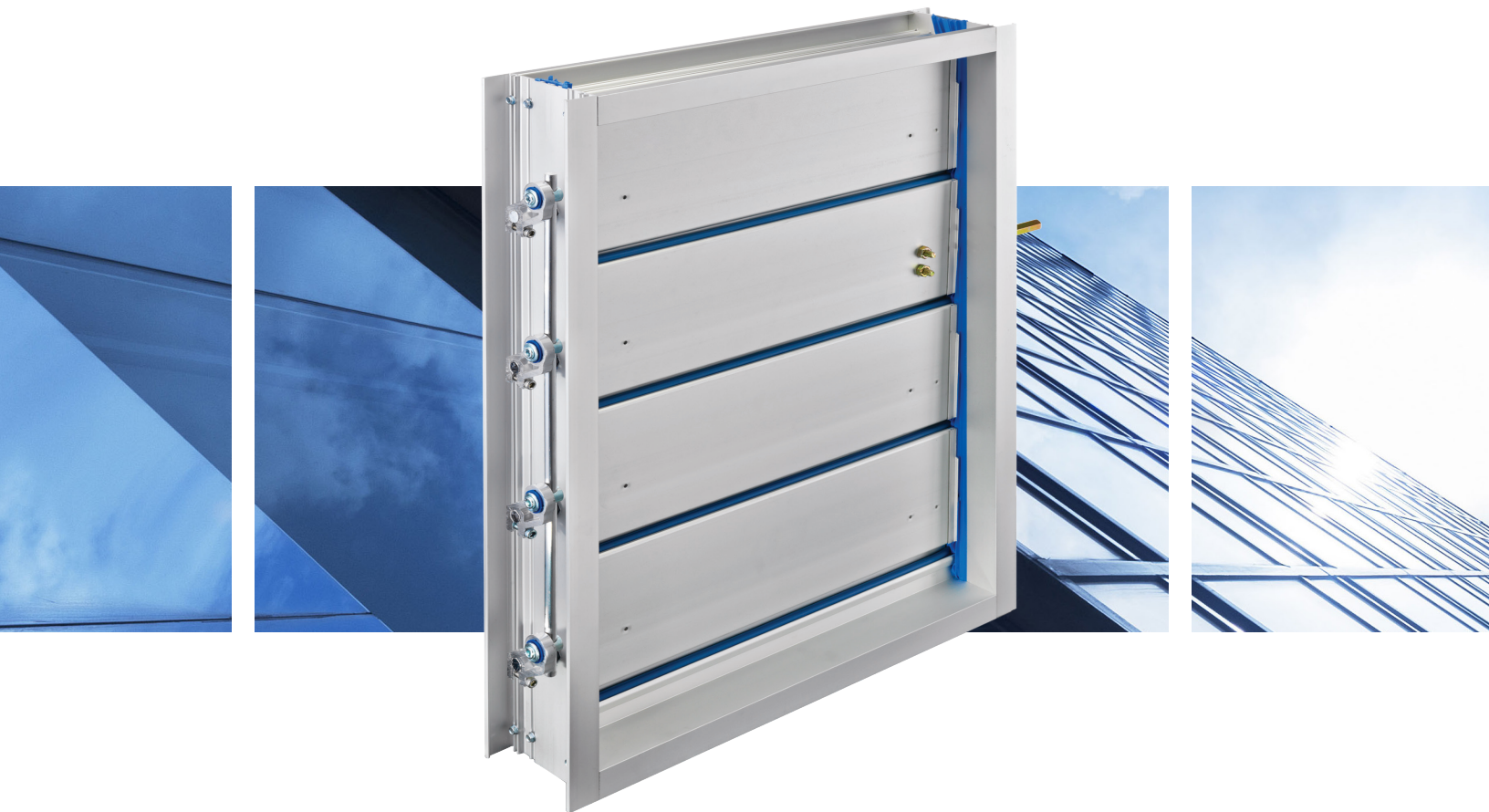


# SERIES 1500

ULTRA-LOW LEAKAGE  
ENHANCED AIR-FOIL CONTROL DAMPER

TAMCO 



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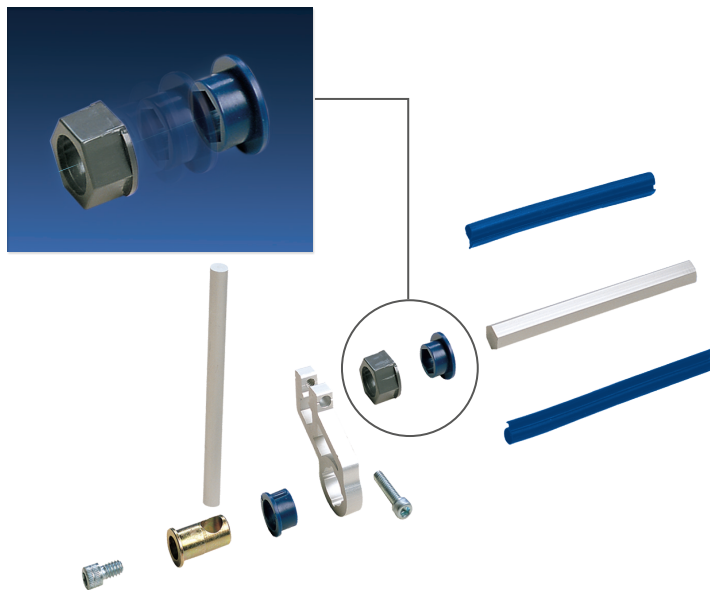
EXPERIENCE TRUE EXCELLENCE IN SERVICE, QUALITY,  
AND MAINTENANCE-FREE PERFORMANCE.

**ALUMINUM  
STRENGTH AND DURABILITY**

- Aluminum extrusions allow for intricate design features not possible with roll or brake formed galvanized steel.
- Aluminum construction allows for additional strength by extruding internal supports and thicker radii.
- Aluminum dampers provide a prolonged and rust-free operational life over galvanized steel types.
- Aluminum oxidizes to form a protective film. If the surface is scratched, the film reforms.  
*(Standard damper is produced with a mill finish.)*

**DEPENDABLE  
"DUAL BEARING SYSTEM"**

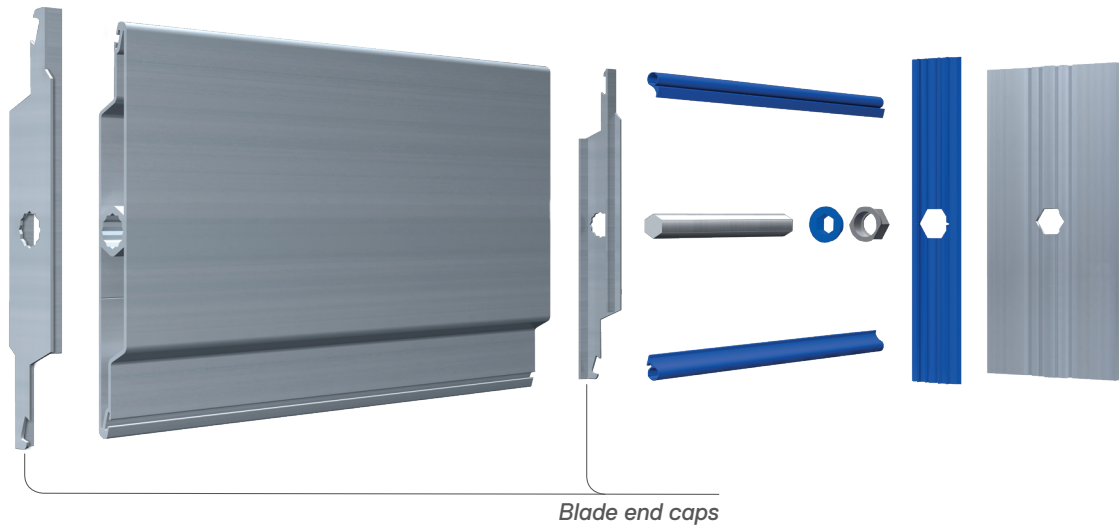
- TAMCO bearings consist of polycarbonate and acetal copolymer (*Celcon*) engineered thermal plastic resins.
- Dual bearing system is self-sealing, self-lubricating, and non-absorbent, which results in a totally maintenance-free performance.
- Bearing materials meet or exceed tensile strength of 8,800 psi (60,674 kPa) and flexural strength of 12,000 psi (82,738 kPa).
- Tensile impact strength of Celcon is 70 ft-lb/in<sup>2</sup> (147.1 kN-m/m<sup>2</sup>) and 145 ft-lb/in<sup>2</sup> (304.7 kN-m/m<sup>2</sup>) for polycarbonate.
- TAMCO's bearing-to-bearing arrangement eliminates action between metal-on-metal and metal-on-plastic riding surfaces. *(Metal-on-metal, bronze or oil-lite bearings and metal-on-plastic nylon bearings have traditionally been one of the weakest links in damper operation, requiring regular lubrication or eventual replacement.)*
- TAMCO's "Dual Bearing System" has a service life of over 20 years under normal conditions and operation, and when installed in accordance with TAMCO Installation Guidelines.



**MAINTENANCE-FREE  
PERFORMANCE ACHIEVED**

- Dampers are assembled using slip-proof linkage components that keep blades aligned as per factory adjustment.
- Hexagon design feature of linkage and pivot elements allow for flat-on-flat press fits that eliminate play and wear.
- Hard alloy aluminum (6005-T5) linkage crank arm and pivot pin are doubly secured by pincer-action and fastener.
- Large diameter ( $1\frac{1}{32}$ " [8.73 mm]) hard alloy aluminum (6005-T5) linkage rod connects the crank arms, which allows for a penetrating grip by the cup-point fastener.  
*(Cup-point trunnion set screw creates a compression hard spot where it secures to the linkage rod.)*
- Trunnions are zinc-plated to provide a hard, smooth and long-lasting rotating surface.





### ULTRA-LOW LEAKAGE BLADE END CAPS

- The Series 1500 blade end caps provide a smooth & uniform surface where the edge of the blade makes contact with the frame seal.
- The end caps cover the hollow blade ends, thereby increasing the surface area that makes contact with frame seal.
- The combination of the uniform surface and increased contact area results in a significant reduction in air leakage between blade edges and frame seals.
- End caps are clear anodized for all Series 1500 dampers, whether they are ordered as standard or with the ET, MR, or SW Options.
- The smooth anodized end cap surface reduces blade to frame seal friction, ultimately requiring less torque to operate the damper.
- The unbroken surface of the end caps creates nearly frictionless wear on the frame seals. This enhances damper longevity and ensures that the damper retains its sealing ability over time.

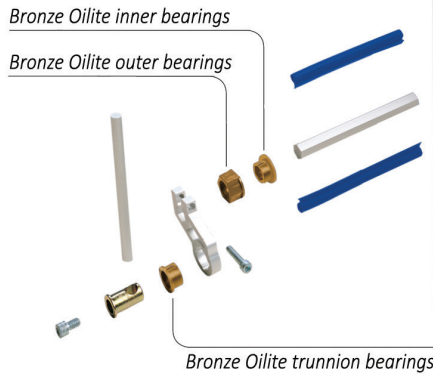
### SILICONE BLADE AND FRAME SEALS

- Silicone blade and frame seals outperform all other existing seals due to flexibility and durability.
- Silicone seals have an estimated service life of 30 years.
- Silicone seals are virtually unaffected by cold operating temperatures. Air leakage tests undertaken in a cold chamber revealed that silicone seals allowed only a minimal increase in leakage rates between 40 °F (4 °C) and -40 °F (-40 °C).
- Silicone's superior dynamic fatigue resistance ensure prolonged sealing longevity, plus phenomenal resistance to weathering, compression set, heat, and UV rays.  
*Even though general-purpose silicone can withstand 500 °F (260 °C), the upper operating temperature of the entire damper unit is 212 °F (100 °C).*

TAMCO SERIES 1500 DELIVERS THE CONSISTENT ULTRA-LOW LEAKAGE PERFORMANCE OUR CUSTOMERS HAVE COME TO DEPEND ON.

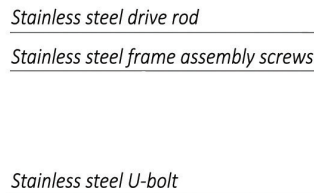
**ELEVATED TEMPERATURE  
 ET OPTION**

- Suitable for high heat environments where temperatures may reach as high as 300 °F (149 °C), and where UL regulated control dampers are not a requirement.
- This option is ideal for dampers intended for use in back-up generator stations, where excessive heat may be an issue.
- It is well-suited for test laboratory applications, wherever high-heat conditions may exist.
- The Elevated Temperature Option is also a practical solution in mildly acidic applications, where Celcon bearings may not withstand environmental conditions.
- Celcon and polycarbonate bearings are replaced with bronze-oilite bearings.



**MOISTURE RESISTANCE  
 MR OPTION**

- All zinc-plated, steel hardware is replaced with stainless steel, protecting hardware from rust and corrosion.
- Suitable for applications where dampers are exposed to extended periods of high humidity or high moisture.
- The Moisture Resistance Option is a cost effective alternative to the Salt Water Resistance Option for applications where salt spray is not a concern.



**NOTE:**

When multiple-section dampers are ordered with MR or SW Options, stainless steel jumpers and SW Option horizontal jackshafts replace standard jumpers or horizontal jackshafts.

## UPGRADE OPTIONS | Series 1500

### Ultra-low Leakage, Enhanced Air-Foil Control Damper

#### SALT WATER RESISTANCE SW OPTION

- The extruded aluminum frames and blades are all clear anodized to a minimum thickness of 0.7 mil (18 microns) deep.
- The frame is assembled with stainless steel screws.
- Stainless steel hardware, linkage parts and screws replace all zinc-plated steel components.
- All aluminum linkage hardware parts are clear anodized.
- Ideally suited for coastal climates.
- Recommended for inland applications, where tire spray from winter-salted roads has been known to corrode dampers installed in close proximity to roads or highways.
- Excellent solution for high humidity applications such as water treatment facilities, municipal pools and greenhouses.

Stainless steel drive rod

Stainless steel frame assembly screws

Stainless steel U-bolt

Anodized frames and blades

Anodized crank arm

Anodized linkage rods

Stainless steel fasteners

Stainless steel trunnions

Stainless steel cup-point fasteners

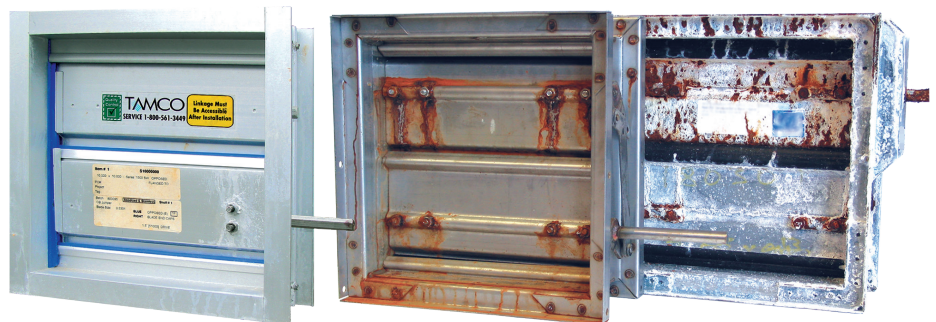


#### TAMCO SALT WATER RESISTANCE OPTION OUTPERFORMS STAINLESS STEEL AND GALVANIZED STEEL

##### ASTM B117

##### SALT WATER SPRAY TESTING

- TAMCO's Series 1500 damper with SW Option, a Brand X stainless steel damper and a Brand Y galvanized damper were exposed to 1000 hours of testing in a Singleton salt spray cabinet.
- Base torque readings were taken before testing. Changes in opening and closing torque readings were recorded at regular intervals, as testing progressed.
- The opening and closing torques for the TAMCO Series 1500 damper with SW Option were unchanged after 1000 hours of salt water spray testing.
- All test dampers were evaluated for changes in surface finishes and degree of rusting.
- The surface of the Series 1500 damper with SW Option showed no change other than a small accumulation of salt residue, which was easily wiped off with a damp cloth.



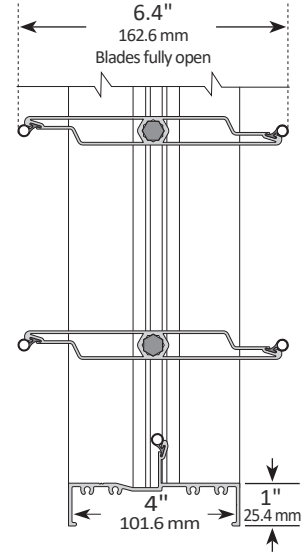
▲ TAMCO SERIES 1500  
WITH SW OPTION

▲ BRAND X  
STAINLESS STEEL

▲ BRAND Y  
GALVANIZED STEEL

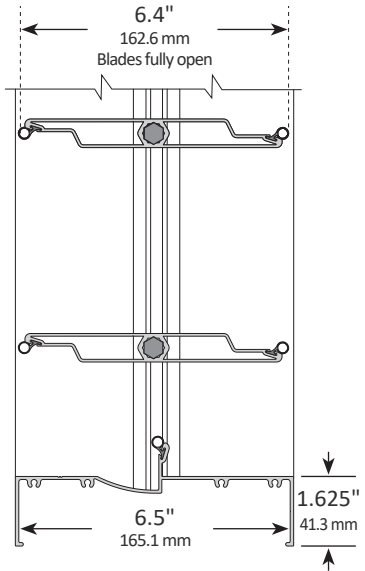
**SP – STANDARD PROFILE**

- Air-foil control dampers, ordered with SP – Standard Profile, are manufactured with 4" (101.6 mm) deep frames. Blades are a maximum 6" (152.4 mm) deep.



**WP – WIDE PROFILE**

- Air-foil control dampers, ordered with WP – Wide Profile, are manufactured with 6.5" (165.1 mm) deep frames. Blades are a maximum 6" (152.4 mm) deep.
- Options offered with WP – Wide Profile dampers are the same as those offered with SP – Standard Profile dampers.





# SERIES 1500



## SPX ENGINEERED AIR MOVEMENT

80 Lorne Street  
Smiths Falls, ON K7A 5J7, Canada  
800 561 3449  
[tamcodampers.com](http://tamcodampers.com)

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