Scrapers GHF HD

DESCRIPTION

GH series wiper seals are dynamic sealing components designed to protect heavy-duty hydraulic and pneumatic cylinders from the ingress of external contaminants such as dust, mud, water, and abrasive debris. Featuring a precision-engineered wiping lip, they effectively clean the rod during its retraction stroke, preventing scoring, premature wear of internal seals, and contamination of the hydraulic fluid. Variations include models with an external metal cage for rigid press-fit interference or all-elastomer/polyurethane designs for snap-in assembly.

PROFILES AND VARIATIONS

PROFILE / TYPE	GEOMETRIC AND FUNCTIONAL DESCRIPTION
Type GHF HD	Heavy Duty wiper with an exposed external metal cage and reinforced scraping lip for extremely harsh environments.
Type GHK	Standard polyurethane wiper profile with a flexible lip, designed for snap-in installation in semi-open grooves.
Type GHM	Metal-cased wiper with a ground external metal shell for a rigid steel-on-steel interference fit within the housing.
Type GHP	Compact elastomer profile equipped with a secondary front dust lip for additional protection in dusty environments.
Type GHT/RM	Special reinforced wiper featuring an integrated vulcanized metal insert, specifically tailored for mobile hydraulics.
Type GHW	Double-lip wiper profile: ensures optimal external rod cleaning while retaining the residual internal oil film.

MATERIALS AND OPERATING CONDITIONS

MATERIAL / COMPOUND	PERIPHERAL SPEED	TEMPERATURE RANGE	MAX PRESSURE
PU (Polyurethane 93 ShA)	Up to 2.0 m/s	−35 / +100 °C	Standard atmospheric
NBR (Nitrile Rubber 70/80 ShA)	Up to 1.0 m/s	−30 / +100 °C	Standard atmospheric
FKM (Fluoroelastomer / Viton)	Up to 3.5 m/s	−20 / +200 °C	Standard atmospheric

COMPATIBLE FLUIDS

Mineral oils, synthetic hydraulic fluids, industrial greases, water, and water-glycol solutions (subject to verification of the specific compound compatibility, e.g., FKM for high temperatures and aggressive chemical agents).

MAIN FEATURES

Calibrated Wiping Efficiency

The geometric profile of the lip is finished with a sharp cutting angle that exerts constant pressure on the rod. This ensures full removal of contaminants without disrupting the functional lubricating oil film.

Stable Mechanical Anchoring

Variants equipped with a metal cage or insert (GHM, GHF HD, GHT) guarantee definitive press-fit interference within the housing groove, completely eliminating risk of displacement from vibrations or thermal spikes.

Run-Out Compensation

The high structural elasticity of the compounds effectively absorbs micro-misalignments, radial shaft oscillations (run-out), and physiological system wear over time.

ADVANTAGES

- **Extended Service Life:** Protects internal cylinder seals, drastically reducing abrasive wear.
- **Simplified Assembly:** Elastic versions allow quick snap-in installation in easily accessible semi-open grooves.
- **Thermal and Chemical Resistance:** Thanks to the wide range of compounds (PU, NBR, FKM), the series adapts to any industrial environment.

COMPLIANCE AND STANDARDS

All products are engineered and manufactured in strict compliance with the dimensional and construction specifications outlined by international standards DIN 3760 and ISO 6195 (Type A / Type B).

MARKET COMMERCIAL CORRESPONDENCES

MANUFACTURER	CORRESPONDING PROFILES (EXAMPLES)
Net Seals	Wiper Series GHF / GHK / GHM / GHP / GHW
Freudenberg (Simrit)	Profile WSO, AS, BAS, AUAS
Parker Prädifa	Profile AY, A1, A2, duster
Trelleborg	Profile Wrin, Turcon Excluder
Kastas Sealing Tech.	Profile K25, K27, K30