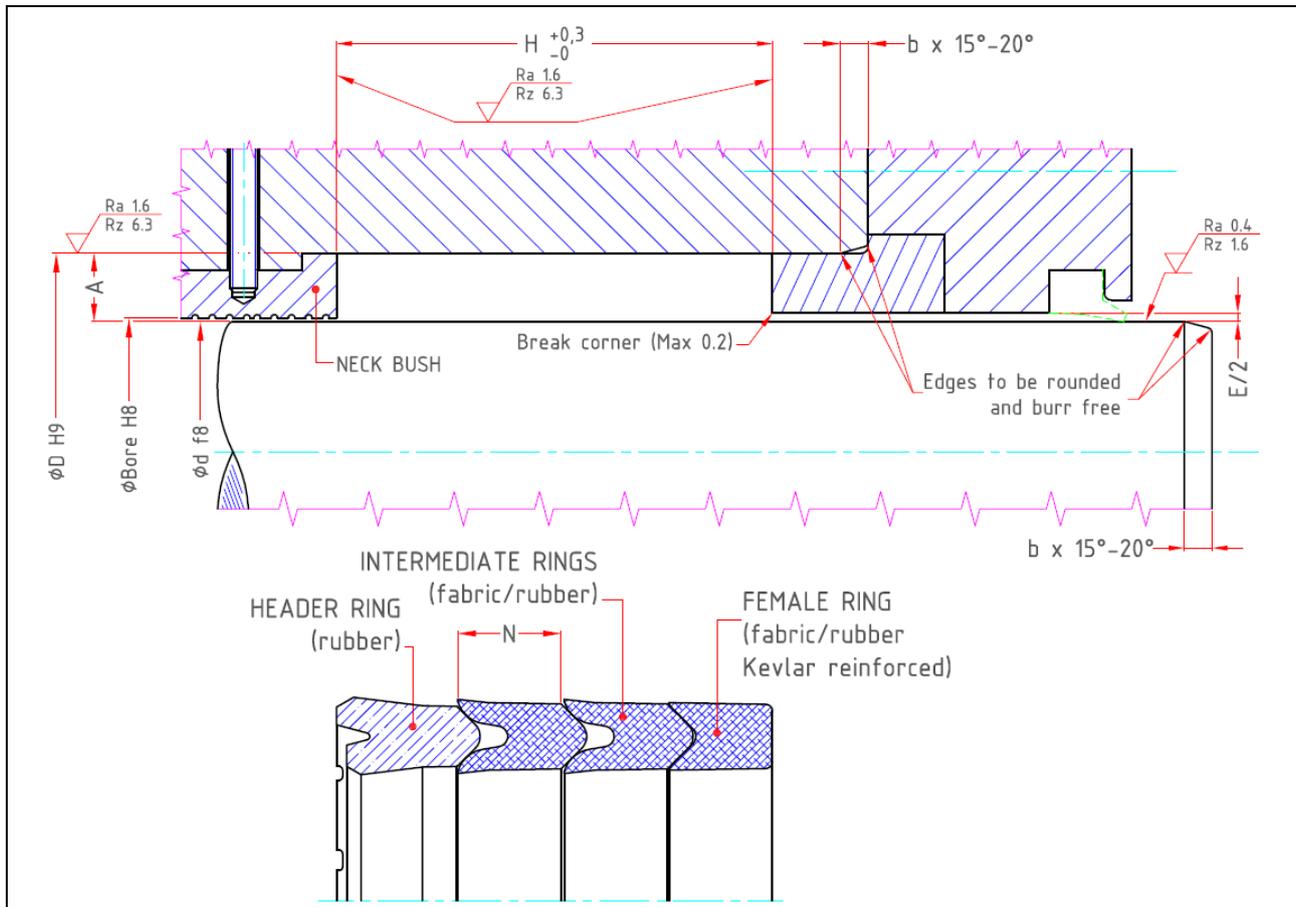


CARCOTEX/SP/SG

V-packing made of rubber proofed fabric for ROD sealing in Heavy-Duty applications



Carcotex/SP/SG is our exclusive “zero leakage” multi-lip hydraulic packing suitable for heavy duty applications, adverse mechanical conditions and long useful lifetime. Thanks to its extremely robust design, Carcotex/SP/SG can withstand large side loads and high pressure peaks even in presence of worn surfaces or misaligned ram.

This type of seal is typically used as rod seal in heavy duty hydraulic cylinders and machineries like forging and extrusion presses.

Carcotex/SP/SG is composed by intermediate V-rings with large cross section made in rubber proofed fabric, a female ring (called also pressure or gland ring), which is extremely resistant to extrusion, made in rubber proofed fabric with Kevlar and a rubber asymmetrical male ring (called also header or support ring) as the main sealing element of the V-packing.

The pressure responsive design of the header guarantees a “zero leakage” performance at both high and low pressures. The flexibility of the rubber lips conforms to worn surfaces or misaligned rams.

Carcotex/SP/SG provides the following benefits compared to the other hydraulic sealing solutions:

- Multi-lip seal which provides multi contact point. For this reason, Carcotex/SP/SG is usually supplied in split version ensuring a very good sealing performance and reducing dramatically the machine shut-down costs.
- The rubber proofed fabric construction can withstand high radial load and thanks to the honeycomb fabric structure, which creates oil pockets, the friction forces are reduced.
- The asymmetrical rubber header with its radial interference is assuring a “zero leakage” performance even in case of worn ram. The header can be easily machined to achieve any requested housing length.
- Carcotex/SP/SG doesn't require initial axial compression nor periodic adjustment.
- Extremely high extrusion resistant materials for the female ring: rubber proofed cotton fabric with Kevlar reinforcement (standard material) or as alternative Nylon or PTFE ring. Available also a self-aligning version (SA) or a corner reinforced version (BU).
- Carcotex/SP/SG does not shrink even in case of very long storage time. For this reason Carcotex/SP/SG is supplied “ready for fitting” and it does not require any trimming of the intermediate V-rings before fitting.
- Fitting instructions are supplied with every seal. A certificate stating the “Fitting Height” is also provided to avoid any mistake during the installation.
- On request the “Carcoflon” coating treatment can be applied on the dynamic side of the V-rings to avoid stick slip effect during the first runs and to give an appreciated friction reduction.

Materials and working conditions

Material Designation	Material Description	Working Temperature (°C)	Peak Temperature (°C)	Max. Speed (m/s)	Max. Pressure (bar)
S800	NBR/Cotton	-20 ÷ +100	-30 / +120	0.7	630
HT700	HNBR/Cotton	-30 ÷ +140	-40 / +160	0.7	630
S890 *	NBR/Kevlar	-20 ÷ +100	-30 / +120	0.7	630
S800K *	NBR/Cotton/Kevlar	-20 ÷ +100	-30 / +120	0.7	630

*Optional materials for very worn machines. For these materials we recommend to consult our technical department.

The above stated working limits are not an indication that these values can be applied simultaneously. The max. speed can be applied only in case of low frequency cycling.

For large extrusion gap the female ring can be supplied in different versions:

- Corner reinforced (BU) female ring
- Self-aligning (SA) Nylon female ring
- Nylon (B.NY) or Teflon (B.PTFE) female ring
- Additional Nylon back-up ring

Installation and hardware requirements

Carcotex/SP/SG is designed to work in a housing with fixed length. Even if the asymmetrical leg allows to support the neck bush, we recommend to fix the neck bush to reduce the load on the header.

Carcotex/SP/SG is recommended with 2 intermediate V-rings. It can be supplied also with only 1 intermediate V-ring to reduce the housing length and the consequent construction costs.

Carcotex/SP/SG is usually supplied in split version (all the rings are open). The advantage of this version is that in the event of a repair and replacement of the seal no major erection work is required. In case an endless V-packing is specified, only the sealing elements (rubber header and intermediate V-rings) are endless, unless otherwise specified.

An adequate cross-section dimensioning is necessary to compensate machining tolerances and wear in large machineries. Here below the recommended cross-sections are listed in relation to the rod diameter.

Recommended cross section and chamfer requirements

Shaft Ød (mm)	A (mm)	b x 15° ÷ 20° (mm)
80÷140	12,5	6,2
100÷350	15	7,5
200÷1000	20	10
500÷1500	25	12,5
> 1000	30	15

Extrusion clearance

The gap between the rod and the inside circumference of the gland follower must be as small as possible. Clearance larger than the maximum permissible values here indicated in the table can cause the extrusion of the female ring with the consequent failure of the sealing system. For larger values pls. contact our tech. department.

A (mm)	Max. extrusion clearance E (mm)	
	0 – 300 bar	300-630 bar
12,5	0,45	0,35
15	0,55	0,40
20	0,70	0,55
25	0,90	0,70
30	1,10	0,90

V-Packing composition and housing length

Carcotex/SP/SG is usually supplied with 2 intermediate V-rings. The use of more than 3 intermediate V-rings is not recommended due to the increase of the friction forces.

By machining the male adapter CARCO can produce V-packing for different housing lengths within the limits listed in the following table:

A (mm)	Housing length range (mm)						N
	1+1+1		1+2+1		1+3+1		
	H min	H max	H min	H max	H min	H max	
12,5	55	58	75	78	95	98	20
15	70	77	95	102	120	127	25
20	85	90	115	120	145	150	30
25	110	125	150	165	190	205	40
30	115	130	160	175	205	220	45

Denomination

Carcotex/SP/SG(SPLIT)/S800 900,0/950,0 x 160,0

