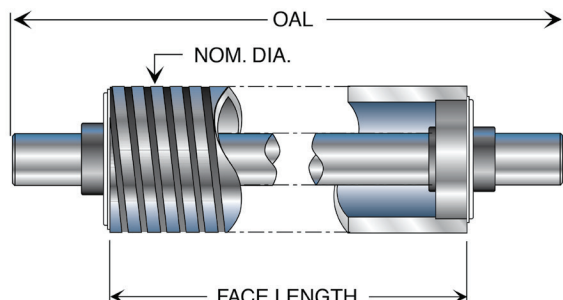


Grooved Rubber-Covered Idler Rolls



A cost-effective solution for spreading, dewrinkling, tracking, non-slip and air elimination

Various elastomers

Precision machined with angled, outward spiraling grooves across the roll surface

These anti-wrinkle rolls can influence your web in various ways, including stretching it, spreading it or allowing the web to lay flat and simply not induce wrinkles in the first place.

Through a partnership with Valley Roller, these idlers are covered with a rubber elastomer and are precision machined with angled, outward spiraling grooves across the roll surface. There are different elastomers available for use, each with different physical properties such as solvent resistance, heat resistance and hardness. In addition, various groove patterns are available to meet your specific application needs. Our Customer Support Specialists can help you determine which elastomer and groove pattern is best for your specific application.

RECOMMENDED WEBSPREADER GROOVE TYPES

Groove Type	Paper	Film
Single Groove (1) LH (1) RH	$\geq .003$	$\geq .007$
Double Groove (2) LH (2) RH	$\leq .003$	$\leq .007$
Triple Groove (3) LH (3) RH	$\leq .0015$	$\leq .002$
Quad-X (4) LH (4) RH	$\leq .001$	$< .001$

Common Applications

Quad X

- Ideal for thin film and paper
- This idler is machined with quadgrooves that run progressively deeper as they travel toward each end of the roll

Silicone Covered

- Built to elevated temperatures
- Silicone rubber coverings are nonmarking and offer excellent web release properties

PVC Nitrile

- Economical and non-marking, capable of withstanding temperatures up to 250° F
- Offers superior abrasion resistance

Ordering is easy with Webex's simple model nomenclature.

GR -300 x 050 x 56"

56 inch roll face length
bearings to fit an 0.75 inch diameter dead shaft
rubber covered to 3.00 inch diameter
grooved rubber-covered idler

GROOVED RUBBER-COVERED MODEL **GR**

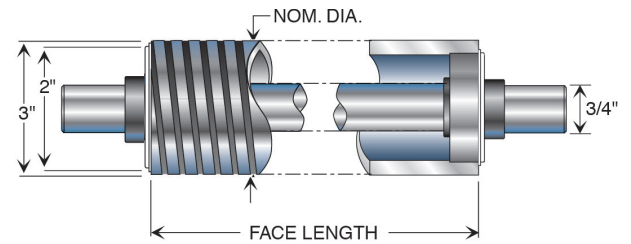
GR-300-075

2.0 inch diameter aluminum core

Rubber covered to 3.0 inch diameter

Low-friction bearings installed for a 0.75 inch diameter dead shaft

Generally available in Face Lengths up to 50 inches



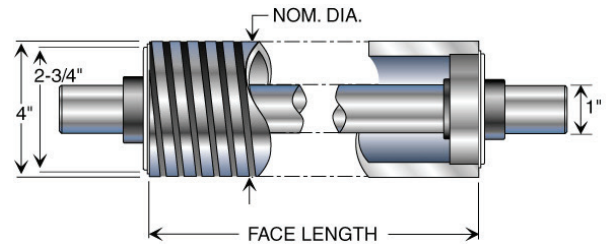
GR-400-100

2.75 inch diameter aluminum core

Rubber covered to 4.0 inch diameter

Low-friction bearings installed for a 1.0 inch diameter dead shaft

Generally available in Face Lengths up to 80 inches



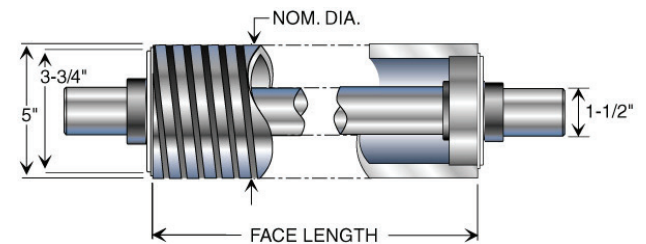
GR-500-150

3.75 inch diameter aluminum core

Rubber covered to 5.0 inch diameter

Low-friction bearings installed for a 1.50 inch diameter dead shaft

Generally available in Face Lengths up to 96 inches



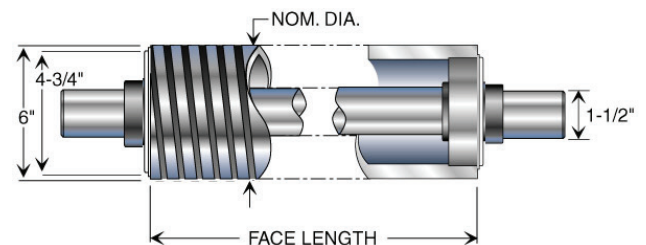
GR-600-150

4.75 inch diameter aluminum core

Rubber covered to 6.0 inch diameter

Low-friction bearings installed for a 1.50 inch diameter dead shaft

Generally available in Face Lengths up to 110 inches



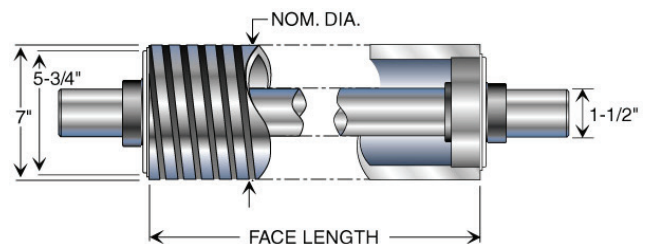
GR-700-150

5.75 inch diameter aluminum core


Rubber covered to 7.0 inch diameter

Low-friction bearings installed for a 1.50 inch diameter dead shaft

Generally available in Face Lengths up to 120 inches



ELASTOMER SELECTION GUIDE: POLYMER PROPERTIES

RELATIVE RATING  Excellent  Above Average  Average  Fair  Poor	NEOPRENE	NITRILE	CARBOXYLATED NITRILE	POLYURETHANE	SILICONE (STANDARD)	EPDM	HYPALON	VITON
Hardness Range	20-95	20-100	45-95	40-95	30-90	25-95	30-90	55-90
Tensile Strength								
Modulus								
Elongation at Break								
Tear Strength								
Cut Resistance								
Resistance to Compression Set								
Resistance to Permanent Set								
Resilience								
Resilience to Heat Build-up								
Resistance to Abrasion								
Ozone Resistance								
Hydrolytic Stability								
Dielectric Strength								
Release Characteristics								
Maximum Service Temperature (° F)	250	250	275	212	500	350	300	500
<u>Acids</u>								
(Mineral) Nitric, Sulfuric								
Hydrochloric, Phosphoric								
(Organic) Acetic, Boric								
<u>Caustics</u>								
Sodium Hydroxide, Calcium Hydroxide								
<u>Aliphatic Hydrocarbons</u>								
Kerosene, Gasoline, Hexane, Naphtha, Mineral Spirits, Most Offset/Letterpress Printing Inks, Many lubricants and greases								
<u>Aromatic Hydrocarbons</u>								
Toluol or Toluene, Xylol or Xylene								
<u>Chlorinated Hydrocarbons</u>								
Methylene Chloride, 1, 1, 1- Trichloroethylene, Perchloroethylene								
<u>Esters</u>								
Ethyl Acetate, Dioctyl Phthalate, Tricresyl, Phosphate								
<u>Alcohols</u>								
Methanol, Ethanol, Isopropyl Alcohol								
<u>Water</u>								
Water								
<u>Glycols</u>								
Ethylene Glycol, Glycerine								
<u>Ketones</u>								
Methyl Ethyl Ketone (MEK), Methyl Isobutyl Ketone								

How to specify the right elastomer

Use this elastomer chart to help determine which rubber compound is best suited to your particular situation. If in doubt, call us. We'll help you determine the best possible covering based on the web handling parameters you have to share with us.

Standard Grooved Idler Rolls use the following elastomers:

Silicone
PVC-Nitrile

Other (nonstandard) elastomers available:

Neoprene
Carboxylated Nitrile
Polyurethane
EPDM
Hypalon
Viton

How to specify the right grooved rubber roll

This literature presents four different groove configurations for the standard rubber-covered idlers. Other options are also available, including additional groove variations and non-groove designs.

To specify the best possible groove or rubber roll design, call us. Chances are we've already designed a rubber-covered roll for an application similar to yours.

ELASTOMER SELECTION GUIDE

Any Webex roll can be Rubber-Covered to meet process needs. The appropriate selection of a rubber cover is important to the success of many process applications. The following is a summary guide to a few of the most popular choices of rubber elastomers used in the web converting industry.

NEOPRENE: Neoprene is considered a good choice for general purpose applications. It has good mechanical properties, good chemical resistance and high resilience. Neoprene is a workhorse in the industry. It is used on nip rolls, pull rolls, feed rolls and in flexo and gravure printing.

NITRILE: Also known as NBR or Buna-N, Nitrile is the most commonly used elastomer in the industry. It has good resistance to oils, chemicals and water. Nitrile is also a workhorse covering with applications as nip rolls, pull rolls and rolls in printing applications.

CARBOXILATED NITRILE: A modified Nitrile rubber, possessing most of the properties of Nitrile along with outstanding abrasion resistance and other physical characteristics, including tensile strength.

NITRILE/PVC BLENDS: Very popular in the web converting industry. The addition of PVC enhances the physical properties, abrasion resistance, strength, chemical and ozone resistance of Nitrile.

POLYURETHANE: Urethane rubber is available in two basic chemical types, polyester and polyether. Polyurethane is a tough elastomer with good chemical and solvent resistance while polyethers work better in applications that come in contact with water. Urethane is typically used in applications where toughness, wear resistance and cut resistance are desired. Urethane generally has high-friction characteristics making it a favorite for pull rolls.

SILICONE: Silicone rubber is known for two main attributes, high temperature (500° F) capability and improved release characteristics. Silicone is a more expensive covering but along with heat resistance and release it has good chemical resistance and excellent ozone resistance. Silicone has generally weak physical characteristics but is widely applied in situations where its temperature and release characteristics are needed.

EPDM: Sometimes called EPT, EPDM consists mostly of Ethylene and Propylene. It has excellent ozone resistance and chemical resistance, especially with polar solvents such as ketones. EPDM is also heat resistant to 350° F. It is typically used where its chemical and temperature capabilities are required such as coating applications.

HYPALON: Hypalon has good physical characteristics, good chemical resistance, excellent ozone resistance and good temperature (350° F) capability. Hypalon is ideal for many roller applications and is a favorite as a covering for nip rolls.

VITON: Viton is known for its excellent chemical resistance and high temperature (500° F) capability. Viton is very expensive so its applications are limited to extreme cases where other compounds fail and the high price can be justified.



**NORTH, CENTRAL AND
SOUTH AMERICA**
Tel +1.920.729.6666
Fax +1.920.725.9992
sales@webexinc.com
www.maxcessintl.com

**EUROPE, MIDDLE EAST
AND AFRICA**
Tel +49.6195.7002.0
Fax +49.6195.7002.933
sales@maxcess.eu
www.maxcess.eu

CHINA
Tel +86.756.881.9398
Fax +86.756.881.9393
info@maxcessintl.com.cn
www.maxcessintl.com.cn

INDIA
Tel +91.22.27602633
Fax +91.22.27602634
india@maxcessintl.com
www.maxcess.in

**KOREA, TAIWAN
AND SE ASIA**
asia@maxcessintl.com
www.maxcess.asia



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