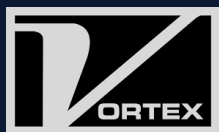


SYCSA®

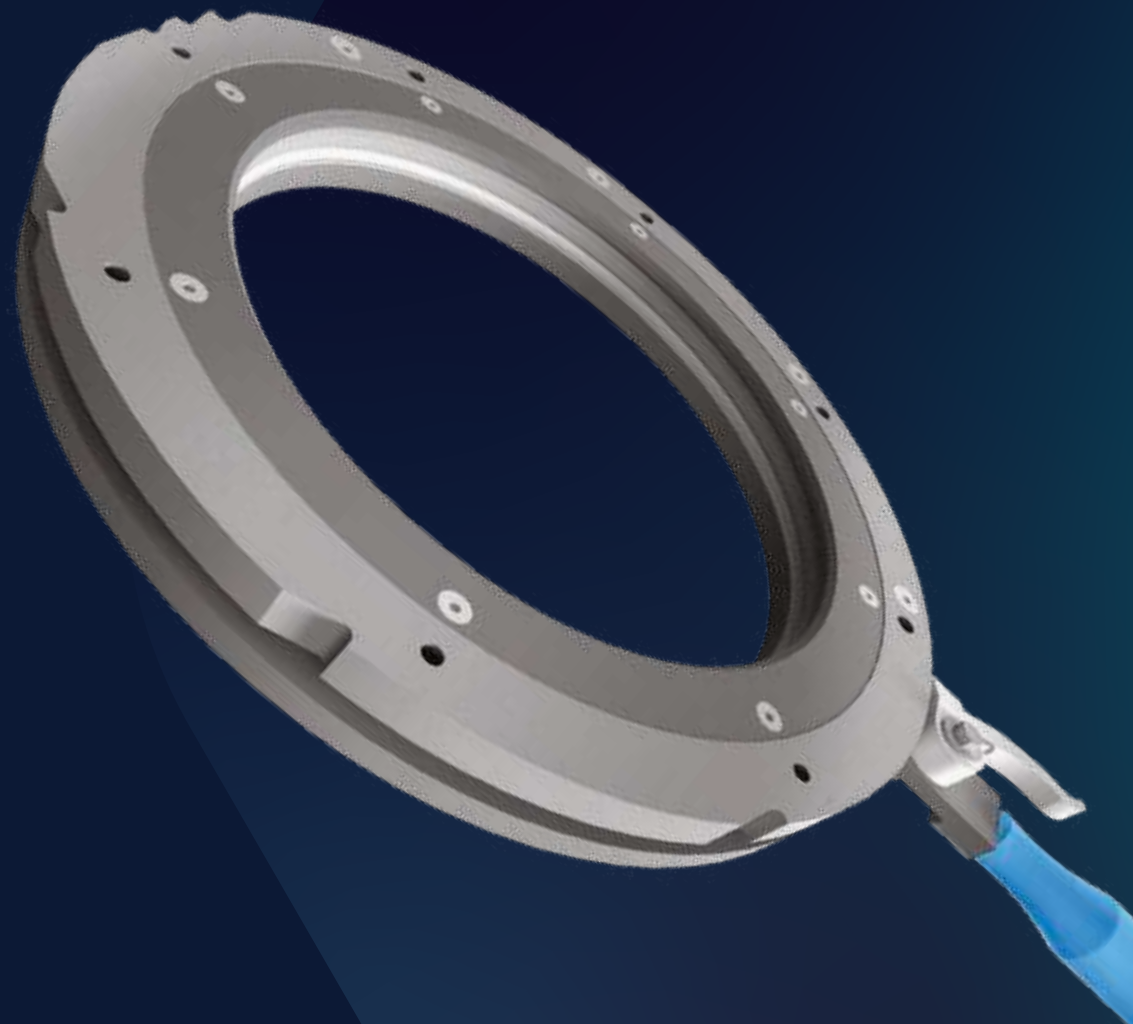
Iris Valve

Quantum
Series

Model No. UBXX



PARTNER SYCSA®





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un producto

SYCSA® te acompaña
en **todas las fases** de tu
proyecto.



DISEÑAMOS



INSTALAMOS



AUTOMATIZAMOS



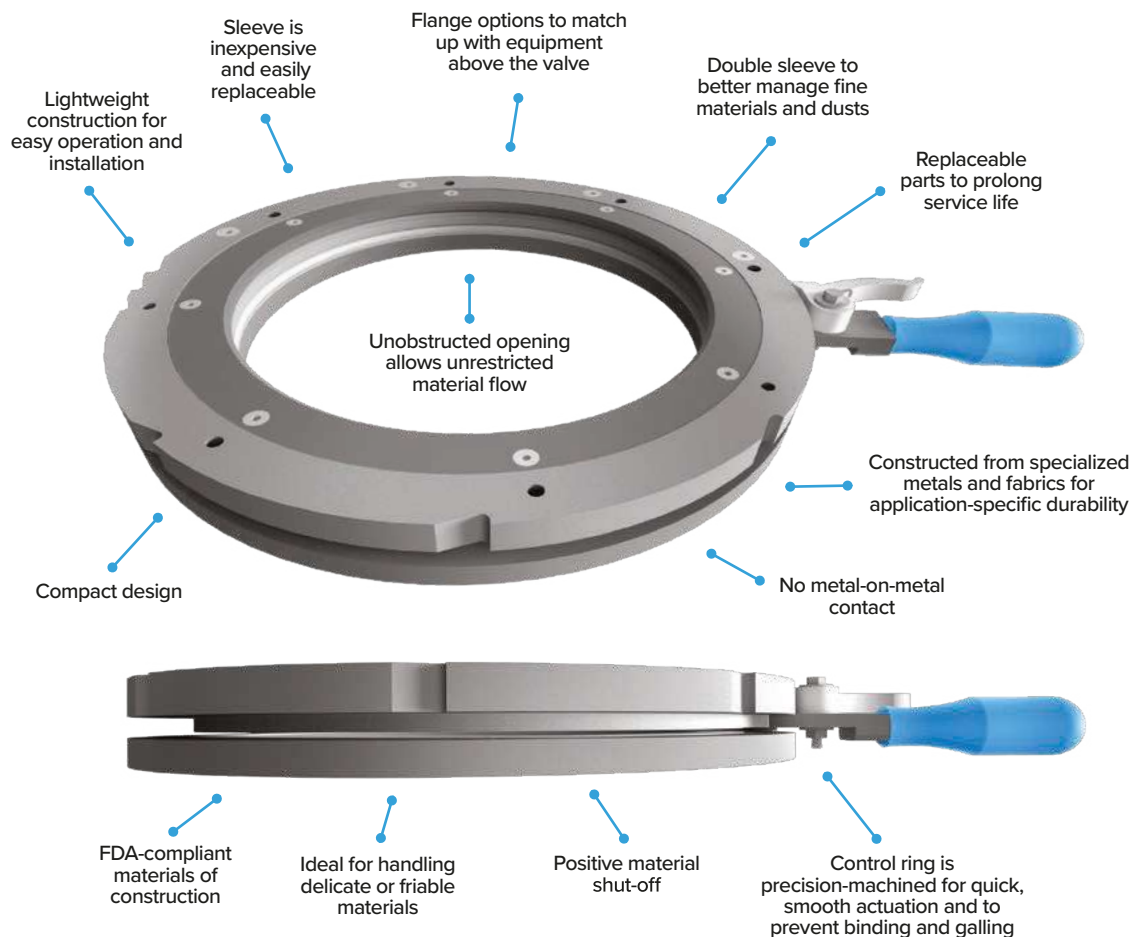
**BRINDAMOS SERVICIO
POSTVENTA**

Model No. UBXX

IRIS VALVE

Ideal application: Manually control the gravity discharge of free-flowing dry bulk solid materials.

Purpose: The Vortex® Iris Valve opens from and closes toward the center of its opening to create a gradual flow or restriction of materials. This design ensures an even discharge of materials and allows manual control over flow rates. The Iris Valve's fabric sleeve and gradual closing action protect delicate and friable materials from degradation. When fully closed, the Iris Valve's fabric sleeve is twisted to the point that it becomes a flat, tight barrier to hold back materials.



KEY FEATURES



Optional preset positions for quick adjustments in material flow rate



Control ring constructed from stainless steel, for increased torque and added durability



Optional replaceable wear liner reduces material contact with the sleeve to extend service life

TECHNICAL SPECIFICATIONS

Conveyance Type	Gravity flow only
Materials Handled	Non-abrasive to moderately abrasive powders, pellets and granules
Standard Sizes	4 – 18 in 100 – 455 mm
Overall Height	2 in 40 mm
Weight	2 – 75 lb 1 – 35 kg
Connection Options	Standard flange or tube stubs Ferrule-type fittings available by request
Material Temperatures	Up to 150°F 65°C
Material Bulk Density	Up to 40 lb/ft ³ Contact us to discuss options for greater bulk densities
Body/Frame Options	Aluminum, 304 or 316L stainless steel
Sleeve Material Options	Urethane, silicone, Buna-N nitrile rubber, PTFE, static dissipative
Control Ring Construction	Stainless steel
Position Confirmation	Visual indication via handle position
Compliance	ATEX Zone 20 (internal), ATEX Zone 21 (external), FDA



DRIVE/ACTUATION TYPES



Infinite position hand lever: Designed with a twisting lever which must be loosened to adjust valve position and tightened to secure the valve in place. Valve position is infinitely adjustable along a 180° horizontal plane. The infinite position hand lever is constructed from stainless steel.

Quick-lock hand lever: Notches are made in the metal valve body to create preset positions. The quick-lock hand lever is designed with a spring-loaded hammer to secure the valve at each set point. This allows for quick material flow adjustments. The quick-lock hand lever and its spring-loaded hammer are both constructed from stainless steel.

Tote handle: The tote handle is constructed from stainless steel and operates much like the quick-lock hand lever, only squeezing a trigger rather than pushing a spring-loaded hammer.

THE POWER OF COMPARISON

Vortex Iris Valve vs. Alternatives

- The Vortex® Iris Valve is designed with a form-fitted fabric sleeve that creates a barrier to prevent material leakage to atmosphere. The fabric sleeve also prevents materials from coming in contact with the valve's moving parts. With several sleeve material options available, an Iris Valve can be designed for most dry bulk solids material handling applications, including abrasion-resistant and food-friendly, among others.
- Many alternative iris valves are constructed with plastic control rings, trigger locks and handles. Such construction renders iris valves nondurable and unreliable. To address these durability concerns, the Iris Valve is constructed with a stainless steel control ring, as well as a metal trigger lock and a metal handle.
- The Iris Valve is constructed from precision-machined parts, to reduce wear and ensure smooth actuation.



CASE STUDY

Multi-Port Diverter Handling Flour

Client: Pasta producer

Application: Pneumatically convey/divert flour from a main supply line into 8 silos. Each silo feeds a separate production line. Each line produces a different pasta type.

Results:

The client previously used a manual hose switching station in this process. They were concerned about labor intensity, workplace safety, profitability, explosion potential, waste reduction and maintenance costs, among other things.

With the Vortex Multi-Port Diverter, the automated system ensures the different grades of flour are conveyed into their proper silo. The client has already saved dollars and labor hours, plus avoided potential processing errors and improved plant safety.



CASE STUDY

Gates & Diverters Handling Plastics

Client: Manufacturer of styrofoam cups, plates & bowls

Application:

- Reintroduce plastic scrap/regrind into the extrusion process.
- Convey resins/compounds into the extrusion process.
- Converge resins from various holding bins into a common convey line.

Valves:

- 7 Roller Gates
- 31 Wye Line Diverters
- 32 Orifice Gates

Results:

This client operates 5 shifts, 24 hours per day — and all but two days each year.

With the addition of Vortex gates and diverters, this client has a solution for automated material transport — and has reduced their manufacturing waste to less than 1%.



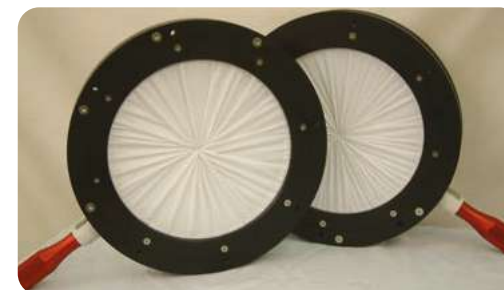
CASE STUDY

Seal Tite Diverter Handling Pet Food

Quantity: 4

Special Features: Spin knobs, for easy in-line access without using tools.

Application: Divert kibble into two disc conveyors, to be transported to a packaging line.



CASE STUDY

Iris Valve Handling Powdered Drink Mix

Quantity: 2

Application: Avoid contamination when handling food & beverage materials.

Special Features: A Teflon-coated body was specified because Teflon does not chemically react or corrode from material contact, which would otherwise compromise taste and create contamination. Teflon also assures food purity because it does not absorb preservatives. Because Teflon is non-stick, it also provides ease of maintenance.



TECHNICAL ARTICLE

How to Select a Valve for Solids & Bulk — Handling

Valve suppliers should have the application engineering knowledge and experience to know what valves and modifications should be applied for certain application parameters. Make sure your supplier is asking the right questions.

Many people think that selecting a slide gate or diverter valve for handling dry bulk solid materials is a relatively simple process. They typically assume the only information needed is:

- Opening shape & size
- Available stack-up height
- Matching connections or bolt hole patterns

But in reality, valve suppliers need much more information to be able to identify the right valve for the application. The more information a valve supplier has about the application parameters, costly mistakes are avoided. Misinformation can put you on either end of the spectrum — whether it be using an expensive valve for a simple application, or an inexpensive valve that is poorly designed for the application.

1. Valve Selection

The most critical questions are:

- What is the valve intended to do?
- Is a slide gate, diverter valve, iris valve or butterfly valve needed to best fulfill the application?

Follow-up questions include:

- What is the valve's opening size? Is the opening square, round or rectangular?
- What is the shape and size of the conveying line? Are the lines tube or pipe? If the lines are pipe, is it schedule 10 or 40?
- Will the valve be used in a pressure, vacuum or gravity flow application? If pressure or vacuum, how much? If pressure, will the system convey material in dilute or dense phase?
- Will the valve be installed indoors or outside?
- What is the temperature of the air and materials being conveyed?

- What should the valve be constructed from (aluminum, stainless steel, carbon steel, etc.)?
- Will the valve be subject to wash-downs? If so, will it be washed with hot water or a caustic liquid?
- If the valve is installed below a bin or silo — Will there be flow aides (aeration, vibration, etc.)? What is the sequence of operations for the system (e.g. When are the flow aides activated, in relation to the cycle of the gate valve)? How is material conveyed into the bin or silo?

Then, you must consider material characteristics:

- What is the material?
- Is it in powder, pellet or granular form?
- What is its particle size?
- What is its weight per cubic foot?
- Is it sticky? Abrasive? Corrosive?
- Is there sanitary or spoilage concerns?
- If multiple materials will pass through a common conveying line, is there cross-contamination concerns?

2. Actuator Selection

The most critical questions are:

- What is your power availability? Is compressed air available?
- What is the cycle frequency?
- Will the valve close on material? If yes, will the material be a standing or flowing column?
- Does actuation speed matter?
- If only intended for maintenance purposes, can I use manual actuation?
- If installed outside, will the valve be subject to cold temperatures?
- What are the cost variables for replacement and repair?
- Will the valve operate in a potentially explosive environment?

3. Standard Modifications

Your valve supplier should offer standard modifications to suit your application/material-specific requirements.

When selecting valve modifications, some application-specific factors that should be considered are:

- Is the application high-cycle?
- Is the material handled abrasive duty? Corrosive? Friable? Food-specific?
- Is chemical compatibility a concern?
- How often will the valve be serviced? Are in-line maintenance features desired?

4. Valve Location & Orientation

The most critical questions are:

- Where will the valve be installed (e.g. below a bin/silo, etc.)?
- Will it be installed in a vertical or horizontal orientation?

This helps determine which accessories may be required for your application. For example, if a slide gate is mounted below a surge hopper, a variable positioning assembly may be required to meter material into the weigh hopper.

5. Features Selection

Common modifications include:

- Abrasion-resistant blade & liners
- Adjustable blade rollers
- Custom valve sizes
- Sealed body with an air purge assembly
- Replaceable seals, liners & wetted parts
- Wear-compensating seals
- Wear-reducing material deflectors
- Wear-resistant blade, bucket blade or pivoting chute

...to name a few.

6. Accessory Selection

When specifying valve accessories, there are four distinct areas:

- Variable positioning assemblies — Vortex offers a VPO/VPC (relay control with manual adjustability); AVP (PLC control with manual adjustability); and an IVP (infinite positioning via a 4-20mA signal).
- Feedback — Vortex offers push-button control panels, and valve/sensor manifold technologies with a variety of PLC interfaces.
- Safety devices — A vented ball valve should always be installed in front of the air control valve, in order to bring the slide gate or diverter valve to a “zero mechanical” state before servicing. This type of ball valve bleeds off any residual downstream pressure contained in the air lines supplying the air cylinder. The ball valve should always be installed within arm's reach of the air control.
- Fabricated accessories — Fabricated transitions provide flexibility when mating up to existing equipment. This includes matching special bolt hole patterns, tube stubs, or blind flanges that allow in-the-field hole placement and installation.

- **EQUIPOS PARA RECEPCIÓN, CARGA Y DESCARGA**

- Descarga de sacos y supersacos
- Descarga de liners
- Descarga de ferrocarril
- Boquillas telescópicas
- Rompebóvedas
- Sistema de aireación
- Activadores de tolva

- **ALMACENAMIENTO**

- Silo atornillado
- Silo soldado
- Silo híbrido
- Silo mezclador
- Silo pesador
- Tanque atornillado
- Tanque presurizable
- Tolva

- **VÁLVULAS**

- Guillotinas
- Diversora
- Mariposa
- Rotatoria
- Iris

- **SISTEMAS DE SEGURIDAD**

- Sistemas pararrayos
- Válvulas de alivio vacío/presión
- Páneles de explosión
- Sistemas de supresión
- Válvulas de aislamiento
- Arrestador de flama

- **MEZCLADO**

- Mezcladora tipo listón
- Mezcladora de paletas
- Mezcladora para lodos
- Mezcladores para plásticos

- **TRANSPORTE MECÁNICO**

- Elevadores de cangilones.
- Transportadores de banda sencillo o reversible
- Alimentadores vibratorios
- Transportadores de rastra
- Transportadores helicoidales
- Transportadores tubulares de discos

- **SISTEMAS DE MONITOREO Y TRAZABILIDAD**

- Silos y tolvas pesadoras
- Sistemas de pesaje en línea
- Sistemas de trazabilidad
- Tableros de control
- Celdas de carga
- Básculas camioneras y ferrocarrileras
- Medición de nivel

- **TRANSPORTE NEUMÁTICO**

- Transporte fase diluida
- Transporte fase densa
- Sopladores
- Motosopladores
- Bomba neumática

- **EQUIPO PERIFÉRICO**

- Cargadores
- Enfriadores para aire de transporte
- Secadoras de aire caliente
- Cristalizado de PET
- Secadoras dehumificadoras

- **COMPONENTES PARA LÍNEA DE TRANSPORTE**

- Lanzas y mirillas
- Empaques
- Tubos y curvas
- Coples
- Mangueras PVC y metálicas
- Manifold para vacío
- Caja de vacío

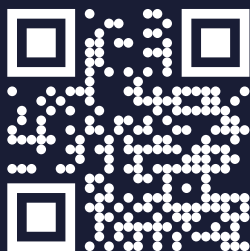
- **DOSIFICACIÓN Y ALIMENTACIÓN A MÁQUINAS**

- Dosificadores volumétricos
- Dosificadores gravimétricos
- Adición de pigmentos o aditivos

- **FILTRADO Y LIMPIEZA DE MATERIAL**

- Filtros para venteo
- Filtros recibidores
- Colectores de polvo
- Trampas magnéticas
- Cribas

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