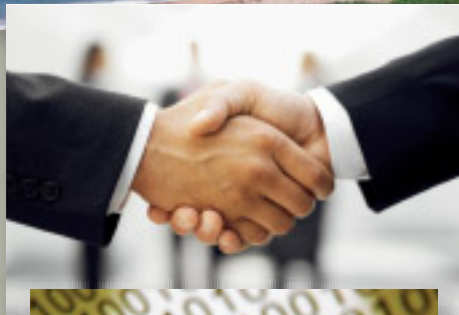


Moduflex



Moduflex ...

Safety and a clean environment in one product

The outloading of bulk goods is associated with the risk of creating waste and dust, as well as the danger of explosion. These risks can have a negative impact on both the environment, work safety and the company's finances. Cimbria Moduflex develops, manufactures and markets solutions that allow the dust-free outloading of bulk goods. We have been doing this since 1977, and with over 9,000 systems delivered to countless different industries, Moduflex has accumulated a firm foundation of experience which is of constant benefit to customers around the world who invest in bulk outloading equipment.



Modular structure – a Moduflex characteristic

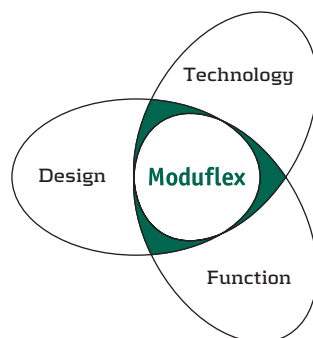
The modular structure of our machinery is a unique feature of Moduflex. This means that the user receives precisely the solution that matches his application, as well as a level of flexibility that enables modifications and repairs of the loading chute to be undertaken with a minimum of disruption of the outloading process. This reduces, not just maintenance costs, but also the knock-on effect in lost production time.

Form and function

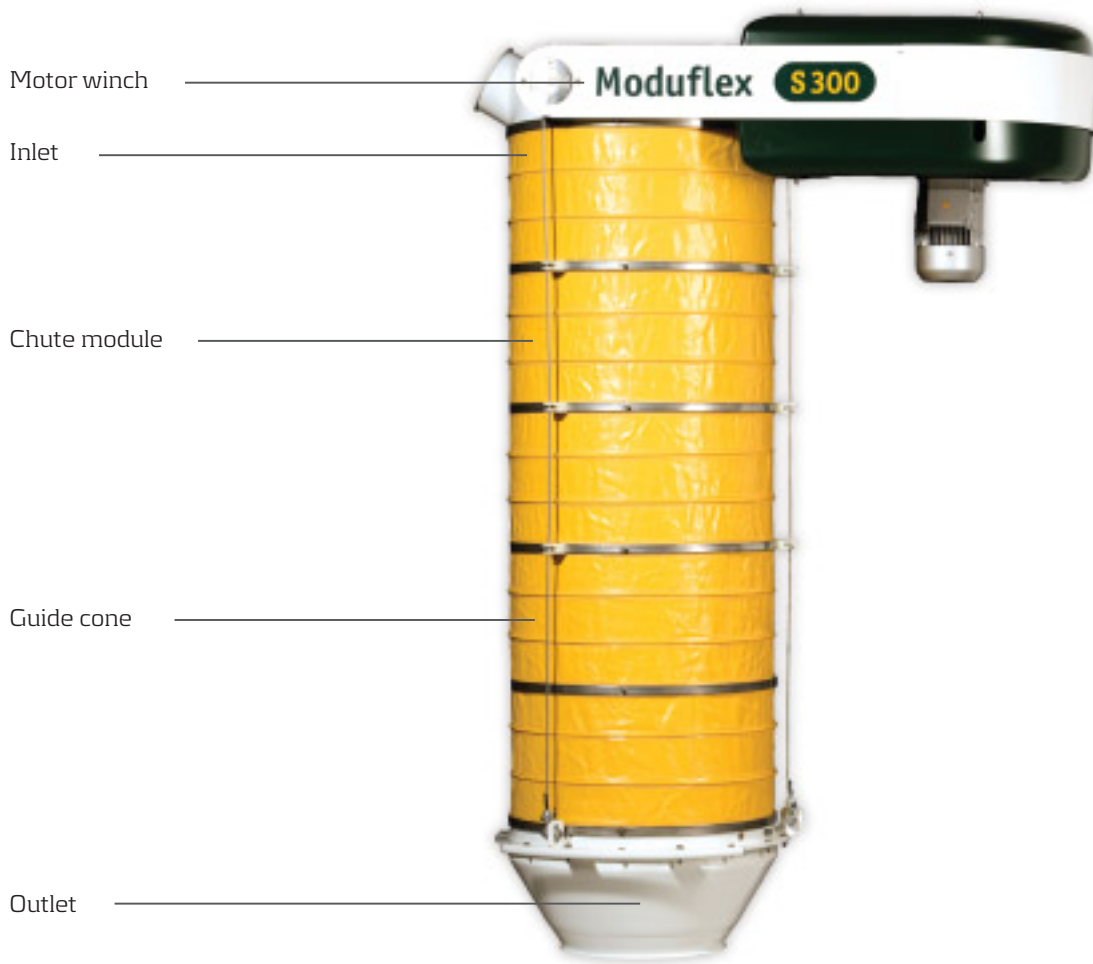
Thanks to their modular structure and dynamic design, our loading chutes are highly functional and reliable outloading units. Moduflex loading chutes are intended to allow design, function and technology to go hand in hand, while at the same time living up to the requirements of the Machinery Directive, the ATEX Directive, etc., to ensure operator safety.

Support and service

We place great emphasis on giving customers the right advice, so that they can select the very best solution – in both technical and financial terms – in collaboration with Moduflex. Our customers can always be certain that the product has been thoroughly tested and documented. In addition, we keep all standard components in stock, which means that we can provide quick and efficient service for our customers.



... outloading solutions



Moduflex solutions mean:

- A reliable and experienced supplier
- Modularly-structured standard components, all kept in stock
- An extensive product range
- Easy servicing and sturdy construction
- Leading design, technology and function
- Well-documented equipment, including for solutions requiring ATEX approval



Inlets

type C + S

The Moduflex inlet for type C + S is a standard inlet. The suction coupling is 150 mm in diameter, and 300 mm and 400 mm diameter inlets are available, depending on the model (standard on type H). Automatic closing function for negative pressure and false air valves are available as accessories for type S inlets.



type H

The Moduflex inlet for type H is a heavy-duty inlet. The type H inlet pipe is funnel-shaped, ensuring optimal flow of the product and minimal dust in the suction duct.

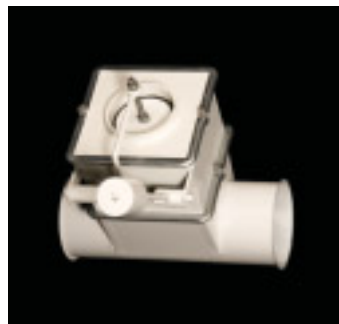
Automatic closing function for negative pressure and false air valves are available as accessories for type H inlets.

type T

The Moduflex inlet for type T is supplied with a 250 mm diameter flange with 12 x 12 mm holes. The suction coupling is 100 mm in diameter. The upper telescopic tube sections are mounted at the bottom of the inlet, using simple linking clamps which make it easy to replace one or more sections of the tube in case of damage.



All inlets are constructed on the basis of a highly compact but sturdy design. The inlets are available in mild steel, stainless steel or wear-resistant versions. The telescopic tube, type T250, is delivered as standard in AISI 316 acid-proof steel.



Automatic 150 mm closing function shuts off negative pressure when the chutes are in the top position. The closing function is supplied in the same choice of material as the rest of the inlet.



False air valves in lacquered or stainless steel are available for loading chutes types C, S and H. The false air valve is equipped with a pipe section which makes it easy to insert into the suction tube of the loading chute.

Integrated filters



type F

The Moduflex inlet for type F is a complete solution, independent of external filters. The inlet is supplied with an integrated filter module with nine filter bags. The inlet is supplied in 300 mm diameter.

The filter intake is equipped with its own fan with regulating valve and pressure tank, ensuring that the filter is kept continuously clean.



The filter bags are mounted on the top and bottom of the filter intake, and are available in several different versions to match various outloaded products and applications.



The filter intake in the type F300 is retractable, providing a very compact construction. As a result, this type of loading chute requires only a small installation height.

type D

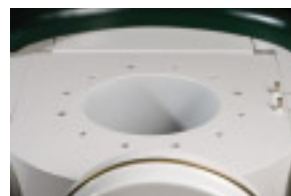
Moduflex inlets for type D have the same characteristics as those for type F, but the inlet is supplied with an integrated filter module with nine filter cassettes. This filter module requires a certain installation height, but the filter cartridges provide a larger filter area than filter bags. The inlet is supplied in a diameter of 300 mm.

The filter cartridges are mounted on top of the filter intake, and are thus extremely easy to service in connection with replacement and/or cleaning.

The filter cartridges are available in several different versions, to match various outloaded products and applications.



All of the inlets fit the PN10 counter-flange as standard, and are supplied with 12 welded M20 nuts in the 300 series and 16 welded M24 nuts in the 400 series. All inlets can be supplied with adaptors for connecting to flanges and suction sockets.



Chute modules

The standard module for Moduflex loading chute is in PVC-clad polyamide with the designation PA700, in a yellow colour code. This module may be utilised with many different products, provided that the product temperature does not exceed 70 °C. The standard module is available in a short and a long version for the 300 and 400 series.



The white module has the same characteristics as the standard module, but the “colourless” white version may be more suitable for certain types of product. Other colours are available on inquiry. The module is available in a short version only for the 300 and 400 series, and cannot be utilised with type C300.



For food products, a food grade module is used which is in PVC-clad polyester in a light grey colour. The material from which the module is manufactured is approved for drinking water, and can thus be used with all kinds of foodstuffs, provided that the product temperature does not exceed 70 °C. The module is also resistant to UV light, rot and fungus, and can be integrated as standard into all types of loading chute in the 300 series, with the exception of type C300.



For very demanding tasks - i.e. with respect to the temperature or chemical composition of the product - a Teflon-clad fibreglass module is used, which has a dark grey colour. This module has a working range of up to 260 °C, and can resist almost all kinds of external influence. The module is highly wear-resistant, and can be integrated as standard into all types of loading chute in the 300 series, with the exception of type C300.



For products with temperatures exceeding the parameters of the standard module, or which require good protection against UV light, a chloroprene rubber-clad polyamide with the designation NPG is used. The NPG modules have a working range of up to 130 °C, have good wearing qualities, and are resistant towards many types of chemical influence. The module can be integrated as standard into all types of loading chute in the 300 and 400 series, with the exception of type C300.



Chute modules	T250	C300	S300	H300	F300	D300	S400	H400
Y Standard			●	●	●	●	●	●
E Long		●	○	○	○	○		
M Foodstuffs			○	○	○	○		
W Special colour			○	○	○	○		
B Heavy duty			○	○	○	○	○	○
G High-temp			○	○	○	○	○	○
Telescopic tube, short	●							
Telescopic tube, long	●							

Guide cones

Support ring

The internal support ring is standard in type C300, but can also be supplied for the other chute types. The support ring ensures the safe coupling of the modules in situations where guide cones are not necessary or desired. The support ring can usefully be utilised with products which produce little or no dust, or with products for which there is a risk of a build-up of residues on the inner side of the guide cone. The support ring can be integrated into all types of loading chute in the 300 series.



Ultramide cone

Moduflex is the only loading chute manufacturer to offer loading chutes with plastic guide cones. The guide cone is made of high-density polyamide, and is moulded with a coat thickness of 6 mm. This produces a very light but extremely sturdy guide cone which may be utilised with products with moderate abrasive characteristics, or when a relatively low weight is desirable for the total out-loading chute. The plastic cone may be used with all types of loading chute in the 300 series.



Steel cones

The standard steel guide cone can be supplied for all types of loading chute, but is mainly utilised in types S-300 and F300, e.g. when the parts in contact with the outloaded product are required to be in stainless steel, such as when outloading foodstuffs. The steel cone is constructed as standard with a coat thickness of 2 mm, but can also be supplied in a 4 mm version, and in a 4 mm version in Hardox 400. The steel cone may be utilised with all types of loading chute in the 300 and 400 series.



Overlapping steel cones

The overlapping steel guide cones are supplied as standard in types H300, D300 and H400, and are typically used with products that create a lot of dust, or where a better separation of product and exhaust air is desirable. The steel cone is constructed as standard with a coat thickness of 2 mm, but can also be supplied in a 4 mm version, and in a 4 mm version in Hardox 400. The overlapping steel cones may be utilised with all types of loading chute in the 300 and 400 series, with certain reservations. This type of cone may not be built into type C300.



Moduflex outloading solutions can be supplied with a number of different guide cone types to match various types of outloaded product, such as powder, granulate or pellets. The guide cones are available in two different lengths in nylon, mild or stainless steel, or in a wear-resistant version. The guide cones are supplied with an edge ring, onto which the modules are fastened with the help of the external connection ring. This means that in case of damage to the guide cone, or in connection with normal wear, the relevant cone or cones may be replaced without having to remove the entire chutes. The cones may be combined in the various types of chutes.

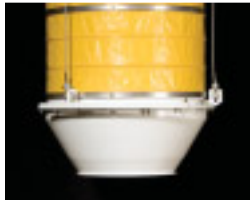
Outlets

Tank outlets



Basic

The outlet is supplied with three easily accessible fixing arms, onto which each wire is secured with a wire lock. The outlet is moreover supplied with three fixed grips located at 120°.



Standard

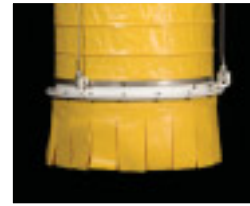
The outlet is mounted on an outlet coupling. Three wire guides are also mounted to allow adjustment of the hoisting wires.



Heavy duty

The outlet is supplied with an internal cone for optimum separation of the product and exhaust air, as well as adjustment sleeves for the hoisting wires and two grips.

Flat outlets



Standard

The outlet is supplied with a dust skirt, as well as a protection guard, on which a level indicator can be fitted. The protection cage can be supplied in mild or stainless steel.



Heavy duty

The outlet is supplied with a stronger and longer dust skirt than the standard flat outlet, as well as a larger protection cage, enabling two level indicators to be mounted.

Moduflex outloading solutions can be supplied with a number of different outlets, for open outloading in lorries or railway trucks, or for outloading with road tankers or tank wagons. Standard and heavy-duty outlets can be supplied with rubber coating.

Telescopic outlets



Tank outlet

The outlet is mounted on an outlet plate. Three wire guides for the hoisting wires are fitted to the plate, along with a flange for the suction tube and a sleeve for the level indicator.



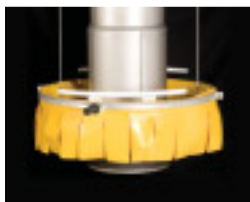
Flat outlet

The outlet is mounted on an outlet plate and is equipped with a dust skirt and an outlet cone in AISI 316 acid-proof steel, to which a level indicator can be fitted.



Multi-outlet

The outlet is a combination of the tank and flat outlet, and is thus equipped with both an outlet cone and a dust skirt. For loading onto flat cars, the dust skirt is lowered.



Multi-outlet

For tanker loading, the dust skirt is raised and fastened using the fittings on the two grips. The outlet cone has a similar design to that of the tank outlet.

Multi-outlets



Standard

This outlet is a combination of the tank outlet and flat outlet, and is consequently equipped with both an outlet cone and dust skirt. For loading onto flat cars, the dust skirt is lowered.

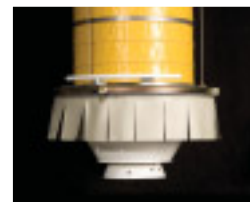


For tanker loading the dust skirt is raised and fastened in the fittings on the two grips. The outlet cone has a similar design to that of the tank outlet.



Heavy duty

This outlet is a combination of the tank outlet and flat outlet, and is thus equipped with both an outlet cone and dust skirt. The dust skirt is stronger and longer than that of the standard multi-outlet.



For tanker loading, the dust skirt is raised and fastened using the fittings on the two grips. The outlet cone has a similar design to that of the tank outlet.

Accessories

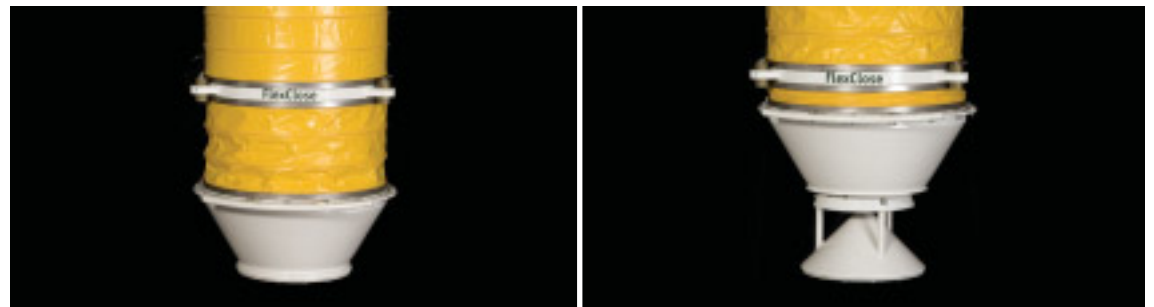
A wide range of accessories ensures that Moduflex loading chutes can be adapted to precisely match the needs of customers.

Among the many accessories we could mention FlexPositioner, which makes it possible to move the chutes horizontally by as much as 2 m, or rotate it by 360°. FlexClose ensures that foreign objects cannot get into the chutes when not in use, and prevents waste after loading. FlexFill is used to optimise the filling of tanker lorries or containers; it not only disperses products with poor slippage characteristics, but also functions as a closing cone. There are innumerable other accessories for the Moduflex equipment, including the entire FlexControl series, which includes, for example, cable-suspended controls for all types of loading chute.

FlexPositioner



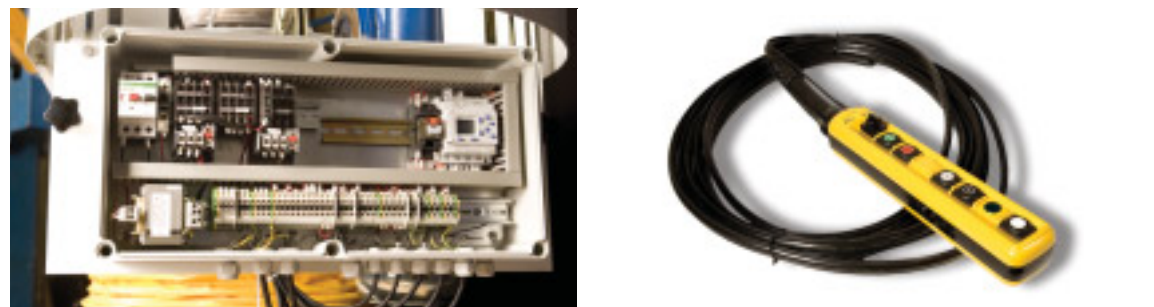
FlexClose



FlexFill



FlexControl



FlexVib/Indicator



Overview	T250	C300	S300	H300	F300	D300	S400	H400
Inlets and integrated filters								
C Basic		●						
S Standard			●				●	
H Heavy duty				●				●
F Standard filter					●			
D Heavy duty filter						●		
T Telescopic tube	●							
Chute modules								
Y Standard			●	●	●	●	●	●
E Long		●	○	○	○	○		
M Foodstuffs			○	○	○	○		
W Special colour			○	○	○	○		
B Heavy duty			○	○	○	○	○	○
G High-temp.			○	○	○	○	○	○
Telescopic tube, short	●							
Telescopic tube, long	●							
Guide cones								
U Ultramide		○	●	○	●	○		
J Steel		○	○	○	○	○	●	●
L Overlapping steel			○	●	○	●	○	○
O Support ring		●	○	○	○	○	○	○
Outlet								
TB Tank outlet, basic		●	○	○	○	○		
TS Tank outlet, standard	●		●	○	●	○	●	○
TH Tank outlet, heavy duty			○	●	○	●	○	●
FS Flat outlet, standard	●		●	○	●	○	●	○
FH Flat outlet, heavy duty			○	●	○	●	○	●
MS Multi-outlet, standard	●		●	○	●	○	●	○
MH Multi-outlet, heavy duty			○	●	○	●	○	●
Miscellaneous								
Hand winch	○	○	○	○	○	○	○	○
Motor winch	○	○	○	○	○	○	○	○
Fan					○	○		
3-point hoisting wire	●	●	●	●	●	●	●	●
Tension wire	●	●	●	●	●	●	●	●
Safety								
ATEX	○	○	○	○	○	○	○	○
Accessories								
FlexClose basic, mechanical		●	○	○	○	○		
FlexClose standard, mechanical			●	●	●	●		
FlexClose standard, electric			○	○	○	○		
FlexFill (only with tank outlet)			○	○	○	○		
FlexPositioner	○	○	○	○	○	○		
FlexControl	○	○	○	○	○	○	○	○
FlexVib	○	○	○	○	○	○	○	○
Capacitive indicator	○	○	○	○	○	○	○	○
Rotating indicator	○	○	○	○	○	○	○	○
Tone fork indicator (only with tank outlet)	○	○	○	○	○	○	○	○
Pneumatic indicator (mainly with tank outlet)	○	○	○	○	○	○	○	○

● Standard

○ Optional

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