



# The Inflatek Valve

The original inflatable seat valve introduced in 1974 and continually developed. Applied in every material processing application. The essential and proven feature of every MiniMaxflo:

Design Temperature: Design Pressure:	To 350°C 7 Barg (43 Barg Special) Vacuum 680m Barg
Sizes:	25mm – 750mm
Utilization:	To 20 cycles per minute
Durability:	Extremely long life
	and operating reliability
Introduced:	1977 (Second Generation
	Design 2001)
Valves Installed:	30,000 world-wide
Guarantee:	24 months



**Other Features:** 

Close and Seal on a column of material Non contact seal activation Fail-Safe control option Maintenance Free Short delivery Low price

# Mactenn

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A Macawber U.S. Group Company

Your Local Distributor:

# <u>50 9001</u>

ompany Management Quality Certification (parent company)





# **MiniMaxflo®**

very low velocity dense-phase conveying systems for fragile materials requiring gentle handling

Mactenn



- Compact equipment. Can be located beneath a big bag and bag splitter or a silo. Transfer pipe sizes 40mm to 50mm depending on application.
- Equipped with a state of art automatic control and fault diagnostic facility and an operator friendly intervention for manual control.

#### **MiniMaxflo**® A sensible alternative to high velocity vacuum/dilute phase systems



### **Typical Conveying Regimes**

- Solid Dense Phase Very low material velocity, pipeline 1. full of material - an excellent regime for fragile materials. Material velocity 1-2m/sec.
- Dune Flow Dense Phase Low material velocity with high 2. line loading ... material moves in plug flow fashion - best regime for most applications in which power economy, pipe erosion, and material degradation issues are important. Average material velocity 1-5m/sec.
- 3. Moving Bed Dense Phase - Higher velocity than dune flow dense phase, but much lower than dilute phase. Used for handling powders that can be fluidized. Average material velocity 3-7m/sec.
- 4. Dilute Phase Material velocity above the saltation velocity no upper limit to the velocity - least attractive regime for operating economy - unsuitable for fragile or abrasive materials or materials with wide particle size distribution. Average material velocity >15m/sec. depending on material.

Almost all applications will benefit from a regime providing the heaviest pipeline loading and the lowest material velocity. The benefits of low velocity pneumatic conveying are:

- Lowest air consumption and energy cost •
- Little or no pipeline wear over very long periods .
- Little or no degradation of fragile materials conveyed .
- Small reception hopper filters
- Segregation of conveyed mixtures avoided. •



Comparison of average material velocities. Example is polyethylene granulas ± 3mm particle size. Transfer rate 2-5 tons/hour at various distances to 100M.



## **Important Comparisons**

Dilute-phase positive pressure or vacuum systems	
High material transfer velocity and low pipeline loading allows excessive inter-particle abrasion.	Material Velocity
Low pressure air source by blower and motor.	Power Source
Old technology dependent on mixing conveying air and material to achieve airborne material.	Power Cost
Many moving parts and old technology.	Operating Reliability
More than 2 times larger than MiniMaxflo.	Space Requirements

dimensions (mm)				net wt		
)	с	d	е	f	(kg)	
27	121	25/40/50	25	100	109	
27	121	40/50	25	100	130	
80	121	40/50	25	150	142	
27	121	50	25	100	390	
80	121	50	25	150	390	



## MiniMaxflo dense-phase conveying system

The lowest possible transfer velocity and the highest line loading. Particle degradation problems overcome.

Simple plant compressed air of 5-7 barg.

Less than half of dilute-phase systems. Pipeline conveys mostly material with less air. Material/Air mixture not required.

One moving part only the inlet valve provides extreme reliability.

Three machine size options. The largest is 968mm high. The smallest system is only 718mm high.

# **MiniMaxflo**<sup>®</sup>

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