



Friction Stays

Hardware By Professionals | For Professionals

Friction Stays Contents & Selection

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The aim of this section is to help you identify the correct type of hardware for your application. The steps to follow when selecting friction stays are:

1. Friction Stay Stack Height Required:

The friction stay stack height required will usually be dictated by the profile system being fabricated - consult your profile system manual for details of their recommended stack height. Alternatively contact the Mila Technical department on: 01327 707300.

To measure the stack height of an existing friction stay measure from the bottom of the stay to the top arm. The standard stack heights for friction stays are 13 and 17mm

2. The Type of Friction Stay Required:

Different types of friction stays are available for different purposes, the main types are:

Standard: standard stays for use on side hung and top hung casement windows.

Egress: friction stays with a wide opening angle for emergency egress. Allow casement windows to satisfy the emergency egress requirements of Approved Document B of the Building Regulations.

Egress Easy Clean: as above but also incorporating an easy-clean position for safe cleaning of the glass from inside.

| Type | | | Application | | | Accreditations | |
|------------|------------|------------|-------------|-----------|----------------------|-------------------|--------------|
| Easy Clean | Restricted | Heavy Duty | Top Hung | Side Hung | Security Enhancement | Secured By Design | BBA Approved |
| | | | ■ | ■ | | ■ | ■ |
| | | | ■ | ■ | | | |
| ■ | | | | ■ | | | |
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| | | | | | ■ | ■ | |



Restricted: friction stays with a built-in restrictor to restrict opening to a maximum of 100mm for child safety.

Heavy Duty: friction stays designed for use on larger casement windows.

3. Maximum Sash Weight:

When selecting friction stays note their recommended maximum sash sizes and weights – these should not be exceeded. You should also consult your profile system manual for details of their recommended maximum sash sizes and weights.

4. Ferritic or Austenitic Stainless Steel:

Friction stays are usually manufactured from one of two types of stainless steel:

Ferritic: stays manufactured from type 430 Stainless Steel which is corrosion resistant in most atmospheric conditions.

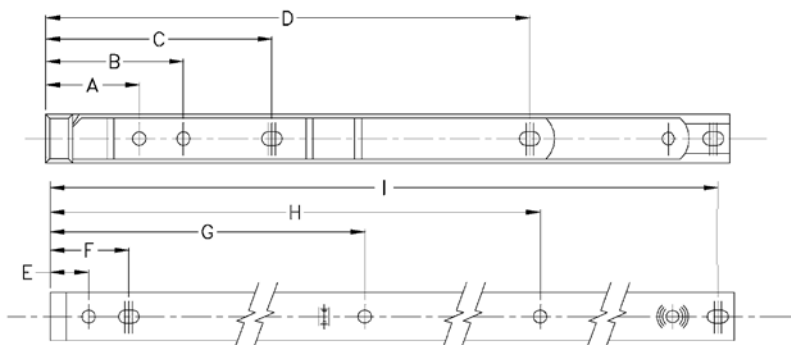
Austenitic: For coastal installations or applications subject to any form of chemical contamination, it is recommended that higher-grade austenitic stainless steel stays are fitted.

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Technical Data

| | |
|--------------------------------|--|
| Application | Side & top hung |
| Stack Height (mm) | 13, 17 |
| Size (inches) | 8,10,12,16,20,24 |
| Max. Sash Weight (kg) | Top hung = 50, side hung = 24 |
| Material Specification: | |
| Stainless steel | Type 430 to BS EN 10088-2 (BS 1449) or type 304 to BS EN 10259.1.4.016 |
| End cap | Acetal / tenac 4520 |
| Slider | Acetal / tenac 4010 |
| Box Quantity | Top hung 8" & 10" = 50, side hung 12" & 16" = 25, top hung 12" to 24" = 25 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) | G(mm) | H(mm) | I(mm) |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Top Hung 8" | 36.2 | 53.0 | - | 150.8 | 15.5 | 30.5 | 159.5 | - | 203.9 |
| Top Hung 10" | 36.2 | 53.0 | 86.7 | 184.7 | 15.5 | 30.5 | 181.9 | - | 254.8 |
| Top Hung 12" | 36.2 | 53.0 | 112.1 | 210.1 | 15.5 | 30.5 | 226.2 | - | 306.0 |
| Top Hung 16" | 36.2 | 53.0 | 166.4 | 260.4 | 15.5 | 30.5 | 226.2 | - | 407.2 |
| Top Hung 20" | 36.2 | 53.0 | 217.2 | 311.2 | 15.5 | 30.5 | 217.8 | - | 508.7 |
| Top Hung 24" | 36.2 | 53.0 | 268.0 | 362.0 | 15.5 | 30.5 | 217.5 | 405.3 | 610.4 |
| Side Hung 12" | 32.6 | - | 114.8 | 212.7 | 279.3 | 15.5 | 30.5 | 226.6 | 305.7 |
| Side Hung 16" | 36.2 | 53.0 | 165.5 | 314.3 | 380.9 | 15.5 | 30.5 | 226.2 | 407.0 |

Ideal Sinidex Friction Stay

The Ideal Sinidex friction stay provides quality, smooth operation, reliability and strength whilst offering excellent value-for-money. Our Ideal Sinidex friction stay offers improved security and weathersealing through the use of a nylon, reduced friction, end cap and has been designed to offer smooth closure and high performance for window applications of all sizes.

- Manufactured from high grade Austenitic (304) and Ferritic (430) stainless steel
- Available in 8", 10", 12", 16", 20" and 24" top hung applications
- Available in 12" or 16" for side hung applications
- Secured By Design licensed product
- BBA approved product



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Top Hung | 8 | 1200 | 300 | 10 | 62° |
| Top Hung | 10 | 1200 | 450 | 16 | 56° |
| Top Hung | 12 | 1200 | 600 | 21 | 64° |
| Top Hung | 16 | 1200 | 750 | 22 | 51° |
| Top Hung | 20 | 1200 | 900 | 24 | 42° |
| Top Hung | 24 | 1200 | 1500 | 50 | 38° |
| Side Hung | 12 | 650 | 1250 | 20 | 64° |
| Side Hung | 16 | 700 | 1300 | 24 | 52° |

Part Numbers

| Description | Size (") | 13mm | 17mm |
|-------------|----------|--------------|--------------|
| | | Stack Height | Stack Height |
| Top Hung | 8 | 022908 | 022958 |
| Top Hung | 10 | 022910 | 022960 |
| Top Hung | 12 | 022912 | 022962 |
| Top Hung | 16 | 022916 | 022966 |
| Top Hung | 20 | 022920 | 022970 |
| Top Hung | 24 | 022924 | 022974 |
| Side Hung | 12 | 022930 | 022980 |
| Side Hung | 16 | 022932 | 022982 |

Guarantees & Accreditations

| | | | |
|----------------------|----------|--------------|-----|
| Mechanical Guarantee | 10 years | BBA Approved | Yes |
| Labour Guarantee | 2 years | SBD Product | Yes |

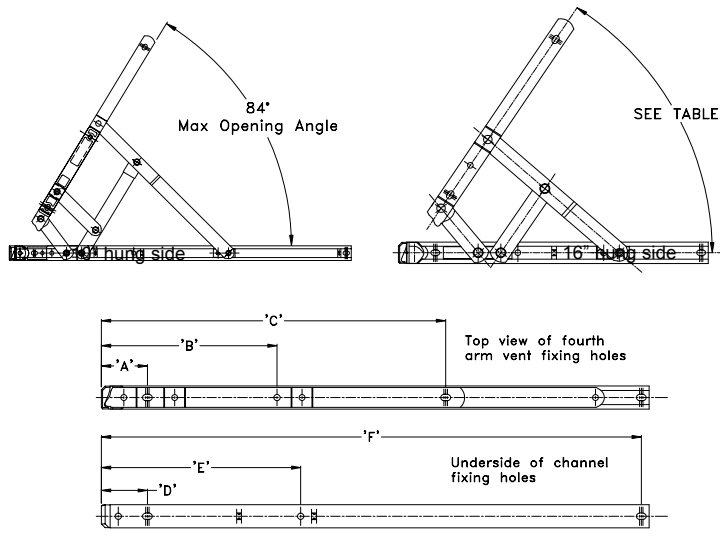


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Technical Data

| | |
|-------------------------|--|
| Application | Egress, side hung |
| Stack Height (mm) | 13, 17 |
| Size (inches) | 10,16 |
| Max. Sash Weight (kg) | 21 |
| Material Specification: | |
| Stainless steel | Type 430 to BS EN 10088-2 (BS 1449) or type 304 to BS EN 10259.1.4.016 |
| End cap | Acetal / tenac 4520 |
| Slider | Acetal / tenac 4010 |
| Box Quantity | 50 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) |
|---------------|-------|-------|-------|-------|-------|-------|
| Side Hung 10" | 34.7 | 62.1 | 192.4 | 31.0 | 100.5 | 254.8 |
| Side Hung 16" | 34.5 | 137.5 | 271.4 | 36.3 | 157.3 | 407.1 |

Ideal Egress Friction Stay

The Ideal range of egress friction stays allow casement windows to satisfy the emergency egress requirements of Approved Document B of the Building Regulations:

"For emergency egress any window should have an unobstructed openable area that is at least 0.33m square and at least 450mm high and 450mm wide"

- Emergency egress function only
- Available in 10" and 16" for side hung applications
- Available in both 13mm and 17mm stack heights



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Side Hung | 10" | 600 | 1200 | 16 | 80° |
| Side Hung | 16" | 600 | 1200 | 21 | 84° |

Part Numbers

| Description | Size (") | 13mm Stack Height | 17mm Stack Height |
|-------------|----------|-------------------|-------------------|
| Side Hung | 10" | 022926 | 022976 |
| Side Hung | 16" | 022928 | 022978 |

Guarantees & Accreditations

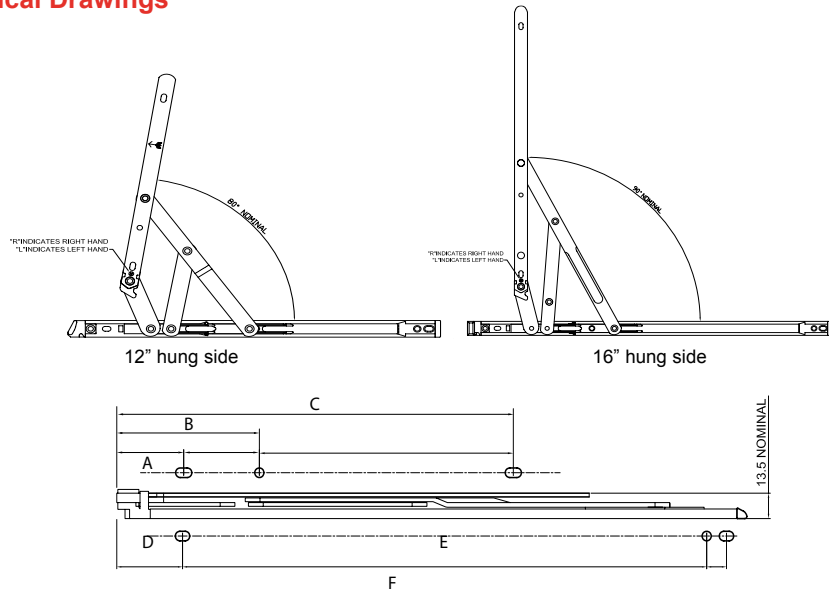
| | |
|----------------------|----------|
| Mechanical Guarantee | 10 years |
| Labour Guarantee | 2 years |

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Technical Data

| | |
|--------------------------------|----------------------------|
| Application | Side hung |
| Stack Height (mm) | 13, 17 |
| Size (inches) | 12,16 |
| Max. Sash Weight (kg) | 21 |
| Material Specification: | |
| Tracks | 304 or 430 stainless steel |
| Links | 304 or 430 stainless steel |
| Rivets | 302 stainless steel |
| End Moulding | Zinc die cast |
| End Spacer | Nylon 6 |
| Box Quantity | 25 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) |
|---------------|-------|-------|-------|-------|--------|--------|
| Side Hung 12" | 37.2 | 79.2 | 220.2 | 36.5 | 291 | 338.5 |
| Side Hung 16" | 37.2 | 142.7 | 355.2 | 36.5 | 385.45 | 432.95 |

Ideal Egress Easy-Clean Friction Stay

The Ideal egress easy-clean stay combines emergency egress with an easy-clean facility. It offers improved security and weathersealing through the use of a colour coded, handed, nylon, end-cap and has been designed to offer smooth closure and high performance.

- Almost 90° opening for easy egress
- Allows casement windows (dependent upon size) to satisfy the egress requirements of Document B of the Building Regulations, ie:

"For emergency egress any window should have an unobstructed openable area that is at least 0.33m square and at least 450mm high and 450mm wide "
- Available in 12" and 16" for side hung egress applications
- Available in both 13mm & 17mm stack heights to suit most common casement profiles



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Side Hung | 12 | 600 | 1200 | 18 | 80° |
| Side Hung | 16 | 600 | 1200 | 21 | 90° |

Part Numbers

| Description | Size (") | 13mm Stack Height | 17mm Stack Height |
|-------------|----------|-------------------|-------------------|
| Side Hung | 12 | 023438C | 023488C |
| Side Hung | 16 | 023440C | 023490C |

Guarantees & Accreditations

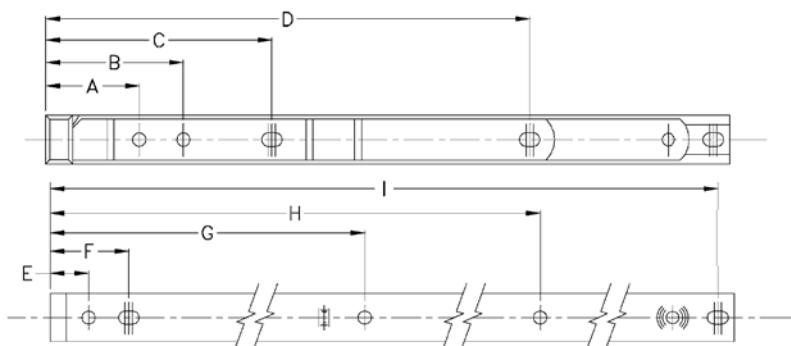
| | |
|----------------------|----------|
| Mechanical Guarantee | 10 years |
| Labour Guarantee | 2 years |

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Technical Data

| | |
|-------------------------|--|
| Application | Restricted, side & top hung |
| Stack Height (mm) | 13, 17 |
| Size (inches) | 12, 16, 20, 24 |
| Max. Sash Weight (kg) | Top hung = 32, side hung = 20 |
| Material Specification: | |
| Stainless steel | Type 430 to BS EN 10088-2 (BS 1449) or type 304 to BS EN 10259.1.4.016 |
| End cap | Acetal / tenac 4520 |
| Slider | Acetal / tenac 4010 |
| Box Quantity | HSR201-12" & HSR24-24" = 25 HSR216-16" & HSR20-20" = 50 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) | G(mm) | H(mm) | I(mm) |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Top Hung 16" | 36.2 | 53.0 | 166.4 | 260.4 | 15.5 | 30.5 | 226.2 | - | 407.2 |
| Top Hung 20" | 36.2 | 53.0 | 217.2 | 311.2 | 15.5 | 30.5 | 217.8 | - | 508.7 |
| Top Hung 24" | 36.2 | 53.0 | 268.0 | 362.0 | 15.5 | 30.5 | 217.5 | 405.3 | 610.4 |
| Side Hung 12" | 32.6 | - | 114.8 | 212.7 | 279.3 | 15.5 | 30.5 | 226.6 | 305.7 |
| Side Hung 16" | 36.2 | 53.0 | 165.5 | 314.3 | 380.9 | 15.5 | 30.5 | 226.2 | 407.0 |

Sinidex Restricted Friction Stay

The Sinidex restricted friction stay offers improved security and weather sealing through the use of a nylon, reduced friction, end-cap. It has been designed to offer smooth closure and high performance for window applications of all sizes.

- Manufactured from high grade Austenitic (304) and Ferritic (430) stainless steel
- Enhanced security friction stay for top hung & side hung casement windows
- Available in 16", 20" and 24" for top hung applications
- Available in 12" for side hung applications
- Secured By Design licensed product



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Top hung | 16 | 700 | 1300 | 24 | 50° |
| Top hung | 20 | 900 | 1200 | 24 | 42° |
| Top hung | 24 | 1200 | 1200 | 32 | 47° |
| Side hung | 12 | 650 | 1250 | 20 | 59° |

Part Numbers

| Description | Hand | Size (") | Austenitic | | Ferritic | |
|-------------|-------|----------|------------|---------|----------|---------|
| | | | 13mm SH | 17mm SH | 13mm SH | 17mm SH |
| Top Hung | Right | 16 | 023529A | 023589A | 023529C | 023589C |
| Top Hung | Left | 16 | 023533A | 023593A | 023533C | 023593C |
| Top Hung | Right | 20 | 023530A | 023590A | 023530C | 023590C |
| Top Hung | Left | 20 | 023534A | 023594A | 023534C | 023594C |
| Top Hung | Right | 24 | 023531A | 023591A | 023531C | 023591C |
| Top Hung | Left | 24 | 023535A | 023595A | 023535C | 023595C |
| Top Hung | Right | 12 | 023528A | 023588A | 023528C | 023588C |
| Top Hung | Left | 12 | 023532A | 023592A | 023532C | 023592C |
| Side Hung | Right | 16 | 023529A | 023589A | 023529C | 023589C |
| Side Hung | Left | 16 | 023533A | 023593A | 023533C | 023593C |

* when using as a side hung stay, use restricted hinge on the bottom and a standard Sinidex on the top

Guarantees & Accreditations

| | | | |
|----------------------|----------|--------------|-----|
| Mechanical Guarantee | 10 years | BBA Approved | Yes |
| Labour Guarantee | 2 years | SBD Product | Yes |

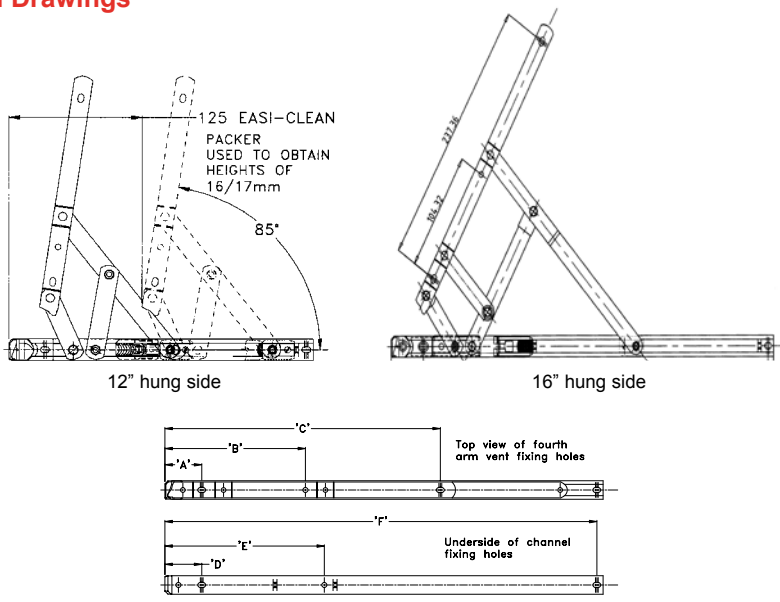


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Technical Data

| | |
|-------------------------|--|
| Application | Egress, side hung |
| Stack Height (mm) | 13, 17 |
| Size (inches) | 12 & 16 |
| Max. Sash Weight (kg) | 21 |
| Material Specification: | |
| Stainless Steel | Type 430 to BS EN 10088-2 (BS 1449) or type 304 to BS EN 10259.1.4.016 |
| End Cap | Acetal / Tenac 4520 |
| Slider | Acetal / Tenac 4010 |
| Box Quantity | 50 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) |
|---------------|-------|-------|-------|-------|-------|-------|
| Side Hung 12" | 34.2 | 61.8 | 208.3 | 31.4 | 41.4 | 305.7 |
| Side Hung 16" | 34.4 | 138.4 | 271.4 | 31.3 | 41.3 | 407.2 |

EZ Egress Friction Stay

The EZ friction stay offers an egress function, for side hung casement windows, without the need for any special tools or reset kits.

- Allows casement windows to open to a full 90° for emergency exit

- Allows casement windows (dependent upon size) to satisfy the requirements of Document B of the Building Regulations, ie:

" For emergency egress any window should have an unobstructed openable area that is at least 0.33m square and at least 450mm high and 450mm wide "

- Option of easy clean facility

- Easy clean position meets the requirements of BS 8213 (minimum 95mm gap between casement and frame)

- Suitable for side hung casement windows



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Side Hung | 12 | 600 | 1200 | 18 | 85° |
| Side Hung | 16 | 600 | 1200 | 21 | 89° |

Part Numbers

| Description | Size (") | Austenitic 13mm Stack Height | Austenitic 17mm Stack Height | Ferritic 13mm Stack Height | Ferritic 17mm Stack Height |
|-------------|----------|------------------------------|------------------------------|----------------------------|----------------------------|
| Side Hung | 12 | 023224A* | 023225A* | 023224 | 023225 |
| Side Hung | 16 | 023226A* | - | 023226 | 023227 |

* When using as a side hung stay, use restricted hinge on the bottom and a standard Sinindex on the top

Guarantees & Accreditations

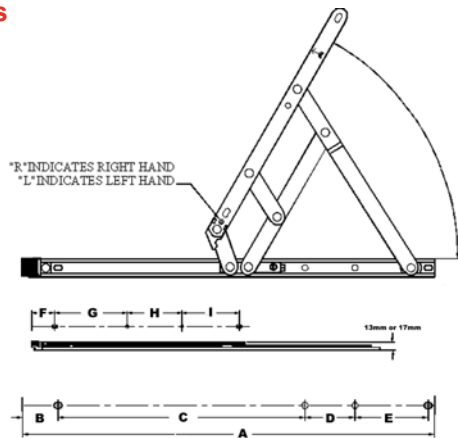
| | |
|----------------------|----------|
| Mechanical Guarantee | 10 years |
| Labour Guarantee | 2 years |

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Technical Data

| | |
|-------------------------|--|
| Application | Side & top hung |
| Stack Height (mm) | 13 & 17 |
| Size (inches) | Top hung = 8,10,12,16,20,24, side hung = 12, 16 |
| Max. Sash Weight (kg) | Contact the Mila technical team on 01327 707 300 |
| Material Specification: | |
| Tracks | 430 stainless steel |
| Links | 430 stainless steel |
| Rivets | 302 stainless steel |
| End Moulding | Zinc die cast |
| End Spacer | Nylon 6 |
| Box Quantity | 25 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) | G(mm) | H(mm) | I(mm) |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Top hung 8" | 205.3 | 34.8 | 131 | - | 33 | 41 | 10.3 | - | 122 |
| Top hung 10" | 255.3 | 34.8 | 176.5 | - | 38 | 41 | 28.33 | - | 126 |
| Top hung 12" | 305.3 | 34.8 | 206.5 | - | 58 | 41 | 50.3 | - | 126 |
| Top hung 16" | 404.6 | 34.8 | 242.8 | 49 | 72 | 41 | 121 | - | 99 |
| Top hung 20" | 504.4 | 34.8 | 210.6 | 116 | 137 | 41 | 171 | - | 99 |
| Top hung 24" | 604.4 | 34.8 | 210.6 | 166 | 187 | 41 | 125.9 | 95.1 | 92 |
| Side hung 12" | 317.5 | 36.5 | 90 | 174.5 | 11 | 37.2 | 42 | - | 141 |
| Side hung 16" | 418.5 | 36.5 | 90 | 275.5 | 11 | 37.2 | 105.5 | - | 212.5 |

Trinity Friction Stay

The Trinity range of stainless steel friction stays is suitable for both top hung and side hung applications.

- Handed nylon end-cap for smooth operation & accurate location
- 13mm & 17mm stack height to suit most common casement profiles
- 8", 10", 12", 16" 20" & 24" top hung
- 12" & 16" side hung
- Egress friction stays available



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Opening (°) |
|-------------|----------|------------|-------------|-------------|
| Top hung | 8 | 1200 | 350 | 85° |
| Top hung | 10 | 1200 | 400 | 85° |
| Top hung | 12 | 1200 | 550 | 85° |
| Top hung | 16 | 1200 | 800 | 45° |
| Top hung | 20 | 1200 | 900 | 45° |
| Top hung | 24 | 1200 | 1200 | 45° |
| Side hung | 12 | 600 | 300 | 90° |
| Side hung | 16 | 700 | 400 | 90° |

Part Numbers

| Description | Size (") | 13mm | 17mm |
|-------------|----------|--------------|--------------|
| | | Stack Height | Stack Height |
| Top hung | 8 | 023408C | 023458C |
| Top hung | 10 | 023410C | 023460C |
| Top hung | 12 | 023412C | 023462C |
| Top hung | 16 | 023416C | 023466C |
| Top hung | 20 | 023420C | 023470C |
| Top hung | 24 | 023424C | 023474C |
| Side hung | 12 | 023444C | 023493C |
| Side hung | 16 | 023448C | 023495C |

Guarantees & Accreditations

| | | | |
|----------------------|----------|--------------|-----|
| Mechanical Guarantee | 10 years | BBA Approved | Yes |
| Labour Guarantee | 2 years | | |

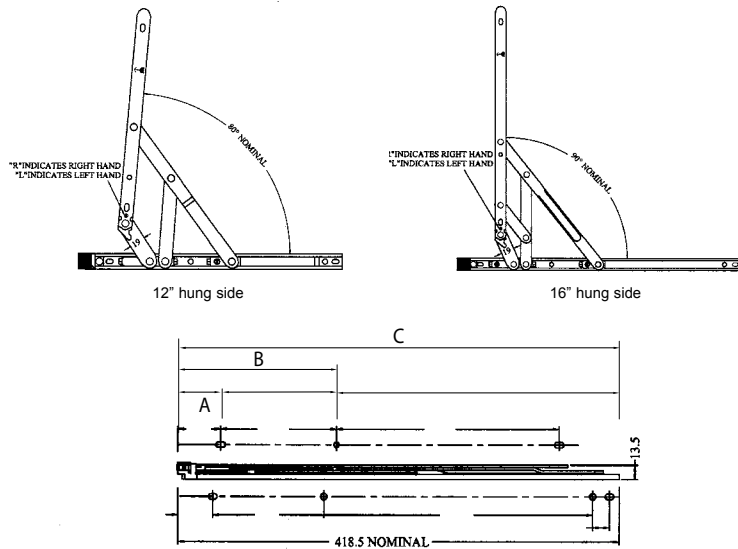


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Technical Data

| | |
|-------------------------|--|
| Application | Egress, side hung |
| Stack Height (mm) | 13 & 17 |
| Size (inches) | 12 & 16 |
| Max. Sash Weight (kg) | Contact the Mila technical team on 01327 707 300 |
| Material Specification: | |
| Tracks | 430 stainless steel |
| Links | 430 stainless steel |
| Rivets | 302 stainless steel |
| End Moulding | Zinc die cast |
| End Spacer | Nylon 6 |
| Box Quantity | 25 |

Technical Drawings



Fixing Hole Details

| Description | A(mm) | B(mm) | C(mm) |
|---------------|-------|-------|-------|
| Side Hung 12" | 37.2 | 79.2 | 220.2 |
| Side Hung 16" | 37.2 | 142.7 | 355.2 |

Trinity Egress Friction Stay

The Trinity egress stay opens to almost 90° for emergency egress.

- Stainless steel friction stays for side hung egress applications
- Almost 90° opening for easy egress
- Allows casement windows (dependent upon size) to satisfy the egress requirements of Document B of the Building Regulations, ie:

“ For emergency egress any window should have an unobstructed openable area that is at least 0.33m square and at least 450mm high and 450mm wide ”
- Handed nylon end-cap for smooth operation and accurate location
- Available in both 13mm & 17mm stack heights to suit most common casement profiles
- Both 12" and 16" sizes available



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Opening (°) |
|-------------|----------|------------|-------------|-------------|
| Side Hung | 12 | 600 | 300 min | 80° |
| Side Hung | 16 | 700 | 400 min | 90° |

Part Numbers

| Description | Size (") | 13mm Stack Height | 17mm Stack Height |
|-------------|----------|-------------------|-------------------|
| Side Hung | 12 | 023432C | 023482C |
| Side Hung | 16 | 023436C | 023486C |

Guarantees & Accreditations

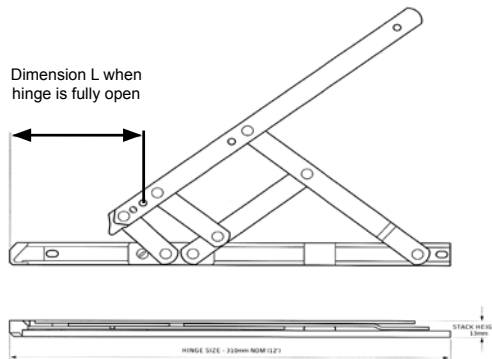
| | |
|----------------------|----------|
| Mechanical Guarantee | 10 years |
| Labour Guarantee | 2 years |

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Technical Data

| | |
|-----------------------------|---|
| Application | Top & side hung |
| Stack Height (mm) | Standard = 13, highline = 16, 17 |
| Size (inches) | 6, 8,10,12,16,20,24 |
| Max. Sash Weight (kg) | Top hung = 40, side hung = 24 |
| Material Specification: | |
| Links & Tracks - Ferritic | Stainless steel to BS 10088/2 Grade 1.4016 |
| Rivets - Ferritic | Stainless steel to BS 10263/5 Grade 1.4016 |
| Links & Tracks - Austenitic | Stainless steel to BS 10088/2 Grade 1.4301 |
| Rivets - Austenitic | Stainless steel to BS 10263/5 Grade 1.4567 |
| End Caps & Points | Nylon 66 |
| Friction Cam | Zinc alloy BS EN 1774:ZL0410, zinc & gold passivate finish |
| Box Quantity | Top hung 6", 8",10",12", side hung 12" = 50 top hung 16", 20", 24", side hung 16" = 25 side hung 12" = 50, side hung 16" = 25 |

Technical Drawings



Fixing Hole Details

| Description | L(mm) |
|---------------|-------|
| Top hung 6" | 63 |
| Top hung 8" | 83 |
| Top hung 10" | 131 |
| Top hung 12" | 164 |
| Top hung 16" | 239 |
| Top hung 20" | 215 |
| Top hung 24" | 156 |
| Side hung 12" | 172 |
| Side hung 16" | 170 |

Defender & Friction Stay

General purpose friction stay for use on both top hung and side hung casement windows.

- Patented lipped slider for enhanced smooth operation
- Easy friction adjustment without metal to metal contact
- Asymmetric location system for reliable weather-sealing
- Standard Defender in 13mm stack height
- Defender Highline in 16 and 17mm stack height
- BBA approved product



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Top Hung | 6 | 150 | 300 | 10 | 50° |
| Top Hung | 8 | 200 | 350 | 12 | 50° |
| Top Hung | 10 | 275 | 400 | 16 | 80° |
| Top Hung | 12 | 350 | 550 | 20 | 80° |
| Top Hung | 16 | 500 | 780 | 21 | 80° |
| Top Hung | 20 | 700 | 1100 | 26 | 50° |
| Top Hung | 24 | 850 | 1300 | 40 | 37.5° |
| Side Hung | 12 | 300 | 600 | 22 | 60° |
| Side Hung | 16 | 400 | 700 | 24 | 60° |

Part Numbers

| Description | Size (") | 13mm | 16mm | 17mm |
|-------------|----------|--------------|--------------|--------------|
| | | Stack Height | Stack Height | Stack Height |
| Top Hung | 6 | 028000 | - | - |
| Top Hung | 8 | 028002T | 028022T | 028042T |
| Top Hung | 10 | 028004 | 028024 | 028044 |
| Top Hung | 12 | 028006 | 028026 | 028046 |
| Top Hung | 16 | 028008 | 028028 | 028048 |
| Top Hung | 20 | 028010 | 028030 | 028050 |
| Top Hung | 24 | 028012 | 028032 | 028052 |
| Side Hung | 12 | 028014 | 028034 | 028054 |
| Side Hung | 16 | 028016 | 028036 | 028056 |

Guarantees & Accreditations

Mechanical Guarantee
Labour Guarantee

10 years
2 years

BBA Approved Yes

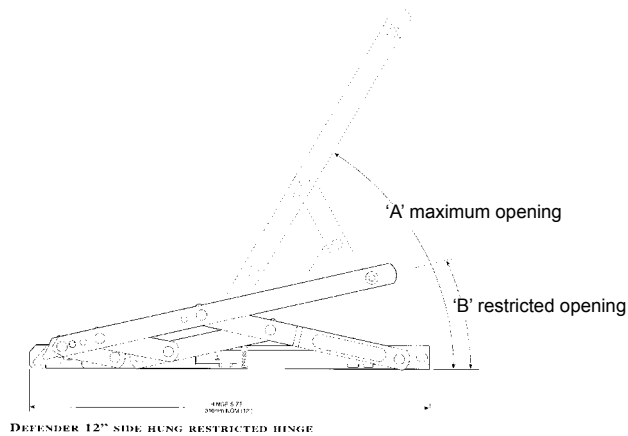


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Technical Data

| | |
|-------------------------------|--|
| Application | Top & side hung, restricted |
| Stack Height (mm) | 13, 16, 17 |
| Size (inches) | Top hung = 12, 16, 20, 24, side hung = 12, 16 |
| Max. Sash Weight (kgs) | Top hung = 35, side hung = 24 |
| Material Specification | |
| Links & Track - Ferritic | Stainless steel to BS 10088/2 grade 1.4016 |
| Rivets - Ferritic | Stainless steel to BS 10263/5 grade 1.4016 |
| Links & Tracks - Austenitic | Stainless steel to BS 10088/2 grade 1.4301 |
| Rivets - Austenitic | Stainless steel to BS 10263/5 grade 1.4567 |
| End Caps & Points | Nylon 66 |
| Friction Cam | Zinc alloy BS EN 1774:ZL0410, zinc & gold passivate finish |
| Restricted Lever | Zinc alloy BS EN 1774:ZL0410, bright copper nickel plate |
| Box Quantity | Top hung 12" = 50, top hung 16", 20", 24" = 25 side hung 12" = 50, side hung 16" = 25 |

Technical Drawing



Fixing Hole Details

| Description | A (Degrees) | B (Degrees) |
|---------------|-------------|-------------|
| Top hung 12" | 65° | 15° |
| Top hung 16" | 60° | 10° |
| Top hung 20" | 50° | 8° |
| Top hung 24" | 37.5° | 7° |
| Side hung 12" | 60° | 13° |
| Side hung 16" | 60° | 12° |

Defender Restricted Friction Stay

The Defender, with built-in restrictor, combines a child resistant lever to limit window opening for maximum safety and a quick release function to allow window to be fully opened for easy cleaning or emergency escape.

- Restricts window opening to a maximum of 100mm
- Quick release lever, for cleaning and ventilation, with automatic relocation
- Complies with child safety requirements of BS 6375 Part 2 (600 Newtons)
- Integral restrictor removes the need for additional devices
- Available in 13, 16 and 17mm stack height
- Suitable for top hung and side hung casement windows
- BBA approved product



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Top Hung | 12 | 550 | 350 | 20 | 15° |
| Top Hung | 16 | 780 | 500 | 21 | 10° |
| Top Hung | 20 | 1100 | 700 | 24 | 8° |
| Top Hung | 24 | 1300 | 850 | 35 | 7° |
| Side Hung | 12 | 600 | 300 | 22 | 13° |
| Side Hung | 16 | 700 | 400 | 24 | 12° |

Part Numbers

| Description | Size (") | 13mm | 16mm | 17mm |
|----------------------|----------|--------------|--------------|--------------|
| | | Stack Height | Stack Height | Stack Height |
| Top Hung | 12 | 028160 | 028180* | 028200 |
| Top Hung | 16 | 028162 | 028182* | 028202 |
| Top Hung | 20 | 028164 | 028184 | 028204 |
| Top Hung | 24 | 028166 | 028186 | 028206 |
| Side Hung Left Hand | 12 | 028168 | 028188 | 028208 |
| Side Hung Right Hand | 12 | 028169 | 028189 | 028209 |
| Side Hung Left Hand | 16 | 028170 | 028190* | 028210 |
| Side Hung Right Hand | 16 | 028171 | 028191* | 028211 |

* Special order only

Guarantees & Accreditations

| | | | |
|----------------------|----------|--------------|-----|
| Mechanical Guarantee | 10 years | BBA Approved | Yes |
| Labour Guarantee | 2 years | | |

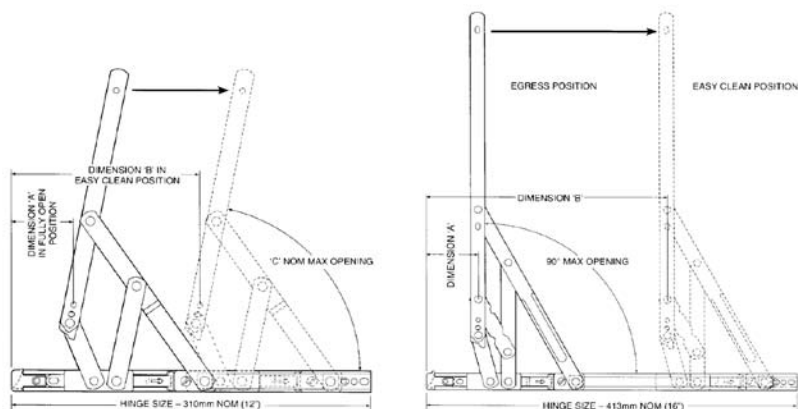


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Technical Data

| | |
|-----------------------------|--|
| Application | Side hung, egress |
| Stack Height (mm) | 13, 16, 17 |
| Size (inches) | 12, 16 |
| Max. Sash Weight (kg) | 24 |
| Material Specification | |
| Links & Track - Ferritic | Stainless steel to BS 10088/2 grade 1.4016 |
| Rivets - Ferritic | Stainless steel to BS 10263/5 grade 1.4016 |
| Links & Tracks - Austenitic | Stainless steel to BS 10088/2 grade 1.4301 |
| Rivets - Austenitic | Stainless steel to BS 10263/5 grade 1.4567 |
| End Caps & Points | Nylon 66 |
| Friction Cam | Zinc alloy BS EN 1774:ZL0410, zinc & gold passivate finish |
| Restricted Lever | Zinc alloy BS EN 1774:ZL0410, bright copper nickel plate |
| Box Quantity | 25 |

Technical Drawings



Fixing Hole Details

| | A (mm) | B (mm) | D (Degrees) |
|--------------|--------|--------|-------------|
| Top hung 12" | 54 | 163 | 80° |
| Top hung 16" | 57 | 268 | 90° |

Defender Egress Friction Stay

The Defender egress friction stay allows casement windows to open to a full 90° for emergency exit combined with an easy clean facility.

- Complies with British Standard BS 5588 Part 1: 1990 and Building Regulations Approved Document B for fire escape windows
- Easy clean facility
- Suitable for side hung casement windows
- Available in 13, 16 and 17mm stack height
- BBA approved product



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Side Hung | 12 | 600 | 300 | 22 | 80° |
| Side Hung | 16 | 780 | 400 | 24 | 90° |

Part Numbers

| Description | Size (") | 13mm Stack Height | 16mm Stack Height | 17mm Stack Height |
|-------------|----------|-------------------|-------------------|-------------------|
| Side Hung | 12 | 028284 | 028288 | 028292 |
| Side Hung | 16 | 028286 | 028290 | 028294 |

Guarantees & Accreditations

| | | | |
|----------------------|---------|--------------|-----|
| Mechanical Guarantee | 5 years | BBA Approved | Yes |
| Labour Guarantee | 2 years | | |



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Technical Data

| | |
|------------------------|-------------------------------------|
| Application | Heavy duty, top hung |
| Stack Height (mm) | 16 |
| Size (inches) | 10, 16, 22 |
| Max. Sash Weight (kg) | 73.6 |
| Material Specification | |
| Stainless Steel | Type 430 to BS EN 10088-2 (BS 1449) |
| Slider | Acetal / tenac 4010 |
| Box Quantity | 25 |

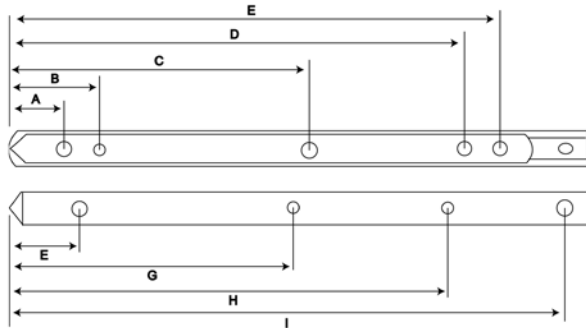
Heavy Duty Friction Stay

Heavy duty friction stay for use on large timber and PVC-U casement windows, as well as some large sectioned aluminium profiles.

- Composite steel/plastic slider for strength, durability and smooth operation
- 84° opening angle on HD 10
- 90° opening angle on HD 16 & HD 22
- HD 10 & HD 16 suitable for use on both top hung and side hung casement windows
- Easy to fit with adjustable friction mechanism



Technical Drawing



Recommended Maximum Sash

| Description | Size (") | Width (mm) | Height (mm) | Weight (kg) | Opening (°) |
|-------------|----------|------------|-------------|-------------|-------------|
| Top Hung | 10 | 1905 | 762 | 50 | 84° |
| Top Hung | 16 | 1828 | 1117 | 70 | 90° |
| Top Hung | 22 | 1626 | 1321 | 73.6 | 90° |

Part Numbers

| Description | Size (") | 16mm Stack Height |
|-------------|----------|-------------------|
| Top Hung | 10 | 023172* |
| Top Hung | 16 | 023174 |
| Top Hung | 22 | 023176 |

* Special Order Only

Fixing Hole Details

| | A(mm) | B(mm) | C(mm) | D(mm) | E(mm) | F(mm) | G(mm) | H(mm) | I(mm) |
|----------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| HD10-10" | 41.1 | 55.8 | - | 212.2 | 236.4 | 33.1 | 208.1 | 252.1 | - |
| HD16-16" | 41.1 | 56.0 | 276.50 | 301.1 | - | 33.0 | 312.7 | 404.6 | - |
| HD22-22" | 41.3 | 56.1 | 186.1 | 341.9 | 366.3 | 32.9 | 405.5 | 512.9 | 556.9 |

Guarantees & Accreditations

| | |
|----------------------|---------|
| Mechanical Guarantee | 5 years |
| Labour Guarantee | 2 years |

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SC Casement Hinge Protector

Enhanced security and compression device for use on the hinge side of casement windows.

- Strong, die-cast sash part and injection moulded frame part
- Supplied in a profile related kit
- No routing of sash, or outer frame, required
- Can be retro-fitted on-site to enhance hinge side security
- Secured By Design licensed product



Part Numbers

| Profile | 16mm Part No. |
|----------------|---------------|
| Spectus 70 | 023881* |
| WHS Esthetique | 023883 |
| WHS System 10 | 023884 |
| HW 70 | 023885 |
| Vinylock 1600 | 023901 |
| Spectus Elite | 023902 |
| Synseal Shield | 023903 |
| Deceuninck | 023904 |
| Rehau Tritec | 023904 |

* Special orders only

Guarantees & Accreditations

| | | | |
|----------------------|---------|-------------|-----|
| Mechanical Guarantee | 5 years | SBD Product | Yes |
| Labour Guarantee | 2 years | | |



Ideal Casement Hinge Protector

Enhanced security device for use on the hinge side of casement windows.

- Strong, die-cast sash and frame parts
- No routing of sash or outer frame required
- Can be retro-fitted on-site to enhance hinge side security
- Versions available to suit both 13mm and 17mm stack height friction stays
- Secured By Design licensed product



Part Numbers

Description

Ideal Casement Hinge Protector

13mm
023200



17mm
023201

Guarantees & Accreditations

| | | | |
|----------------------|----------|-------------|-----|
| Mechanical Guarantee | 10 years | SBD Product | Yes |
| Labour Guarantee | 2 years | | |



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