Kopex-Ex® ISR™ Fittings
Industrial Strain-Relief Fittings

Globally certified to meet 100% of pull-out requirements with no external clamping
Kopex-Ex® ISR™ Fittings
Meet 100% of cable pull-out requirements with no need for external clamping

Thomas & Betts is proud to introduce the next generation of globally-certified industrial strain-relief fittings:

**Kopex-Ex® ISR™ Fittings**

The latest in Thomas & Betts' long line of renowned industrial cable termination products, the **Kopex-Ex® ISR™** fitting was developed in Canada with input from end users in the oil and gas industry. This is a high-level solution for industrial end users looking for a superior quality fitting that reduces installation time and costs while surpassing global standards for pull-out requirements.

The majority of strain-relief fittings on the market today are designed to meet 25% of the IEC pull-out requirement for surface applications and, as per IEC standard 60079, require that the installer provide additional clamping as close as possible to the point at which cables exit the enclosure to ensure that pulling and twisting is not transferred to the terminations. The external clamping requirement adds time, complexity and cost to the installation process. In the event that additional clamping is not provided, the integrity of electrical systems as well as compliance with IEC standards are compromised.

With its unique design and integral clamping mechanism, the new **Kopex-Ex® ISR™** fitting allows you to meet 100% of IEC cable pull-out requirements with no external clamping, reducing installation time, complexity and costs.

Developed for the drill rig industry, with input from the drill rig industry.
Kopex-Ex® ISR™ fittings
The new design standard
for high-performance industrial strain-relief fittings

TEMPERATURE RANGE
-50°C to 110°C

CERTIFICATIONS and STANDARDS
Class/Zones system
Ex e IIC Gb Ex ta IIIC Da IP66

Class/Divisions system
CLI Div2 ABCD CLII Div1 EFG CLIII Div1 Type 4X

CERTIFICATES
CSA 14.70069467X  •  IECEx CSA 14.0035X  •  SIRA 14ATEX3238X
UL E328651 and E31979

Gas Protection “Increased Safety”
Where arcs and sparks don’t normally occur
IIC: Acetylene, hydrogen and all other gases

Dust Atmospheres
IIIC: Conductive and other types of dusts

Ingress Protection
Dust-tight and powerful water jets

Class I, Zone 1, 2 / Class II, Zone 20, 21, 22

Ex e IIC Gb  Ex ta IIIC Da  IP66

Gas and vapours protection
A: Acetylene
B: Hydrogen
C: Ethylene
D: Propane and methane

Dust protection
E: Metal
F: Coal
G: Flour, grain

Fibers and flyings protection

Environmental protection from dust and water
Corrosion resistant

Class I Division 2 and Class II, III Division 1

CLI  DIV2  ABCD  CLII  DIV1  EFG  CLIII  DIV1  TYPE 4X

Class I, Zone 1, 2, 20, 21, 22 / Class I, II, III Division 2

UL

Certification

Gas Protection “Increased Safety”
Where arcs and sparks don’t normally occur
IIC: Acetylene, hydrogen and all other gases

Dust Atmospheres
IIIC: Conductive and other types of dusts
Kopex-Ex® ISR™ fittings
Superior 100% pull-out performance with no external clamping

**Ordering information**

<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>HUB SIZE (A THREAD)</th>
<th>TORQUE</th>
<th>THROAT DIA.</th>
<th>MIN. DIA.</th>
<th>MAX. DIA.</th>
<th>B (REF.)</th>
<th>C (O.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISR050-053</td>
<td>1/2” NPT</td>
<td>400 lb-f (45.19 Nm)</td>
<td>0.625 in.</td>
<td>0.325 in.</td>
<td>0.525 in.</td>
<td>1.75 in.</td>
<td>2.00 in.</td>
</tr>
<tr>
<td>ISR050-062</td>
<td>1/2” NPT</td>
<td>600 lb-f (67.79 Nm)</td>
<td>0.750 in.</td>
<td>0.425 in.</td>
<td>0.625 in.</td>
<td>2.05 in.</td>
<td>2.20 in.</td>
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<tr>
<td>ISR075-062</td>
<td>3/4” NPT</td>
<td>800 lb-f (90.39 Nm)</td>
<td>1.00 in.</td>
<td>0.550 in.</td>
<td>0.750 in.</td>
<td>2.60 in.</td>
<td>2.80 in.</td>
</tr>
<tr>
<td>ISR100-082</td>
<td>1” NPT</td>
<td>1000 lb-f (114.28 Nm)</td>
<td>1.25 in.</td>
<td>0.750 in.</td>
<td>0.950 in.</td>
<td>3.25 in.</td>
<td>3.50 in.</td>
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<tr>
<td>ISR100-102</td>
<td>1” NPT</td>
<td>1250 lb-f (146.88 Nm)</td>
<td>1.50 in.</td>
<td>0.875 in.</td>
<td>1.075 in.</td>
<td>3.90 in.</td>
<td>4.10 in.</td>
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<tr>
<td>ISR125-122</td>
<td>1-1/4” NPT</td>
<td>1500 lb-f (174.28 Nm)</td>
<td>1.75 in.</td>
<td>1.00 in.</td>
<td>1.20 in.</td>
<td>4.50 in.</td>
<td>4.75 in.</td>
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<tr>
<td>ISR125-137</td>
<td>1-1/4” NPT</td>
<td>1750 lb-f (200.88 Nm)</td>
<td>2.00 in.</td>
<td>1.125 in.</td>
<td>1.325 in.</td>
<td>5.12 in.</td>
<td>5.37 in.</td>
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<tr>
<td>ISR150-156</td>
<td>1-1/2” NPT</td>
<td>2000 lb-f (226.28 Nm)</td>
<td>2.25 in.</td>
<td>1.25 in.</td>
<td>1.45 in.</td>
<td>5.75 in.</td>
<td>6.00 in.</td>
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<tr>
<td>ISR200-179</td>
<td>2” NPT</td>
<td>2500 lb-f (289.28 Nm)</td>
<td>3.25 in.</td>
<td>1.50 in.</td>
<td>1.80 in.</td>
<td>7.00 in.</td>
<td>7.25 in.</td>
</tr>
<tr>
<td>ISR200-206</td>
<td>2” NPT</td>
<td>3000 lb-f (341.55 Nm)</td>
<td>3.75 in.</td>
<td>1.625 in.</td>
<td>1.925 in.</td>
<td>7.50 in.</td>
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1. Reference dimension before installation.

**METRIC**

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**Applications**

**Tray Cable**
Complies with NEC requirements when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, Kopex-Ex® ISR™ fittings must be used in combination with a certified Class I hazardous location sealing fitting. N.B.: Tray cable is not suitable for use in Zone 1 locations.

**Portable Cord**
Complies with NEC requirements when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, Kopex-Ex® ISR™ fittings must be used in combination with a certified Class I hazardous location sealing fitting. N.B.: Portable cord can be used in Zone 1 applications only when installed on portable equipment.

**Utilization**
For use with unarmoured cable types suitable for use in Class I, Zone 1 (e.g. extra-hard usage cord). When used with tray cables, Series ISR™ cable glands are suitable to be installed in Class I, Zone 2/ Div. 2 classified hazardous location area only according to IEC/NEC wiring method, or subject to local inspection authority having jurisdiction.

**NEC or USA Requirements**
For installations in accordance with the NEC in Class I Zone 1, the ISR™ fitting can be used only with listed extra-hard usage cord or listed TC-ER-HL cable having a diameter up to and including 1 inch. Additionally, for Zone 20 applications, only extra-hard usage cord can be used. Refer to NEC wiring methods for additional details and local inspection authority for more information.

The metric version of the ISR is not UL listed.
Gland Nut

- Distinctive domed profile
- High-strength, corrosion-resistant copper-free aluminum construction (less than 0.4%)
- Heavy-duty, wide hex design for ease of installation
- Smooth, snag-free contour design prevents injury and sheds water
- Laser-etched certification markings are visible no matter where it is installed

Chuck Ring

- Fiber-reinforced nylon construction and unique over-molded design provide both strength and flexibility
- Acts as a built-in clamp - superior 100% pull-out performance eliminating need for external clamping
- Jaws grasp cable jacket over a large surface preventing damage and tearing
- Flexible TPE belt positions the chucks radially, allowing uniform cable engagement

Sealing Bushing

- High-tech silicon polymer performs in extreme temperature conditions (-50°C to +110°C)
- Wide surface of engagement provides dependable seal against dust and liquids
- Excellent engagement even on irregular cable shapes

Body

- High-strength, corrosion-resistant copper-free aluminum construction (less than 0.4%)
- Small turning radius allows close spacing of fittings
- Fine thread for easy tightening; ample anti-seizing grease prevents “cold-welding” to gland nut threads
- Anti-rotation splines prevent cable and bushings from twisting and deforming during tightening
- Biting, box-side teeth ensure electrical ground with enclosure and allow draining of trapped moisture to prevent corrosion
- O-ring seated in a recessed shoulder prevents over-compression of sealing bushing

Interface Sealing O-Ring

- Wide and flexible - adapts easily to variations in knockout dimensions
- Wide sealing footprint to prevent moisture and dust from migrating into enclosure

Competition

25% pull-out resistance

External clamping required

Kopex-Ex® ISR® Fitting

100% pull-out resistance
No external clamping required
With a variety of manufacturers to choose from, engineers, end users and installers often see Thomas & Betts as the logical first choice for a variety of reasons:

• Preferred supplier to the Canadian electrical industry for close to a century

• A wide range of ever-evolving quality products and superior solutions customized to meet application-specific challenges

• An established company invested and committed to helping engineers, contractors and end users reduce costs while increasing performance and safety

• Canadian-based sales and marketing, customer service and logistics

• 80% of products sold in Canada are manufactured in Canada