

POLYCOMPACT

SERIES - PD



POLYMER DOSING SYSTEM

THREE CHAMBER – POWDER UNIT

- AUTOMATIC PRODUCT PREPARATION IN A CROSS FLOW PROCESS
 - OPTIMAL AND EFFECTIVE PRODUCT PREPARATION AND PROVISION
 - INTELLIGENT CONTROL WITH SIEMENS PLC
 - USER FRIENDLY HANDLING VIA SIEMENS TOUCH SCREEN
 - MEASURING OF PREPARATION WATER WITH MIN. MONITORING AND SHUT DOWN
 - CONTACT FREE, ANALOGUE LEVEL MONITORING AND CONTROL
 - USE OF HIGH QUALITY AND RELIABLE COMPONENTS
 - MINIMUM REPAIR AND MAINTENANCE COSTS
 - OPTIMUM PRICE-PERFORMANCE RATIO
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- A 3D isometric diagram of the Three Chamber Powder Unit. It shows a grey metal frame with three main chambers. The left chamber has a hopper for powder. The middle chamber contains a blue motorized pump. The right chamber is a control unit with a Siemens PLC and a touch screen. Various pipes, valves, and electrical connections are shown throughout the system.

FUNCTIONAL DESCRIPTION OF THE PD – UNITS



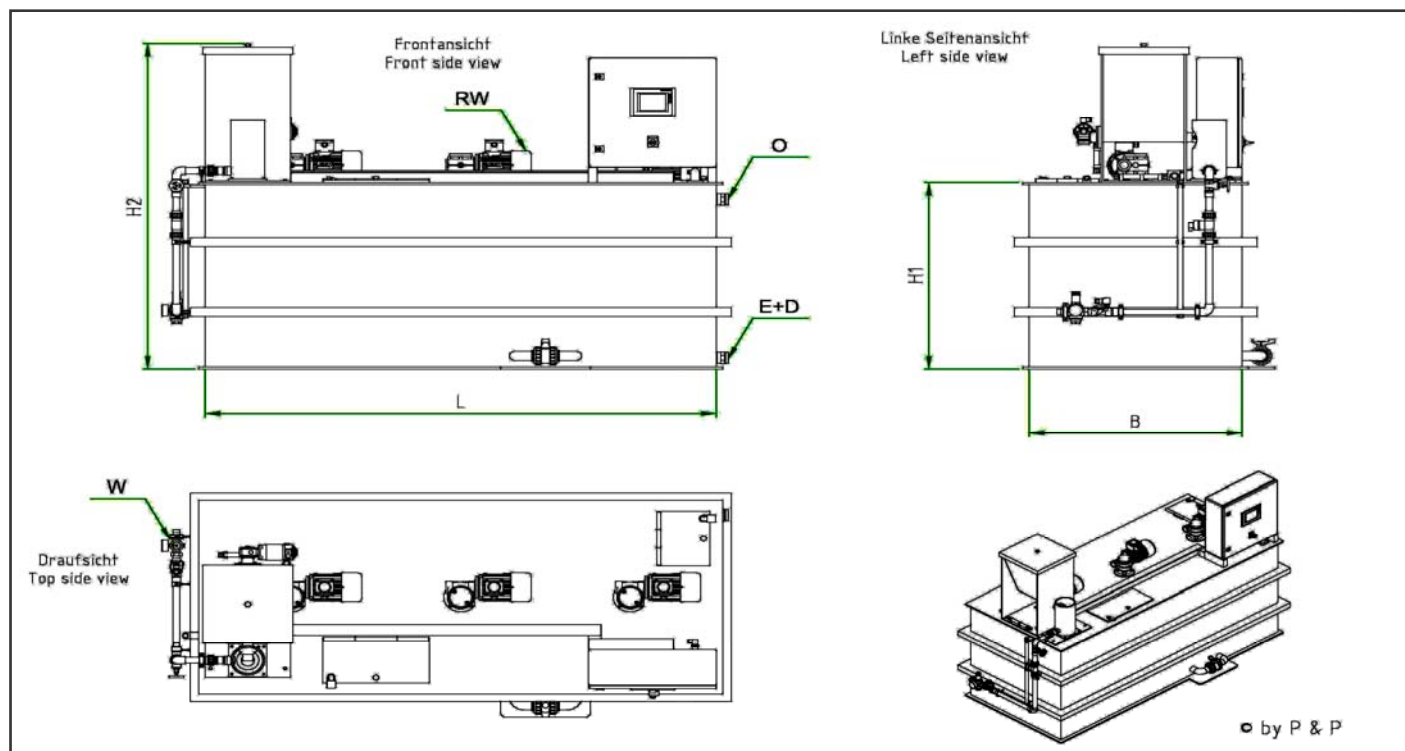
THE **POLYCOMPACT**, POLYMER UNIT **PD** IS A CONTINUOUSLY OPERATING DISSOLVING AND DOSING UNIT WHERE THE PARENT OR POST SOLUTION IS MADE UP AND MATURED IN A THREE CHAMBER CROSS FLOW PROCESS.

THE CRUMBLY POWDER POLYMER IS DOSED INTO THE HIGH-PERFORMANCE WASH-IN DISPERSER VIA AN ELECTRONICALLY REGULATED SCREW AUGER. IN THE DISPERSER EVERY SINGLE SOLID PARTICLE IS TRANSPORTED EFFECTIVELY INTO THE WATER FLOW AND MOISTENED. THIS TECHNIQUE ENSURES THAT NO LUMPING OCCURS AND THE PREPARED POLYMER SOLUTION CAN BE MADE UP ECONOMICALLY AND HOMOGENEOUSLY.

CASCADES INCORPORATED INTO THE SYSTEM CAUSE THE OPTIMALLY MOISTENED PRODUCT TO FLOW FROM THE PREPARATION CHAMBER INTO THE EXTRACTION CHAMBER. BY CONTINUOUS GENTLE STIRRING IN EACH CHAMBER THE MEDIUM IS FURTHER BROKEN DOWN AND THE FULLY MATURED PRODUCT IS AVAILABLE IN THE THIRD CHAMBER.

IN THE EXTRACTION CHAMBER A LEVEL SENSOR IS ALSO INSTALLED WHICH CONTROLS THE PREPARATION AUTOMATICALLY. IF THE LEVEL IN THE EXTRACTION CHAMBER FALLS BELOW A MINIMUM VALUE AFTER SOLUTION HAS BEEN EXTRACTED, THE UNIT BEGINS TO PREPARE NEW SOLUTION UNTIL A MAXIMUM LEVEL IN THE CHAMBER IS REACHED. ADDITIONAL AND RECOMMENDED FUNCTIONS ARE THE DRY PROTECTION FOR THE EXTRACTION PUMP, THE POWDER MIN. MONITORING IN THE STORAGE FUNNEL AS WELL AS THE SHUT DOWN OF PREPARATION IF THE WATER FLOW BECOMES TOO LOW.

FROM THE EXTRACTION CHAMBER, VIA DOWN-STREAM PUMPS, THE FULLY MATURED SOLUTION IS DIRECTED TOWARDS ITS POINTS OF APPLICATION.



POLYCOMPACT POWDER UNIT		Typ	500	1000	1500	2000	3000	4000	5000	6000
PRODUCT AMOUNT IN 45 MINS. MATURING TIME		L/H	625	1250	1875	2500	3750	5000	6250	7500
PRODUCT AMOUNT IN 60 MINS. MATURING TIME		L/H	500	1000	1500	2000	3000	4000	5000	6000
OVERALL PLANT SIZE INCL. FUNNEL AND ELECTRICAL CABINET										
LENGTH	L	MM	1100	1500	1800	2400	2900	3300	3600	4000
WIDTH	B	MM	700	800	1000	1000	1200	1400	1600	1800
HEIGHT	H 1	MM	1000	1000	1000	1000	1000	1000	1000	1000
HEIGHT	H 2	MM	1782	1782	1782	1782	1782	1782	1782	1782
WEIGHT, EMPTY		KG	180	220	250	280	340	370	420	450
EFFECTIVE CHAMBER CAPACITY	L		640	1014	1538	2066	3018	4027	5038	6316
POWER REQUIREMENT OF STIRRERS	RW	KW	2 x 0,55	3 x 0,55	3 x 0,55	3 x 0,55	3 x 0,55	3 x 1,1	3 x 1,1	3 x 1,1
REVOLUTIONS		1/MIN	100	100	100	100	100	100	100	100
POWER REQUIREMENT OF PLANT		KW	1,5	2,2	2,2	2,2	2,2	4	4	4
PREP. WATER SIZE	W	DN	25	25	25	25	25	25	40	40
CAPACITY RANGE PREP. WATER										
MIN		L/H	600	600	600	600	600	600	800	800
MAX		L/H	6000	6000	6000	6000	6000	6000	8000	8000
EXTRACTION + DRAINAGE CONNECTION	E + D	DN	25	25	40	40	40	40	40	40
OVERFLOW		DN	25	25	40	40	40	40	40	40

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