



*Built to last*

# PRODUCT RANGE

DMN-WESTINGHOUSE

COMPONENTS FOR BULK SOLIDS HANDLING

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# Introduction

The international world of processing comprises a large variety of industries and companies. DMN-WESTINGHOUSE has been designing and manufacturing rotary valves, diverter valves and other related components for the bulk solids handling industry for more than 40 years. As an independent company with no involvement in system design, our sole activity is the development, manufacture and sale of these components.

DMN-WESTINGHOUSE offers tailor-made solutions to the global food, dairy, plastics, (petro)chemical, pharmaceutical, mineral, power and biomass industries. Our line of rotary valves and diverter valves comprises a number of universal components that are suitable for many applications. We also have a range of dedicated components for use in specific industries or to handle specific products. Stringent hygiene requirements and/or low capacities are often required in the pharmaceutical industry. The SAL small sanitary airlock is designed specifically to meet these requirements. With the emergence of new industries, our rotary valves have also proven themselves to be capable of handling recycled plastic from cars, vegetable waste, and so on.

# Rotary valves

*Feed your process*

Rotary Valves	AL AXL*	BL BXL*	DAIRY CIP	MZC	SAL	OS GOS	AML	GL	MLD MALD MGLD	DL	SRV
Food	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Dairy	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Animal Feed	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Pharma	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Plastics	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Petro-Chemical	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Mineral	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Power/Biomass	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️
Recycling	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️

\* enlarged inlet

⚙️ Recommended ⚙️ Sometime used ⚙️ Not recommended

# AL-AXL



- High filling efficiency
- Sheared angle inlet
- Minimum air leakage
- Customised solutions
- Drilled flanges in accordance with PN10, ANSI 150lbs and JIS
- Easy detachable versions available
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available

Size Type AL	100	150	175	200	250	300	350	400	450	500
Size Type AXL			200	250	300	350				
Ltr/rev*	0,8	2,5	5,5	10,5	19	34	58	91	135	230

\* at 100% filling

# AL-AXL DAIRY



- USDA Dairy Accepted
- Versions conforming to EC 1935/2004 available
- Easy removal of rotor for fast and efficient cleaning
- Smooth product contact surfaces in food grade material
- Rotor pockets radiused and polished to Ra=0,8 µm (150 grit)
- Rotor vanes chamfered on all edges
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available
- CIP-suitable versions conforming to EHEDG Type EL Class I available

Size Type AL	150	175	200	250	300	350
Size Type AXL		200	250	300	350	
Ltr/rev*	2,5	5,5	10,5	19	34	58

\* at 100% filling

# AL-AXL MZC



- Supporting bars for easy removal of rotor and end cover
- Direct drive or chain drive
- Narrow, flexible and maintenance free construction with direct drive
- Hygienic, USDA Dairy Accepted versions available
- Versions conforming to EC 1935/2004 available
- Increased safety at work
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available

Size Type AL	150	175	200	250	300	350
Size Type AXL		200	250	300	350	
Ltr/rev*	2,5	5,5	10,5	19	34	58

\* at 100% filling

# SAL



- For sanitary use
- Easy detachable rotor
- Low capacity
- Complete valve highly polished (inside and outside)
- Product surfaces FDA approved
- Maximum product temperature up to 100 °C
- System pressure up to 1 bar g
- Versions conforming to ATEC 94/9/EC available
- CIP-suitable versions conforming to EHEDG Type EL Class I available

Size	50	65	80	100	150
Ltr/rev*	0,07	0,13	0,25	0,8	2,5

\* at 100% filling

# OS



- High capacity
- High filling efficiency
- Sheared angle inlet
- Minimum air leakage
- Customised solutions
- Versions conforming to ATEX 94/9/EC available

Size	400	450	500
Ltr/rev*	91	135	230

\* at 100% filling

# BL-BXL



- High filling efficiency
- Sheared angle inlet
- Minimum air leakage
- Customised solutions
- Drilled flanges in accordance with PN10, ANSI 150lbs and JIS
- Easy detachable versions available
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available

Size Type BL	150	175	200	250	300	350
Size Type BXL		200	250	300	350	
Ltr/rev*	2,5	5,5	10,5	19	34	58

\* at 100% filling

# BL-BXL DAIRY

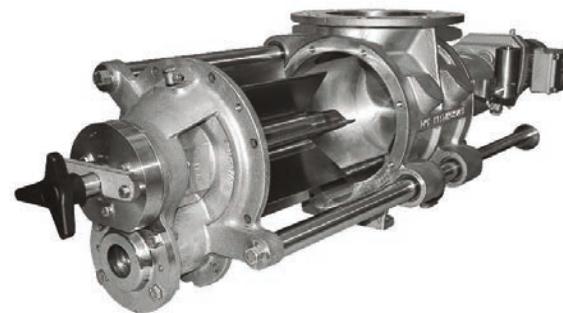


- USDA Dairy Accepted
- Versions conforming to EC 1935/2004 available
- Easy removal of rotor for fast and efficient cleaning
- Smooth product contact surfaces in food grade material
- Rotor pockets radiused and polished to Ra=0,8 µm (150 grit)
- Rotor vanes chamfered on all edges
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available
- CIP-suitable versions conforming to EHEDG Type EL Class I available

Size Type BL	150	175	200	250	300	350
Size Type BXL		200	250	300	350	
Ltr/rev*	2,5	5,5	10,5	19	34	58

\* at 100% filling

# BL-BXL MZC



- Supporting bars for easy removal of rotor and end cover
- Direct drive or chain drive
- Narrow, flexible and maintenance free construction with direct drive
- Hygienic, USDA Dairy Accepted versions
- Versions conforming to EC 1935/2004 available
- Increased safety at work
- Special blow through versions for cyclone or spray drier applications
- Explosion shock resistant up to 10 bar g
- Flameproof versions for both St1 and St2 products available
- Versions conforming to ATEX 94/9/EC available

Size Type BL	150	175	200	250	300	350
Size Type BXL		200	250	300	350	
Ltr/rev*	2,5	5,5	10,5	19	34	58

\* at 100% filling

# GOS



- High capacity
- High filling efficiency
- Sheared angle inlet
- Minimum air leakage
- Customised solutions
- Versions conforming to ATEX 94/9/EC available

Size	400	450	500
Ltr/rev*	91	135	230

\* at 100% filling

# AML



- High filling efficiency
- Large inlet size in relation to rotor volume
- Minimum air leakage
- Customised solutions
- Body with one round and one square flange
- Round flange drilled in accordance with PN10, ANSI 150lbs or JIS
- Usable as transition piece from round to square and vice versa
- Explosion shock resistant
- Versions conforming to ATEX 94/9/EC available

Size	100	150	200	250	300	350	400
Ltr/rev*	0,8	2,5	5,5	10,5	19	34	58

\* at 100% filling

# USAL

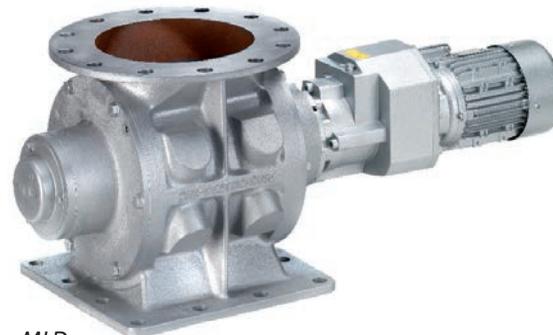


- High filling efficiency
- Sheared angle inlet
- Minimum air leakage
- Customised solutions
- Easy detachable versions available
- NFPA69 compliant models available
- Cast iron versions currently available
- Explosion proof models available up to 10 bar g
- Versions conforming to ATEX 94/9/EC available

Size	203,2 (8")	254 (10")	304,8 (12")
Ltr/rev*	5,38	10,47	18,96

\* at 100% filling

# MLD/MALD



MLD



MALD

- Compact design
- Substantial construction
- Standard fitted with direct drive
- Pressure surge proof up to 10 bar g
- Flange drillings available to PN 10, ANSI 150
- Direct inverter control
- Sheared angle inlet
- Versions conforming to ATEX 94/9/EC available

Size	100	150	175	200	250	300	350
Ltr/rev*	0,8	2,5	5,5	10,5	19	34	58

\* at 100% filling

# GL

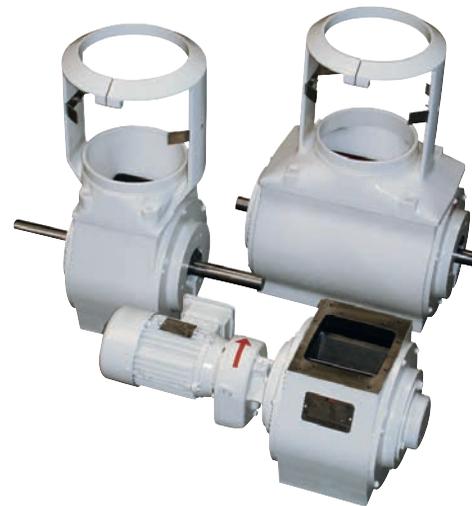


- Maximum protection against product degradation
- High filling efficiency
- Large air vent opening
- Robust construction
- Available with direct drive or chaindriven
- Flanges drilled in accordance with PN 10, ANSI 150 lbs and JIS
- Versions conforming to ATEX 94/9/EC available

Size	150	200	250	300	350
Ltr/rev*	5	10	17,5	32	79

\* at 100% filling

# SRV

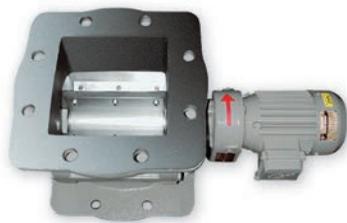


- Specially designed for flour milling
- Square inlet and outlet
- Supplied with or without cast sight feed unit
- Direct drive or twin shaft for multi gang drive
- Close, wide and extra wide clearance versions available
- Versions conforming to ATEX 94/9/EC available

# DL



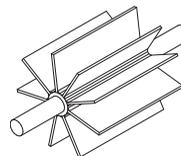
- Minimum air leakage
- Rotors with adjustable polyurethane or fixed chamfered mild steel blades
- Suitable for both round and square counter flanges
- Ex stock delivery for standard executions
- Versions conforming to ATEX 94/9/EC available
- Flameproof versions suitable to handle St2 products available



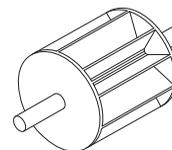
Size	200	250	300
Ltr/rev*	6	8,5	19

\* at 100% filling

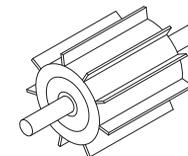
## Rotor options



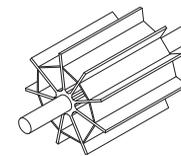
Fixed blades



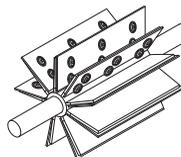
End disc  
Fixed blades



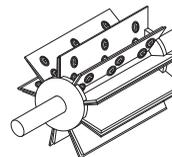
Reduced capacity (RC)  
Fixed blades



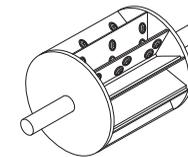
RC open end  
Fixed blades



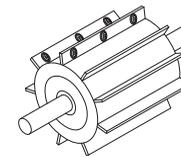
Replaceable and  
adjustable blades



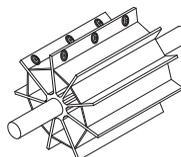
Semi end-disc  
Replaceable and  
adjustable blades



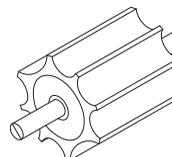
End-disc  
Replaceable and  
adjustable blades



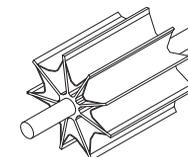
Reduced capacity  
Replaceable and  
adjustable blades



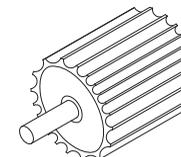
RC open end  
Replaceable and  
adjustable blades



Scalloped



Scalloped open end



Fine dosing

# Accessories



Inlet restrictor



Ventbox



Dropoutbox



Pressure regulator for air purged seals



Rotor interference detection (RID)

# Diverter valves

## The Art of Diverting

Diverter Valves	PTD	SPTD	PTD-CIP	2-TDV 3-TDV	M-TDV	GPD	SBD	BTD	FDV	FVV
Food	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	⚙️	🛑	⚙️	⚙️
Dairy	🌟	🌟	⚙️	⚙️	⚙️	⚙️	⚙️	🛑	🌟	🌟
Animal Feed	⚙️	⚙️	⚙️	🌟	🌟	⚙️	⚙️	⚙️	⚙️	⚙️
Pharma	🌟	🌟	⚙️	⚙️	⚙️	⚙️	⚙️	🛑	🛑	🛑
Plastics	⚙️	⚙️	⚙️	🌟	🌟	⚙️	⚙️	🌟	⚙️	⚙️
Petro-Chemical	⚙️	⚙️	⚙️	🌟	🌟	⚙️	⚙️	🌟	⚙️	⚙️
Mineral	🌟	🌟	🌟	🛑	🛑	⚙️	🌟	⚙️	🌟	🌟
Power/Biomass	🌟	🌟	🌟	🛑	🛑	⚙️	🌟	⚙️	🌟	🌟
Recycling	🌟	⚙️	🌟	🛑	🛑	⚙️	🌟	⚙️	🌟	🛑

⚙️ Recommended   🌟 Sometime used   🛑 Not recommended

# PTD



*PTD with static seals*

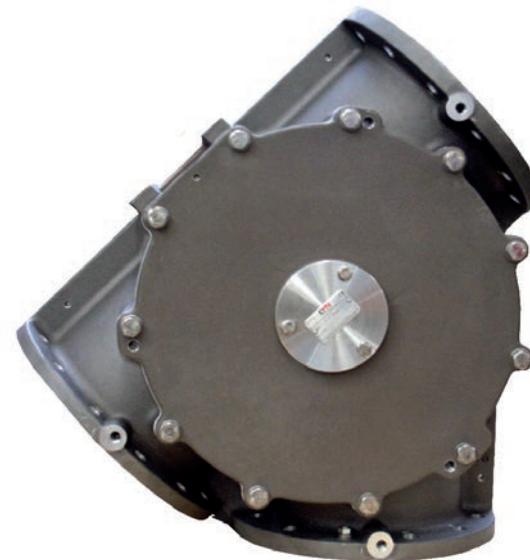
*PTD with inflatable seals*

- Pressure shock resistant up to 10 bar\*
- Two channel design
- Minimal maintenance
- Quick clean version available
- Compact form
- User friendly design
- No moving parts on the outside
- Pressure up to 3 bar g with static seals
- Sizes 50-150 up to 6 bar g with inflatable seals
- Versions with electrical drive available
- Wear resistant pipes optionally available
- Versions conforming to ATEX 94/9/EC available

\* Size 200 excluded

Size	50	65	80	100	125	150	200
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# SPTD



- Universal application
- Sizes from NB 150 up to 400 (6" to 16")
- Available in metric or inch pipe size
- Pressure up to 3 bar g
- Maximum product temperature +80 °C for standard models
- For diverting only
- Static or dynamic sealing
- No moving parts on the outside
- Special versions available
- Versions conforming to ATEX 94/9/EC available

Size	150	200	250	300	350	400
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# PTD-CIP



- Suitable for clean in place (CIP) process systems
- EHEDG Type EL Class I certificate of compliance
- Dual tunnel design
- Patented seals
- No seal in product stream
- Allowing a partial or full system wash through

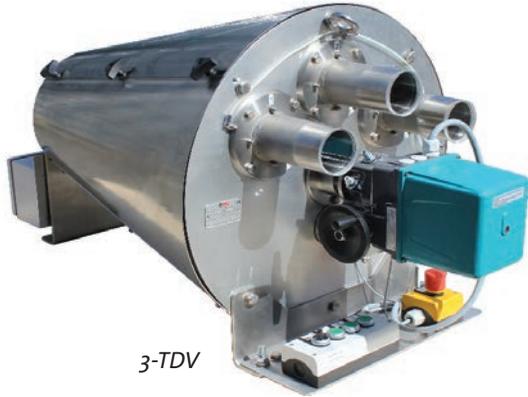
# GPD



- USDA Dairy Accepted versions available
- Rugged cast construction
- Available in stainless steel AISI 316, cast iron and aluminium
- Sealed and permanently lubricated outboard bearings
- Easily detachable design
- Change on the fly with most powders
- One-piece body with removable end plates and rotating blade assembly
- Pneumatic or manual operation
- Flanges drilled according to PN 10 or ANSI 150 lbs
- Versions conforming to ATEX 94/9/EC available

Size	150	200	250	300
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# 2/3-TDV



3-TDV



2-TDV

- USDA Dairy Accepted versions available
- Available with 2 or 3 ports
- Smooth product contact surfaces
- Inflatable seals
- Pressure from -0,8 up to 3 bar g
- Multiple choice of line connections
- Minimised product degradation
- Converging and diverging applications
- Easy detachable construction
- Temperature range -20 °C up to +100 °C
- All stainless and aluminium stainless configurations
- Versions conforming to ATEX 94/9/EC available

Size	40	50	65	80	100	125	150
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# M-TDV



- USDA Dairy Accepted versions available
- Up to 14 ports
- Inflatable seals
- All product contact materials FDA approved
- Smooth product contact surfaces
- Minimal product degradation
- Pressure from -0,8 up to 3 bar
- Temperature range -20 °C to +100 °C
- Converging and diverging applications
- Multiple choice of line connections
- Compact design
- Versions conforming to ATEX 94/9/EC available

Size	40	50	65	80	100	125	150
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# SBD



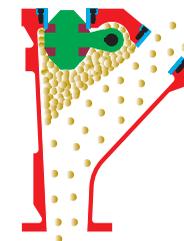
- Competitive pricing
- Sizes 65, 80 and 100
- Excellent for hygienic environments
- Suitable for pneumatic conveying of powders and granulates
- CIP suitable
- Tri-clamp connection
- Stainless steel execution including actuator
- Quick delivery

Size	65	80	100
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# BTD



- For abrasive products
- Suitable for systems with high pressures and temperatures
- Body made from ductile spheroidal cast iron
- Replaceable wear bushings on outlet
- Grease lubricated shaft seals
- Seals can be replaced with the valve in place
- Versions conforming to ATEX 94/9/EC available



Size	65	80	100	125	150	200	250
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# FDV



- Compact form
- Optimal sealing
- Simple construction
- Minimal pressure loss
- Available with flange or pipe fittings
- Flanges drilled in accordance with PN10, ANSI 150 lbs and JIS
- Cast iron, aluminium or 316 stainless steel
- Versions conforming to ATEX 94/9/EC available

Size FDV-F	50	65	80	100	125	150	200	250
Size FDV-P	50	65	80	100	125	150		

# FVV



- Saving system costs
- Compact design
- Easy maintenance
- Optimal sealing
- Flange or pipe fittings
- Flanges drilled in accordance with PN 10 and ANSI 150 lbs
- Cast iron, aluminium or stainless steel
- Versions conforming to ATEX 94/9/EC available



Size	50	65	80	100	125	150
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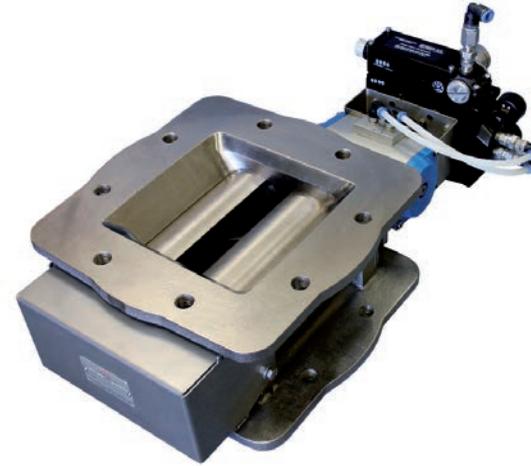
# Other Components

*Built to last*

Other Components	MORRIS	DUC	PRV	SC XSC	CSV	COS
Food	⚙️	⚙️	★	★	★	⚠️
Dairy	⚠️	⚙️	★	⚠️	⚠️	⚠️
Animal Feed	⚙️	★	⚙️	⚙️	⚙️	⚙️
Pharma	⚠️	⚙️	★	⚠️	⚠️	⚠️
Plastics	⚙️	⚠️	⚙️	⚙️	⚙️	⚙️
Petro-Chemical	⚙️	⚠️	⚙️	⚙️	⚙️	⚙️
Mineral	⚙️	⚠️	⚙️	⚙️	⚙️	⚙️
Power/Biomass	⚙️	⚠️	⚙️	⚙️	⚙️	⚙️
Recycling	⚙️	★	⚙️	⚙️	⚙️	★

⚙️ Recommended   ★ Sometime used   ⚠️ Not recommended

# COS



- Size 200
- Flow starts at the centre
- Easy to operate
- Gradual control of product flow
- Bowed, rotary shutters
- Round/square flanges PN10
- Cast iron execution

Size	200
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## MORRIS



- The original Morris compression coupling
- Easy to install
- Substantial and reliable construction
- Competitive pricing
- Electrical conductivity
- Available for practically ever pipe diameter

## sc/xsc



- Very competitive pricing
- Manual and electro-pneumatical version
- Blade with rounded bevelled-edges to prevent wear and leakage
- Stuffing gland to enhance pressure control
- Self-flushing action: no need for clean-out ports

## DUC



- Prevents bridging of product at the hopper outlet
- Smooth flow of material
- Maximum discharge efficiency
- Cast housing, explosion proof construction
- Compact forms
- Easy clean features
- No separation of premixed product

## PRV



- Reliable
- Compact form
- Maintenance free
- Use of non corrosive materials
- Easy disassembly and inspection

## Legislation

In certain parts of the process industry it is very important that product contamination is prevented in the process. When dealing with powders, there is also always a danger of dust explosions. In order to protect public health and ensure safe working conditions, governments have drawn up official legislation for systems and components. Moreover, private organisations have created specifications components should comply with in order to meet the required branch or system-specific requirements.

**USDA** | With regards to the USDA (United States Department of Agriculture), our AL, AML and BL rotary valves are tested and certified USDA Dairy Accepted. This also applies to our 2- and 3-TDV tube diverters, M-TDV multiport diverter and GPD gravity plug diverter. This means that these components meet the high standards that apply in the US food, dairy, pet food and other related industries.

**ATEX** | Process systems and components often have to be able to withstand explosions and prevent fires from passing the component. This has resulted in official European legislation, known as the ATEX 94/9/EC Directive. All DMN rotary valves and diverter valves are also available in ATEX 94/9/EC-compliant versions.



**EHEDG** | In 2011 DMN-WESTINGHOUSE was awarded the official EHEDG Type EL Class I certificates of compliance for its hygienic CIP rotary valves and a hygienic CIP plug diverter valve. The components in question were evaluated for compliance with the Hygienic Equipment Design Criteria of the EHEDG and were declared to meet these criteria. These certificates also enable DMN-WESTINGHOUSE to offer a range of components that are suitable for hygienic 'clean in place' (CIP) processing systems.

**EC 1935/2004** | The European regulation EC 1935/2004 applies to all food contact materials. With regard to the use of these materials as parts in our components, we can supply a declaration of compliance and appropriate documentation that demonstrate compliance to the EC 1935/2004 regulation. The materials used also conform to FDA regulations with regard to food contact.

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**Rotary Valves**



**Diverter Valves**



**Other Components**