



**INSOTHERM**  
WINDOW HARDWARE  
EXCEEDING POSSIBILITIES

**Over 70 Years** of Exceeded Precision  
and Quality Standards

## **OUR PRODUCT RANGE**

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*nafmo*<sup>®</sup> Domestic Friction Stay Hinges

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*nafmo*<sup>®</sup> Universal Friction Stay Hinges

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*nafmo*<sup>®</sup> Commercial Friction Stay hinges

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*nafmo*<sup>®</sup> Restrictor Arm

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*nafmo*<sup>®</sup> Parallel Friction Stay Hinges

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## ABOUT US

### Welcome to Insotherm Window Hardware Pvt. Ltd.

Insotherm Window Hardware Pvt. Ltd. is a premier provider of sophisticated window hardware solutions. Our reputation for excellence is built on decades of experience, cutting-edge technology, and a relentless pursuit of perfection. We cater to a diverse clientele, providing bespoke solutions that meet the unique needs of each project, continually exceeding possibilities.

At Insotherm, we are committed to exceeding possibilities in the window hardware industry by delivering top-tier solutions that combine aesthetics, functionality, and durability. As a leading name in the industry, we strive to enhance both residential and commercial environments with our technologically advanced products.

At Insotherm, "**Exceeding Possibilities**" is our mantra that drives our relentless pursuit of innovation, ensuring we continually surpass conventional expectations and redefine industry standards. We prioritize rigorous quality assurance and continuous R&D to stay ahead of market trends. Our dedicated team ensures exceptional craftsmanship and outstanding after-sales service, making us a trusted partner in the fenestration industry across India.



### Vision Statement

To be the global leader in innovative, high-quality window hardware solutions, continuously setting new industry standards through cutting-edge technology and exceptional craftsmanship.

We envision a future where our products redefine reliability and customer satisfaction, fostering trust and integrity worldwide.

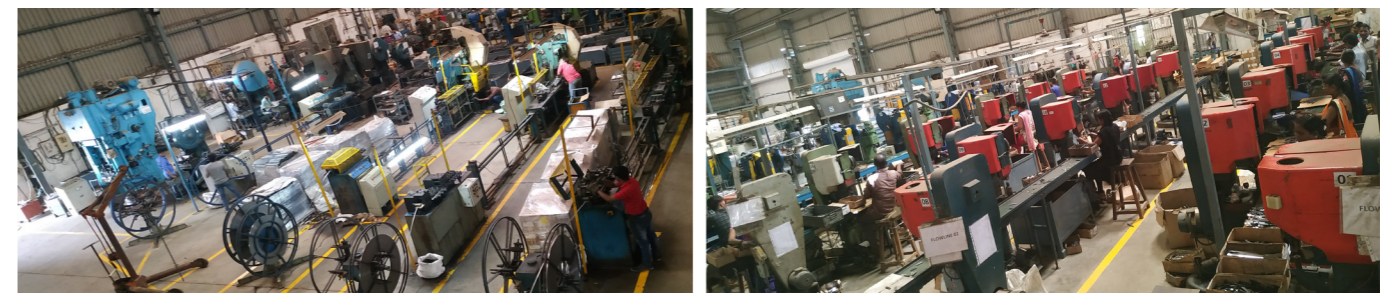


### Mission Statement

At Insotherm Window Hardware, we innovate with cutting-edge technology, deliver superior craftsmanship, and uphold integrity through ethical practices. We empower our team in an inclusive environment and expand globally through strategic collaborations.

Our commitment to exceeding customer expectations and supporting sustainability drives us forward.

Join us in shaping the future of window hardware.



# JOURNEY SO FAR



**1875**

Established Mohammedalli Allibhai Kachwalla & Co. as a glass trading and importing business.



**1940**

Rebranded as M.A. Kachwalla & Sons, continuing operations as glass traders and importers.



**1958**

Founded Safeglas Corporation Pvt. Ltd., launching India's first glass tempering plant.



**1974**

Launched Munik Glass Industries Pvt. Ltd. to manufacture toughened glass.



**1994**

Established Insotherm Glass Systems & Universal Glass Traders.

Began manufacturing insulating glass units with India's first European Automated DGIU plant.

Expanded into trading window hardware and glass.



**2006**

Set up Cotswold Architectural Products (India) Pvt. Ltd. to manufacture friction stay hinges.

Formed a joint venture with Cotswold Architectural Products Ltd. UK for export and supply of friction stay hinges (until 2022).



**2023**

Rebranded as Insotherm Window Hardware Private Limited after acquiring Cotswold UK shares.

Continued manufacturing friction stay hinges and expanded product offerings for both Indian and international markets.

# OUR PRODUCT PORTFOLIO

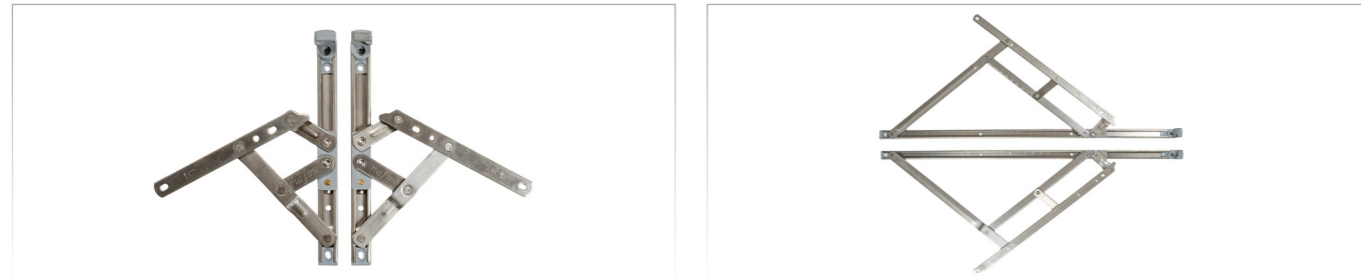
**nafmo**® for **Domestic** (Light Duty) Applications  
for uPVC, Aluminum & Wooden Windows

## ► **nafmo**® Domestic Friction Stay Hinges (Handed)

### Domestic Series DS08" - 24"

Friction stay offer improved security and weather sealing through the use of a Duracon slider for reduced friction and Nylon 66 Glass filled End caps for added stability. These stays have been designed to offer smooth closure and higher performance for window applications of all sizes.

- Available in 8", 10", 12", 14", 16", 20" & 24" top hung & 10", 12", 14" & 16" for side hung applications.
- Manufactured using high-grade SS304 / SS202 / SS430 (Ferretic Stainless Steel).
- The stays have been proven to a lifetime 20,000 cycles.



Application	Inch	Product Code	Degree Opening	Load in Kg.	Max Height	Max Width
Normal Top Hung 13/16	8	DS08	62	8	300	1200
	10	DS10	56	14	450	1200
	12	DS12	64	20	600	1200
	14	DS14	41	23	600	1300
	16	DS16	51	22	750	1200
	20	DS20	21	22	900	1500
	24	DS24	21	48	1200	450
Normal Side Hung 13/16	10	DS10	84	14	900	600
	12	DS12	84	20	1200	600
	14	DS14	84	21	1300	600
	16	DS16	84	22	1300	700
Normal Top Hung 13/16	24	DS24	21	53	1250	1550
Normal Top Hung 13/16	24+	DS24+	21	53	1350	1650

### Extreme Series ES12"/16"

ES Stays for heavier windows. Reinforced stays used for added strength. These stays have been designed to offer smooth closure and higher performance for window application of all sizes.

Application	Inch	Product Code	Degree Opening°	Load in (Kg.)	Max Height	Max Width
Side Hung 13/16	12	ES 12	84	30	1350	750
	16	ES 16	84	35	1450	800



### Domestic Egress DE10"/12"/16"

Side hung friction stays, which allows a maximum clear opening in excess 500mm wide x 850mm high. When fitting the DE10 / DE16 please observe Code of Practice for safety in use and during cleaning of windows.

Application	Inch	Product Code	Degree Opening°	Load in (Kg.)	Max Height	Max Width
Side Hung 13/16	10	DE10	90	22	1200	600
	12	DE12	90	22	1200	650
	16	DE16	90	24	1300	700



## ► **nafmo**® Restrictor Arm

### Domestic Restrictor Arm (Single Point/Adjustable) DRA102 10"/12"

On side-hung windows supported by standard butt hinges (and in some cases friction stays) the friction arm offers distinct advantages over the conventional peg stay. It is totally concealed when the vent is closed and offers no internal obstruction when opened. For large top hung vents the friction arm can be used as an extra support by fitting it below the existing friction stay. This has the effect of limiting the opening as well as adding greater stability to the window.

Application	Inch	Product Code	Degree Opening°	Load in (Kg.)	Max Height	Max Width
DRA10	10	DRA 102	90	NA	NA	NA
	12	DRA 102	90	NA	NA	NA
DRA10 Restricted	10	DRA 102	90	NA	NA	NA
	12	DRA 102	90	NA	NA	NA





## ► nafmo® Universal Friction Stay Hinges

### Universal Series

#### US08"- 24"

Friction stay offer improved security and weather sealing through the use of a Duracon slider for reduced friction and Nylon 66 Glass filled End caps for added stability. These stays have been designed to offer smooth closure and higher performance for window applications of all sizes.

- Available in 8", 10", 12", 14", 16", 20" & 24" top hung and 10", 12", 14" & 16" for side hung applications.
- Manufactured using high-grade SS304 / SS202 / SS430 (Ferretic Stainless Steel).
- The stays have been proven to a lifetime 20,000 cycles.



Application	Inch	Product Code	Degree Opening	Load in Kg.	Max Height	Max Width
Normal Top Hung 13/16	8	US08	62	8	300	1200
	10	US10	56	14	450	1200
	12	US12	64	20	600	1200
	14	US14	41	23	600	1300
	16	US16	51	22	750	1200
	20	US20	21	22	900	1500
	24	US24	21	48	1200	450
Normal Side Hung 13/16	10	US10	84	14	900	600
	12	US12	84	20	1200	600
	14	US14	84	21	1300	600
	16	US16	84	22	1300	700
Normal Top Hung 16	24	US24	21	53	1250	1550
Normal Top Hung 13/16	24+	US24+	21	53	1350	1650

## nafmo® for Commercial (Heavy Duty) Applications for uPVC, Aluminum & Wooden Windows

- Carries commercial windows up to 1350mm width and 2100mm height and 130kg in weight.
- Smooth and balanced operation for life - windows open and close with ease.
- Additional linking of arms for greater strength and rigidity.
- Effective weather sealing and drought proofing fully concealed once fitted.
- Manufactured from high - grade "Austenitic stainless steel" with nickel content >8% for maximum performance longevity.
- Austenitic stainless steel cap for added strength.
- Composite steel/duracon slider for strength, durability & smooth operation.

## ► nafmo® Commercial Friction Stay Hinges

### Commercial Side Hung Series

#### CS10"- 18"

Heavy Duty Range	Length in (inch)	Length in (mm)	Height in (mm)	Width in (mm)	Weight approx	Stack Height	Opening Angle°
CS10	10	258	1200	450	30 Kg.	16	84
CS12	12	305	1200	500	30 Kg.	16	84
CS14	14	355	1250	600	35 Kg.	16	84
CS16	16	410	1300	750	40 Kg.	16	84
CS18	18	455	1450	750	50 Kg.	16	84



### Commercial Top Hung Series

#### CS22"/24"/26"

Heavy Duty Range	Length in (inch)	Length in (mm)	Height in (mm)	Width in (mm)	Weight approx	Stack Height	Opening Angle°
CS22	22	567	1500	1200	60 Kg./20° 50 Kg./45°	16	41
CS24	24	609	1750	1350	70 Kg.	16	30
CS26	26	660	2100	1500	130 Kg.	16	20



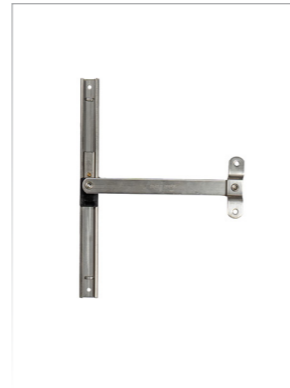
## ► nafmo® Restrictor Arm

### Commercial Restrictor Arm CS102 10"

On side-hung windows supported by standard butt hinges (and in some cases friction stays) the friction arm offers distinct advantages over the conventional peg stay. It is totally concealed when the vent is closed and offers no internal obstruction when opened.

For large top hung vents, the friction arm can be used as an extra support by fitting it below the existing friction stay. This has the effect of limiting the opening as well as adding greater stability to the window.

Heavy Duty Range	Length in (inch)	Length in (mm)	Height in (mm)	Width in (mm)	Weight approx	Stack Height
CS102	10	258				Restrictor Stay
	12	305				Restrictor Stay



## ► nafmo® Parallel Friction Stay Hinges

### Parallel Stay PS11"/18"/36"

- Parallel opening windows provide ultimate natural ventilation by allowing a balanced air flow around the entire opening.
- Can be operated manually or using electric actuators.
- Closes inline which allows for greater choice in profile selectio
- Hinge mechanism is fully concealed when the sash is closed.
- Tested to operate for 10,000 cycles.
- Manufactured from high grade "Austenitic stainless steel".

Product Ref.	Max Vent Weight (Kg)	Max Vent Height (mm)	Max Vent Width (mm)	Distance Opening (mm)
PS11"	25	750	350	180
PS18"	70	1000	1200	180
PS36"	150	2000	2000	180



## DRIVEN BY EXCELLENCE

We are continually exploring new technologies and design trends to create products that set new benchmarks in the industry, as we seamlessly blend functionality with contemporary design to offer products that not only perform impeccably but also enhance the visual appeal of any space, consistently exceeding possibilities.

After all, our customers are at the heart of everything we do and their continued satisfaction is the goal that drives us all.







**INSOTHERM WINDOW HARDWARE PRIVATE LIMITED**

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