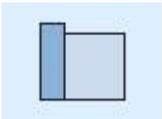


Hydraulic Packings

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
GPY-Packings [Piston packings]	 Dimension table	RN919	For those applications, the SKY-packings are used and the improvement of durability becomes an essential issue. The GPY-packings for pistons and the GNY-packings for rods are recommended. With the RN919 wear resistant material and larger cross-sectional area than the SKY- packings of the same dimensions, the GPY piston packings prove to be free from damage by a back pressure and the GNY rod packings obtain higher sealing capability and optimum sealing performance against eccentric movements.	# Basic cylinders # Cylinders for construction and industrial vehicles
GNY-Packings [Rod packings]	 Dimension table	RN919		
RGY-Packings [Piston & rod packings]	 Dimension table	RN923	The grooves of RGY piston packings and RNY rod packings are compatible with those for the SKY-packings. RGY-packings are designed to withstand back pressure and provide longer service time by adopting an improved wear resistant material.	# Basic cylinders # Cylinders for construction machine tools and industrial vehicles
RNY-Packings [Rod packings]	 Dimension table	RN922	RNY rod packings are designed exclusively for sealing rods. RNY rod packings made of a highly elastic compound achieve good sealing performance against eccentric movements.	# Cylinders for machine tools and industrial vehicles
(T)SGY-Packings [Piston packings]	 Dimension table	RN812	The groove dimensions of SGY & SNY packings are compatible with those of the SKY-packings. Service temperature range of -45°C to $+100^{\circ}\text{C}$ allows cylinders for use in multiple temperature conditons -in both regular and severe cold euvironments- without changing packings.	# Crane and aerial work platforms
(T)SNY-Packings [Rod packings]	 Dimension table	RN809	SGY & SNY-packings also feature exceptionally low stick slip. Due to the nature of the application, the material is required to have a moderately low material hardness. Conduct verification tests in the case of SGY & SNY-packings are used in high pressure and/or high frequency conditions.	# Cylinders for rigid conditions
SKY-Packings [Piston & rod packings]	 Dimension table	RN906 (RF905) (RF907)	SKY-packings are specified as the basic hydraulic packing in Japan since 1966. SKY-packings are multiply applicable to both pistons and rods. Flexible and easy installing properties fit to one piece groove and eliminate parts of divided grooves. Compacter cylinder design with lower cost is achievable by SKY packings.	# Basic cylinders # Cylinders of low hydraulic pressure # Cylinders for construction machine tools and industrial vehicles
KY-Packings [Piston & rod packings]	 Dimension table	RN906 (RF905) (RF907)	KY-packings replace V-packings with superior sealing performance, compacter groove dimensions and easy installation. The largest cross-sectional area of KY- packings assures stable sealing performance for vast applications. Abundant dimensional assortment is another plus.	# Basic cylinders # Hydraulic press and injection molding machine # Cylinders for construction machine tools and industrial vehicles

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
RGU-Packings [Piston packings]	 Dimension table	RN923	As double acting packings, the RGU-packings have a unique seal lip shape and provide identical sealing performance to U-packings on compacter sized pistons. Frequently be in service as a combination system with the PWL-bearings which offer multi-functions-bearing & back-up ring.	# Cylinders for agricultural machines # Cylinders for machine tools and industrial vehicles # Cylinders for light weight construction machines
HSD-Packings [Piston packings]	 Dimension table	RN906	HSD-packings are double acting packings and enable to minimize the size of pistons. Stable sealing performance without damage from twisting or rolling, unlike O-rings, is obtainable.	# Cylinders for agricultural machines # Cylinders for industrial vehicles
PENTA-Seals PS [Rod packings]	 Dimension table	RN906 (RF905)	The grooves of PENTA -Seals are compatible with those of O-rings specified by JIS B2401 P line. In addition to the superior sealing performance, PENTA -Seals prevent damage from twisting or rolling.	# Miniature cylinders # Control valves, solenoid valves
NMY-Packings [Rod packings]	 Dimension table	RN906	NMY-packings are small in cross sectional area and compatible with the grooves of O-rings specified by JIS B2401 P line. NMY packings are far superior in sealing performance and friction characteristics over O-rings.	# Miniature cylinders # Control valves, solenoid valves
STK-Seals (STR type) [rotation seals]	 Dimension table	PT151	S-FLON (PTFE) seals and back-up rings are combined to achieve low friction characteristic and of elimination stick slip even at low pressure/speed conditions. Moderate sealing performance comparing with U-packings due to the PTFE plastic seals which have higher rigidity and lower elasticity than rubber materials.	# Rotary joints # Swivel joints
ST-Seals [Piston seals]	 Dimension table	PT111	Good practice is needed to prevent scars on the delicate surface of S-FLON seals. # ST type is applicable to common & general applications with diversified dimensions. # STS type is designed for low friction/pressure cylinders, with small cross sectional area.	# Cylinders for machine tools and industrial vehicles
SMJ-Seals [Rod seals]	 Dimension table	PT154	# STG type is well accepted by construction machines and heavy machineries sectors. # SMJ type is available as rod seals with optimum sealing performance and durability. # STR type is designed for rotary joints.	# Cylinders for general industrial machines # Cylinders for construction equipment # Cylinders for special applications

The material codes specified in () are of heat resistant materials.

The heat resistant material for the SKY-300F, KY-250F and their larger sized products is RF907 instead of RF905.

RGU packings have been renovated to improve stability of sealing performance.

Pneumatic Packings

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
PGY-Packings [Piston packings]	 Dimension table	RN713 (RF905)	Improved wear resistant packings are PGY piston packings & PNY rod packings. Stable sealing performance is obtainable in lubricated, non-lubricated and dry air systems.	# Basic cylinders # Miniature cylinders
PNY-Packings [Rod packings]	 Dimension table	RN713 (RF905)		
GLY-Packings [Piston & rod packings]	 Dimension table	RK701 (RF905)	GLY-packings are applicable to pneumatic pistons & rods in non-lubricated air supply systems, while inapplicable to lubricated cylinders.	# Basic cylinders
PPD-Packings [Piston packings]	 Dimension table	RN729	PPD-packings are double acting piston packings compatible with the grooves for the PSD-packings. Sealing performance of PPD-packings sustains unchanged despite of large eccentric movement of the pistons. Moderate durability and fair friction characteristics.	# Basic cylinders # Miniature cylinders # Thin type cylinders # Cylinders for specific requirements
PSD-Packings [Piston packings]	 Dimension table	RN713 (RF704)	PSD-packings are the world best selling double acting pneumatic piston packings. The profile of the PSD-packings is compact and designed to provide outstanding friction properties. Unlike O-rings, PSD- packings resist twisting or rolling.	# Basic cylinders # Miniature cylinders # Thin type cylinders
PDU-Packings [Rod packings]	 Dimension table	RN818 (RF905)	PDU-packings, the one-piece packing & wiper, allow compacter cylinder designs.	# Basic cylinders
Mini Y-Packings MYA.MYN.MYH [Piston & rod packings]	 Dimension table	MYA RK703 (NBR)	Packings for small-gauge pneumatic applications. # MYA packings feature low friction applicable to small-gauge cylinders.	# Miniature cylinders

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
	 Dimension table	MYN RN716 (NBR)	# MYN packings are extra low friction, even lower than MYA packings, suitable for solenoid valves. # MYH packings are applicable to high temperature applications.	# Solenoid valves
	 Dimension table	MYH *1 RF704 (FKM)	Mini-Y packings are compatible with the grooves for O-rings specified by JIS B2401 P-line.	# Heat resistants
MYP-Packings [Piston packings]	 Dimension table	RN722	MYP-packings are applicable to small diameter pistons. Likewise Mini Y Packings, they are compatible with the grooves for O-rings specified by JIS B2401 P-line. By adopting the slit structure of the lip part, MYP-packings regulate back pressure and avoid incorrect installation. High wear resistant properties and stable performance are achievable.	# Miniature cylinders
MYR-Packings [Rod packings]	 Dimension table	RN818	MYR-packings are applicable to small diameter rods. Likewise Mini Y Packings, they are compatible with the grooves for O-rings specified by JIS B2401 P-line. By adopting an improved wear resistant material, they provide durable and stable sealing performance despite of the small cross sectional size.	# Miniature cylinders
PPY-Packings [Piston packings]	 Dimension table	RN713 (RF704)	Improved wear resistant PPY piston packings & PRY rod packings are applicable to miniature cylinders. Greater abrasion resistance with superior friction properties is obtainable comparing with O-rings.	# Basic cylinders
PRY-Packings [Rod packings]	 Dimension table	RN713 (RF704)		# Miniature cylinders
Grid-Surface Gaskets [Rubber sheet gaskets]	 Dimension table	RN917 RD911 RD914 *2	Unique and deep grid pattern of Grid-Surface Gaskets minimizes protrusion of the gasket sheet when squeezed in the assembly process offering optimum sealing performance.	# Solenoid valves

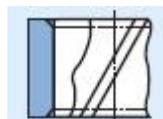
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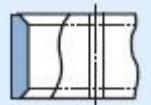
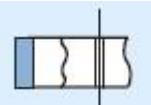
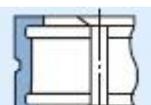
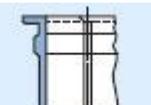
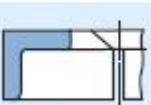
*1 The profiles of MYN and MYH are variant.

*2 RD914 is a green material and does not contain PVC.

RD914 is recommended for the replacement of RD911 (NBR+PVC).

Relative Parts

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
SCK-Wipers [Rod wipers]	 Dimension table	RN814		# Cylinders for construction and industrial vehicles # Cylinders for machine tools # Cylinders for agricultural machines
SDR-Wipers [Rod wipers]	 Dimension table	RN906 (RF905)	Wipers protect packings and cylinders by preventing the penetration of dust from the outside. # SCK-wipers: Insertable dust seals with a large profile for both outdoor and indoor applications.	# Hydraulic and pneumatic cylinders # Low pressure and hydro-pneumatic cylinders
SDB-Wipers [Rod wipers]	 Dimension table	RN819 (RF903)	They are specially designed to prevent water penetration through the outer circuit of the groove. # SDR-wipers: Common dust seals insertable in cylinders for indoor applications.	# Cylinders for machine tools # Cylinders for special applications
SCB-Wipers [Rod wipers]	 Dimension table	RN807	# SDB-wipers: Dust seals with rubber coated metal jacket placed on the outer circuit. Specially designed for the prevention of penetration of operating fluids. # SCB-wipers: Metal jacket type insertable in the groove by press fitting. They are suitable to the conditions where protection from dust, mud, and rain is required. # SER-wipers: Insertable dust seals with a small profile for miniature cylinders of indoor applications.	# Basic cylinders # Cylinders for construction and industrial vehicles # Cylinders for agricultural machines # Cylinders for marine vessels
SER-Wipers [Rod wipers]	 Dimension table	RN906 (RF905)	# SFR-wipers: Low friction type for pneumatic cylinders of indoor applications.	# Miniature hydraulic cylinders # Miniature pneumatic cylinders
SFR-Wipers [Rod wipers]	 Dimension table	RN912		# Basic pneumatic cylinders
SW-Wear Rings [Piston wear rings]	 Dimension table	PB201	Wear rings for pistons. Fabric reinforced phenolic resin structure provides excellent resistance against pressing load. Installable in one piece groove and inhibit a metal seizing and/or a deterioration of metal surface.	# Basic hydraulic cylinders # Cylinders for construction and industrial vehicles

Product name [Application]	Profiles (Left section)	Material codes	Characteristics	Field of application
SWA-Wear Rings [Piston wear rings]	 Dimension table	PB201	# SW-wear rings are applied to the wide range of hydraulic cylinders. # SWA-wear rings are designed for low pressure hydraulic cylinders and pneumatic cylinders.	# Basic pneumatic cylinders # Low pressure hydraulic cylinders # Hydro-pneumatic cylinders
SWB-Wear Rings [Piston wear rings]	 Dimension table	PB251	# SWB-wear rings are applicable to pneumatic cylinders.	
S-LEEVE (WPB type) [Piston bearings]	 Dimension table	PN104	WPB & WRB-bearings provide multi-functions of bearing plus back-up ring, installable in one piece grooves in combination with the packings compatible with the grooves of the SKY-packings. WPB & WRB-bearings inhibit metal seizing and eccentric movement of piston and/or rod and greatly improve pressure resistance and durability of the SKY-packings. For those applications higher dimensional precision is required, SW-wear rings are recommended.	# Basic hydraulic cylinders # Cylinders for industrial vehicles # Cylinders for machine tools
S-LEEVE (WRB type) [Rod bearings]	 Dimension table	PN104		
PWL-Bearings [Piston bearings]	 Dimension table	PN104	PWL-plastic bearings provide multi-functions of bearing plus back-up ring, installable in one piece grooves in combination with the RGU-packings. PWL-bearings inhibit seizing of piston metals and greatly improve pressure resistance and durability of the RGU-packings. PWL-bearings can be combined with most of HSD-packings to improve pressure resistance and durability of HSD-packings.	# Cylinders for agricultural machines # Cylinders for machine tools and industrial vehicles # Cylinders for small mini construction machines
PCS-Cushion Seals	 Dimension table	RN803 (RF903)	PCS-cushion seals in common pneumatic cylinders prevent breakage and impact noise by absorbing shock at stroke end. Unlike other cushion systems, PCS-cushion seals eliminate check-valve that provides unignorable advantage in maintenance.	# Basic pneumatic cylinders

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