



Made in USA



NEW APOGEE AERO®

ANTI-CORKSCREWING ROLLER CASING SPACERS ***PATENT PENDING

MANUFACTURED EXCLUSIVELY FOR CASING SPACERS

- REDUCED COEFFICIENT OF FRICTION
- REDUCED SIZE OF EQUIPMENT
- REDUCED INSTALLATION TIME
- REDUCED COST OF PROJECT



**Casing Spacers with
rollers benefits**

- see page 1

**Casing Spacers
rollers options**

-see page 3



ISO 9001 CERTIFIED COMPANY - FM537405



ADVANCE

PRODUCTS & SYSTEMS, LLC

APOGEEAERO® ROLLERS MANUFACTURED EXCLUSIVELY FOR CASING SPACERS

COST & PERFORMANCE BENEFITS OF ROLLERS VS. RUNNERS

APS has now developed a new line of anti-corkscrewing rollers specifically designed for its Casing Spacers that fits into a smaller annular space while withstanding higher load strengths than any other isolation roller offered on the market. These new patent pending ApogeeAero® Roller Casing Spacers are cost competitive to traditional Casing Spacers with runners while still isolating the carrier pipe from the casing pipe. Not only are they cost competitive, but they can carry heavy loads while reducing the coefficient of friction from .2 to .06 which is 70% less, thus increasing the average installation speeds from 3-5 ft. per minute to 15+ ft. per minute. Unlike traditional casing spacers, the design of the anti-corkscrewing ApogeeAero® Casing Spacers eliminates the need for a guide or greasing of the casing pipe I.D., and decreases installatoin time, size of equipment, and overall cost of the project.

- **Low-profile** allows for a smaller Casing to be used for any given carrier pipe, reducing the cost of the casing pipe.
- **Higher load strength** allows for fewer rollers needed for a given load, therefore reducing the cost of each Casing Spacer.
- **Reduced Push/Pull Force Requirements** allow for smaller, less expensive equipment to be used during installation.
- **Increased installation speed** allows for quicker installation time of the carrier pipe, saving money on hourly rental fees and workers' wages.



50 lb. 8-year-old pushes a 16 in., 20 ft. long steel pipe weighing 1250 lbs. without any assistance or extra equipment needed. ApogeeAero® Roller Casing Spacers makes installation so easy, even a child can do it.

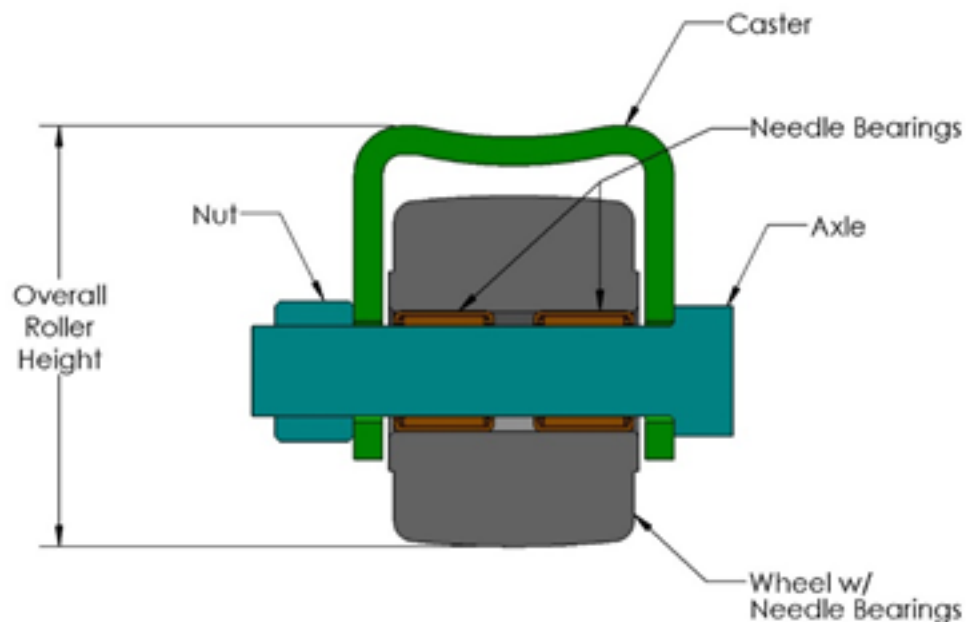
APOGEEAERO® ROLLERS				VS	TRADITIONAL ROLLERS	
SIZE	HEIGHT	STATIC LOAD	DYNAMIC LOAD	HEIGHT	STATIC LOAD	DYNAMIC LOAD
SMALL	1.625"	2,000 lbs	1,000 lbs	2.5"	375 lbs	125 lbs
MEDIUM	2.625"	6,000 lbs	2,750 lbs	4.25"	1,800 lbs	600 lbs
LARGE	3.25"	9,000 lbs	3,750 lbs	5.625"	2,400 lbs	800 lbs
XLARGE	3.63"	12,500 lbs	6,000 lbs	6.5"	3,000 lbs	1000 lbs

NEW!

PATENT PENDING **MADE IN THE USA**

ROLLER DESIGN OVERVIEW:

APS has engineered the only ApogeeAero roller manufactured specifically for casing spacer applications. This roller features an engineered, hardened bearing, axle and caster, while providing cathodic isolation & strength capabilities of glass filled nylon polymer. Incorporating this roller design with APS proprietary anti-corkscrewing technology eliminates any corkscrewing or spiraling of the casing spacer during installation without the use of a guide or other aid; thus making this the most innovative casing spacer to ever be introduced to the market.



ROLLER ASSEMBLY MATERIAL SPECIFICATIONS

Wheel

Glass-filled Nylon
Flexural Strength - 40,000 psi
Deflection Temp. under load@ 264 psi - 470° F

Axle (Steel)

Zinc-plated carbon steel

Nut (Steel)

Zinc-plated carbon steel

Axle (Stainless Steel)

304 Stainless Steel

Nut (Stainless Steel)

304 Stainless Steel

Fusion-Coated Caster (Steel)

Small – 10 GA Hot rolled, pickled & oiled
Med, Lg, & XL – 7 GA Hot rolled, pickled & oiled

Caster (Stainless Steel)

T-304 Stainless Steel
Small – 10 GA
Med, Lg, & XL – 7 GA

Hardened-Coated Needle Bearings

Type - drawn cup needle roller bearings

APOGEEAERO® ROLLER CASING SPACER OPTIONS

Band and Risers

Band - 14 Gauge, T-304 Stainless Steel or Fusion-Coated Carbon Steel
Width: 8" & 12"

Riser - 10 Gauge, T-304 Stainless Steel or Fusion-Coated Carbon Steel

Liner

PVC

Dielectric Strength - {1/8" (3.18 mm) thick}
60,000 V min.

Thickness - .090" +/- .010"

Hardness - 80 Duro +/- 5

EPDM

Dielectric Strength - {1/8" (3.18 mm) thick}
50,000 V min.

Thickness - .090" (2.29mm) min.

Hardness - Durometer "A" 85-90

Water Absorption - 1% max.

Overlaps Edges

Bolts, Nuts and Washers

Up to nominal OD of 16" - T-304 Stainless or Zinc-plated Steel -
1/4" - 2" long bolts

Above nominal OD of 16" - T-304 Stainless or Zinc-plated Steel -
5/16" - 2" long bolts

Runners/Risers

1" or 2" wide glass filled polymer plastic

Sizes of Runners/Riser Available:

Length - 7" & 11" (17.8, 27.9 cm)

Effective Heights for 7" Length -

1", 1 1/2", 2", 2 1/2", 3", 3 1/2", 4", 4 1/2", 5", 5 1/2" and 6"

Effective Heights for 11" Length - 1", 1 1/2"

Runner/Roller Material Specifications:

Rockwell Hardness (M) - (ASTM D785) - 101

Tensile Strength - (ASTM D638) - 27,000 psi

Flexural Strength - (ASTM D790) - 40,000 psi

Deflection Temp. @ 264 psi - (ASTM D648) - 480 °F (249 °C)

Deformation Under Load @ 72 °F (22 °C) - 3500 lb.

Load, - (ASTM D648) - 1%

Coating Specifications for Carbon Steel Spacers

Thermoplastic Powder Coating Specifications

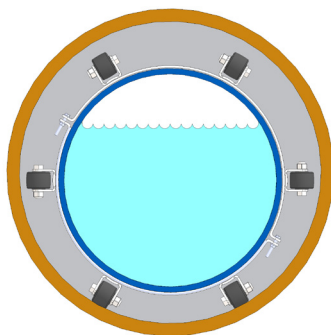
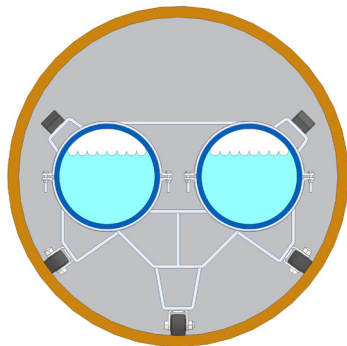
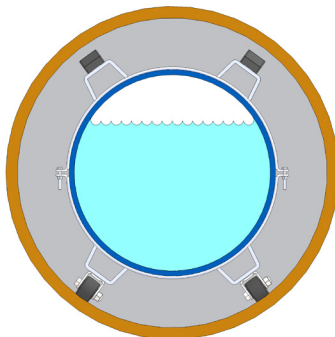
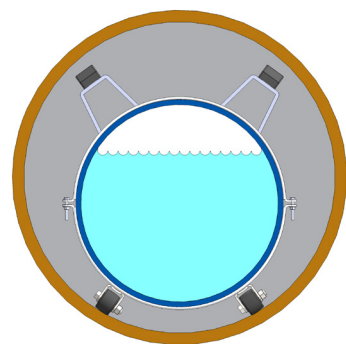
Durometer - Shore A2 (10 Sec.)

(ASTM D1706-61T) - 50-55

Max. Temperature - 150 °F (65 °C)

Electrical Properties (ASTM D149-61)

Coating Thickness 10-15 mil.



APS MANUFACTURES SPACERS FOR SPECIFIC CUSTOMER REQUIREMENTS

While casing spacers are available in a number of sizes, APS is also capable of manufacturing ApogeeAero® Roller Casing Spacers for specific customer requirements. The APS engineering staff has experience with:

- Designing multiple carriers within one casing
- Positioning thermally insulated pipe without damage to insulation
- Centering small carriers within large casings
- Positioning gravity sewer to on-grade requirements
- Casing spacers for all types and sizes of pipe

Heavy duty two-piece metal bands serve practically every piping application. APS metal band casing spacers are available in two models: the SSI8 model, which is 8" in width and recommended for carrier pipe 4" to 36"; and the SSI12

model, which is 12" in width and is recommended for pipe 36" to 120" and larger. Metal band spacers are recommended for every 6 to 8 feet of pipeline.

The bands are constructed of 14 gauge 304 stainless steel or carbon steel with a standard 0.090" PVC liner. Stainless steel spacers are available in grade 304.

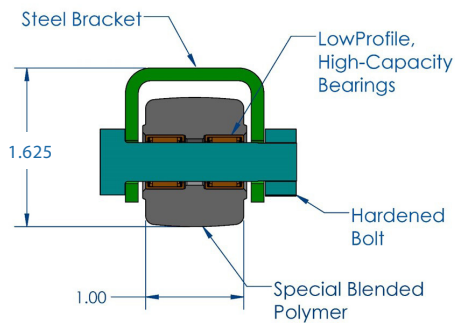
Carbon steel spacers are available with a thermoplastic powder coating for extra corrosion protection. APS believes that fusion-bonded coatings provide the most complete and effective corrosion protection available.

ApogeeAero® Roller Casing Spacers can be manufactured with modular runners, riser runners or rollers on the top. Rollers can also be placed every 60° around the carrier pipe allowing the pipe to maintain a constant grade even if it corkscrews inside the casing during installation.

APOGEEAERO® ROLLER SIZES

***PATENT PENDING

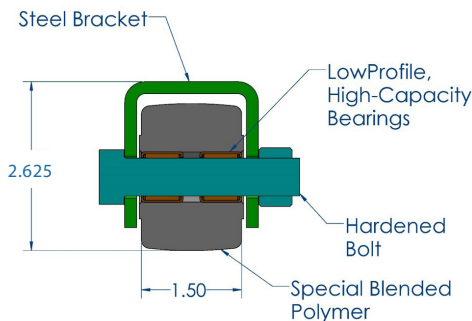
Small Roller



Height: 1.625"
Width: 1.000"
Static Load Cap: 2,000 lbs.
Dynamic Load Cap: 1,000 lbs.



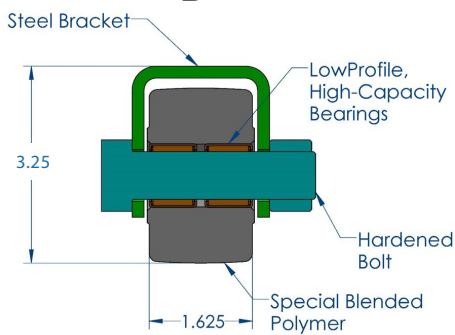
Medium Roller



Height: 2.625"
Width: 1.500"
Static Load Cap: 6,000 lbs.
Dynamic Load Cap: 2,750 lbs.



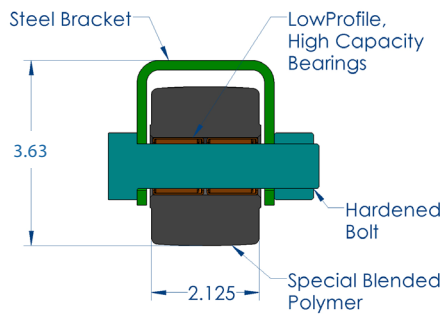
Large Roller



Height: 3.25"
Width: 1.625"
Static Load Cap: 9,000 lbs.
Dynamic Load Cap: 3,750 lbs.



XL Roller



Height: 3.63"
Width: 2.125"
Static Load Cap: 12,500 lbs.
Dynamic Load Cap: 6,000 lbs.



How To Order

PLEASE INDICATE THE FOLLOWING:

- Project Reference and Location

METAL INSULATORS

- Model number: SI (steel) or SSI (stainless steel)
- Carrier Pipe O.D. Including Coating Thickness
- O.D. of Bell or Mechanical Joint
- Riser Runners, Mods or Rollers on top
- Type & schedule or weight per foot of carrier pipe
- Casing I.D. or Casing O.D. and Wall Thickness
- Configuration: Clear Bell, Centered, Centered and Restrained, or Non-centered and Restrained

END SEALS

- Model: AC (pull-on), AW (wrap-around), AZ (zipper), AM (molded)
- Carrier Pipe O.D. Including Coating Thickness
- Casing O.D.
- Configuration: Centered or Non-centered

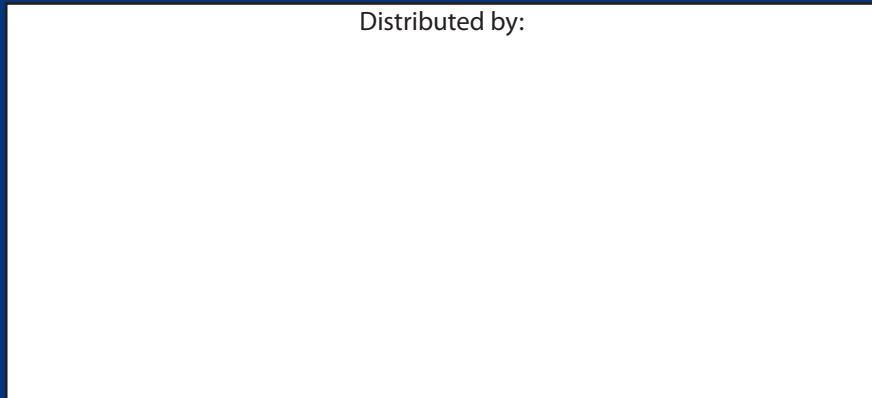
OTHER QUALITY PRODUCTS AVAILABLE:

- Standard Isolating Gasket Kits
- Kleerband® Flange Band Protectors
- Radolid® Bolt and Nut Protection Caps
- UBolt-Cote® and Atlas® Pipe Support Pads
- Foreman Nite Caps - temporary pipe plugs
- ISOJOINT® - Monolithic Isolating Joint
- Safety Spray Shields
- Innerlynx® - Modular Mechanical Seals
- Gal-vo-plast® Coated Wall Sleeves
- Infinity® Wall Sleeves



Note: Please contact your distributor or the factory for prices.

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