# PolyRex polymer make-up unit

# PolyRex — The king of polymer feeders

The TOMAL® PolyRex provides automatic batch-wise preparation and metering of polymer solutions from dry or liquid chemicals.

The PolyRex uses a 3-stage mixing process to effectively hydrate and blend the polymer to a homogenous and activated solution. The first step is the hydration stage, where the polymer is wet. During the second stage mixing takes place through the water ejector. The third stage provides one hour of efficient but gentle agitation in the mixing tank.

The PolyRex 3-stage mixing system provides you with the most efficient means of polymer activation.



# PolyRex -

# Able to minimize polymer usage with low maintenance

- The batch preparation system gives outstanding characteristics compared to a continuous system by eliminating any risk of "short circuiting" of unprepared polymer.
- TOMAL's proven multiscrew polymer feeder ensures reliable pulsation free discharge with high metering accuracy providing consistent batch composition.
- A highly effective static mixer in stainless steel optimizing the post dilution water sequence.
- Vacuum hopper filling, and the unique hygienic bag clamp prevent potential slipping hazards by eliminating the risk of polymer spillage.
- Our wide range of options such as different big bag handling systems and our flexibility enable us to adapt machines to customer individual requirements.
- Each unit is wet tested prior to dispatch from the factory and ready for immediate use.





### **PolyRex - Features**

#### Water control

Incoming water feed is automated and regulated to provide consistent pressure and flow rate.

#### **Electric equipment**

 All electrical equipment and interconnecting cables are NEMA 4X with CSA Approvals

#### **Materials**

The powder feeder, support stand and powder storage hopper come standard as epoxy coated carbon steel. Option is available for 304 and 316 SS materials. Tanks and agitators and the wetting system are all 304 stainless steel.

#### Powder feeder

The feeder is a double screw type 182 P design ensuring smooth flow of dry polymer to the wetting cone.

#### **Hydration system**

Cone design for optimal dissolving of dry product.

#### **User friendly controls**

The PolyRex unit is easily operated via PLC with touch screen display graphically illustrating system functionality.

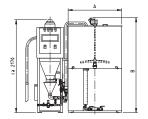
#### Preparation/stock tanks

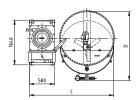
Made from stainless steel fitted with our highly effective new agitator.

### PolyRex - Technical data

Max. preparation capacity at 0.5% or 0.25% stock solution concentration and 60-45 min. maturing time.

Capacities (Kg/h)			Dimensions (mm)				
Туре	0.5% Solution	0.25% Solution	Tank Size	Α	В	С	D
PolyRex 0.6	1.0 - 1.2	0.5 - 0.6	2 x 0.3 m <sup>3</sup>	800	1470	1530	1140
PolyRex 1.0	1.8 - 2.3	0.9 - 1.1	2 x 0.5 m <sup>3</sup>	960	1720	1670	1350
PolyRex 2.0	3.8 - 4.7	1.9 - 2.3	2 x 1.0 m <sup>3</sup>	1250	2230	1960	1610
PolyRex 3.0	5.1 - 6.4	2.5 - 3.2	2 x 1.5 m <sup>3</sup>	1430	2230	2140	1800
PolyRex 4.0	7.7 – 9.5	3.8 - 4.7	2 x 2.0 m <sup>3</sup>	1610	2780	2330	2100
PolyRex 5.4	9.8 - 12.0	4.9 - 6.0	2 x 2.7 m <sup>3</sup>	1860	2780	2560	2350
PolyRex 6.6	12.9 – 16.0	6.8 - 8.6	2 x 3.3 m <sup>3</sup>	1860	3280	2560	2350
PolyRex 8.4	15.6 – 19.1	8.3 - 10.4	2 x 4.2 m <sup>3</sup>	2000	3680	2700	2500





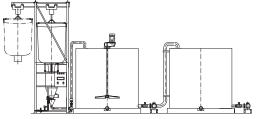
PolyRex with vacuum conveyor

## PolyRex Maxi - Technical data

PolyRex - Optional equipment

The PolyRex Maxi systems are built for high capacity needs, in large waste water plants or in industrial applications.

Туре	0.5% Solution	0.25% Solution	Tank Size	
PolyRex MAXI 11	20.7 - 25.5	11.1 - 14.0	2 x 5.5 m <sup>3</sup>	
PolyRex MAXI 16	27.4 – 33.0	15.1 – 18.6	2 x 8.0 m <sup>3</sup>	
PolyRex MAXI 23	34.8 – 41.0	19.7 – 23.8	2 x 11.5 m <sup>3</sup>	



PolyRex MAXI with big bag station, electrical chain hoist and a telfer beam

#### Vacuum conveyor

Ensures a dust free working environment, without any direct contact with the polymer.

#### Hopper level switch

At low level in the powder hopper a level indicator gives an alarm signal.

#### **Hygienic Bag Clamp**

Eliminates the potential of spilling dry polymer from bulk bag supply.

#### **Electromagnetic flowmeter**

For easy and accurate measuring of the dosing pump capacity, an electromagnetic flowmeter is mounted in the dosing line prior to the dilution water system.

#### Dilution water/static mixer

The water and the stock solution are added simultaneously to the dosing line to produce the final concentration. Ensures a homogenized solution at the dosing point via the static mixer.

#### Liquid polymer

For easy conversion from dry to liquid polymer there is a changeover switch located on the front of the control panel. Mixing takes place in the hydration system to obtain the "clearest" possible polymer solution. The equipment consists of a dosing pump and a non-return valve with hose connections.

#### Stainless steel executions

 All units can be equipped with support, piping and all valves in stainless steel AISI 304/316



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