2.5	4.0	2.5	4.2	0.3		d+5.0	D-5.0
25-054		5.4		5.6				
25-061		6.1		6.3				
25-079		7.9		8.1				
25-095		9.5		9.7				
25-148		14.8		15.0				
25-195		19.5		20.0				
25-245		24.5		25.0				
25-295		29.5		30.0				
25-395		39.5		40.0				
25-495		49.5		50.0				
25-595		59.5		60.0				
30-054	3.0	5.4	3.0	5.6	0.3		d+6.0	D-6.0
30-061		6.1		6.3				
30-079		7.9		8.1				
30-095		9.5		9.7				
30-148		14.8		15.0				
30-195		19.5		20.0				
30-245		24.5		25.0				
30-295		29.5		30.0				
30-395		39.5		40.0				
30-495		49.5		50.0				
40-195	4.0	19.5	4.0	20.0	0.3		d+8.0	D-8.0
40-245		24.5		25.0				
40-295		29.5		30.0				
40-395		39.5		40.0				
40-495		49.5		50.0				
50-195	5.0	19.5	5.0	20.0	0.3		d+10.0	D-10.0
50-245		24.5		25.0				
50-295		29.5		30.0				
50-395		39.5		40.0				
50-495		49.5		50.0				

O.L. Seals A/S

Back-Up Rings

Kefloy Spiral BakRing® Type S-



Spiral BakRing® Type S-

Spiral BakRing® is used to prevent extrusion of rubber O-Rings and rubber X-Rings. It consists as standard of two windings which in the ends are cut in an angle. It can be used for static as well as for dynamic applications. It should not be used for rotating applications. As it is “open” it can be installed at places where solid Back-up Rings are impossible to install. It adapts easily to big temperature changes.

Working Range

The values should be considered as recommendations. A combination of maximum values should be avoided. Values stated below are related to the BakRings and not to the rubber seal they back up.

Pressure
Static up to 250 MPa depending on temperature, gap and BakRing® Compound.
Reciprocating up to 40 MPa depending on temperature, gap and BakRing® Compound.

Temperature
-200°C to + 260°C depending on compound.

Velocity
Reciprocating up to 2 m/sec.
Should not be used for rotating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring or X-Ring, it is possible to cover almost all fluids.

Compounds

Spiral BakRings are normally made in the very extrusion resistant Kefloy® 60, which is a blue, glass fibre filled modified PTFE.
Where the BakRing® is in direct contact with food or drugs, Kefloy 11 is recommended.

Compound	Materials	Static applications	Dynamic applications
		Pressure MPa	Pressure MPa
Kefloy® 11	Virgin PTFE	220	40
Kefloy® 13	PTFE / Bronze	270	60
Kefloy® 22	PTFE / Carbon / Graphite	270	60
Kefloy® 60	PTFE / Glass fibre Light blue	270	60
Kefloy® 72	PTFE / Glass fibre White	270	60

A range of other compounds are available on request.

do O-Ring Cross Sec. BS	do O-Ring Cross Sec. SMS	d Internal diameter.	D External diameter.	L1 Groove width	L2 Groove width	R Radius	G Radial gab	C Chamfer	W Bak Ring thickness	T Bak Ring Width
		h9	H9	+0.2/-0	+0.2/-0	Max.	Max.	Min.		
	1.6	D - 2.6	d + 2.6	3.00	4.00	0.2	0.05	0.5	1.30	1.0
1.78		D - 2.9	d + 2.9	3.80	5.30	0.3	0.06	0.6	1.45	1.4
	2.4	D - 4.0	d + 4.0	4.60	6.00	0.3	0.06	0.6	2.00	1.4
2.62		D - 4.5	d + 4.5	4.60	6.20	0.3	0.07	1.0	2.25	1.4
	3.0	D - 5.0	d + 5.0	5.40	6.80	0.3	0.07	1.0	2.50	1.4
3.53		D - 6.2	d + 6.2	5.70	7.70	0.5	0.08	1.3	3.10	1.4
5.33		D - 9.4	d + 9.4	8.50	10.80	0.5	0.10	2.0	4.70	1.7
	5.7	D-10.0	d+10.0	9.30	11.10	0.5	0.10	2.0	5.00	1.7
7.0		D-12.2	d+12.2	11.20	14.70	0.6	0.13	2.5	6.10	2.5
	8.4	D-15.0	d+15.0	13.20	15.40	0.6	0.13	3.0	7.50	2.5

Advantages

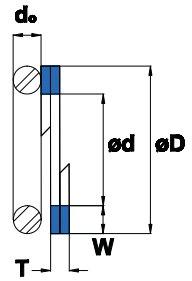
- Easy to install
- Available for all diameters up to 3.000 mm

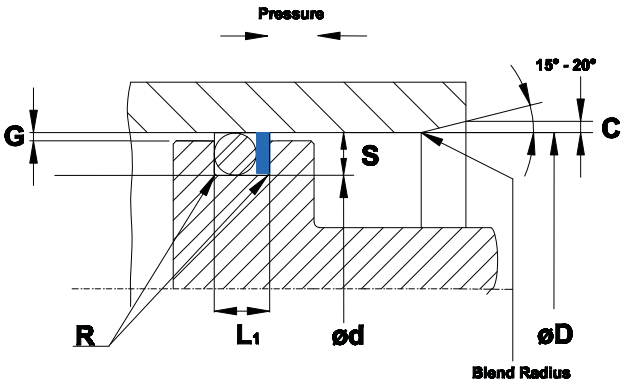
Seal Selection Guide

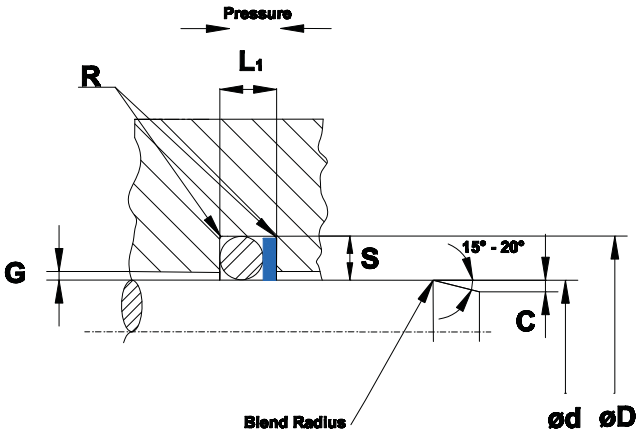
Ordering Example
External groove diameter: 50.5 mm
Internal groove diameter: 44.3 mm
Groove width: 5.7 mm

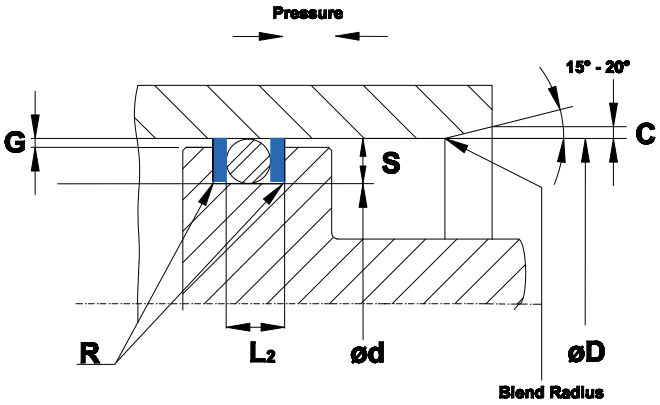
Part no S-0443-0505-14-11
Back-Up Ring® Type
Internal groove dia. x 10
External groove dia. x 10
Back-Up ring width x 10
Compound no
O-Ring size 44.04 x 3.53
O-Ring to be ordered separately

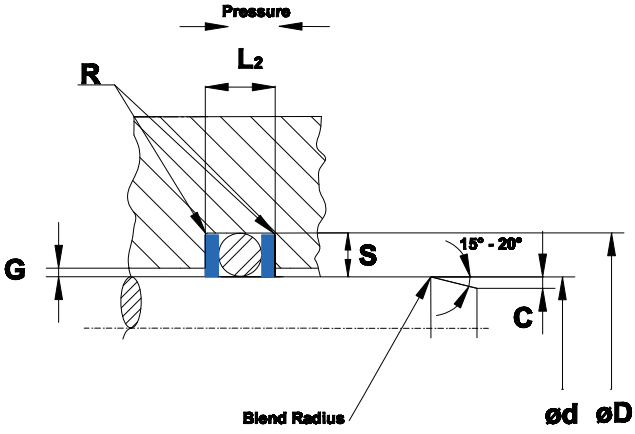
Type "S" Spiral











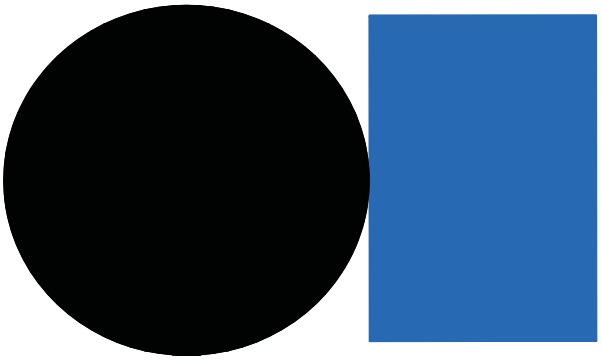
O-Ring Size
O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d +5%
O-Ring I.D. not smaller than d -10%

Important Note
The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Back-Up Rings

Kefloy Uncut BakRing® Type U-



Uncut BakRing® Type U-

Uncut BakRing® is used to prevent extrusion of rubber O-Rings and rubber X-Rings. It is a solid ring with a rectangular cross section. It can be used for static as well as for reciprocating and rotating applications.

Working Range

The values should be considered as recommendations. A combination of maximum values should be avoided. Values stated below are related to the BakRings and not to the rubber seal they back up.

Pressure
Static up to 300 MPa depending on temperature, gap and BakRing® Compound.
Dynamic up to 60 MPa depending on temperature, gap and BakRing® Compound.

Temperature
-200°C to + 260°C depending on compound.

Velocity
Reciprocating or rotating up to 2 m/sec. depending on pressure and compounds.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring or X-Ring, it is possible to cover almost all fluids.

Compounds

Uncut BakRings are normally made in the very extrusion resistant Kefloy® 60, which is a blue, glass fibre filled modified PTFE.

Where the BakRing® is in direct contact with food or drugs, Kefloy 11 is recommended.

Compound	Materials	Static applications	Dynamic applications
		Pressure MPa	Pressure MPa
Kefloy® 11	Virgin PTFE	220	40
Kefloy® 13	PTFE / Bronze	270	60
Kefloy® 22	PTFE / Carbon / Graphite	270	60
Kefloy® 60	PTFE / Glass fibre Light blue	270	60
Kefloy® 72	PTFE / Glass fibre White	270	60

A range of other compounds are available on request.

do O-Ring Cross Sec. BS	do O-Ring Cross Sec. SMS	d Internal diameter.	D External diameter.	L1 Groove width	L2 Groove width	R Radius	G Radial gab	C Chamfer	W Bak Ring thickness	T Bak Ring Width
		h9	H9	+0.2/-0	+0.2/-0	Max.	Max.	Min.		
	1.6	D - 2.6	d + 2.6	3.00	4.00	0.2	0.05	0.5	1.30	1.0
1.78		D - 2.9	d + 2.9	3.80	5.30	0.3	0.06	0.6	1.45	1.4
	2.4	D - 4.0	d + 4.0	4.60	6.00	0.3	0.06	0.6	2.00	1.4
2.62		D - 4.5	d + 4.5	4.60	6.20	0.3	0.07	1.0	2.25	1.4
	3.0	D - 5.0	d + 5.0	5.40	6.80	0.3	0.07	1.0	2.50	1.4
3.53		D - 6.2	d + 6.2	5.70	7.70	0.5	0.08	1.3	3.10	1.4
5.33		D - 9.4	d + 9.4	8.50	10.80	0.5	0.10	2.0	4.70	1.7
	5.7	D-10.0	d+10.0	9.30	11.10	0.5	0.10	2.0	5.00	1.7
7.0		D-12.2	d+12.2	11.20	14.70	0.6	0.13	2.5	6.10	2.5
	8.4	D-15.0	d+15.0	13.20	15.40	0.6	0.13	3.0	7.50	2.5

Advantages

- Available for all diameters up to 2.500 mm

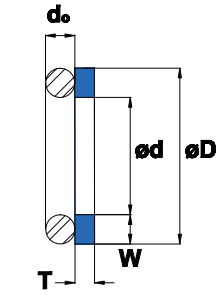
Seal Selection Guide

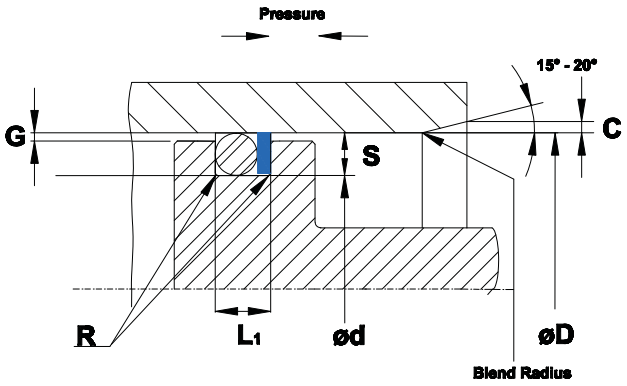
Ordering Example

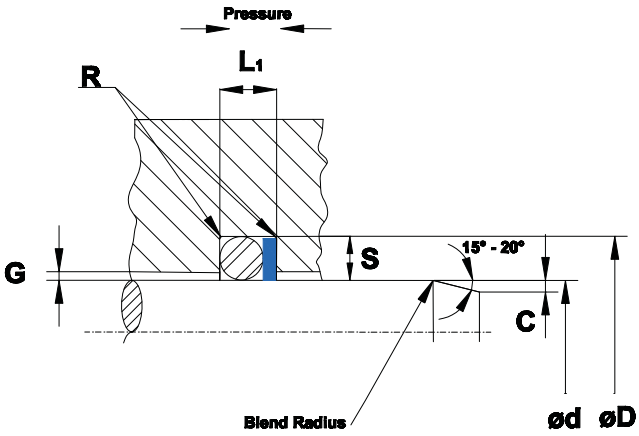
External groove diameter: 395.0 mm
Internal groove diameter: 382.8 mm
O-Ring cross section: 7.00 mm

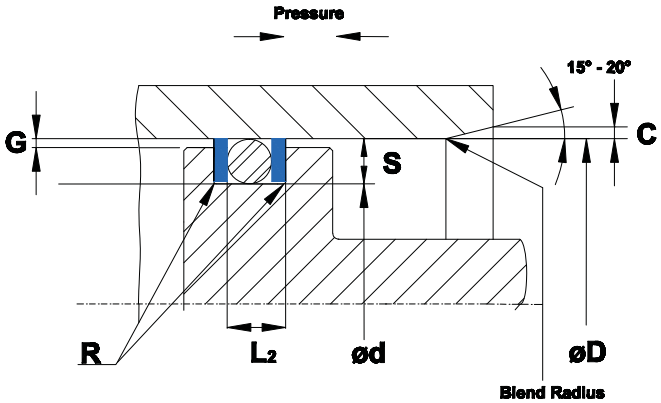
Part no U-3828-3950-25-13
BakRing® Type
Internal groove diameter x 10
External groove diameter x 10
BakRing® width x 10
Compound no

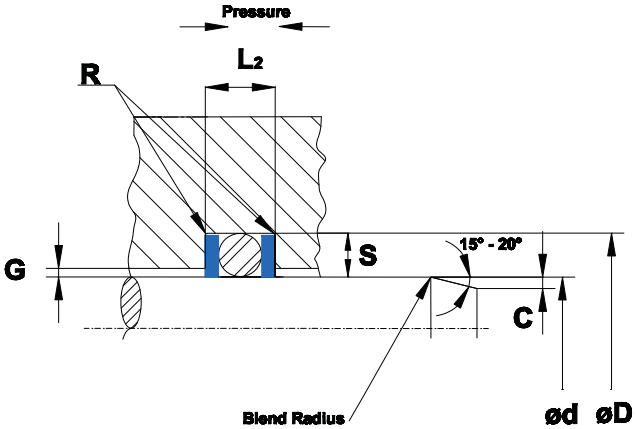
Type "U" Uncut











O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d +5%
O-Ring I.D. not smaller than d -10%

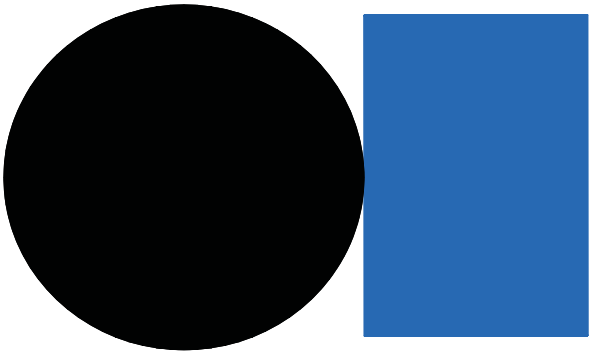
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Back-Up Rings

Kefloy Cut BakRing® Type C-



Cut BakRing® Type C-

Cut BakRing® is used to prevent extrusion of rubber O-Rings and rubber X-Rings. It is a solid ring with a rectangular cross section. It can be used for static as well as for reciprocating and rotating applications.

Working Range

The values should be considered as recommendations. A combination of maximum values should be avoided. Values stated below are related to the BakRings and not to the rubber seal they back up.

Pressure
Static up to 300 MPa depending on temperature, gap and BakRing® Compound.
Dynamic up to 60 MPa depending on temperature, gap and BakRing® Compound.

Temperature
-200°C to + 260°C depending on compound.

Velocity
Reciprocating or rotating up to 2 m/sec. depending pressure and on compounds.
Should not be used for rotating applications.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring or X-Ring, it is possible to cover almost all fluids.

Compounds

Cut BakRings are normally made in the very extrusion resistant Kefloy® 60, which is a blue, glass fibre filled modified PTFE.

Where the BakRing® is in direct contact with food or drugs, Kefloy 11 is recommended.

Compound	Materials	Static applications	Dynamic applications
		Pressure MPa	Pressure MPa
Kefloy® 11	Virgin PTFE	200	30
Kefloy® 13	PTFE / Bronze	250	50
Kefloy® 22	PTFE / Carbon / Graphite	250	50
Kefloy® 60	PTFE / Glass fibre Light blue	250	50
Kefloy® 72	PTFE / Glass fibre White	250	50

A range of other compounds are available on request.

do O-Ring Cross Sec. BS	do O-Ring Cross Sec. SMS	d Internal diameter.	D External diameter.	L1 Groove width	L2 Groove width	R Radius	G Radial gab	C Chamfer	W Bak Ring thickness	T Bak Ring Width
		h9	H9	+0.2/-0	+0.2/-0	Max.	Max.	Min.		
	1.6	D - 2.6	d + 2.6	3.00	4.00	0.2	0.05	0.5	1.30	1.0
1.78		D - 2.9	d + 2.9	3.80	5.30	0.3	0.06	0.6	1.45	1.4
	2.4	D - 4.0	d + 4.0	4.60	6.00	0.3	0.06	0.6	2.00	1.4
2.62		D - 4.5	d + 4.5	4.60	6.20	0.3	0.07	1.0	2.25	1.4
	3.0	D - 5.0	d + 5.0	5.40	6.80	0.3	0.07	1.0	2.50	1.4
3.53		D - 6.2	d + 6.2	5.70	7.70	0.5	0.08	1.3	3.10	1.4
5.33		D - 9.4	d + 9.4	8.50	10.80	0.5	0.10	2.0	4.70	1.7
	5.7	D-10.0	d+10.0	9.30	11.10	0.5	0.10	2.0	5.00	1.7
7.0		D-12.2	d+12.2	11.20	14.70	0.6	0.13	2.5	6.10	2.5
	8.4	D-15.0	d+15.0	13.20	15.40	0.6	0.13	3.0	7.50	2.5

Advantages

- Easy to install
- Available for all diameters up to 2.500 mm

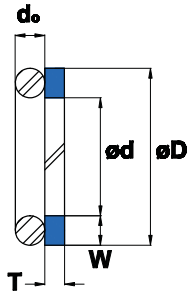
Seal Selection Guide

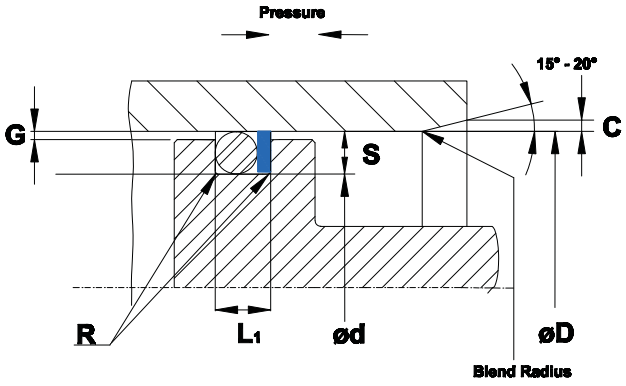
Ordering Example

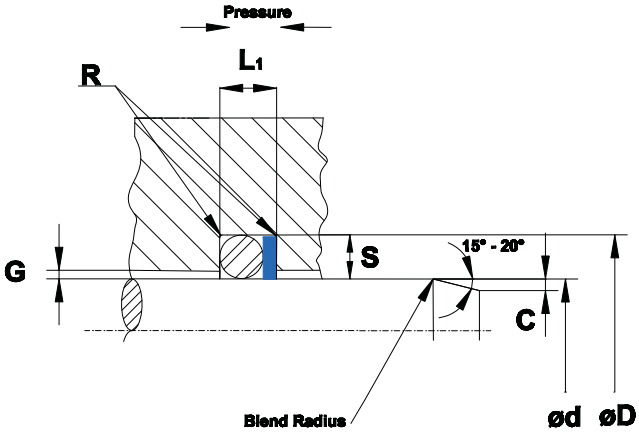
External groove diameter:	21.5 mm
Internal groove diameter:	18.6 mm
O-Ring cross section:	1.78 mm

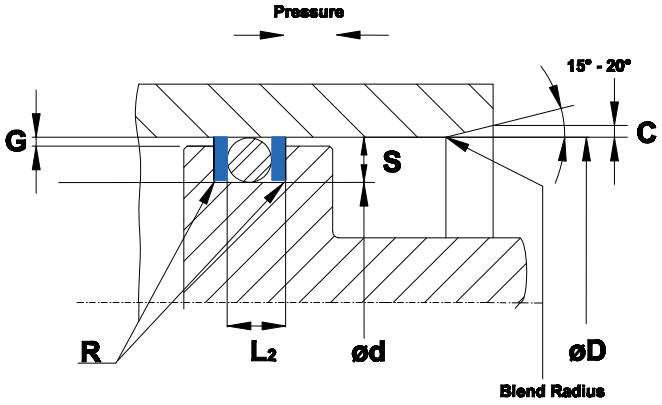
Part no C-0215-0186-14-60
BakRing® Type
Internal groove diameter x 10
External groove diameter x 10
BakRing® width x 10
Compound no

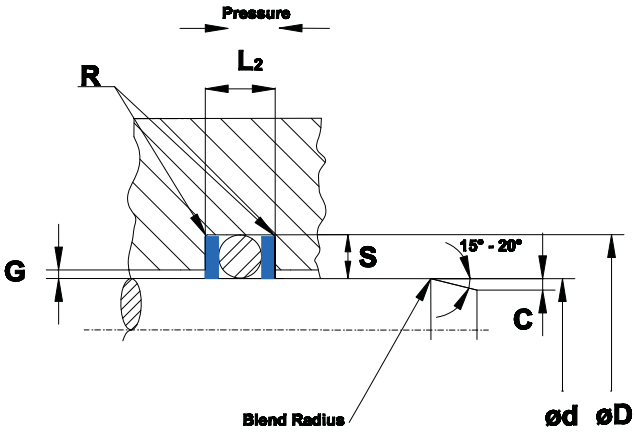
Type "C" Cut











O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d +5%
O-Ring I.D. not smaller than d -10%

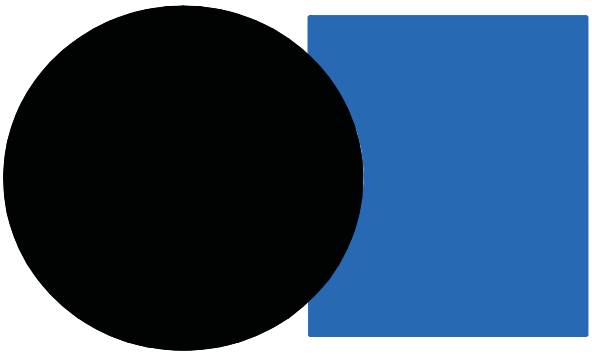
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Back-Up Rings

Kefloy Heavy Duty BakRing® Type H-



Heavy Duty BakRing® Type H-

Heavy Duty BakRing® is used to prevent extrusion of rubber O-Rings and rubber X-Rings. It is a solid ring with a concave cross section. The concave contact surface against the O-Ring protects the O-Ring against deformation. It can be used for static as well as for reciprocating and rotating applications.

Working Range

The values should be considered as recommendations. A combination of maximum values should be avoided. Values stated below are related to the BakRings and not to the rubber seal they back up.

Pressure
Static up to 400 MPa depending on temperature, gap and BakRing® Compound.
Dynamic up to 100 MPa depending on temperature, gap and BakRing® Compound.
For pressures exceeding above mentioned values, please contact your O.L. Seals distributor.

Temperature
-200°C to + 260°C depending on compound.

Velocity
Reciprocating or rotating up to 2 m/sec. depending on pressure and compounds.
Can be used for rotating applications in uncut execution.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right compound for the O-Ring or X-Ring, it is possible to cover almost all fluids.

Compounds

Heavy Duty BakRings are normally made in the very extrusion resistant Kefloy® 60, which is a blue, glass fibre filled modified PTFE.

Where the BakRing® is in direct contact with food or drugs, Kefloy 11 is recommended.

Compound	Materials	Static applications	Dynamic applications
		Pressure MPa	Pressure MPa
Kefloy® 11	Virgin PTFE	300	70
Kefloy® 13	PTFE / Bronze	400	100
Kefloy® 22	PTFE / Carbon / Graphite	400	100
Kefloy® 60	PTFE / Glass fibre Light blue	400	100
Kefloy® 72	PTFE / Glass fibre White	400	100

A range of other compounds are available on request.

do O-Ring Cross Sec. BS	do O-Ring Cross Sec. SMS	d Internal diameter.	D External diameter.	L1 Groove width	L2 Groove width	R Radius	G Radial gab	C Chamfer	W Bak Ring thickness	T Bak Ring Width
		h9	H9	+0.2/-0	+0.2/-0	Max.	Max.	Min.		
	1.6	D - 2.6	d + 2.6	3.00	4.00	0.2	0.05	0.5	1.30	1.0
1.78		D - 2.9	d + 2.9	3.80	5.30	0.3	0.06	0.6	1.45	1.4
	2.4	D - 4.0	d + 4.0	4.60	6.00	0.3	0.06	0.6	2.00	1.4
2.62		D - 4.5	d + 4.5	4.60	6.20	0.3	0.07	1.0	2.25	1.4
	3.0	D - 5.0	d + 5.0	5.40	6.80	0.3	0.07	1.0	2.50	1.4
3.53		D - 6.2	d + 6.2	5.70	7.70	0.5	0.08	1.3	3.10	1.4
5.33		D - 9.4	d + 9.4	8.50	10.80	0.5	0.10	2.0	4.70	1.7
	5.7	D-10.0	d+10.0	9.30	11.10	0.5	0.10	2.0	5.00	1.7
7.0		D-12.2	d+12.2	11.20	14.70	0.6	0.13	2.5	6.10	2.5
	8.4	D-15.0	d+15.0	13.20	15.40	0.6	0.13	3.0	7.50	2.5

Advantages

- Maximum protection of the O-Ring
- Available for all diameters up to 2.500 mm

Seal Selection Guide

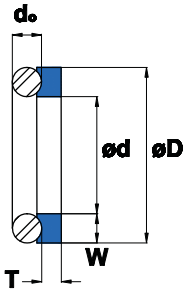
Ordering Example

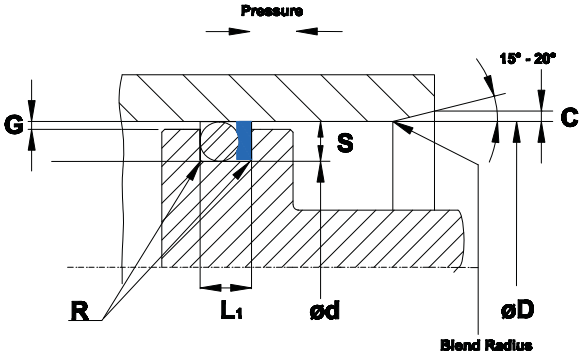
External groove diameter: 75.3 mm
Internal groove diameter: 70.8 mm
O-Ring cross section: 2.62 mm

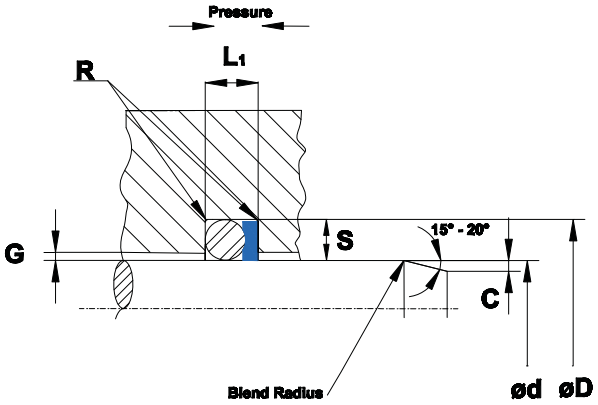
Part no H-0753-0708-14-22
BakRing® Type
Internal groove diameter x 10
External groove diameter x 10
BakRing® width x 10
Compound no

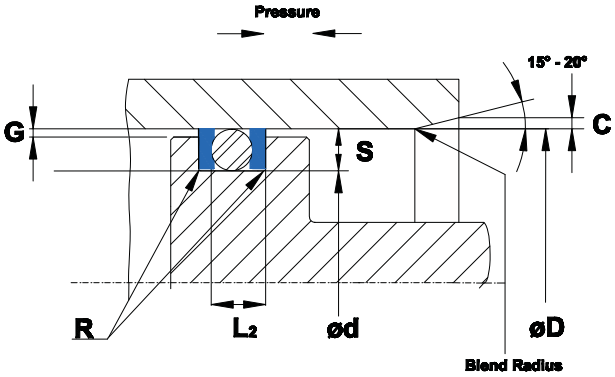
Heavy Duty BakRing type H can also be delivered in cut execution. Add suffix “C” to the compound code to order this execution. Example: H-0753-0708-14-22C

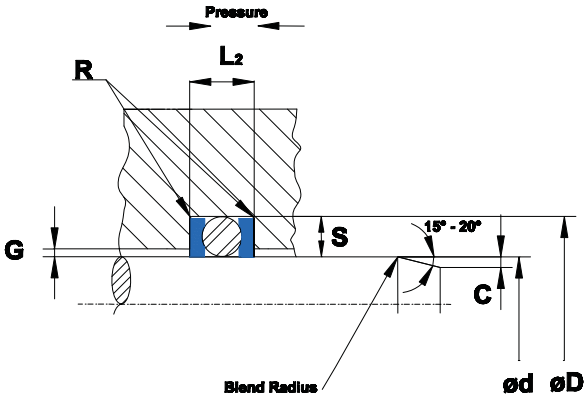
Type "H" Heavy











O-Ring Size

O-Ring cross section according to installation dimensions.
O-Ring I.D. as close to dia. d as possible.
O-Ring I.D. not bigger than d +5%
O-Ring I.D. not smaller than d -10%

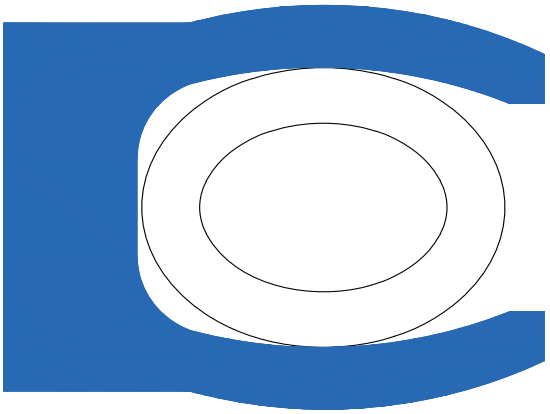
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Piston Seals

MupuSeal® R Type 3062-



MupuSeal® R Type 3062-

Is a single acting spring energized piston seal for static and semi dynamic applications.
MupuSeal® R consists of jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

MupuSeal® R has symmetric sealing lips. The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications and applications with a very little movement.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-120°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static or semi static applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Piston Seals

MupuSeal® R Type 3062-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

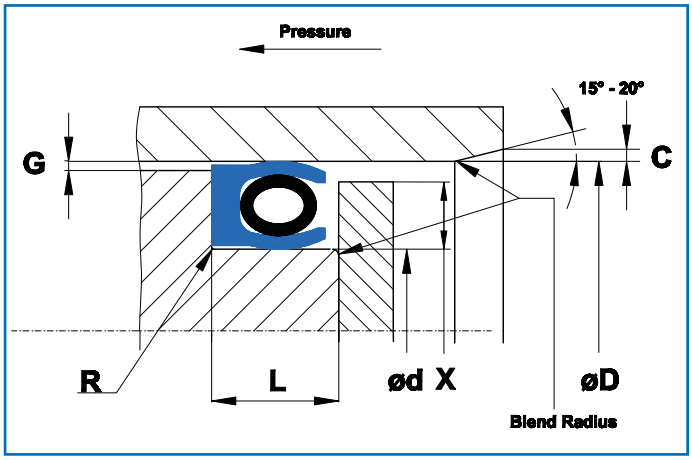
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 32 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Piston diameter: 55.3 mm

Part no 30624-0553-13-S
MupuSeal® type
Series
Piston dia. x 10
Jacket compound no
Spring material



Installation dimensions for MupuSeal type 3062- (With standard groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30620	000	6.0	øD-2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	6 - 13.99
30621	100	13.0	øD-4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	14 - 24.99
30622	200	18.0	øD-6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	25 - 45.99
30623	300	28.0	øD-9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	46 - 124.99
30624	400	45.0	øD-12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.12	125 – 629.99
30625	500	100.0	øD-19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630 -

Installation dimensions for MupuSeal type 3064- (With extended groove width).

MupuSeal Dynamic Cross section		øD Bore	ød Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia. H9	Dia. h9	+ 0.2 - 0	Max.	Min.	2 MPa (20 bar)	10 MPa (100 bar)	20 MPa (200 bar)	40 MPa (400 bar)	
30640	000	6.0	øD-2.90	3.80	0.4	0.4	0.25	0.15	0.10	0.07	6 - 13.99
30641	100	13.0	øD-4.50	4.65	0.4	0.6	0.35	0.20	0.15	0.08	14 - 24.99
30642	200	18.0	øD-6.20	5.70	0.6	0.7	0.50	0.25	0.20	0.10	25 - 45.99
30643	300	28.0	øD-9.40	8.50	0.8	0.8	0.60	0.30	0.25	0.12	46 - 124.99
30644	400	45.0	øD-12.20	11.20	0.8	0.9	0.90	0.50	0.40	0.20	125 – 629.99
30645	500	100.0	øD-19.00	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 -

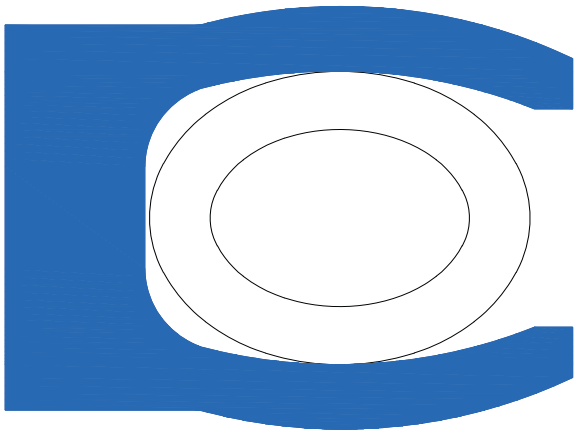
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Rod Seals

MupuSeal® R Type 3061-



MupuSeal® R Type 3061-

Is a single acting spring energized rod seal for static and semi dynamic applications.
MupuSeal® R consists of jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

MupuSeal® R has symmetric sealing lips. The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications and applications with a very little movement.
MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-120°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static or semi static applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Rod Seals

MupuSeal® R Type 3061-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- Standard grooves according to ISO 3771 and MIL G 5514F
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

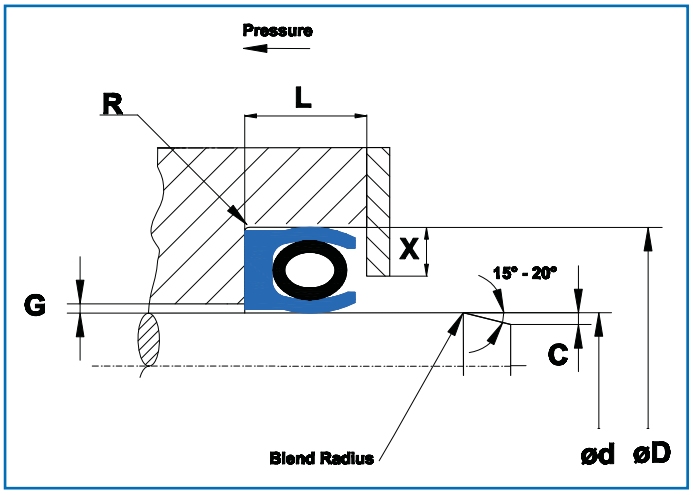
Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
	Steel Chrome plated steel Cast iron	Kefloy® 13 Kefloy® 32
Hydraulic oil Motor oil Grease Other mineral oils	Aluminium Stainless steel Bronze Soft metals	Kefloy® 25 Kefloy® 28 Kefloy® 32 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

Seal Selection Guide

Ordering Example
Rod diameter: 98.7 mm

Part no 30614-0987-32-E
MupuSeal® type
Series
Rod dia. x 10
Jacket compound no
Spring material



Installation dimensions for MupuSeal R type 3061- (With standard groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30610	000	3.0	ød+2.90	2.40	0.4	0.4	0.20	0.10	0.08	0.05	3 - 9.99
30611	100	8.0	ød+4.50	3.60	0.4	0.6	0.25	0.15	0.10	0.07	10 - 19.99
30612	200	12.0	ød+6.20	4.80	0.6	0.7	0.35	0.20	0.15	0.08	20 - 39.99
30613	300	20.0	ød+9.40	7.10	0.8	0.8	0.50	0.25	0.20	0.10	40 - 119.99
30614	400	35.0	ød+12.20	9.50	0.8	0.9	0.60	0.30	0.25	0.15	120 - 629.99
30615	500	80.0	ød+19.00	15.00	0.8	1.5	0.90	0.50	0.40	0.20	630-

Installation dimensions for MupuSeal R type 3063- (With extended groove width).

MupuSeal Dynamic Cross section		ød Rod	øD Groove	L	R	X	G Radial gap				Recomm. dia/cross
Part no.	Series	Min. Dia d h9	D H9	+ 0.2 - 0	Max.	Min.	2MPa (20 bar)	10MPa (100 bar)	20MPa (200 bar)	40MPa (400 bar)	
30630	000	3.0	ød+2.90	3.80	0.4	0.4	0.25	0.15	0.10	0.07	3 - 9.99
30631	100	8.0	ød+4.50	4.65	0.4	0.6	0.35	0.20	0.15	0.08	10 - 19.99
30632	200	12.0	ød+6.20	5.70	0.6	0.7	0.50	0.25	0.20	0.10	20 - 39.99
30633	300	20.0	ød+9.40	8.50	0.8	0.8	0.60	0.30	0.25	0.12	40 - 119.99
30634	400	35.0	ød+12.20	11.20	0.8	0.9	0.90	0.50	0.40	0.20	120 - 629.99
30435	500	80.0	ød+19.00	20.00	0.8	1.5	0.95	0.60	0.45	0.25	630 -

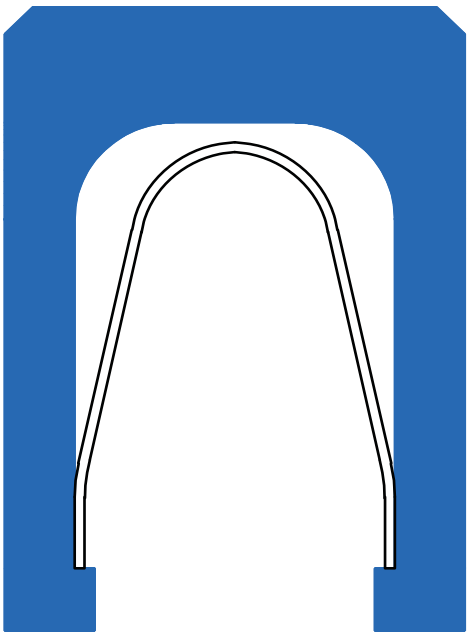
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Flange Seals

MupuSeal® Type 3051-



MupuSeal® Type 3051-

Is a spring energized flange seal for internal pressure and dynamic applications. MupuSeal® consists of jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

The flexible V-spring gives a good spring force which ensures the sealing capacity. MupuSeal® is designed for dynamic applications at moderate speeds. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal® is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Flange Seals ID

MupuSeal® Type 3051-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

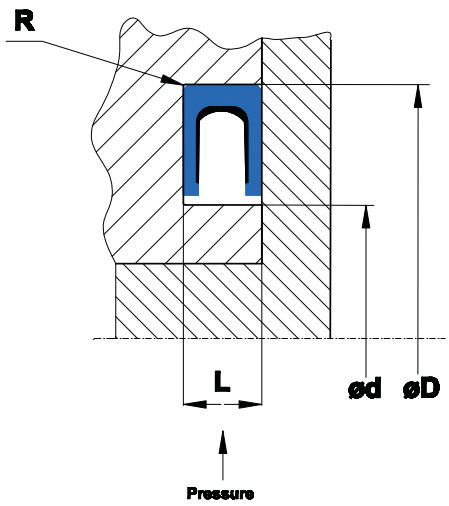
Spring Energized Flange Seals ID

MupuSeal® Type 3051-

Seal Selection Guide

Ordering Example
Groove outside diameter: 213.5 mm

Part no 30513-2135-28-H
MupuSeal® type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Outer dia. øD Groove	Inner dia. ød	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. H11	dia.	+0.15 -0	Toll.	Max.	
30511	100	32.0	øD-7.20	2.25	+0.03/-0	0.4	32 - 44.99
30512	200	45.0	øD-9.60	3.10	+0.05/-0	0.6	45 - 99.99
30513	300	80.0	øD-14.20	4.70	+0.08/-0	0.8	100 - 199.99
30514	400	110.0	øD-19.00	6.10	+0.10/-0	0.8	200 - 999.99
30515	500	400.0	øD-30.00	9.50	+0.20/-0	0.8	1000 -

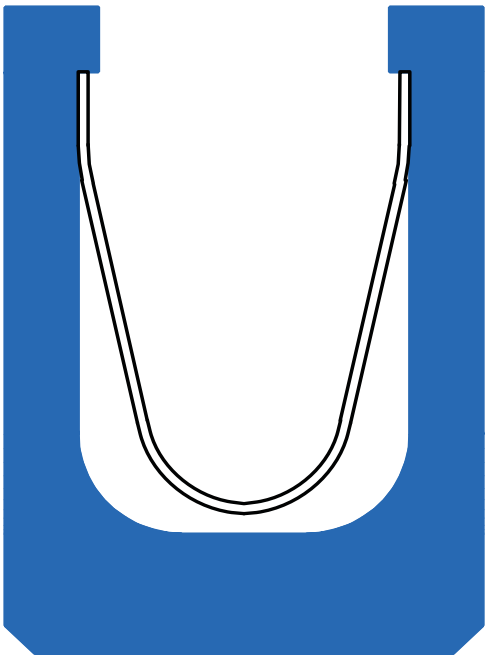
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Flange Seals

MupuSeal® Type 3052-



MupuSeal® Type 3052-

Is a spring energized flange seal for external pressure and dynamic applications. MupuSeal® consists of jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

The flexible V-spring gives a good spring force which ensures the sealing capacity. MupuSeal® is designed for dynamic applications at moderate speeds. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

Temperature
-70°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Rotating speed up to 2 m/sec.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal® is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Flange Seals OD

MupuSeal® Type 3052-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

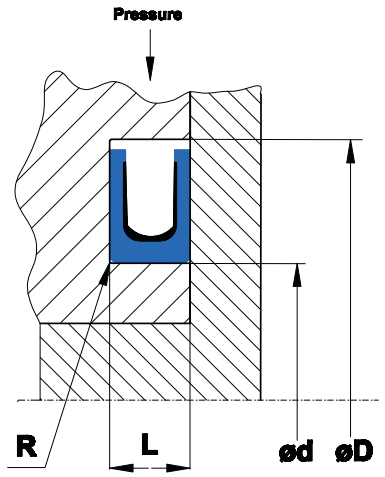
Spring Energized Flange Seals OD

MupuSeal® Type 3052-

Seal Selection Guide

Ordering Example
Groove outside diameter: 83.7 mm

Part no 30522-0837-40-S
MupuSeal® type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Inner dia. ød Groove	Outer dia. øD	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. h11	dia.	+0.15 -0	Toll.	Max.	
30521	100	40.0	ød+7.20	2.25	+0.05/-0	0.4	40 – 49.99
30522	200	45.0	ød+9.60	3.10	+0.08/-0	0.6	50 – 99.99
30523	300	80.0	ød+14.20	4.70	+0.10/-0	0.8	100 – 199.99
30524	400	110.0	ød+19.00	6.10	+0.15/-0	0.8	200 – 999.99
30525	500	400.0	Ød+30.00	9.50	+0.20/-0	0.8	1000 –

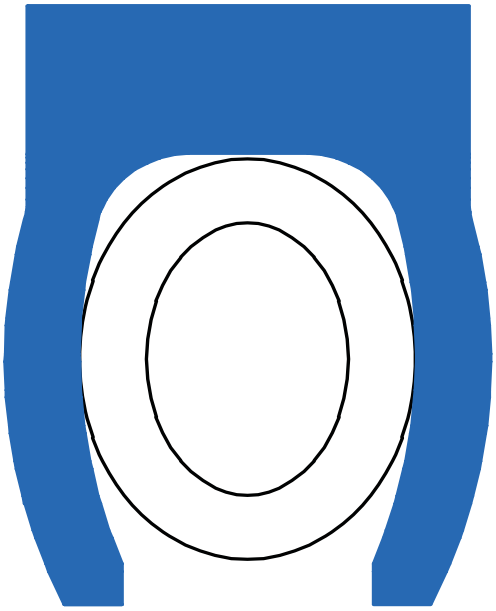
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Flange Seals

MupuSeal® R Type 3071-



MupuSeal® R Type 3071-

Is a spring energized flange seal for internal pressure and static applications. MupuSeal® R consists of jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-200°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static and semi dynamic applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Flange Seals ID

MupuSeal® R Type 3071-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

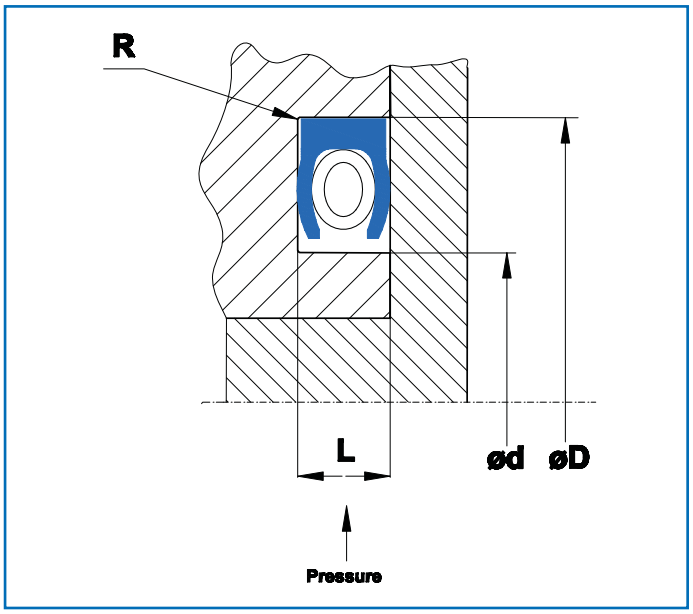
Spring Energized Flange Seals ID

MupuSeal® R Type 3071-

Seal Selection Guide

Ordering Example
Groove outside diameter: 422.7 mm

Part no 30714-4227-32-H
MupuSeal® R type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Outer dia. øD Groove	Inner dia. ød	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. H11	dia.	+0.15 -0	Toll.	Max.	
30710	000	10.0	øD-4.80	1.45	+0.03/-0	0.4	12 – 13.99
30711	100	13.0	øD-7.20	2.25	+0.03/-0	0.4	14 – 24.99
30712	200	18.0	øD-9.60	3.10	+0.05/-0	0.6	25 – 45.99
30713	300	28.0	øD-14.20	4.70	+0.08/-0	08	46 – 124.99
30714	400	45.0	øD-19.00	6.10	+0.10/-0	0.8	125 – 999.99
30715	500	110.0	øD-30.00	9.50	+0.20/-0	0.8	1000 –

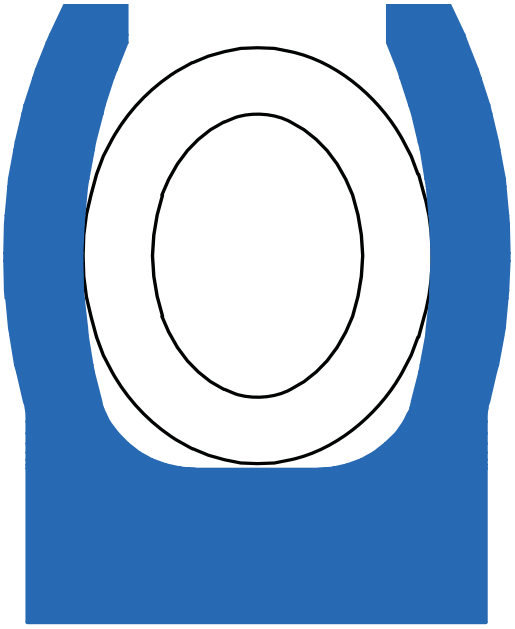
Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.

O.L. Seals A/S

Spring Energized Flange Seals

MupuSeal® R Type 3072-



MupuSeal® R Type 3072-

Is a spring energized flange seal for external pressure and static applications. MupuSeal® R consists of jacket of Kefloy® energized by a spiral spring.

The steel spring is available in three different chemical resistant alloys.

• Stainless steel	AISI 301; DIN 1.4310
• Hasteloy™	C-276; EN ISO 15156; NACE MR-01-75
• Elgiloy™	ASTM F1058; EN ISO 15156; NACE MR-01-75

Hasteloy™ is a trademark of Haynes International Inc.
Elgiloy™ is a registered trademark of Elgiloy Specialty Metals

The helical wound spring gives a high spring force which ensures excellent sealing capacity. MupuSeal® R is excellent for static applications. MupuSeal® can be used with virtually all fluids.
MupuSeal® is pressure responsive.

Working Range

Pressure
Up to 80 MPa in standard execution. For pressures exceeding 80 MPa, please contact your O.L. Seals distributor.

Temperature
-200°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

Velocity
Should be used for static and semi dynamic applications only.

Fluids
Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right alloy for the spring energizer, it is possible to cover almost all fluids.

Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- Extreme temperatures
- Aggressive environments
- Food and drug
- Offshore
- Chemical processes
- Refrigeration
- Energy
- Electronic
- Machine tools
- Aviation
- Defence

Spring Energized Flange Seals OD

MupuSeal® R Type 3072-

Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Simple groove design
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water Water hydraulic Steam Non lubricating fluids Air, dry or lubricated	Steel Chrome plated steel Cast iron Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90
Hydraulic oil Motor oil Grease Other mineral oils	Steel Chrome plated steel Cast iron	Kefloy® 11 Kefloy® 13 Kefloy® 28 Kefloy® 90
	Aluminium Stainless steel Bronze Soft metals	Kefloy® 11 Kefloy® 25 Kefloy® 28 Kefloy® 40 Kefloy® 90

For other fluids or sealing surfaces, please consult your O.L. Seals distributor.

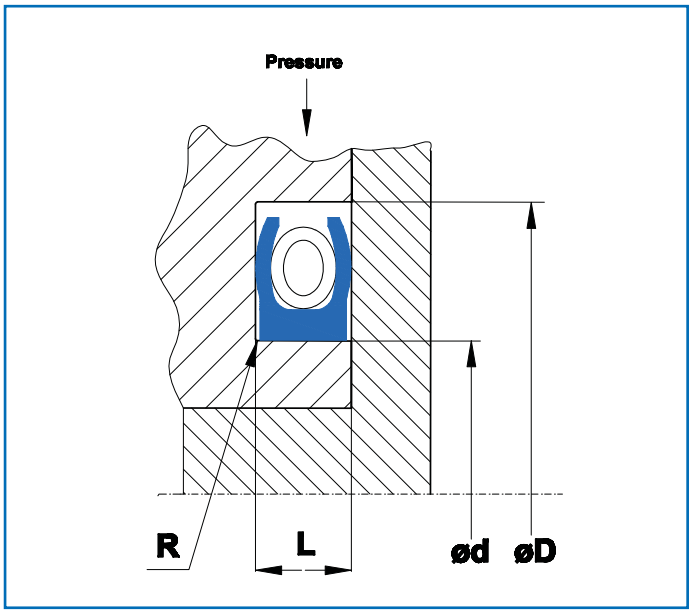
Spring Energized Flange Seals OD

MupuSeal® R Type 3072-

Seal Selection Guide

Ordering Example
Groove inside diameter: 85.8 mm

Part no 30722-0858-32-S
MupuSeal® R type
Series
Groove dia. x 10
Jacket compound no
Spring material



Installation dimensions

MupuSeal Face Cross section		Nom. dia. ød	øD	Groove length L		Radius R	Recomm. dia/cross
Part no.	Series	Min. dia. h11	dia.		Toll.	Max.	
30720	000	3.0	ød+4.80	1.45	+0.03/-0	0.4	3 – 9.99
30721	100	8.0	ød+7.20	2.25	+0.05/-0	0.4	10 – 19.99
30722	200	12.0	ød+9.60	3.10	+0.08/-0	0.6	20 – 39.99
30723	300	20.0	ød+14.20	4.70	+0.10/-0	0.8	40 – 119.99
30724	400	35.0	ød+19.00	6.10	+0.15/-0	0.8	120 – 999.99
30725	500	80.0	ød+30.00	9.50	+0.20/-0	0.8	1000 –

Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system dertermines the combinations of maximum values.