



# Guarnizioni Tornite

## Machined Seals





## **GUARNIZIONI TORNITE** MACHINED SEALS

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# NON PERDERE. QUINDI GARANTIRE.



Non si tratta solo di offrire una vasta gamma di referenze di prodotto a stock ma anche di garantire un'eccellente qualità nel servizio.

Il nostro staff fornisce quotidianamente consulenza, scouting di prodotto, flessibilità e velocità di reazione in Italia e sui mercati internazionali.

Con le sedi di Vicenza, Brescia, Mantova, Modena, Torino e un sistema logistico ottimizzato, organizziamo e distribuiamo gli articoli in tempi rapidi.

Grazie alla nostra capacità di assistenza online e vendita e-commerce, supportata da processi logistici completamente automatizzati, arriviamo ovunque i nostri clienti abbiano bisogno del nostro intervento, consulenza o fornitura.

# NOT LOSING. THEREFORE GUARANTEEING.

It's not only about offering a full range of product references in stock, but also guaranteeing excellent service quality. Our staff provides daily consulting, product scouting, flexibility and reaction speed in Italy and for international markets.

With facilities in Vicenza, Brescia, Mantova, Modena, Torino and an optimized logistics system, we organize and distribute items quickly.

Thanks to our online service and e-commerce capability, supported by fully automated logistical processes, we arrive wherever our customers need our intervention, advice or delivery.



## I NOSTRI SERVIZI OUR SERVICES



**CONSULENZA E ASSISTENZA TECNICA**  
CONSULTANCY AND TECHNICAL ASSISTANCE



**MILIONI DI PRODOTTI A MAGAZZINO**  
MILLIONS OF PRODUCTS IN STOCK



**LOGISTICA INTEGRATA E KANBAN**  
INTEGRATED LOGISTICS AND KANBAN



**CONTROLLO QUALITÀ IN ENTRATA E IN USCITA**  
INBOUND AND OUTBOUND QUALITY CONTROL



**PROGETTAZIONE E PRODUZIONE A DISEGNO DI GUARNIZIONI TORNITE**  
DESIGN AND CUSTOMIZED PRODUCTION OF MACHINED SEALS



**ETICHETTE PERSONALIZZATE E QR CODE**  
CUSTOMIZED LABELS AND QR CODES



**ORDINI WEB**  
WEB ORDERS



**RILEVAZIONE CAMPIONI E KIT DEL CLIENTE**  
ARTICLE DETECTION AND KIT ASSEMBLY



**ASSEMBLAGGIO E COLLAUDO TUBI E RACCORDI**  
ASSEMBLY AND TESTING OF HOSES AND FITTINGS



**EVENTI FORMATIVI**  
TRAINING EVENTS



**FRIDLE**  
**FRIDLE GROUP**

# SKF SEALS DISTRIBUTOR

Out of the Fridle experience we have established a new company division that is specialised in consulting, design and production of custom turned gaskets. Thanks to the SKF technology we can guarantee the highest performance sealing solution for any sector of application. We are able to machine elastomeric and thermoplastic materials with an outside diameter of up to 600 mm, guaranteeing a high quality and efficient service by offering each customer endless design and sealing solutions.

Dall'esperienza di Fridle è nata una nuova divisione aziendale specializzata nella consulenza, progettazione e produzione di guarnizioni tornite su misura. Grazie alla tecnologia SKF possiamo garantire la soluzione di tenuta più performante in qualsiasi settore di applicazione. Possiamo lavorare materiali elastomerici e termoplastici fino a un diametro esterno di 600 mm, garantendo un servizio di grande qualità ed efficienza offrendo a ogni cliente infinite soluzioni di design e di tenuta.



**PROGETTAZIONE E PRODUZIONE  
A DISEGNO DI GUARNIZIONI**  
DESIGN AND CUSTOMIZED SEALS PRODUCTION



**MATERIALI CERTIFICATI**  
CERTIFIED MATERIALS



**VELOCITÀ DI ESECUZIONE**  
FAST SERVICE



**CONTROLLO QUALITÀ IN ENTRATA E IN USCITA**  
INBOUND AND OUTBOUND QUALITY CONTROL



**EVENTI FORMATIVI**  
TRAINING EVENTS



# GUARNIZIONI TORNITE



Lo sviluppo di nuove applicazioni di tenuta rende fondamentale la scelta di materiali sempre più performanti. Le soluzioni di tenuta devono affrontare velocità, pressioni e temperature sempre maggiori immerse in fluidi scarsamente lubrificanti.

La compatibilità chimica dei materiali risulta una variabile importante da considerare, soprattutto con fluidi HFA, HFB o i moderni oli biodegradabili.

In un contesto in continua evoluzione, Fridle Group propone una gamma di oltre 15 materiali suddivisi tra: elastomeri, poliuretani e termoplastici in grado di soddisfare le applicazioni più critiche.

Le macchine utensili di concezione SKF, utilizzate da Fridle Group, permettono di lavorare materiali elastomerici e termoplastici fino a un diametro esterno di 600 mm.

I profili delle guarnizioni prodotte da lavorazione meccanica possono essere sia standard sia speciali.

## MACHINED SEALS

Selecting the most performing materials is critical in the development of new sealing solutions.

Seals must face very demanding conditions of speed, pressure and temperature and frequently in contact with poor lubricating materials.

The materials chemical compatibility is very important, especially with HFA, HFB fluids and with biodegradable oils.

In an ever-evolving context, Fridle Group offers a range of 15 materials, divided between elastomers, polyurethans and thermoplastic, capable to meet the requirements of the most critical applications.

The SKF machines operated by Fridle Group, can lathe elastomeric and thermoplastic materials with an outer diameter up to 600 mm. The machined sealing profiles can be standard or customized.



Elastomers are extremely flexible materials and can easily adjust to any surface.

Thanks to their structure, they have a high elasticity and resilience and usually offer a good compression set.

Thermoplastic elastomers, better known as polyurethanes, demonstrate the same properties of elastomers but they are harder and more wear resistant.

Thermoplastic materials are essentially harder and more rigid, they possess higher mechanical characteristics.

Our expertise allows us to guide the customer in choosing the correct sealing solutions to meet all requirements, produced with the design and the material that best suit the application, constantly contributing to the improvement of the finished product.

## I MATERIALI SKF SKF MATERIALS

I materiali elastomerici, estremamente flessibili, si adattano a qualsiasi superficie con il minimo sforzo.

Grazie alla loro struttura hanno elevata elasticità e spesso offrono un ridotto compression set.

Gli elastomeri termoplastici, più comunemente conosciuti come poliuretani, vantano le caratteristiche degli elastomeri ma con elevata durezza e resistenza all'usura.

I materiali termoplastici sono più duri e rigidi, vantano elevate caratteristiche meccaniche.

La nostra esperienza di oltre 40 anni ci permette di guidare il cliente nella scelta della soluzione di tenuta su misura per le proprie necessità, realizzata con il profilo ed il materiale che meglio si adattano all'applicazione, contribuendo al miglioramento continuo delle performance del prodotto finito.

# ELASTOMERI TERMOPLASTICI POLIURETANI THERMOPLASTIC ELASTOMERS POLIURETHANES

## SKF ECOPUR

Poliuretano (TPU) con ottima resistenza all'abrasione e basso compression set. Può essere utilizzato con olio minerale in applicazioni fino a 400 bar.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'ABRASIONE.**

Thermoplastic polyurethane with an excellent resistance to abrasion and low compression set.

It can be used in mineral oil and in applications up to 400 bar.

### **MAIN FEATURE: ABRASION RESISTANCE.**

## SKF ECOPUR LD

Poliuretano colato (CPU) che presenta proprietà simili a quelle dell'ECOPUR. Copre una gamma dimensionale da diametri di 600 mm a 1200 mm.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'ABRASIONE.**

Cast polyurethane (CPU) that features similar properties to ECOPUR. It covers the dimensional range from diameters of 600 mm to 1200 mm.

### **MAIN FEATURE: ABRASION RESISTANCE.**

## SKF G-ECOPUR

Poliuretano colato (CPU) che presenta proprietà simili a quelle dell'H-ECOPUR. Copre una gamma dimensionale da diametri di 540 mm a 4000 mm.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'ABRASIONE.**

Cast polyurethane (CPU) that features similar properties to ECOPUR. It covers the dimensional range from diameters of 600 mm to 1200 mm.

### **MAIN FEATURE: ABRASION RESISTANCE.**

## SKF H-ECOPUR

Poliuretano (TPU) resistente all'idrolisi, ottime prestazioni meccaniche e resistenza all'abrasione. Utilizzabile in acqua fino a 90°C. È particolarmente adatto ad applicazioni in ambito alimentare e marino.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'IDROLISI.**

Hydrolysis resistant thermoplastic polyurethane, with great mechanical properties.

It can be used in water up to 90°C; it is recommended for use in food and marine applications.

### **MAIN FEATURE: HYDROLYSIS RESISTANCE.**

## SKF S-ECOPUR

Poliuretano (TPU) autolubrificante che permette di ridurre attrito ed usura. Può essere utilizzato in applicazioni con acqua o pneumatiche.

### **PROPRIETÀ SPECIFICA: AUTOLUBRIFICAZIONE.**

Self-lubricated thermoplastic polyurethane optimized to reduce friction and improve wear resistance.

It is suitable for most critical applications in water hydraulics and in non-lubricated pneumatics.

### **MAIN FEATURE: SELF-LUBRICATION.**

## SKF T-ECOPUR

Poliuretano (TPU) per applicazioni a basse temperature, garantisce le medesime proprietà dell'ECOPUR in applicazioni fino a -50°C.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALLE BASSE TEMPERATURE.**

Thermoplastic polyurethane for low temperature applications.

It guarantees the same properties of ECOPUR in applications up to -50°C.

### **MAIN FEATURE: RESISTANCE TO LOW TEMPERATURES.**

## SKF X-ECOPUR

Poliuretano (TPU) ad elevata durezza, ottime proprietà di riduzione dell'attrito e resistenza all'usura e alle elevate pressioni, Può essere utilizzato in applicazioni con elevati gap radiali.

**PROPRIETÀ SPECIFICA: RESISTENZA ALL'USURA E DUREZZA.**

Hard grade thermoplastic polyurethane, it provides outstanding friction reduction and wear and pressure resistance. Suitable for applications with larger clearances, improving the performances of standard TPUs and thermoplastic materials.

**MAIN FEATURE: WEAR RESISTANCE.**

## SKF X-ECOPUR-H

Poliuretano (TPU) ad elevata durezza che garantisce le performance meccaniche di SKF X-Ecopur in applicazioni con fluidi a base acquosa, grazie alle proprietà di resistenza all'idrolisi.

**PROPRIETÀ SPECIFICA: RESISTENZA ALL'IDROLISI E DUREZZA.**

Extremely hard polyurethane ,it guarantees the mechanical performances of X-Ecopur in water-based fluids thanks to its outstanding hydrolysis resistance

**MAIN FEATURE: HYDROLYSIS RESISTANCE AND HARDNESS.**

## SKF X-ECOPUR-S

Poliuretano (TPU) ad elevata durezza che unisce alle caratteristiche di resistenza all'estrusione degli agenti lubrificanti che riducono sensibilmente l'attrito ed ottimizzano le prestazioni in applicazioni a secco.

**PROPRIETÀ SPECIFICA: AUTOLUBRIFICAZIONE E DUREZZA.**

Extremely hard polyurethane which combines a better extrusion resistance to lubricating agents reducing considerably friction and optimizing the performances under poor lubricated conditions.

**MAIN FEATURE: SELF-LUBRICATION AND HARDNESS.**

## ELASTOMERI ELASTOMERS

### SKF ECORUBBER-1

Materiale elastomerico NBR con buona resistenza agli oli minerali, fluidi HFA, HFB e HFC.

**PROPRIETÀ SPECIFICA: VERSATILITÀ D'IMPIEGO.**

NBR based elastomer with good resistance to mineral oils and HFA, HFB and HFC pressure fluids.

**MAIN FEATURE: VERSATILITY.**

### SKF ECORUBBER-H

Gomma acrilonitrile-butadiene idrogenata (HNBR).con elevata resistenza termica (fino a 150 °C, 170 °C per brevi periodi), ottima resistenza chimica e agli agenti atmosferici. Compatibile con idrocarburi alifatici, on compatibile con carburanti aromatici, e solventi clorurati.

**PROPRIETÀ SPECIFICA: RESISTENZA TERMICA.**

Hydrogenated rubber with high thermal resistance (up to 150 °C, 170 °C for short periods) and excellent chemical and weather resistance.

**MAIN FEATURE: CHEMICAL RESISTANCE.**

### SKF ECORUBBER-2

Elastomero a base di gomma fluorurata (FKM), con un'elevata resistenza a calore, agenti atmosferici, ozono e agenti chimici. Compatibile con oli minerali e grassi contenenti zolfo, con fluidi in pressione di tipo HFD e con il petrolio greggio.

**PROPRIETÀ SPECIFICA: RESISTENZA AL CALORE.**

FKM-based elastomer, it offers excellent resistance to heat, weathering, ozone and many chemicals. Compatible with mineral oils and greases containing sulphur, HFD pressure fluids and crude oil

**MAIN FEATURE: HEAT RESISTANCE.**

## SKF ECORUBBER-3

Materiale elastomerico a base di gomma etilene-propilene (EPDM), con eccellente resistenza all'acqua calda, al vapore, ai detergenti e ai solventi organici polari. Presenta una buona resistenza agli agenti atmosferici, all'ozono e all'invecchiamento.

### PROPRIETÀ SPECIFICA: RESISTENZA ALLE ALTE TEMPERATURE

Elastomer based on ethylene-propylene rubber (EPDM), with outstanding resistance to hot water, steam, washing agents and polar organic solvents outstanding resistance to hot water, steam, washing agents and polar organic solvents

### MAIN FEATURE: HIGH TEMPERATURE RESISTANCE

## SKF ECOFLAS

Fluoroelastomero a base di copolimero alternato di tetrafluoroetilene e propilene (TFE/P).con maggiore resistenza a trazione e temperatura. Offre un'eccellente resistenza all'acqua calda e al vapore fino a 230 °C, nonché a gas acidi, ammine, fluidi freno.

### PROPRIETÀ SPECIFICA: RESISTENZA ALLE ALTE TEMPERATURE

Fluoroelastomer based on an alternating copolymer of tetrafluoroethylene and propylene (TFE/P), with higher tensile strength and improved temperature resistance. It offers excellent resistance to hot water and steam up to 230 °C, as well as to sour gas, amines and brake fluids.

### MAIN FEATURE: HIGH TEMPERATURE RESISTANCE

## SKF ECOSIL

Gomma siliconica (MVQ) con un'elevata resistenza agli agenti atmosferici, all'ozono e all'invecchiamento,

### PROPRIETÀ SPECIFICA: RESISTENZA ALL'INVECCHIAMENTO

Silicone rubber (MVQ) with high resistance to weathering, ozone and ageing.

### MAIN FEATURE: AGING RESISTANCE

## TERMOPLASTICI THERMOPLASTICS

### F10-00

Materiale termoplastico a base di politetrafluoroetilene (PTFE vergine), offre un'eccellente resistenza chimica ed è attaccato solo da metalli alcalini fusi e fluoro elementare ad alte temperature. È adatto ad applicazioni alimentari.

### PROPRIETÀ SPECIFICA: RESISTENZA CHIMICA.

Thermoplastic material based on polytetrafluoroethylene (PTFEvirgin), it has outstanding chemical resistance and will only be attacked by molten alkali metals and elementary fluorine at high temperatures. It is suitable for the food industry.

### MAIN FEATURE: CHEMICAL RESISTANCE.

### F10-04

Materiale termoplastico PTFE + vetro, presenta una maggiore resistenza alla compressione e proprietà di scorrimento migliorate.

### PROPRIETÀ SPECIFICA: RESISTENZA ALLA COMPRESSIONE.

Elastomeric material, PTFE loaded with glass, featuring improved compression strength and enhanced sliding properties.

### MAIN FEATURE: COMPRESSION RESISTANCE.

## F10-25

Materiale termoplastico PTFE + Carbografite, presenta una maggiore resistenza meccanica, rigidità e durezza, oltre a proprietà di scorrimento migliorate.

### **PROPRIETÀ SPECIFICA: RESISTENZA MECCANICA**

Elastomeric material, PTFE loaded with carbographite. This material offers outstanding of compression resistance, gliding and thermal conductivity.

### **MAIN FEATURE: MECHANICAL STRENGTH**

## F10-50

Materiale termoplastico PTFE + Bronzo con elevate prestazioni di resistenza alla compressione, scorrevolezza e conduttività termica.

### **PROPRIETÀ SPECIFICA: VERSATILITÀ NEGLI IMPIEGHI.**

Elastomeric material, PTFE loaded with bronze. This material offers outstanding compression resistance, gliding and thermal conductivity.

### **MAIN FEATURE: VERSATILITY.**

## F10-59

Materiale termoplastico PTFE + fibre polimeriche con eccellenti prestazioni meccaniche e di resistenza all'usura, consigliato anche per applicazioni alimentari.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'USURA.**

Thermoplastic material, PTFE loaded with polymeric fibers. It offers outstanding mechanical performances and excellent wear resistance. Recommended for food applications.

### **MAIN FEATURE: WEAR RESISTANCE.**

## F10-90

Materiale termoplastico PTFE + PEEK con eccellenti prestazioni meccaniche e di resistenza all'usura, consigliato anche per applicazioni alimentari.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'USURA.**

Elastomeric material, PTFE loaded with PEEK.

This material offers outstanding compression resistance, gliding and thermal conductivity. Suitable for food&beverage applications.

### **MAIN FEATURE: WEAR RESISTANCE.**

## F10-148

Materiale termoplastico PTFE + fibre minerali e lubrificanti con elevata resistenza meccanica rigidità e durezza.

### **PROPRIETÀ SPECIFICA: RESISTENZA MECCANICA.**

Thermoplastic PTFE loaded with mineral fibers and lubricants with high mechanical resistance, rigidity and hardness.

### **MAIN FEATURE: MECHANICAL RESISTANCE.**



## SKF ECOTAL

Copolimero poliacetalico semicristallino (POM-C), offre buone proprietà meccaniche, basso assorbimento d'acqua e buona resistenza chimica. Può essere impiegato con oli minerali e con fluidi idraulici ignifughi a base acquosa (fluidi HFA, HFB e HFC).

### **PROPRIETÀ SPECIFICA: BUONA RESISTENZA CHIMICA**

Semi-crystalline polyacetal copolymer (POM-C) offering good mechanical properties, low water absorption and good chemical resistance. It can be used with mineral oils and water-based fire-resistant hydraulic fluids (HFA, HFB and HFC fluids).

### **MAIN FEATURE: GOOD CHEMICAL RESISTANCE.**

## SKF ECOMID

SKF Ecomid è una poliammide colata (PA) con buone proprietà di scorrimento. Può essere impiegato con oli minerali e con alcuni fluidi idraulici ignifughi a base acquosa (considerare il rigonfiamento del materiale che può assorbire acqua fino all'8% in peso).

### **PROPRIETÀ SPECIFICA: SCORRIMENTO**

ast polyamide (PA) with good sliding properties.

It can be used with mineral oils and some water-based fire-resistant hydraulic fluids (material swelling must be considered, as it can absorb water up to 8% by weight).

### **MAIN FEATURE: SLIDING PROPERTIES.**

## SKF ECOPAEEK

Polimero PEEK ad elevata durezza e resistenza alla trazione, mantiene le proprie caratteristiche meccaniche anche ad elevate temperature.

### **PROPRIETÀ SPECIFICA: DUREZZA.**

PEEK polymer with high tensile strength and stiffness. It maintains its mechanical properties also at high temperatures

### **MAIN FEATURE: HARDNESS.**

## SKF ECOWEAR 1000

Materiale termoplastico semicristallino a base di polietilene (UHMW-PE) con un peso molecolare di circa 4.500.000 g/mol, presenta un coefficiente di attrito molto basso, un'eccellente resistenza all'usura e un'elevata resistenza agli urti (anche a basse temperature fino a -200 °C), offre una resistenza allo scorrimento viscoso (creep) molto elevata ed è quasi idrorepellente, senza fenomeni di rigonfiamento.

### **PROPRIETÀ SPECIFICA: RESISTENZA ALL'USURA.**

Semi-crystalline thermoplastic material based on polyethylene (UHMW-PE) with a molecular weight of approx. 4,500,000 g/mol.

It features a very low coefficient of friction, excellent wear resistance and high impact strength (also at low temperatures down to -200 °C).

It offers very high creep resistance and is almost water-repellent, with no swelling effects.

### **MAIN FEATURE: WEAR RESISTANCE.**

TABELLA DEI MATERIALI SKF SKF Materials Chart		Colore Colour	Durezza Hardness Shore A/D	Temperatura di esercizio Operating temperature		Resistenza Resistance					
				MIN	MAX	Olio minerale Mineral oil based		Fluidi HFA-E HFA fluids		Acqua Water	
Elastomeri, poliuretani <i>Elastomers, polyurethanes</i>				MIN	MAX	RT	60°C	RT	60°C	RT	60°C
ECOPUR	Elastomero poliuretano termoplastico (TPU) <i>Polyurethane (TPU)</i>	●	95/48	-30	110	+	+	0	-	+	-
ECOPUR LD	Elastomero poliuretano prodotto per colata (CPU) <i>Cast polyurethane (CPU)</i>	●	95/48	-35	110	+	+	0	-	+	-
G-ECOPUR	Elastomero poliuretano prodotto per colata (CPU) <i>Cast polyurethane (CPU)</i>	●	95/47	-30	110	+	+	+	+0	+	0
H-ECOPUR	Elastomero poliuretano termoplastico (TPU) <i>Polyurethane (TPU)</i>	●	95/48	-20	110	+	+	+	+	+	+
S-ECOPUR	Elastomero poliuretano termoplastico (TPU) <i>Polyurethane (TPU)</i>	●	95/48	-20	110	+	+	+	+	+	+
T-ECOPUR	Elastomero poliuretano termoplastico (TPU) <i>Polyurethane (TPU)</i>	●	95/48	-50	110	+	+	0	-	+	-
X-ECOPUR	Poliuretano termoplastico ad elevata durezza (TPU) <i>Hard grade polyurethane (TPU)</i>	●	97/57	-30	110	+	+	0	-	+	-
X-ECOPUR H	Poliuretano termoplastico ad elevata durezza (TPU) <i>Hard grade polyurethane (TPU)</i>	●	97/60	-20	110	+	+	+	+	+	+
X-ECOPUR S	Poliuretano termoplastico ad elevata durezza (TPU) <i>Hard grade polyurethane (TPU)</i>	●	96/58	-20	110	+	+	+	+	+	+
Elastomeri, gomme <i>Elastomers, rubbers</i>				MIN	MAX	RT	60°C	RT	60°C	RT	60°C
SKF ECORUBBER-1	Elastomero a base acrilacril-nitril butadiene (NBR) <i>Acrylonitrile butadiene rubber (NBR)</i>	●	85 / -	-30	100	+	+	+	+	+	+
SKF ECORUBBER-H	NBR idrogenato (H-NBR) <i>Hydrogenated NBR (H-NBR)</i>	●	85 / -	-25	150	+	+	+	+	+	+
SKF ECORUBBER-2	Elastomero fluorurato (FKM) <i>Fluorocarbonate rubber (FKM)</i>	●	85 / -	-20	200	+	+	+	0	+	+
SKF ECORUBBER-3	Elastomero a base etilene-propilene-diene (PDM) <i>Ethylene propylene diene rubber (EPDM)</i>	●	85 / -	-50	150	-	-	-	-	-	-
SKF ECOFLAS	Elastomero a base tetrafluoroetilene propilene (TFE/P) <i>Elastomer based on tetrafluoroethylene propylene</i>	●	85 / -	-50	150	-	-	-	-	-	-
SKF ECOSIL	Elastomero a base siliconi metil-vinilici (MVQ) <i>Silicone rubber (MVQ)</i>	●	85 / -	-60	200	+/0	+/0	0	0	+/0	+/0
Termoplastiche <i>Thermoplastics</i>				MIN	MAX	RT	60°C	RT	60°C	RT	60°C
F10-00	Politetrafluoroetilene (PTFE) <i>Polytetrafluoroethylene propylene (TFE/P)</i>	●	- / 57	-200	260	+	+	+	+	+	+
F10-04	PTFE + vetro <i>Polytetrafluoroethylene + glass</i>	●	- / 60	-200	260	+	+	+	+	+	+
F10-25	PTFE + 25% carbonio <i>Polytetrafluoroethylene + 25% carbon</i>	●	- / 63	-200	260	+	+	+	+	+	+
F10-50	PTFE +40% bronzo <i>Polytetrafluoroethylene + 40% bronze</i>	●	- / 67	-200	250	+	+	+	+	+	+
F10-59	PTFE + polimero <i>Polytetrafluoroethylene + polymer</i>	●	- / 59	-240	300	+	+	+	+	+	+
F10-90	PTFE + PEEK <i>Polytetrafluoroethylene + PEEK</i>	●	- / 62	-200	260	+	+	+	+	+	+
F10-148	PTFE + fibre minerali <i>Polytetrafluoroethylene + mineral fibers</i>	●	- / 60	-200	250	+	+	+	+	+	+
SKF ECOTAL	Copolimero poliacetalico (POM) <i>Polyacetal (POM)</i>	●	- / 82	-50	100	+	+	+	+	+	+
SKF ECOMID	Poliammide (PA) <i>Polyamide (PA)</i>	●	- / 77	-40	110	+	+	-	-	-	-
SKF ECOPAЕК	Polietereterchetone (PEEK) <i>Polyaryletherketone (PEEK)</i>	●	- / 87	-100	260	+	+	+	+	+	+
SKF ECOPAЕК	Polietereterchetone (PEEK) <i>Polyaryletherketone (PEEK)</i>	●	- / 87	-100	260	+	+	+	+	+	+

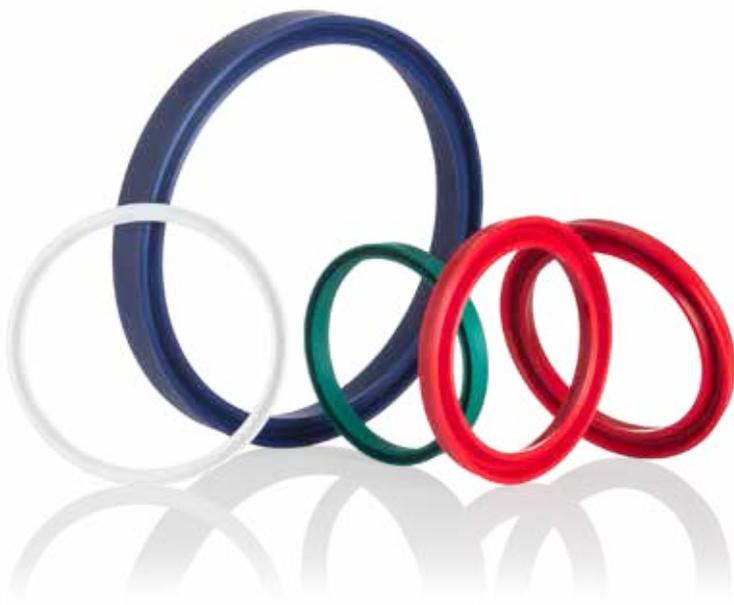
**+** Resistente  
*Suitable*

**0** Dati non disponibili o resistenza limitata  
*Unknown data or limited resistance*

**-** Non raccomandato  
*Not recommended*

**RT** Temperatura ambiente  
*Room temperature (20 °C)*

# SOLUZIONI APPLICATIVE APPLICATIONS



## TENUTE IDRAULICHE A LABBRO HYDRAULIC LIP SEALS

Modalità produttiva: tornitura CNC.  
Impiego: applicazioni alternative idrauliche e pneumatiche.  
Campo di applicazione: cilindri idraulici standard, presse, attuatori pneumatici.

Production method: CNC lathe machining.  
Use: hydraulic and pneumatic alternative applications.  
Applications: standard hydraulic cylinders, presses, pneumatic actuators.

## TENUTE IDRAULICHE IN PTFE PTFE HYDRAULIC SEALS

Modalità produttiva: tornitura CNC.  
Impiego: applicazioni alternative idrauliche.  
Campo di applicazione : cilindri idraulici, presse, macchine movimento terra, attrezzature idrauliche.

Production method: CNC lathe machining.  
Use: hydraulic alternative applications.  
Applications: hydraulic cylinders, presses, earth moving machines, hydraulic equipment.



## TENUTE PER IL SETTORE FOOD & BEVERAGE SEALS FOR FOOD & BEVERAGE INDUSTRY

Tenute per applicazioni statiche e dinamiche con certificazione FDA, CE1935/2004, MOCA.  
Profili standard e a disegno in materiali quali: EPDM, FKM, MVQ, PUR, PTFE.

Seals for static and dynamic applications with certifications: FDA, CE1935/2004, MOCA.  
Standard and custom profiles in EPDM, FKM, MVQ, PUR and PTFE materials.

## ANELLI DI TENUTA PER ALBERI ROTANTI ROTARY SHAFT SEALS

Modalità produttiva: tornitura CNC.  
Impiego: applicazioni rotative.  
Campo di applicazione: elementi rotanti, motori elettrici, riduttori, elettropompe.

Production method: CNC lathe machining.  
Use: rotary applications.  
Applications: rotating elements, electric motors, gearboxes, electric pumps.



## TENUTE STATICHE STATIC SEALS

Modalità produttiva: tornitura CNC.  
Impiego: applicazioni idrauliche e pneumatiche.  
Campo di applicazione: presse, macchine agricole, macchine movimento terra, valvole, flange e macchine utensili.

Production method: CNC lathe machining.  
Use : hydraulic and pneumatic applications.  
Applications: presses, agricultural machines, earth moving machines, valves, flanges, machine tools.



## TENUTE ROTATIVE IN PTFE PTFE ROTARY SEALS

Modalità produttiva: tornitura CNC.  
Impiego: applicazioni idrauliche e rotanti.  
Campo di applicazione : distributori rotanti, unità idrauliche, macchine utensili, elettromandrini.

Production method: CNC lathe machining.  
Use: hydraulic and rotary applications.  
Applications: rotating directional control valves, hydraulic units, machine tools, electrospindle.



# Tenute Pistone / Piston Seal

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>K01-P</b> 	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal      	-30 +110	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	
		-35 +110	0,5	400 (5.800)		
		-30 +110	0,5	400 (5.800)		
		-20 +110	0,5	400 (5.800)		
		-20 +110	0,7	400 (5.800)		
		-50 +110	0,5	400 (5.800)		
<b>K01-PE</b> 	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal      	-30 +110	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	
		-35 +110	0,5	400 (5.800)		
		-30 +110	0,5	400 (5.800)		
		-20 +110	0,5	400 (5.800)		
		-20 +110	0,7	400 (5.800)		
		-50 +110	0,5	400 (5.800)		
<b>K01-R</b> 	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston sea      	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecosil <sup>3</sup>	
		-25 +150	0,5	160 (2.300)		
		-30 +100	0,5	160 (2.300)		
		-20 +200	0,5	160 (2.300)		
		-50 +150	0,5	160 (2.300)		
		-60 +200	-	-		
<b>K01-RE</b> 	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal      	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecosil <sup>3</sup>	
		-25 +150	0,5	160 (2.300)		
		-30 +100	0,5	160 (2.300)		
		-20 +200	0,5	160 (2.300)		
		-50 +150	0,5	160 (2.300)		
		-60 +200	-	-		
<b>K02-P</b> 	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal      	-30 +100	0,5	700 (10.000)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>Back-up Ring</b> SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
		-35 +100	0,5	700 (10.000)		
		-30 +100	0,5	700 (10.000)		
		-20 +100	0,5	700 (10.000)		
		-20 +100	0,7	700 (10.000)		
		-40 +100	0,5	700 (10.000)		

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm
2. Non adatto per oli minerali
3. Raccomandato solo per applicazioni statiche o quasi statiche

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm
2. Not suitable for mineral oils
3. Only recommended for static or almost static applications



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>K02-PD</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-30 +100	0,5	700 (10.000)	Tenuta Seal	Back-up Ring
		-35 +100	0,5	700 (10.000)	ECOPUR	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	700 (10.000)	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	700 (10.000)	G-ECOPUR	SKF Ecomid
		-20 +100	0,7	700 (10.000)	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	700 (10.000)	S-ECOPUR	SKF Ecotal <sup>1</sup>
				T-ECOPUR	SKF Ecotal <sup>1</sup>	
<b>K02-R</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-25 +150	0,5	250 (3.600)	Tenuta Seal	Back-up Ring
		-25 +100	0,5	250 (3.600)	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-20 +200	0,5	250 (3.600)	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	250 (3.600)	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecorubber-3 <sup>2</sup>	SKF Ecotal <sup>1</sup>
-10 +200	0,5	250 (3.600)	SKF Ecorubber-3 <sup>2</sup>	SKF Ecoflon 2		
				SKF Ecoflas	SKF Ecopeak	
<b>K02-RD</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-25 +150	0,5	250 (3.600)	Tenuta Seal	Back-up Ring
		-25 +100	0,5	250 (3.600)	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-20 +200	0,5	250 (3.600)	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	250 (3.600)	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecorubber-3 <sup>2</sup>	SKF Ecotal <sup>1</sup>
-10 +200	0,5	250 (3.600)	SKF Ecorubber-3 <sup>2</sup>	SKF Ecoflon 2		
				SKF Ecoflas	SKF Ecopeak	
<b>K03-P</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-30 +100	0,5	400 (5.800)	Tenuta Seal	O-Ring
		-30 +100	0,5	400 (5.800)	ECOPUR	NBR 70
		-30 +100	0,5	400 (5.800)	ECOPUR LD	NBR 70
		-20 +100	0,5	400 (5.800)	G-ECOPUR	NBR 70
		-20 +100	0,7	400 (5.800)	H-ECOPUR	NBR 70
		-50 +110	0,5	400 (5.800)	S-ECOPUR	NBR 70
				T-ECOPUR	MVQ 70	
<b>K03-F</b>  	PTFE, tenuta pistone a singolo effetto  <i>PTFE, single acting piston seal</i>	-55 +200	1	200 (2.900)	Tenuta Seal	O-Ring
		-30 +100	1	200 (2.900)	SKF Ecoflon 1	MVQ 70
		-50 +150	1	400 (5.800)	SKF Ecoflon 1	NBR 70
		-20 +200	1	400 (5.800)	SKF Ecoflon 2,3,4	EPDM
		-55 +200	1	400 (5.800)	SKF Ecoflon 2,3,4	FPM 75
		-30 +100	1	400 (5.800)	SKF Ecoflon 2,3,4	MVQ 70
-55 +90	0,5	200 (2.900)	SKF Ecoflon 2,3,4	NBR 70		
-30 +90	0,5	200 (2.900)	SKF Ecowear 1000	MVQ 70		
				SKF Ecowear 1000	NBR 70	

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
2. Non adatto per oli minerali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
2. Not suitable for mineral oils



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials			
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX				
<b>K03-S</b>  	PTFE, Tenuta pistone a singolo effetto  PTFE, single acting piston seal  	-200 +260	1	200 (2.900)	<b>Tenuta Seal</b>	<b>Molla Spring</b>		
		-200 +260	1	400 (5.800)				SKF Ecoflon 1
<b>K04-P</b>  	PTFE, Tenuta pistone a singolo effetto  PTFE, single acting piston seal  	-30 +100	0,5	700 (10.000)	<b>Tenuta Seal</b>	<b>Back-up Ring</b>	<b>O-Ring</b>	
		-30 +100	0,5	700 (10.000)	ECOPUR	SKF Ecotal <sup>1</sup>	NBR 70	
<b>K04-PD</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-30 +100	0,5	700 (10.000)	ECOPUR LD	SKF Ecomid	NBR 70	
		-30 +100	0,5	700 (10.000)	G-ECOPUR	SKF Ecomid	NBR 70	
<b>K05-P</b>  	Pneumatico, tenuta pistone a singolo effetto  Pneumatic, single acting piston seal  	-30 +110	1	25 (360)	H-ECOPUR	SKF Ecotal <sup>1</sup>	NBR 70	
		-35 +110	1	25 (360)	S-ECOPUR	SKF Ecotal <sup>1</sup>	NBR 70	
<b>K05-R</b>  	Pneumatico, tenuta pistone a singolo effetto  Pneumatic, single acting piston seal  	-30 +100	1	25 (360)	T-ECOPUR	SKF Ecotal <sup>1</sup>	MVQ 70	
		-20 +200	1	25 (360)	SKF Ecoflon 1	SKF Ecoflon 2,3,4	SKF Ecoflon 1000	SKF Ecoflon 1

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. Raccomandato solo per applicazioni statiche o quasi statiche

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. Only recommended for static or almost static applications



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>K06-P</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-30 +110	0,5	400 (5.800)	<b>Tenuta Seal</b>	
		-35 +110	0,5	400 (5.800)	ECOPUR	
		-30 +110	0,5	400 (5.800)	ECOPUR LD	
		-20 +110	0,5	400 (5.800)	G-ECOPUR	
		-20 +110	0,7	400 (5.800)	H-ECOPUR	
		-50 +110	0,5	400 (5.800)	S-ECOPUR T-ECOPUR	
<b>K06-R</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b>	
		-25 +150	0,5	160 (2.300)	SKF Ecoflas	
		-30 +100	0,5	160 (2.300)	SKF Ecorubber-H	
		-20 +200	0,5	160 (2.300)	SKF Ecorubber-1	
		-50 +150	0,5	160 (2.300)	SKF Ecorubber-2	
		-60 +200	-	-	SKF Ecorubber-3 <sup>2</sup> SKF Ecosil3	
<b>K07-P</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b>	<b>O-Ring</b>
		-30 +100	0,5	400 (5.800)	ECOPUR	NBR 70
		-30 +100	0,5	400 (5.800)	ECOPUR LD	NBR 70
		-20 +100	0,5	400 (5.800)	G-ECOPUR	NBR 70
		-20 +100	0,7	400 (5.800)	H-ECOPUR	NBR 70
		-50 +100	0,5	400 (5.800)	S-ECOPUR T-ECOPUR	NBR 70 MVQ 70
<b>K07-F</b>  	PTFE, tenuta pistone a singolo effetto  PTFE, single acting piston seal  	-30 +100	1	200 (2.900)	<b>Tenuta Seal</b>	<b>O-Ring</b>
		-55 +200	1	200 (2.900)	SKF Ecoflon 1	NBR 70
		-30 +100	1	400 (5.800)	SKF Ecoflon 1	MVQ 70
		-20 +200	1	400 (5.800)	SKF Ecoflon 2,3,4	NBR 70
		-50 +150	1	400 (5.800)	SKF Ecoflon 2,3,4	FPM 75
		-55 +200	1	400 (5.800)	SKF Ecoflon 2,3,4	EPDM
		-30 +90	0,5	200 (2.900)	SKF Ecoflon 2,3,4	MVQ 70
		-55 +90	0,5	200 (2.900)	SKF Ecowear 1000	NBR 70
			SKF Ecowear 1000	MVQ 70		
<b>K08-E</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-55 +110	5	600 (8.700)	<b>Pattino Glide Ring</b>	<b>O-Ring</b>
		-30 +100	5	600 (8.700)	G-ECOPUR 54D	MVQ 70
		-55 +110	5	600 (8.700)	G-ECOPUR 54D	NBR 70
		-30 +100	5	600 (8.700)	X-ECOPUR, H, S	MVQ 70
		-20 +200	10	600 (8.700)	X-ECOPUR, H, S	NBR 70
		-30 +100	10	600 (8.700)	SKF Ecoflon 2,3,4	FPM 75
		-55 +90	5	400 (5.800)	SKF Ecoflon 2,3,4	NBR 70
		-30 +90	5	400 (5.800)	SKF Ecowear 1000	MVQ 70
			SKF Ecowear 1000	NBR 70		

1. Non adatto per oli minerali  
2. Raccomandato solo per applicazioni statiche o quasi statiche

1. Not suitable for mineral oils  
2. Only recommended for static or almost static applications



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX			
<b>K08-D</b>  	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal  	-55 +110	5	600 (8.700)	<b>Pattino</b> <i>Glide Ring</i>	<b>O-Ring</b>	
		-30 +100	5	600 (8.700)	G-ECOPUR 54D	MVQ 70	
		-55 +110	5	600 (8.700)	G-ECOPUR 54D	NBR 70	
		-30 +100	5	600 (8.700)	X-ECOPUR, H, S	MVQ 70	
		-30 +100	5	600 (8.700)	X-ECOPUR, H, S	NBR 70	
		-20 +200	10	600 (8.700)	SKF Ecoflon 2,3,4	FPM 75	
		-30 +100	10	600 (8.700)	SKF Ecoflon 2,3,4	NBR 70	
-55 +90	5	400 (5.800)	SKF Ecowear 1000	MVQ 70			
-30 +90	5	400 (5.800)	SKF Ecowear 1000	NBR 70			
<b>K08-P</b>  	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal  	-30 +100	1	250 (3.600)	<b>Tenuta Seal</b>	<b>O-Ring</b>	
		-30 +100	1	250 (3.600)	ECOPUR	NBR 70	
		-30 +100	1	250 (3.600)	ECOPUR LD	NBR 70	
		-20 +100	1	250 (3.600)	G-ECOPUR	NBR 70	
		-20 +100	1	250 (3.600)	H-ECOPUR	NBR 70	
		-20 +100	1,4	250 (3.600)	S-ECOPUR	NBR 70	
		-50 +100	1	250 (3.600)	T-ECOPUR	MVQ 70	
<b>K08-ES</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal  	-30 +100	5	600 (8.700)	<b>Tenuta Seal</b>	<b>O-Ring</b>	
		-60 +110	5	600 (8.700)	G-ECOPUR 54D	SKF Ecorubber-1	
		-30 +100	5	600 (8.700)	G-ECOPUR 54D	SKF Ecosil	
		-60 +100	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecorubber-1	
		-60 +100	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecosil	
		-30 +100	10	600 (8.700)	SKF Ecoflon 2,3,4	SKF Ecorubber-1	
		-20 +200	10	600 (8.700)	SKF Ecoflon 2,3,4	SKF Ecorubber-2	
-30 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecorubber-1			
-60 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecosil			
<b>K08-DS</b>  	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal  	-30 +100	5	600 (8.700)	<b>Tenuta Seal</b>	<b>O-Ring</b>	
		-60 +110	5	600 (8.700)	G-ECOPUR 54D	SKF Ecorubber-1	
		-30 +100	5	600 (8.700)	G-ECOPUR 54D	SKF Ecosil	
		-60 +100	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecorubber-1	
		-60 +100	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecosil	
		-30 +100	10	600 (8.700)	SKF Ecoflon 2,3,4	SKF Ecorubber-1	
		-20 +200	10	600 (8.700)	SKF Ecoflon 2,3,4	SKF Ecorubber-2	
-30 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecorubber-1			
-60 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecosil			
<b>K09-N</b>  	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b>	<b>Energizzante</b> <i>Energizer</i>	<b>Back-up</b>
		-20 +100	0,5	400 (5.800)	ECOPUR	SKF Ecorubber-1	SKF Ectal <sup>1</sup>
		-20 +100	0,7	400 (5.800)	H-ECOPUR	SKF Ecorubber-1	SKF Ectal <sup>1</sup>
		-50 +100	0,5	400 (5.800)	S-ECOPUR	SKF Ecorubber-1	SKF Ectal <sup>1</sup>
					T-ECOPUR	SKF Ecosil	SKF Ectal <sup>1</sup>

1. SKF Ectal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm

1. SKF Ectal up to Ø 260 mm, SKF Ecomid above Ø 260 mm



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	Tenuta Seal	Energizzante Energizer	Back-up
	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal	-30 +100	0,5	400 (5.800)	Tenuta Seal	Energizzante Energizer	Back-up
		-20 +100	0,5	400 (5.800)	ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	400 (5.800)	H-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-50 +100	0,5	400 (5.800)	S-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
					400 (5.800)	T-ECOPUR	SKF Ecosil
	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal	-30 +100	0,3	1500 (21700)	Tenuta Seal	Energizzante Energizer	Back-up
		-20 +100	0,3	1500 (21700)	ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,4	1500 (21700)	H-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-50 +100	0,3	1500 (21700)	S-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
					1500 (21700)	T-ECOPUR	SKF Ecosil
	Idraulica, tenuta pistone a doppio effetto  Hydraulic, double acting piston seal	-30 +100	1	400 (5.800)	Tenuta Seal	Energizzante Energizer	Back-up Ring
		-30 +100	1	400 (5.800)	X-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-30 +100	1,2	400 (5.800)	X-ECOPUR, H	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-30 +100	1,5	400 (5.800)	X-ECOPUR, S	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	1,5	400 (5.800)	SKF Ecoflon 2,3,4	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
					400 (5.800)	SKF Ecoflon 2,3,4	SKF Ecorubber-2
	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal	-30 +100	0,5	500 (7.200)	K 10-A	K 11-T	K 12-T
		-35 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR <sup>2</sup>
		-30 +100	0,7	500 (7.200)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	500 (7.200)	SKF Ecomid	G-ECOPUR	G-ECOPUR 54D <sup>3</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H <sup>2</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S <sup>2</sup>
		-25 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-1	SKF Ecoflon 2
		-20 +200	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-3	SKF Ecoflon 2
	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting piston seal	-30 +100	0,5	500 (7.200)	K 10-A	K 11-M	K 12-M
		-35 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR <sup>2</sup>
		-30 +100	0,7	500 (7.200)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	500 (7.200)	SKF Ecomid	G-ECOPUR	G-ECOPUR 54D <sup>3</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H <sup>2</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S <sup>2</sup>
		-25 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-1	SKF Ecoflon 2
		-20 +200	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-3	SKF Ecoflon 2

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. SKF Ecotal alternativo fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 3. SKF Ecomid alternativo

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Alternative SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 3. Alternative SKF Ecomid



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX			
<b>K1315-T</b> 	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-30 +100	0,5	600 (8.700)	<b>K 13-T</b>	<b>K 14-T</b>	<b>K 15-T</b>
		-30 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR
		-35 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	ECOPUR	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	600 (8.700)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-30 +100	0,5	600 (8.700)	SKF Ecomid	G-ECOPUR	SKF Ecomid
		-20 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H
		-20 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	600 (8.700)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S
		-20 +100	0,7	600 (8.700)	SKF Ecotal <sup>1</sup>	S-ECOPUR	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	T-ECOPUR	SKF Ecotal <sup>1</sup>
<b>K16-A</b> 	Idraulica/pneumatica, tenuta pistone a singolo effetto  <i>Hydraulic/pneumat, single acting piston seal</i>	-30 +110	0,5	160 (2.300)	<b>Tenuta Seal</b>		
		-35 +110	0,5	160 (2.300)	ECOPUR		
		-30 +110	0,5	160 (2.300)	ECOPUR LD		
		-30 +110	0,5	160 (2.300)	G-ECOPUR		
		-20 +110	0,5	160 (2.300)	H-ECOPUR		
		-20 +110	0,7	160 (2.300)	S-ECOPUR		
		-50 +110	0,5	160 (2.300)	T-ECOPUR		
		-10 +200	0,5	160 (2.300)	SKF Ecoflas		
		-25 +150	0,5	160 (2.300)	SKF Ecorubber-H		
		-30 +100	0,5	160 (2.300)	SKF Ecorubber-1		
<b>K16-B</b> 	Idraulica/pneumatica, tenuta pistone a singolo effetto  <i>Hydraulic/pneumat, single acting piston seal</i>	-30 +110	0,5	160 (2.300)	<b>Tenuta Seal</b>		
		-35 +110	0,5	160 (2.300)	ECOPUR		
		-30 +110	0,5	160 (2.300)	ECOPUR LD		
		-30 +110	0,5	160 (2.300)	G-ECOPUR		
		-20 +110	0,5	160 (2.300)	H-ECOPUR		
		-20 +110	0,7	160 (2.300)	S-ECOPUR		
		-50 +110	0,5	160 (2.300)	T-ECOPUR		
		-10 +200	0,5	160 (2.300)	SKF Ecoflas		
		-25 +150	0,5	160 (2.300)	SKF Ecorubber-H		
		-30 +100	0,5	160 (2.300)	SKF Ecorubber-1		
<b>K17-P</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting piston seal</i>	-30 +100	0,5	250 (3.600)	<b>Tenuta Seal</b>		<b>Back-up Ring</b>
		-20 +100	0,5	250 (3.600)	ECOPUR		SKF Ecotal <sup>1</sup>
		-20 +100	0,7	250 (3.600)	H-ECOPUR		SKF Ecotal <sup>1</sup>
		-40 +100	0,5	250 (3.600)	S-ECOPUR		SKF Ecotal <sup>1</sup>
		-40 +100	0,5	250 (3.600)	T-ECOPUR		SKF Ecotal <sup>1</sup>
<b>K17-R</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting piston seal</i>	-25 +150	0,5	250 (3.600)	<b>Tenuta Seal</b>		<b>Back-up Ring</b>
		-25 +150	0,5	250 (3.600)	SKF Ecorubber-H		SKF Ecoflon 2
		-25 +100	0,5	250 (3.600)	SKF Ecorubber-H		SKF Ecopeak
		-30 +100	0,5	250 (3.600)	SKF Ecorubber-H		SKF Ecotal <sup>1</sup>
		-20 +200	0,5	250 (3.600)	SKF Ecorubber-1		SKF Ecotal <sup>1</sup>
		-20 +200	0,5	250 (3.600)	SKF Ecorubber-2		SKF Ecoflon 2

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>K19-F</b>  	PTFE, tenuta pistone a singolo effetto  PTFE, single acting piston seal  	-200 +260	15	200 (2.900)	<b>Tenuta Seal</b>	<b>Molla Spring</b>
		-200 +260	15	400 (5.800)	SKF Ecoflon 1	1.4310 <sup>2</sup>
		-200 +260	15	400 (5.800)	SKF Ecoflon 2	1.4310 <sup>2</sup>
		-200 +260	15	400 (5.800)	SKF Ecoflon 3	1.4310 <sup>2</sup>
		-200 +260	15	400 (5.800)	SKF Ecoflon 4	1.4310 <sup>2</sup>
		-200 +90	15	200 (2.900)	SKF Ecowear 1000	1.4310 <sup>2</sup>
<b>K20-R</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting rod seal  	-25 +150	0,5	700 (10.000)	<b>Tenuta Seal</b>	<b>Back-up Ring</b>
		-25 +150	0,5	700 (10.000)	SKF Ecorubber-H	SKF Ecoflon 2
		-25 +100	0,5	700 (10.000)	SKF Ecorubber-H	SKF Ecopeak
		-30 +100	0,5	700 (10.000)	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-20 +200	0,5	700 (10.000)	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	0,5	700 (10.000)	SKF Ecorubber-2	SKF Ecoflon 2
<b>K21-P</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting rod seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b>	<b>O-Ring</b>
		-20 +100	0,5	400 (5.800)	ECOPUR	NBR 70
		-20 +100	0,7	400 (5.800)	H-ECOPUR	NBR 70
		-50 +100	0,5	400 (5.800)	S-ECOPUR	NBR 70
		-50 +100	0,5	400 (5.800)	T-ECOPUR	MVQ 70
<b>K22-P</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting rod seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b>	<b>Support Ring</b>
		-35 +100	0,5	400 (5.800)	ECOPUR	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	400 (5.800)	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	400 (5.800)	G-ECOPUR	SKF Ecomid
		-20 +100	0,5	400 (5.800)	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	400 (5.800)	S-ECOPUR	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	400 (5.800)	T-ECOPUR	SKF Ecotal <sup>1</sup>
<b>K22-R</b>  	Idraulica, tenuta pistone a singolo effetto  Hydraulic, single acting rod seal  	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b>	<b>Support Ring</b>
		-25 +150	0,5	160 (2.300)	SKF Ecoflon	SKF Ecoflon
		-25 +100	0,5	160 (2.300)	SKF Ecorubber, H	SKF Ecoflon 2
		-30 +100	0,5	160 (2.300)	SKF Ecorubber, H	SKF Ecotal <sup>1</sup>
		-20 +200	0,5	160 (2.300)	SKF Ecorubber 4	SKF Ecotal <sup>1</sup>
		-50 +150	0,5	160 (2.300)	SKF Ecorubber 2	SKF Ecoflon 2
		-40 +100	0,5	160 (2.300)	SKF Ecorubber LD	SKF Ecoflon 2
		-40 +100	0,5	160 (2.300)	SKF Ecorubber LD	SKF Ecotal <sup>1</sup>

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	Tenuta Seal	Energizzante Energizer	Back-up Ring
<b>K23-N</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting rod seal</i>	-30 +100	0,5	400 (5.800)	ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,5	400 (5.800)	H-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	400 (5.800)	S-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	400 (5.800)	T-ECOPUR	SKF Ecosil	SKF Ecotal <sup>1</sup>
<b>K23-D</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting rod seal</i>	-30 +100	0,5	400 (5.800)	ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,5	400 (5.800)	H-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	400 (5.800)	S-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	400 (5.800)	T-ECOPUR	SKF Ecosil	SKF Ecotal <sup>1</sup>
<b>K23-H</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting rod seal</i>	-30 +100	0,3	1.500 (21.000)	ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,3	1.500 (21.000)	H-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +100	0,4	1.500 (21.000)	S-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-50 +100	0,3	1.500 (21.000)	T-ECOPUR	SKF Ecosil	SKF Ecotal <sup>1</sup>
<b>K23-F</b> 	Idraulica, tenuta pistone a doppio effetto  <i>Hydraulic, double acting rod seal</i>	-30 +100	1	400 (5.800)	X-ECOPUR	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-30 +100	1	400 (5.800)	X-ECOPUR H	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-30 +100	1,2	400 (5.800)	X-ECOPUR S	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-30 +100	1,5	400 (5.800)	SKF Ecoflon 2,3,4	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	1,5	400 (5.800)	SKF Ecoflon 2,3,4	SKF Ecorubber-2	SKF Ecotopack
<b>K24-P</b> 	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston seal</i>	-30 +110	0,5	500 (7.200)	ECOPUR		
		-35 +110	0,5	500 (7.200)	ECOPUR LD		
		-30 +110	0,5	500 (7.200)	G-ECOPUR		
		-20 +110	0,5	500 (7.200)	H-ECOPUR		
		-20 +110	0,7	500 (7.200)	S-ECOPUR		
		-50 +110	0,5	500 (7.200)	T-ECOPUR		
		-10 +200	0,5	250 (3.600)	SKF Ecoflas		
		-25 +150	0,5	250 (3.600)	SKF Ecorubber-H		
		-30 +100	0,5	250 (3.600)	SKF Ecorubber-1		
		-20 +200	0,5	250 (3.600)	SKF Ecorubber-2		
		-50 +150	0,5	250 (3.600)	SKF Ecorubber-3		

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils





# Tenute Stelo / Rod Seals

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>S01-P</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +110	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-35 +110	0,5	400 (5.800)	
		-30 +110	0,5	400 (5.800)	
		-20 +110	0,5	400 (5.800)	
		-20 +110	0,7	400 (5.800)	
		-50 +110	0,5	400 (5.800)	
<b>S01-R</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b> SKF ECOFLAS SKF ECORUBBER-H SKF ECORUBBER-1 SKF ECORUBBER-2 SKF ECORUBBER-3 <sup>2</sup> SKF ECOSIL <sup>3</sup>
		-25 +150	0,5	160 (2.300)	
		-30 +100	0,5	160 (2.300)	
		-20 +200	0,5	160 (2.300)	
		-50 +150	0,5	160 (2.300)	
		-60 +200	-	-	
<b>S02-P</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +100	0,5	700 (10.000)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR  <b>Back-up Ring</b> SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
		-35 +100	0,5	700 (10.000)	
		-30 +100	0,5	700 (10.000)	
		-20 +100	0,5	700 (10.000)	
		-20 +100	0,7	700 (10.000)	
		-40 +100	0,5	700 (10.000)	
<b>S02-PD</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR  <b>Back-up Ring</b> SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
		-35 +100	0,5	400 (5.800)	
		-30 +100	0,5	400 (5.800)	
		-20 +100	0,5	400 (5.800)	
		-20 +100	0,7	400 (5.800)	
		-40 +100	0,5	400 (5.800)	
<b>S02-R</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-10 +200	0,5	250 (3.600)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecorubber-3 <sup>2</sup>  <b>Back-up Ring</b> SKF Ecopeak SKF Ecoflon 2 SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecoflon 2 SKF Ecoflon 2 SKF Ecotal <sup>1</sup>
		-25 +150	0,5	250 (3.600)	
		-25 +100	0,5	250 (3.600)	
		-30 +100	0,5	250 (3.600)	
		-20 +200	0,5	250 (3.600)	
		-50 +150	0,5	250 (3.600)	

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. Raccomandato solo per applicazioni statiche o quasi statiche

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. Only recommended for static or almost static applications



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	Tenuta Seal	Back-up Ring
<b>S02-RD</b> 	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-10 +200 -25 +150 -25 +100 -30 +100 -20 +200 -50 +150 -40 +100	0,5 0,5 0,5 0,5 0,5 0,5 0,5	250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600)	SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecorubber-3 <sup>2</sup>	SKF Ecopeak SKF Ecoflon 2 SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecoflon 2 SKF Ecoflon 2 SKF Ecotal <sup>1</sup>
<b>S02-S</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +100 -20 +100 -20 +100 -40 +100	5 5 7 5	400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800)	ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
<b>S03-P</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +100 -35 +110 -30 +100 -20 +100 -20 +100 -50 +110	0,5 0,5 0,5 0,5 0,7 0,5	400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800)	ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	NBR 70 NBR 70 NBR 70 NBR 70 NBR 70 MVQ 70
<b>S03-F</b> 	PTFE, tenuta stelo a singolo effetto  <i>PTFE, single acting rod seal</i>	-55 +200 -30 +100 -50 +150 -20 +200 -55 +200 -30 +100 -55 +90 -30 +90	1 1 1 1 1 1 0,5 0,5	200 (2.900) 200 (2.900) 400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800) 200 (2.900) 200 (2.900)	SKF Ecoflon 1 SKF Ecoflon 1 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecowear 1000 SKF Ecowear 1000	MVQ 70 NBR 70 EPDM FPM 75 MVQ 70 NBR 70 MVQ 70 NBR 70
<b>S03-S</b> 	PTFE, tenuta stelo a singolo effetto  <i>PTFE, single acting rod seal</i>	-200 +260 -200 +260 -200 +90	1 1 0,5	200 (2.900) 400 (5.800) 200 (2.900)	SKF Ecoflon 1 SKF Ecoflon 2,3,4 SKF Ecowear 1000	1.4310 1.4310 1.4310

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm


 Statico  
Static

 Alternato  
Alternate

 Elicoidale  
Helical

 Oscillante  
Swinging

 Rotatorio  
Rotary

# Tenute Stelo / Rod Seals

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	Tenuta Seal	O-Ring	Tenuta Seal
<b>S04-P</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +100	0,5	700 (10.000)	ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	700 (10.000)	ECOPUR LD	NBR 70	SKF Ecomid
		-30 +100	0,5	700 (10.000)	G-ECOPUR	NBR 70	SKF Ecomid
		-20 +100	0,5	700 (10.000)	H-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	700 (10.000)	S-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	700 (10.000)	T-ECOPUR	MVQ 70	SKF Ecotal <sup>1</sup>
<b>S04-PD</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +100	0,5	700 (10.000)	ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	700 (10.000)	ECOPUR LD	NBR 70	SKF Ecomid
		-30 +100	0,5	700 (10.000)	G-ECOPUR	NBR 70	SKF Ecomid
		-20 +100	0,5	700 (10.000)	H-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	700 (10.000)	S-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>
		-40 +100	0,5	700 (10.000)	T-ECOPUR	MVQ 70	SKF Ecotal <sup>1</sup>
<b>S05-P</b> 	Pneumatica, tenuta stelo a singolo effetto  <i>Pneumatic, single acting rod seal</i>	-30 +110	1	25 (360)	ECOPUR		
		-35 +110	1	25 (360)	ECOPUR LD		
		-30 +110	1	25 (360)	G-ECOPUR		
		-20 +110	1	25 (360)	H-ECOPUR		
		-20 +110	2	25 (360)	S-ECOPUR		
		-50 +110	1	25 (360)	T-ECOPUR		
<b>S05-R</b> 	Pneumatica, tenuta stelo a singolo effetto  <i>Pneumatic, single acting rod seal</i>	-10 +200	1	25 (360)	SKF Ecoflas		
		-25 +150	1	25 (360)	SKF Ecorubber-H		
		-30 +100	1	25 (360)	SKF Ecorubber-1		
		-20 +200	1	25 (360)	SKF Ecorubber-2		
		-50 +150	1	25 (360)	SKF Ecorubber-3 <sup>1</sup>		
<b>S06-P</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +110	0,5	400 (5.800)	ECOPUR		
		-35 +110	0,5	400 (5.800)	ECOPUR LD		
		-30 +110	0,5	400 (5.800)	G-ECOPUR		
		-20 +110	0,5	400 (5.800)	H-ECOPUR		
		-50 +110	0,5	400 (5.800)	S-ECOPUR		
		-20 +110	0,7	400 (5.800)	T-ECOPUR		

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm
2. Non adatto per oli minerali
3. Raccomandato solo per applicazioni statiche o quasi statiche

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm
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3. Only recommended for static or almost static applications



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Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>S06-R</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup> SKF Ecosil <sup>2</sup>
		-25 +150	0,5	160 (2.300)	
		-30 +100	0,5	160 (2.300)	
		-20 +200	0,5	160 (2.300)	
		-50 +150	0,5	160 (2.300)	
		-60 +200	-	-	
<b>S07-P</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +100	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR T-ECOPUR S-ECOPUR  <b>O-Ring</b> NBR 70 NBR 70 NBR 70 NBR 70 MVQ 70 NBR 70
		-30 +100	0,5	400 (5.800)	
		-30 +100	0,5	400 (5.800)	
		-20 +100	0,5	400 (5.800)	
		-50 +110	0,5	400 (5.800)	
		-20 +100	0,7	400 (5.800)	
<b>S07-F</b> 	PTFE, tenuta stelo a singolo effetto  PTFE, single acting rod seal  	-55 +200	1	200 (2.900)	<b>Tenuta Seal</b> SKF Ecoflon 1 SKF Ecoflon 1 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecowear 1000 SKF Ecowear 1000  <b>O-Ring</b> MVQ 70 NBR 70 EPDM FPM 75 MVQ 70 NBR 70 MVQ 70 NBR 70
		-30 +100	1	200 (2.900)	
		-50 +150	1	400 (5.800)	
		-20 +200	1	400 (5.800)	
		-55 +200	1	400 (5.800)	
		-30 +100	1	400 (5.800)	
		-55 +90	0,5	200 (2.900)	
		-30 +90	0,5	200 (2.900)	
<b>S08-P</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +110	0,3	400 (5.800)	<b>Tenuta Seal</b> ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-20 +110	0,3	400 (5.800)	
		-20 +110	0,4	400 (5.800)	
		-50 +110	0,3	400 (5.800)	
<b>S08-PE</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal  	-30 +110	0,3	400 (5.800)	<b>Tenuta Seal</b> ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-20 +110	0,3	400 (5.800)	
		-20 +110	0,4	400 (5.800)	
		-50 +110	0,3	400 (5.800)	

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		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>S08-R</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-10 +200 -25 +150 -30 +100 -20 +200 -50 +150	0,3 0,3 0,3 0,3 0,3	160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>	
<b>S09-E</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-55 +110 -30 +100 -55 +110 -30 +100 -20 +200 -30 +100 -55 +90 -30 +90	5 5 5 5 10 10 5 5	600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 400 (5.800) 400 (5.800)	<b>Pattino Glide Ring</b> G-ECOPUR 54D G-ECOPUR 54D SKF ECOPUR, H, S SKF ECOPUR, H, S SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecowear 1000 SKF Ecowear 1000	<b>O-Ring</b> MVQ 70 NBR 70 MVQ 70 NBR 70 FPM 75 NBR 70 MVQ 70 NBR 70
<b>S09-D</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-55 +110 -30 +100 -55 +110 -30 +100 -20 +200 -30 +100 -55 +90 -30 +90	5 5 5 5 10 10 5 5	600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 400 (5.800) 400 (5.800)	<b>Pattino Glide Ring</b> G-ECOPUR 54D G-ECOPUR 54D SKF ECOPUR, H, S SKF ECOPUR, H, S SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecowear 1000 SKF Ecowear 1000	<b>O-Ring</b> MVQ 70 NBR 70 MVQ 70 NBR 70 FPM 75 NBR 70 MVQ 70 NBR 70
<b>S09-P</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100 -30 +100 -30 +100 -20 +100 -20 +100 -50 +110	1 1 1 1 1,4 1	250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600) 250 (3.600)	<b>Pattino Glide Ring</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>O-Ring</b> NBR 70 NBR 70 NBR 70 NBR 70 NBR 70 MVQ 70
<b>S09-ES</b> 	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100 -60 +110 -30 +100 -60 +110 -30 +100 -20 +200 -30 +90 -60 +90	5 5 5 5 10 10 5 5	600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 600 (8.700) 400 (5.800) 400 (5.800)	<b>Pattino Glide Ring</b> G-ECOPUR 54D G-ECOPUR 54D X-ECOPUR, H, S X-ECOPUR, H, S SKF Ecoflon 2,3,4 SKF Ecoflon 2,3,4 SKF Ecowear 1000 SKF Ecowear 1000	<b>Energizzante Energizer</b> SKF Ecorubber-1 SKF Ecosil SKF Ecorubber-1 SKF Ecosil SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-1 SKF Ecosil

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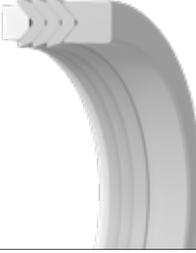
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Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials		
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX			
<b>S09-DS</b>  	Idraulica, tenuta stelo a doppio effetto  <i>Hydraulic, double acting rod seal</i>  	-30 +100	5	600 (8.700)	<b>Pattino</b> <i>Glide Ring</i>	<b>Energizzante</b> <i>Energizer</i>	
		-60 +110	5	600 (8.700)	G-ECOPUR 54D	SKF Ecorubber-1	
		-30 +100	5	600 (8.700)	G-ECOPUR 54D	SKF Ecosil	
		-60 +110	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecorubber-1	
		-30 +100	5	600 (8.700)	X-ECOPUR, H, S	SKF Ecosil	
		-20 +200	10	600 (8.700)	SKF Ecoflon 2,3,4	SKF Ecorubber-1	
		-30 +90	5	400 (5.800)	SKF Ecoflon 2,3,4	SKF Ecorubber-2	
-60 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecorubber-1			
-60 +90	5	400 (5.800)	SKF Ecowear 1000	SKF Ecosil			
<b>S1012-M</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston sea</i>  	-30 +100	0,5	500 (7.200)	<b>S 10-A</b>	<b>S 11-T</b>	<b>S 12-T</b>
		-35 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR <sup>3</sup>
		-30 +100	0,7	500 (7.200)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	500 (7.200)	SKF Ecomid	G-ECOPUR	G-ECOPUR 54D <sup>4</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H <sup>3</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S <sup>3</sup>
		-25 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-1	SKF Ecoflon 2
		-20 +200	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-3	SKF Ecoflon 2
<b>S1012-T</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston sea</i>  	-30 +100	0,5	500 (7.200)	<b>S 10-A</b>	<b>S 11-T</b>	<b>S 12-T</b>
		-35 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR <sup>3</sup>
		-30 +100	0,7	500 (7.200)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	G-ECOPUR	G-ECOPUR 54D <sup>4</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H <sup>3</sup>
		-20 +100	0,5	500 (7.200)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S <sup>3</sup>
		-25 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-H	SKF Ecoflon 2
		-30 +100	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-1	SKF Ecoflon 2
		-20 +200	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,5	250 (3.600)	SKF Ecoflon 2	SKF Ecorubber-3	SKF Ecoflon 2
<b>S1315-T</b>  	Idraulica, tenuta pistone a singolo effetto  <i>Hydraulic, single acting piston sea</i>  	-30 +100	0,5	600 (8.700)	<b>S 13-A</b>	<b>S 14-T</b>	<b>S 15-T</b>
		-30 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	ECOPUR	X-ECOPUR
		-35 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	ECOPUR	SKF Ecotal <sup>1</sup>
		-30 +100	0,5	600 (8.700)	SKF Ecomid	ECOPUR LD	SKF Ecomid
		-30 +100	0,5	600 (8.700)	SKF Ecomid	G-ECOPUR	SKF Ecomid
		-20 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	H-ECOPUR	X-ECOPUR H
		-20 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +100	0,7	600 (8.700)	SKF Ecotal <sup>1</sup>	S-ECOPUR	X-ECOPUR S
		-20 +100	0,7	600 (8.700)	SKF Ecotal <sup>1</sup>	S-ECOPUR	SKF Ecotal <sup>1</sup>
-40 +100	0,5	600 (8.700)	SKF Ecotal <sup>1</sup>	T-ECOPUR	SKF Ecotal <sup>1</sup>		
<b>S16-A</b>  	Idraulica / pneumatica, tenuta cappello a singolo effetto  <i>Hydraulic / pneumatic, single acting hat seal</i>  	-30 +110	0,5	160 (2.300)	ECOPUR		
		-35 +110	0,5	160 (2.300)	ECOPUR LD		
		-30 +110	0,5	160 (2.300)	G-ECOPUR		
		-20 +110	0,7	160 (2.300)	H-ECOPUR		
		-20 +110	0,5	160 (2.300)	S-ECOPUR		
		-50 +110	0,5	160 (2.300)	T-ECOPUR		
		-10 +200	0,5	160 (2.300)	SKF ECOFLAS		
		-25 +150	0,5	160 (2.300)	SKF ECORUBBER-H		
		-30 +100	0,5	160 (2.300)	SKF ECORUBBER-1		
		-20 +200	0,5	160 (2.300)	SKF ECORUBBER-2		
		-50 +150	0,5	160 (2.300)	SKF ECORUBBER-3 <sup>2</sup>		

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. SKF Ecotal alternativo fino a Ø 260 mm, SKF Ecomid sup. a Ø 260 mm  
 4. SKF Ecomid alternativo

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. Alternative SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 4. SKF Ecomid alternativo

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>S16-B</b> 	Idraulica/pneumatica, tenuta pistone a singolo effetto  <i>Hydraulic/pneumat, single acting piston seal</i>	-30 +110	0,5	160 (2.300)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup>	
		-35 +110	0,5	160 (2.300)		
		-30 +110	0,5	160 (2.300)		
		-20 +110	0,5	160 (2.300)		
		-20 +110	0,7	160 (2.300)		
		-50 +110	0,5	160 (2.300)		
		-10 +200	0,5	160 (2.300)		
		-25 +150	0,5	160 (2.300)		
		-30 +100	0,5	160 (2.300)		
		-20 +200	0,5	160 (2.300)		
<b>S17-P</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +110	0,5	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	
		-35 +110	0,5	400 (5.800)		
		-30 +110	0,5	400 (5.800)		
		-20 +110	0,5	400 (5.800)		
		-20 +110	0,7	400 (5.800)		
		-50 +110	0,5	400 (5.800)		
		-30 +110	0,5	400 (5.800)		
<b>S17-R</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-10 +200	0,5	160 (2.300)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup>	
		-25 +150	0,5	160 (2.300)		
		-30 +100	0,5	160 (2.300)		
		-20 +200	0,5	160 (2.300)		
		-50 +150	0,5	160 (2.300)		
<b>S18-P</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-30 +100	0,5	600 (8.700)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>Back-up Ring</b> SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
		-35 +100	0,5	600 (8.700)		
		-30 +100	0,5	600 (8.700)		
		-20 +100	0,5	600 (8.700)		
		-20 +100	0,7	600 (8.700)		
		-40 +100	0,5	600 (8.700)		
<b>S18-R</b> 	Idraulica, tenuta stelo a singolo effetto  <i>Hydraulic, single acting rod seal</i>	-10 +200	0,5	250 (3.600)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 SKF Ecorubber-3	<b>Back-up Ring</b> SKF Ecoflon 2 SKF Ecoflon 2 SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecoflon 2 SKF Ecoflon 2 SKF Ecotal <sup>1</sup>
		-25 +150	0,5	250 (3.600)		
		-25 +100	0,5	250 (3.600)		
		-30 +100	0,5	250 (3.600)		
		-20 +200	0,5	250 (3.600)		
		-50 +150	0,5	250 (3.600)		
		-40 +100	0,5	250 (3.600)		

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 2. Non adatto per oli minerali

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 2. Not suitable for mineral oils



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		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>S19-F</b>  	PTFE, tenuta stelo a singolo effetto  PTFE, single acting rod seal	-200 +260 -200 +260 -200 +260 -200 +260 -200 +90	15 15 15 15 15	200 (2.900) 400 (5.800) 400 (5.800) 400 (5.800) 200 (2.900)	<b>Pattino</b> <i>Glide Ring</i>  SKF Ecoflon 1 SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecoflon 4 SKF ECOWEAR 1000	<b>Molla</b> <i>Spring</i>  1.4310 <sup>3</sup> 1.4310 <sup>3</sup> 1.4310 <sup>3</sup> 1.4310 <sup>3</sup> 1.4310 <sup>3</sup>
<b>S20-R</b>  	Idraulica, tenuta stelo a doppio effetto  Hydraulic, double acting rod seal	-25 +150 -25 +150 -25 +100 -30 +100 -20 +200 -20 +200	0,5 0,5 0,5 0,5 0,5 0,5	700 (10.000) 700 (10.000) 700 (10.000) 700 (10.000) 700 (10.000) 700 (10.000)	<b>Tenuta Seal</b>  SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-2	<b>Back-up Ring</b>  SKF Ecoflon 2 SKF Ecopeak SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecoflon 2 SKF Ecopeak
<b>S21-P</b>  	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100 -20 +100 -20 +100 -50 +110	0,5 0,5 0,7 0,5	400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800)	<b>Tenuta Seal</b>  ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>O-Ring</b>  NBR 70 NBR 70 NBR 70 MVQ 70
<b>S22-P</b>  	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100 -35 +100 -30 +100 -20 +100 -20 +100 -40 +100	0,5 0,5 0,5 0,5 0,7 0,5	400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800)	<b>Tenuta Seal</b>  ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>O-Ring</b>  SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
<b>S22-R</b>  	Idraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-10 +200 -25 +150 -25 +100 -30 +100 -20 +200 -50 +150 -40 +100	0,5 0,5 0,5 0,5 0,5 0,5 0,5	160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300) 160 (2.300)	<b>Tenuta Seal</b>  SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecorubber-3 <sup>2</sup>	<b>O-Ring</b>  SKF Ecoflon SKF Ecoflon 2 SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecoflon 2 SKF Ecoflon 2 SKF Ecotal <sup>1</sup>

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. Specifica del materiale metallico della molla

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. Spring metal material specification.



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials			
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX				
<b>S24-P</b>  	Idrraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100	0,5	700 (10.000)	<b>Tenuta Seal</b>	<b>O-Ring</b>	<b>Back-up Ring</b>	
		-20 +100	0,5	700 (10.000)	ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>	
		-20 +100	0,7	700 (10.000)	H-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>	
		-20 +100	0,7	700 (10.000)	S-ECOPUR	NBR 70	SKF Ecotal <sup>1</sup>	
		-40 +100	0,5	700 (10.000)	T-ECOPUR	MVQ 70	SKF Ecotal <sup>1</sup>	
<b>S2527-F</b>  	PTFE, tenuta stelo a singolo effetto  PTFE, single acting rod seal	-200 +260	1,5	100 (1.450)	<b>S25-F</b>	<b>S26-F</b>	<b>S27-F</b>	
					SKF Ecoflon 2	SKF Ecoflon 1	SKF Ecoflon 2	
<b>S2931-F</b>  	PTFE, tenuta stelo a singolo effetto  PTFE, single acting rod seal	-200 +260	1,5	315 (4.500)	<b>S29-F</b>	<b>S30-F</b>	<b>S31-F</b>	
					SKF Ecoflon 2	SKF Ecoflon 1	SKF Ecoflon 2	
<b>S32-P</b>  	Idrraulica, tenuta stelo a singolo effetto  Hydraulic, single acting rod seal	-30 +100	0,5	500 (7.200)	<b>Tenuta Seal</b>	<b>Anello antiestruzione</b>	<b>Support Ring</b>	
		-30 +100	0,5	500 (7.200)	ECOPUR	SKF Ecotal <sup>1</sup>	SKF Ecotal <sup>1</sup>	
		-35 +100	0,5	500 (7.200)	ECOPUR	X-ECOPUR	SKF Ecotal <sup>1</sup>	
		-35 +100	0,5	500 (7.200)	ECOPUR LD	SKF Ecomid	SKF Ecotal <sup>1</sup>	
		-30 +100	0,5	500 (7.200)	G-ECOPUR	G-ECOPUR 54D	SKF Ecomid	
		-30 +100	0,5	500 (7.200)	G-ECOPUR	SKF Ecomid	SKF Ecomid	
		-20 +100	0,5	500 (7.200)	H-ECOPUR	X-ECOPUR H	SKF Ecotal <sup>1</sup>	
		-20 +100	0,5	500 (7.200)	H-ECOPUR	SKF Ecotal <sup>1</sup>	SKF Ecotal <sup>1</sup>	
		-20 +100	0,7	500 (7.200)	S-ECOPUR	SKF Ecotal <sup>1</sup>	SKF Ecotal <sup>1</sup>	
		-20 +100	0,7	500 (7.200)	S-ECOPUR	X-ECOPUR S	SKF Ecotal <sup>1</sup>	
		-40 +100	0,5	500 (7.200)	T-ECOPUR	SKF Ecotal <sup>1</sup>	SKF Ecotal <sup>1</sup>	
<b>S35-P</b>  	Idrraulica, tenuta pistone a singolo effetto  Hydraulic, single acting rod seal	-30 +110	0,4	400 (5.800)	<b>Tenuta Seal</b>			
		-35 +110	0,4	400 (5.800)	ECOPUR			
		-35 +110	0,4	400 (5.800)	ECOPUR LD			
		-30 +110	0,4	400 (5.800)	G-ECOPUR			
		-20 +110	0,4	400 (5.800)	H-ECOPUR			
		-20 +110	0,5	400 (5.800)	S-ECOPUR			
		-50 +110	0,4	400 (5.800)	T-ECOPUR			

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils



# Raschiatori / Wipers

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>A01-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D <sup>2</sup> H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-35 +110	4	-	
		-30 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	
<b>A01-B</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D <sup>2</sup> H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-35 +110	4	-	
		-30 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	
<b>A02-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D <sup>2</sup> H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-35 +110	4	-	
		-30 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	

1. Non adatto per oli minerali  
 2. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. Not suitable for mineral oils  
 2. For hard grade polyurethanes, refer to material properties



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>A02-B</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>	
		-35 +110	4	-	ECOPUR	
		-30 +110	4	-	ECOPUR LD	
		-30 +110	4	-	G-ECOPUR	
		-30 +110	4	-	G-ECOPUR 54D <sup>2</sup>	
		-20 +110	4	-	H-ECOPUR	
		-20 +110	4	-	S-ECOPUR	
		-50 +110	4	-	T-ECOPUR	
		-30 +110	4	-	X-ECOPUR <sup>2</sup>	
		-20 +110	4	-	X-ECOPUR H <sup>2</sup>	
		-20 +110	4	-	X-ECOPUR S <sup>2</sup>	
		-10 +200	4	-	SKF Ecoflas	
		-25 +150	4	-	SKF Ecorubber-H	
		-30 +100	4	-	SKF Ecorubber-1	
-20 +200	4	-	SKF Ecorubber-2			
-50 +150	4	-	SKF Ecorubber-3 <sup>1</sup>			
<b>A02-I</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>	
		-20 +110	4	-	ECOPUR	
		-20 +110	4	-	H-ECOPUR	
		-20 +110	4	-	S-ECOPUR	
		-50 +110	4	-	T-ECOPUR	
		-30 +110	4	-	X-ECOPUR <sup>3</sup>	
		-20 +110	4	-	X-ECOPUR H <sup>2</sup>	
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>	
		-10 +200	4	-	SKF Ecoflas	
		-25 +150	4	-	SKF Ecorubber-H	
		-30 +100	4	-	SKF Ecorubber-1	
		-20 +200	4	-	SKF Ecorubber-2	
		-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>	
		<b>A03-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +80	4	-
-20 +80	4			-	ECOPUR	SKF Ecotal <sup>1</sup>
-20 +80	4			-	H-ECOPUR	SKF Ecotal <sup>1</sup>
-20 +80	5			-	S-ECOPUR	SKF Ecotal <sup>1</sup>
-40 +80	4			-	T-ECOPUR	SKF Ecotal <sup>1</sup>
-30 +80	4			-	X-ECOPUR <sup>3</sup>	SKF Ecotal <sup>1</sup>
-20 +80	4			-	X-ECOPUR H <sup>3</sup>	SKF Ecotal <sup>1</sup>
-20 +80	5			-	X-ECOPUR S <sup>3</sup>	SKF Ecotal <sup>1</sup>
-10 +200	4			-	SKF Ecoflas	SKF Ecopeak
-25 +80	4			-	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
-30 +80	4			-	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
-20 +200	4			-	SKF Ecorubber-2	SKF Ecopeak
-50 +150	4			-	SKF Ecorubber-3 <sup>2</sup>	SKF Ecopeak

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. For hard grade polyurethanes, refer to material properties



Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>A04-A</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>
		-35 +110	4	-	ECOPUR
		-30 +110	4	-	ECOPUR LD
		-30 +110	4	-	G-ECOPUR
		-30 +110	4	-	G-ECOPUR 54D <sup>3</sup>
		-20 +110	4	-	H-ECOPUR
		-20 +110	4	-	S-ECOPUR
		-50 +110	4	-	T-ECOPUR
		-30 +110	4	-	X-ECOPUR <sup>3</sup>
		-20 +110	4	-	X-ECOPUR H <sup>3</sup>
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>
		-10 +200	4	-	SKF Ecoflas
		-25 +150	4	-	SKF Ecorubber-H
		-30 +100	4	-	SKF Ecorubber-1
-20 +200	4	-	SKF Ecorubber-2		
-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>		
<b>A04-B</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>
		-35 +110	4	-	ECOPUR
		-30 +110	4	-	ECOPUR LD
		-30 +110	4	-	G-ECOPUR
		-30 +110	4	-	G-ECOPUR 54D <sup>3</sup>
		-20 +110	4	-	H-ECOPUR
		-20 +110	4	-	S-ECOPUR
		-50 +110	4	-	T-ECOPUR
		-30 +110	4	-	X-ECOPUR <sup>3</sup>
		-20 +110	4	-	X-ECOPUR H <sup>3</sup>
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>
		-10 +200	4	-	SKF Ecoflas
		-25 +150	4	-	SKF Ecorubber-H
		-30 +100	4	-	SKF Ecorubber-1
-20 +200	4	-	SKF Ecorubber-2		
-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>		
<b>A05-A</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>
		-35 +110	4	-	ECOPUR
		-30 +110	4	-	ECOPUR LD
		-30 +110	4	-	G-ECOPUR
		-30 +110	4	-	G-ECOPUR 54D <sup>3</sup>
		-20 +110	4	-	H-ECOPUR
		-20 +110	4	-	S-ECOPUR
		-50 +110	4	-	T-ECOPUR
		-30 +110	4	-	X-ECOPUR <sup>3</sup>
		-20 +110	4	-	X-ECOPUR H <sup>3</sup>
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>
		-10 +200	4	-	SKF Ecoflas
		-25 +150	4	-	SKF Ecorubber-H
		-30 +100	4	-	SKF Ecorubber-1
-20 +200	4	-	SKF Ecorubber-2		
-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>		

1. Non adatto per oli minerali  
2. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. Not suitable for mineral oils  
2. For hard grade polyurethanes, refer to material properties



Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>A05-B</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>	
		-20 +110	4	-	ECOPUR	
		-20 +110	4	-	H-ECOPUR	
		-50 +110	4	-	S-ECOPUR	
		-30 +110	4	-	T-ECOPUR	
		-20 +110	4	-	X-ECOPUR3	
		-20 +110	4	-	X-ECOPUR H <sup>3</sup>	
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>	
		-10 +200	4	-	SKF Ecoflas	
		-25 +150	4	-	SKF Ecorubber-H	
		-30 +100	4	-	SKF Ecorubber-1	
		-20 +200	4	-	SKF Ecorubber-2	
		-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>	
<b>A05-I</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b>	
		-20 +110	4	-	ECOPUR	
		-20 +110	4	-	H-ECOPUR	
		-50 +110	4	-	S-ECOPUR	
		-30 +110	4	-	T-ECOPUR	
		-20 +110	4	-	X-ECOPUR3	
		-20 +110	4	-	X-ECOPUR H <sup>3</sup>	
		-20 +110	4	-	X-ECOPUR S <sup>3</sup>	
		-10 +200	4	-	SKF Ecoflas	
		-25 +150	4	-	SKF Ecorubber-H	
		-30 +100	4	-	SKF Ecorubber-1	
		-20 +200	4	-	SKF Ecorubber-2	
		-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>	
<b>A06-A</b>  	Pneumatica, a singolo effetto <i>Pneumatic, single acting</i>	-30 +80	4	-	<b>Tenuta Seal</b>	<b>Sede Housing</b>
		-20 +80	4	-	ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +80	4	-	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +80	5	-	S-ECOPUR	SKF Ecotal <sup>1</sup>
		-40 +80	4	-	T-ECOPUR	SKF Ecotal <sup>1</sup>
		-30 +80	4	-	X-ECOPUR <sup>3</sup>	SKF Ecotal <sup>1</sup>
		-20 +80	4	-	X-ECOPUR H <sup>3</sup>	SKF Ecotal <sup>1</sup>
		-20 +80	5	-	X-ECOPUR S <sup>3</sup>	SKF Ecotal <sup>1</sup>
		-10 +200	4	-	SKF Ecoflas	SKF Ecopeak
		-25 +80	4	-	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-30 +80	4	-	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	4	-	SKF Ecorubber-2	SKF Ecopeak
		-50 +150	4	-	SKF Ecorubber-3 <sup>2</sup>	SKF Ecopeak

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Non adatto per oli minerali  
 3. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Not suitable for mineral oils  
 3. For hard grade polyurethanes, refer to material properties



Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>A07-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR3 X-ECOPUR H <sup>3</sup> X-ECOPUR S <sup>3</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup>
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	5	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	
		<b>A08-A</b>  	Idraulica / pneumatica, a singolo effetto <i>Idraulic / Pneumatic, single acting</i>	-30 +110	
-35 +110	4			-	
-30 +110	4			-	
-30 +110	4			-	
-20 +110	4			-	
-20 +110	4			-	
-50 +110	4			-	
-30 +110	4			-	
-20 +110	4			-	
-20 +110	4			-	
-10 +200	4			-	
-25 +150	4			-	
-30 +100	4			-	
-20 +200	4	-			
-50 +150	4	-			
<b>A08-B</b>  	Idraulica / pneumatica, a singolo effetto <i>Idraulic / Pneumatic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D <sup>2</sup> H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-35 +110	4	-	
		-30 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
-20 +200	4	-			
-50 +150	4	-			

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm
2. Non adatto per oli minerali
3. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm
2. Not suitable for mineral oils
3. For hard grade polyurethanes, refer to material properties


 Statico  
Static

 Alternato  
Alternate

 Elicoidale  
Helical

 Oscillante  
Swinging

 Rotatorio  
Rotary

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>A09-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-20 +110	4	-	
		-20 +110	4	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	
		<b>A10-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	
-20 +110	4			-	
-20 +110	4			-	
-50 +110	4			-	
-30 +110	4			-	
-20 +110	4			-	
-20 +110	4			-	
-10 +200	4			-	
-25 +150	4			-	
-30 +100	4			-	
-20 +200	4			-	
-50 +150	4			-	
<b>A11-A</b>  	Idraulica / pneumatica, a singolo effetto <i>Hydraulic / Pneumatic, single acting</i>			-30 +110	4
		-35 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	5	-	
		-50 +110	4	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	

1. Non adatto per oli minerali  
 2. Per poliuretani di elevata durezza, riferirsi alle proprietà dei materiali

1. Not suitable for mineral oils  
 2. For hard grade polyurethanes, refer to material properties



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>A11-I</b>  	Idraulica / pneumatica, a doppio effetto <i>Idraulic / Pneumatic, double acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR H-ECOPUR T-ECOPUR S-ECOPUR SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-20 +110	4	-	
		-50 +110	4	-	
		-20 +110	5	-	
		-10 +200	4	-	
		-25 +150	4	-	
		-30 +100	4	-	
		-20 +200	4	-	
		-50 +150	4	-	
<b>A12-A</b>  	Idraulica, a singolo effetto <i>Hydraulic, single acting</i>	-30 +110	4	-	<b>Tenuta Seal</b> ECOPUR LD G-ECOPUR G-ECOPUR 54D <sup>2</sup> H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR <sup>2</sup> X-ECOPUR H <sup>2</sup> X-ECOPUR S <sup>2</sup>
		-35 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	5	-	
		-50 +110	4	-	
		-30 +110	4	-	
		-20 +110	4	-	
		-20 +110	5	-	
<b>A12-B</b>  	Idraulica, a doppio effetto <i>Hydraulic, double acting</i>	-30 +110	4	16 (230)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-35 +110	4	16 (230)	
		-30 +110	4	16 (230)	
		-20 +110	4	16 (230)	
		-20 +110	5	16 (230)	
		-50 +110	4	16 (230)	

1. Non adatto per oli minerali

1. Not suitable for mineral oils


 Static  
Static

 Alternato  
Alternate

 Elicoidale  
Helical

 Oscillante  
Swinging

 Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>A13-A</b>  	Idraulica / pneumatica, a singolo effetto <i>Hydraulic / pneumatic, single acting</i>	-70 +110	1	-	<b>Tenuta Seal</b>	
		-70 +110	1	-	X-ECOPUR	
		-70 +110	1	-	X-ECOPUR H	
		-50 +80	1	-	X-ECOPUR S	
		-200 +90	1	-	SKF Ecotal <sup>1</sup>	
		-100 +260	1	-	SKF Ecowear 1000 SKF Ecopeak	
<b>A25-F</b>  	Idraulica / pneumatica, a singolo effetto <i>Hydraulic / pneumatic, single acting</i>	-30 +110	5	-	<b>Tenuta Seal</b>	<b>Energizzante Energizer</b>
		-20 +110	5	-	X-ECOPUR	NBR 70
		-20 +110	5	-	X-ECOPUR H	NBR 70
		-20 +110	5	-	X-ECOPUR S	NBR 70
		-20 +200	10	-	SKF Ecoflon 2,3,4	FPM 75
		-30 +100	10	-	SKF Ecoflon 2,3,4	NBR 70
		-55 +90	10	-	SKF Ecowear 1000	MVQ 70
		-30 +90	10	-	SKF Ecowear 1000	NBR 70
<b>A26-F</b>  	Idraulica / pneumatica, a doppio effetto <i>Hydraulic / pneumatic, double acting</i>	-30 +100	5	16 (230)	<b>Tenuta Seal</b>	<b>Energizzante Energizer</b>
		-30 +100	5	16 (230)	G-ECOPUR 54D	NBR 70
		-30 +100	5	16 (230)	X-ECOPUR	NBR 70
		-20 +100	5	16 (230)	X-ECOPUR H	NBR 70
		-20 +100	5	16 (230)	X-ECOPUR S	NBR 70
		-20 +200	10	16 (230)	SKF Ecoflon 2,3,4	FPM 75
		-30 +100	10	16 (230)	SKF Ecoflon 2,3,4	NBR 70
		-55 +90	10	16 (230)	SKF Ecowear 1000	MVQ 70
		-30 +90	10	16 (230)	SKF Ecowear 1000	NBR 70
<b>A27-F</b>  	Idraulica / pneumatica, a doppio effetto <i>Hydraulic / pneumatic, double acting</i>	-30 +100	5	16 (230)	<b>Tenuta Seal</b>	<b>Energizzante Energizer</b>
		-30 +100	5	16 (230)	G-ECOPUR 54D	NBR 70
		-30 +100	5	16 (230)	X-ECOPUR	NBR 70
		-20 +100	5	16 (230)	X-ECOPUR H	NBR 70
		-20 +100	5	16 (230)	X-ECOPUR S	FPM 75
		-20 +200	10	16 (230)	SKF Ecoflon 2,3,4	NBR 70
		-30 +100	10	16 (230)	SKF Ecoflon 2,3,4	MVQ 70
		-55 +90	10	16 (230)	SKF Ecowear 1000	NBR 70
		-30 +90	10	16 (230)	SKF Ecowear 1000	NBR 70

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

# Anelli Guida / Guide Rings

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>F01</b> 	Anello guida, stelo/pistone <i>Guide ring,            rod or piston            application</i>	-200 +200 -200 +200 -50 +100 -40 +120	4 5 4 1	3 4.5 25 90	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup> SKF Ecotex <sup>2</sup>
<b>F02</b> 	Anello guida, stelo / pistone <i>Guide ring,            rod or piston            application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>
<b>F03</b> 	Anello guida, applicazione pistone <i>Guide ring,            piston            application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>
<b>F04</b> 	Anello guida, applicazione stelo <i>Guide ring,            rod            application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Tessuto rinforzato in resina poliestere, disponibile solo come nastro guida

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Special fabric reinforced material, available as a guide tape only



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>F05</b> 	Anello guida, applicazione pistone <i>Guide ring,                      piston application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>
<b>F06</b> 	Anello guida, applicazione stelo <i>Guide ring,                      rod application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>
<b>F07</b> 	Anello guida, applicazione pistone <i>Guide ring,                      piston application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>
<b>F08</b> 	Anello guida, applicazione stelo <i>Guide ring,                      rod application</i>	-200 +200 -200 +200 -50 +100	4 5 4	3 4.5 25	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecoflon 3 SKF Ecotal <sup>1</sup>

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Soggetto a temperatura e a compressione consentita

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Depending on temperature and allowable compression



# Anelli di Back-up / Back-up Rings

Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>ST08</b>  	Back-up ring, inattivo e utilizzato con O-Ring  <i>Back-up ring, inactive and used with O-Ring</i>	-70 +110	-	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR X-ECOPUR H X-ECOPUR S SKF Ecoflon 1 SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-200 +260	-	-	
		-200 +260	-	-	
		-40 +100	-	-	
		-100 +260	-	-	
		-50 +100	-	-	
<b>ST09</b>  	Back-up ring, inattivo per O-Ring  <i>Back-up ring, inactive for O-Ring</i>	-70 +110	-	-	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR G-ECOPUR 54D H-ECOPUR S-ECOPUR T-ECOPUR X-ECOPUR X-ECOPUR H X-ECOPUR S SKF Ecoflon 1 SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-70 +110	-	-	
		-200 +260	-	-	
		-200 +260	-	-	
		-40 +100	-	-	
		-100 +260	-	-	
-50 +100	-	-			
<b>ST10</b>  	Back-up ring, attivo e utilizzato per pistoni di tipo PD  <i>Back-up ring, active for piston seal type PD</i>	-200 +260	-	-	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>
		-40 +100	-	-	
		-100 +260	-	-	
		-50 +100	-	-	
		-50 +100	-	-	

1. Fino a Ø 260 mm  
2. Superiore a Ø 260 mm

1. Up to Ø 260 mm  
2. Above Ø 260 mm



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>ST11</b>  	Back-up ring, attivo e utilizzato per stelo di tipo PD  <i>Back-up ring, active for rod seal type PD</i>	-200 +260 -40 +100 -100 +260 -50 +100	- - - -	- - - -	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>
<b>ST12</b>  	Back-up ring, triangolare per applicazione stelo per sedi speciali  <i>Back-up ring, triangular for rod application which fits in special housings</i>	-200 +260 -40 +100 -100 +260 -50 +100	- - - -	- - - -	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>
<b>ST13</b>  	Back-up ring, triangolare per applicazione pistone per sedi speciali  <i>Back-up ring, triangular for piston application which fits in special housings</i>	-200 +260 -40 +100 -100 +260 -50 +100	- - - -	- - - -	<b>Tenuta Seal</b> SKF Ecoflon 2 SKF Ecomid <sup>2</sup> SKF Ecopaek SKF Ecotal <sup>1</sup>

1. Fino a Ø 260 mm  
2. Superiore a Ø 260 mm

1. Up to Ø 260 mm  
2. Above Ø 260 mm



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

# Tenute per Rotazione / Rotary Seals

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>R01-P</b> 	Tenuta per albero rotante singolo effetto <i>Single acting rotary shaft seal</i>	-30 +80	5 <sup>3</sup>	0,5 (7)	<b>Tenuta Seal</b> ECOPUR	<b>Energizzante Energizer</b> SKF Ecotal <sup>1</sup>
		-35 +80	5 <sup>3</sup>	0,5 (7)	ECOPUR LD	SKF Ecomid
		-30 +80	5 <sup>3</sup>	0,5 (7)	G-ECOPUR	SKF Ecomid
		-20 +80	5 <sup>3</sup>	0,5 (7)	H-ECOPUR	SKF Ecotal <sup>1</sup>
		-20 +80	5 <sup>3</sup>	0,5 (7)	S-ECOPUR	SKF Ecotal <sup>1</sup>
		-40 +80	5 <sup>3</sup>	0,5 (7)	T-ECOPUR	SKF Ecotal <sup>1</sup>
<b>R01-R</b> 	Tenuta per albero rotante singolo effetto <i>Single acting rotary shaft seal</i>	-10 +200	10 <sup>3</sup>	0,5 (7)	<b>Tenuta Seal</b> SKF Ecoflas	<b>Tenuta Seal</b> Metal
		-25 +80	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-30 +80	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	15 <sup>3</sup>	0,5 (7)	SKF Ecorubber-2	Metal
		-50 +80	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-3 <sup>2</sup>	SKF Ecotal <sup>1</sup>
		-50 +150	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-3 <sup>2</sup>	Metal
		-50 +80	5 <sup>3</sup>	0,2 (3)	SKF Ecosil	SKF Ecotal <sup>1</sup>
		-60 +200	5 <sup>3</sup>	0,2 (3)	SKF Ecosil	Metal
<b>R01-AF</b> 	Tenuta per albero rotante singolo effetto <i>Single acting rotary shaft seal</i>	-30 +110	5 <sup>3</sup>	0,5 (7)	<b>Tenuta Seal</b> ECOPUR	
		-35 +110	5 <sup>3</sup>	0,5 (7)	ECOPUR LD	
		-30 +110	5 <sup>3</sup>	0,5 (7)	G-ECOPUR	
		-20 +110	5 <sup>3</sup>	0,5 (7)	H-ECOPUR	
		-20 +110	5 <sup>3</sup>	0,5 (7)	S-ECOPUR	
		-50 +110	5 <sup>3</sup>	0,5 (7)	T-ECOPUR	
		-10 +200	10 <sup>3</sup>	0,5 (7)	SKF Ecoflas	
		-25 +150	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-H	
		-30 +100	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-1	
		-20 +200	15 <sup>3</sup>	0,5 (7)	SKF Ecorubber-2	
		-50 +150	10 <sup>3</sup>	0,2 (3)	SKF Ecorubber-3 <sup>2</sup>	
		-60 +200	5 <sup>3</sup>	0,2 (3)	SKF Ecosil	
<b>R01-AS</b> 	Tenuta per albero rotante singolo effetto <i>Single acting rotary shaft seal</i>	-30 +110	5 <sup>3</sup>	0,5 (7)	<b>Tenuta Seal</b> ECOPUR	
		-35 +110	5 <sup>3</sup>	0,5 (7)	ECOPUR LD	
		-30 +110	5 <sup>3</sup>	0,5 (7)	G-ECOPUR	
		-20 +110	5 <sup>3</sup>	0,5 (7)	H-ECOPUR	
		-20 +110	5 <sup>3</sup>	0,5 (7)	S-ECOPUR	
		-50 +110	5 <sup>3</sup>	0,5 (7)	T-ECOPUR	
		-10 +200	10 <sup>3</sup>	0,5 (7)	SKF Ecoflas	
		-25 +150	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-H	
		-30 +100	10 <sup>3</sup>	0,5 (7)	SKF Ecorubber-1	
		-20 +200	15 <sup>3</sup>	0,5 (7)	SKF Ecorubber-2	
		-50 +150	10 <sup>3</sup>	0,2 (3)	SKF Ecorubber-3 <sup>2</sup>	
		-60 +200	5 <sup>3</sup>	0,2 (3)	SKF Ecosil	

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm
2. Tessuto rinforzato in resina poliesteri, disponibile solo come nastro guida
3. I valori di limite di velocità superficiale sono basati sulla capacità di dissipazione del calore del sistema di tenuta (diametro dell'albero, lubrificazione...)

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm
2. Special fabric reinforced material, available as a guide tape only
3. Surface speed limit values are depending on heat dissipation ability of the sealing system (shaft diameter, lubrication...)



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>R01-F</b> 	Tenuta per albero rotante singolo effetto. PTFE caricato guarnizione a labbro <i>Single acting rotary shaft seal. Spring loaded PTFE lip seal</i>	-20 +200 -30 +100	10 <sup>3</sup> 10 <sup>3</sup>	15 (210) 15 (210)	<b>Tenuta Seal</b> SKF Ecoflon 4 SKF Ecoflon 4	<b>O-Ring</b> FPM 75 NBR 70
<b>R02-P</b> 	Tenuta per albero rotante singolo effetto con labbro antipolvere <i>Single acting rotary shaft seal with additional dust lip</i>	-30 +80 -35 +80 -30 +80 -20 +80 -20 +80 -40 +80	5 <sup>3</sup> 5 <sup>3</sup> 5 <sup>3</sup> 5 <sup>3</sup> 5 <sup>3</sup> 5 <sup>3</sup>	0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>Tenuta Seal</b> SKF Ecotal <sup>1</sup> SKF Ecomid SKF Ecomid SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>
<b>R02-R</b> 	Tenuta per albero rotante singolo effetto con labbro antipolvere <i>Single acting rotary shaft seal with additional dust lip</i>	-10 +200 -25 +80 -30 +80 -20 +200 -50 +80 -50 +150 -50 +80 -60 +200	10 <sup>3</sup> 10 <sup>3</sup> 10 <sup>3</sup> 15 <sup>3</sup> 10 <sup>3</sup> 10 <sup>3</sup> 5 <sup>3</sup> 5 <sup>3</sup>	0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7) 0,5 (7) 0,2 (3) 0,2 (3)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>2</sup> SKF Ecorubber-3 <sup>2</sup> SKF Ecosil SKF Ecosil	<b>Tenuta Seal</b> Metal SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> Metal SKF Ecotal <sup>1</sup> Metal SKF Ecotal <sup>1</sup> Metal
<b>R03-P</b> 	Tenuta per albero rotante doppio effetto con anelli di backup <i>Double acting rotary seal with integrated backup rings</i>	-30 +100 -20 +100 -20 +100 -40 +100	0,2 0,2 0,3 0,2	400 (5.800) 400 (5.800) 400 (5.800) 400 (5.800)	<b>Tenuta Seal</b> ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR	<b>Tenuta Seal</b> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup> SKF Ecotal <sup>1</sup>

1. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm  
 2. Tessuto rinforzato in resina poliesteri, disponibile solo come nastro guida  
 3. I valori di limite di velocità superficiale sono basati sulla capacità di dissipazione del calore del sistema di tenuta (diametro dell'albero, lubrificazione...)

1. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm  
 2. Special fabric reinforced material, available as a guide tape only  
 3. Surface speed limit values are depending on heat dissipation ability of the sealing system (shaft diameter, lubrication...)



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	Tenuta Seal	O-Ring
<b>R03-R</b> 	Tenuta per rotativa a doppio effetto <i>Double acting rotary seal</i>  	-10 +200	0,2	250 (3.600)	SKF Ecoflas	SKF Ecopaek
		-25 +100	0,2	250 (3.600)	SKF Ecorubber-H	SKF Ecotal <sup>1</sup>
		-30 +100	0,2	250 (3.600)	SKF Ecorubber-1	SKF Ecotal <sup>1</sup>
		-20 +200	0,2	250 (3.600)	SKF Ecorubber-2	SKF Ecoflon 2
		-50 +150	0,2	250 (3.600)	SKF Ecorubber-3	SKF Ecoflon 2
		-40 +100	0,2	250 (3.600)	SKF Ecorubber-3	SKF Ecotal <sup>1</sup>
<b>R04-A</b> 	Tenuta per rotativa a doppio effetto <i>Double acting rotary seal</i>  	-30 +110	0,2	160 (2.300)	ECOPUR	
		-20 +110	0,2	160 (2.300)	H-ECOPUR	
		-20 +110	0,3	160 (2.300)	S-ECOPUR	
		-50 +110	0,2	160 (2.300)	T-ECOPUR	
		-10 +200	0,2	100 (1.450)	SKF Ecoflas	
		-25 +150	0,2	100 (1.450)	SKF Ecorubber-H	
		-30 +100	0,2	100 (1.450)	SKF Ecorubber-1	
		-20 +200	0,2	100 (1.450)	SKF Ecorubber-2	
		-50 +150	0,2	100 (1.450)	SKF Ecorubber-3 <sup>2</sup>	
<b>R05-A</b> 	Idraulica, tenuta per rotativa a doppio effetto <i>Hydraulic, double acting rotary seal</i>  	-30 +110	0,2	160 (2.300)	ECOPUR	
		-20 +110	0,2	160 (2.300)	H-ECOPUR	
		-20 +110	0,3	160 (2.300)	S-ECOPUR	
		-50 +110	0,2	160 (2.300)	T-ECOPUR	
		-10 +200	0,2	100 (1.450)	SKF Ecoflas	
		-25 +150	0,2	100 (1.450)	SKF Ecorubber-H	
		-30 +100	0,2	100 (1.450)	SKF Ecorubber-1	
		-20 +200	0,2	100 (1.450)	SKF Ecorubber-2	
		-50 +150	0,2	100 (1.450)	SKF Ecorubber-3 <sup>2</sup>	
<b>R06-P</b> 	Tenuta rotante ad azione assiale <i>Axially acting rotary seal</i>  	-30 +110	25	-	ECOPUR	
		-35 +110	25	-	ECOPUR LD	
		-30 +110	25	-	G-ECOPUR	
		-20 +110	25	-	H-ECOPUR	
		-20 +110	25	-	S-ECOPUR	
		-50 +110	25	-	T-ECOPUR	

1. Tessuto rinforzato in resina poliestere, disponibile solo come nastro guida  
 2. I valori di limite di velocità superficiale sono basati sulla capacità di dissipazione del calore del sistema di tenuta (diametro dell'albero, lubrificazione...)

1. *Special fabric reinforced material, available as a guide tape only*  
 2. *Surface speed limit values are depending on heat dissipation ability of the sealing system (shaft diameter, lubrication...)*



Tenute per Rotazione / Rotary Seals

Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>R06-R</b> 	Tenuta rotante ad azione assiale <i>Axially acting rotary seal</i>	-10 +200 -25 +150 -30 +100 -20 +200 -50 +150	25 25 25 25 25	- - - - -	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
<b>R07-P</b> 	Tenuta rotante ad azione assiale <i>Axially acting rotary seal</i>	-30 +110 -35 +110 -30 +110 -20 +110 -20 +110 -50 +110	25 25 25 25 25 25	- - - - - -	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
<b>R07-R</b> 	Tenuta rotante ad azione assiale <i>Axially acting rotary seal</i>	-10 +200 -25 +150 -30 +100 -20 +200 -50 +150	25 25 25 25 25	- - - - -	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
<b>R08-A</b> 	Tenuta per singolo effetto <i>Single acting rotary seal</i>	-30 +110 -35 +110 -30 +110 -20 +110 -20 +110 -50 +100 30 +100 25 +150 20 +200 50 +150 10 +200 60 +200	- - - - - - - - - - -	- - - - - - - - - - -	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR SKF Ecorubber-1 SKF Ecorubber-H SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup> SKF Ecoflas SKF Ecosil

1. Non adatto per oli minerali

1. Not suitable for mineral oils



Tipo Type	Descrizione Description  Usò Use	Condizioni di esercizio Operating conditions			Materiali Materials	
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX		
<b>R09-F</b> 	Tenuta rotativa a doppio effetto <i>Double-acting rotary seal</i>	-20 +200 -30 +100	0,4 0,4	350 (5.000) 350 (5.000)	<b>Pattino</b> <i>Glide Ring</i> SKF Ecoflon 4 SKF Ecoflon 4	<b>Energizzante</b> <i>Energizer</i> FPM 75 NBR 70
<b>R09-FS</b> 	Tenuta rotativa a doppio effetto <i>Double-acting rotary seal</i>	-30 +100 -20 +200	0,4 0,4	350 (5.000) 350 (5.000)	<b>Pattino</b> <i>Glide Ring</i> SKF Ecoflon 4 SKF Ecoflon 4	<b>Energizzante</b> <i>Energizer</i> SKF Ecorubber-1 SKF Ecorubber-2
<b>R10-F</b> 	Tenuta rotativa a doppio effetto <i>Double-acting rotary seal</i>	-20 +200 -30 +100	0,4 0,4	350 (5.000) 350 (5.000)	<b>Pattino</b> <i>Glide Ring</i> SKF Ecoflon 4 SKF Ecoflon 4	<b>Energizzante</b> <i>Energizer</i> FPM 75 NBR 70
<b>R10-FS</b> 	Tenuta rotativa a doppio effetto <i>Double-acting rotary seal</i>	-30 +100 -20 +200	0,4 0,4	350 (5.000) 350 (5.000)	<b>Tenuta Seal</b> SKF Ecoflon 4 SKF Ecoflon 4	<b>Energizzante</b> <i>Energizer</i> SKF Ecorubber-1 SKF Ecorubber-2



Statico  
Static



Alternato  
Alternate



Elicoidale  
Helical



Oscillante  
Swinging



Rotatorio  
Rotary





Tipo Type	Descrizione Description  Uso Use	Condizioni di esercizio Operating conditions			Materiali Materials
		T °C MIN / MAX	S m/s MAX	P bar (psi) MAX	
<b>R15-P</b>  	Tenuta statica a doppio effetto <i>Double-acting static seal</i>  	-30 +110	-	400 (5.800)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-35 +110	-	400 (5.800)	
		-30 +110	-	400 (5.800)	
		-20 +110	-	400 (5.800)	
		-20 +110	-	400 (5.800)	
		-50 +110	-	400 (5.800)	
<b>R16</b>  	Tenuta statica a doppio effetto <i>Double-acting static seal</i>  	-10 +200	-	50 (3.600)	<b>Tenuta Seal</b> SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup>
		-25 +150	-	50 (3.600)	
		-30 +110	-	50 (3.600)	
		-20 +200	-	50 (3.600)	
		-50 +150	-	50 (3.600)	
<b>R20-P</b>  	Tenuta a flangia a singolo effetto <i>Single-acting flange seal</i>  	-30 +110	-	800 (11.600)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR
		-35 +110	-	800 (11.600)	
		-30 +110	-	800 (11.600)	
		-20 +110	-	800 (11.600)	
		-20 +110	-	800 (11.600)	
		-50 +110	-	800 (11.600)	
<b>R30-A</b>  	Tenuta valvola stelo con rivestimento in PTFE <i>Valve stem seal with PTFE jacket</i>  	-25 +200	0,5	1000 (14.500)	<b>Tenuta Seal</b> <b>Rivestimento Cover</b> <b>Back-up Ring</b> SKF Ecorubber-H      SKF Ecoflon <sup>2</sup> SKF Ecopaek SKF Ecorubber-H      SKF Ecoflon <sup>2</sup> SKF Ecotal <sup>3</sup> SKF Ecorubber-2      SKF Ecoflon <sup>2</sup> SKF Ecopaek SKF Ecorubber-2      SKF Ecoflon <sup>2</sup> SKF Ecotal <sup>3</sup>
		-25 +100	0,5	500 (7.200)	
		-20 +200	0,5	1000 (14.500)	
		-20 +100	0,5	500 (7.200)	
<b>R35-A</b>  	Tenuta a flangia a singolo effetto <i>Single-acting flange seal</i>  	-30 +110	-	800 (11.600)	<b>Tenuta Seal</b> ECOPUR ECOPUR LD G-ECOPUR H-ECOPUR S-ECOPUR T-ECOPUR SKF Ecoflas SKF Ecorubber-H SKF Ecorubber-1 SKF Ecorubber-2 SKF Ecorubber-3 <sup>1</sup> SKF Ecosil
		-35 +110	-	800 (11.600)	
		-30 +110	-	800 (11.600)	
		-20 +110	-	800 (11.600)	
		-20 +110	-	800 (11.600)	
		-50 +110	-	800 (11.600)	
		-10 +200	-	250 (3.600)	
		-25 +150	-	250 (3.600)	
		-30 +100	-	250 (3.600)	
		-20 +200	-	250 (3.600)	
		-50 +150	-	250 (3.600)	
		-60 +200	-	250 (3.600)	

1. Non adatto per oli minerali  
 2. Per tutti i tipi di SKF Ecoflon, fare riferimento alle proprietà del materiale  
 3. SKF Ecotal fino a Ø 260 mm, SKF Ecomid superiore a Ø 260 mm

1. Not suitable for mineral oils  
 2. For all types of SKF Ecoflon, refer to material properties  
 3. SKF Ecotal up to Ø 260 mm, SKF Ecomid above Ø 260 mm





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