

Glue blending and Flake metering

For particleboard production

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DIEFFENBACHER

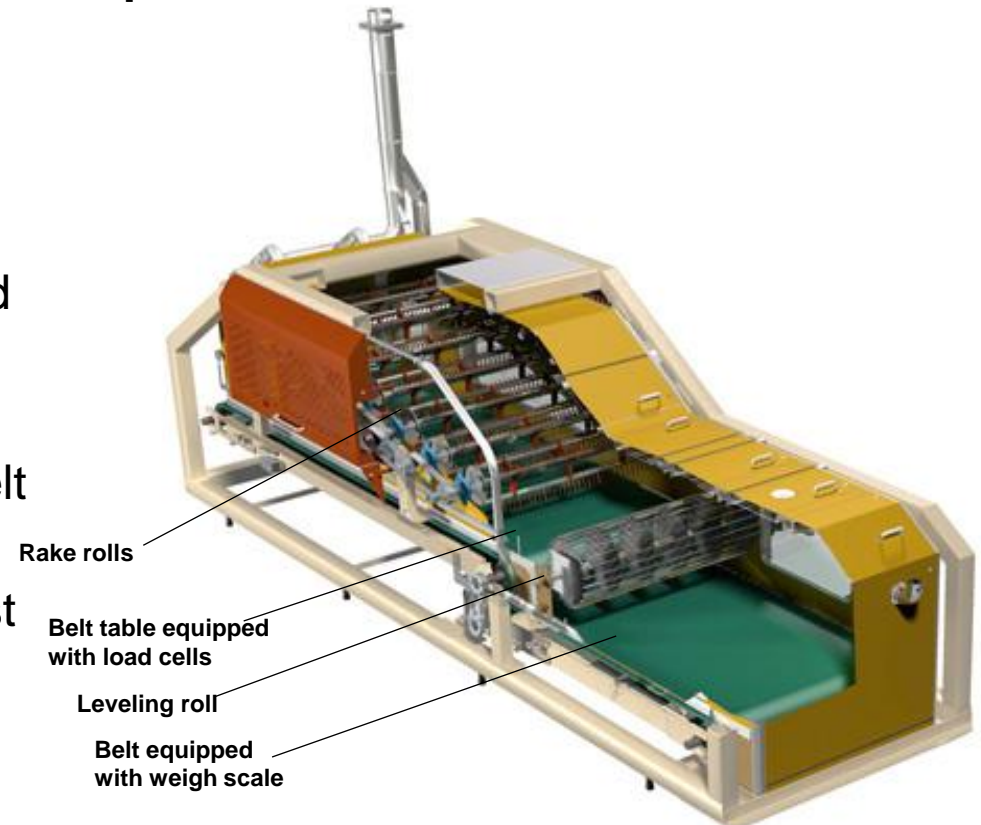
Gluing system

Dieffenbacher's gluing system for particleboard production features

- Flake dosing bins: single or double belt
- Glue blenders

Single- or double-belt dosing bins are provided for different capacity needs.

The SBW dosing bins operate with a single-belt table. On the belt table, the load cells measure the filling degree of the bin and adjust the incoming flake flow. Flakes are conveyed through rake rolls, which ensure a constant mat height. The high-accuracy weigh scale after the rolls, combined with the variable-speed belt drive adjuster, controls the flake discharge volume.



Flake metering

- The DBW dosing bins (picture) operate with two separate belt tables. The bin itself is separated from the metering belt to allow high bin volume and to ensure high measuring accuracy.
- On the first belt table, load cells measure the filling degree of the bin and adjust the incoming flake flow. The second belt conveys the flakes via the weigh scale, which, together with the variable-speed drive adjuster, controls the flake discharge volume. The leveling roll ensures constant mat height.
- Both dosing bin models are equipped with dust suction nozzles and belts with scrapers to keep the dosing bin clean. The belts are equipped with horizontal guiding profiles to ensure high availability. The weigh scale of the bin is independent of belt movement and belt tension.



Flake dosing bins are equipped with reliable load cell measurement system.

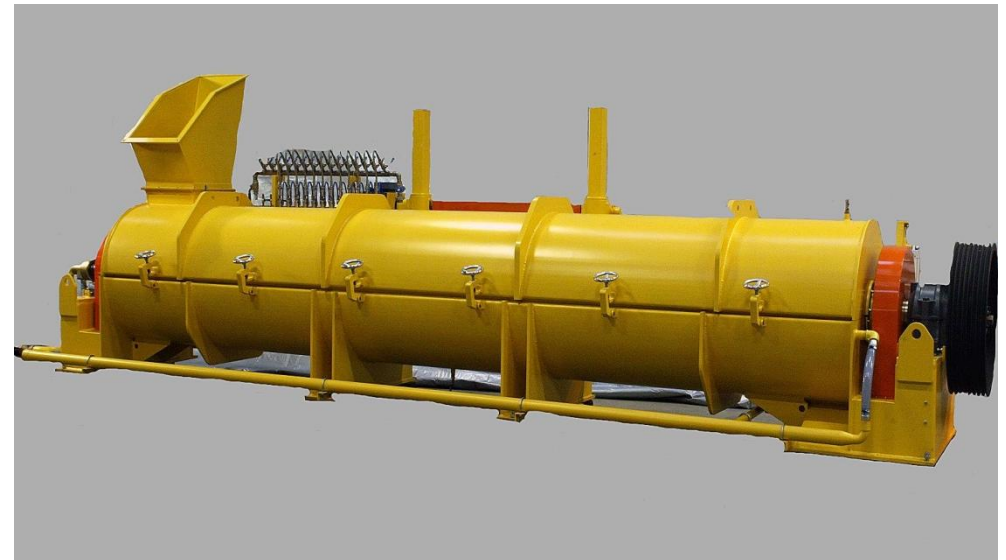
Flake dosing bins

Type	Dosing belts	Discharge capacity [m ³ /h]	Discharge width [mm]	Bin width [mm]	Bin length [mm]	Bin volume [mm]
SBW-R3-500	1	20	500	1400	4900	0,2
SBW-R4-900	1	55	900	1800	5400	0,6
SBW-R4-1600	1	100	1600	2500	5400	1,0
DBW-R7-1600	2	130	1600	2640	7950	3
DBW-R11-2000	2	250	2000	3040	9800	7,5
DBW-R15-2000	2	330	2000	3040	13500	11,5

Glue blenders

Glue blenders provide for uniform glue distribution due to large chamber volume and long retention time. A constant filling level of the blender is maintained by a discharge gate, guaranteeing an optimum gluing result. The filling-level adjustment is connected to the weigh scale of the dosing bin and to the power consumption of the main motor.

The blender is designed with a self-cleaning geometry. The mixing drum is made of double walled sheet steel. The space between the drum walls enables the circulation of cooling water. The water is also circulated in the mixing shaft and tools. The blender's cover is opened by an electric motor. Two different intake methods are available depending on flake type. The conventional paddle intake is designed for surface flakes. While the rotation speed itself minimizes the breakage effect during blending, a gentle screw intake is highly recommended for coarser core flakes to prevent excessive flake breakage.



Glue blenders



PLC controlled discharge flap



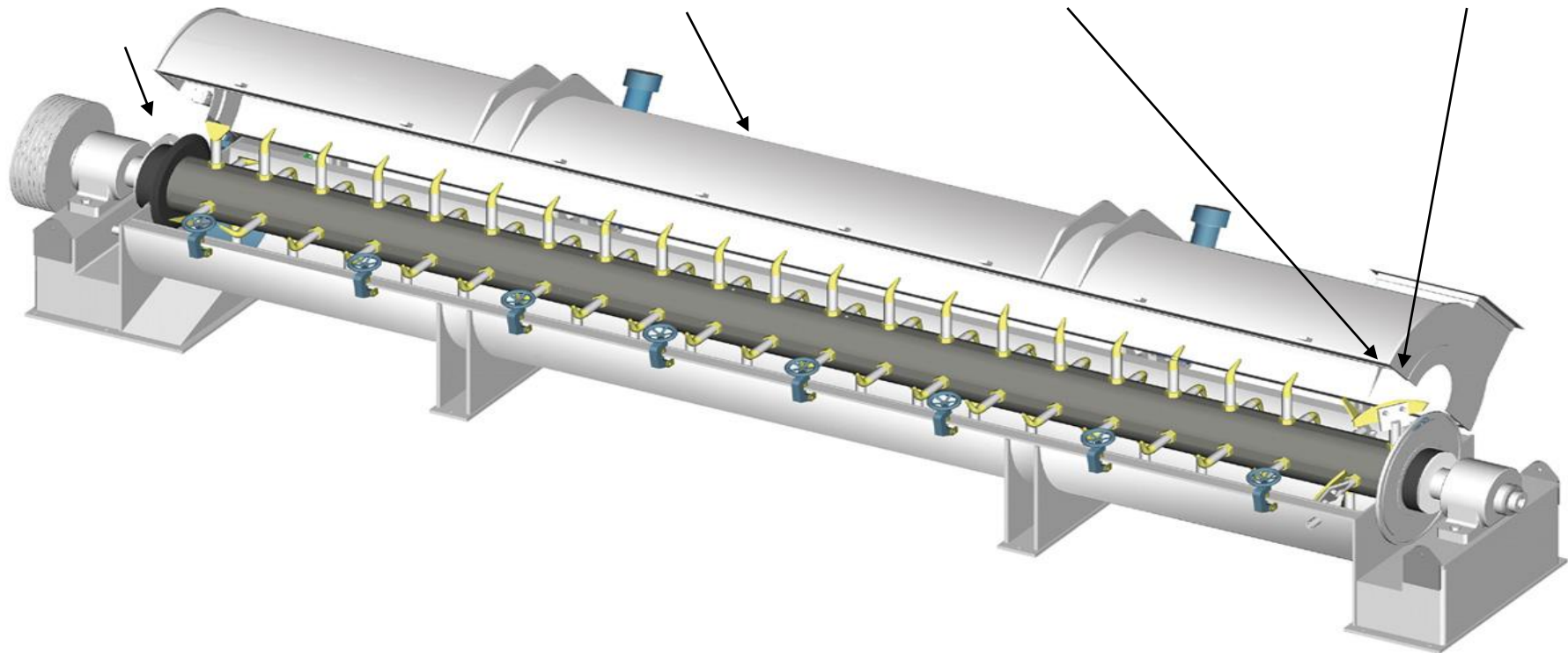
Adjustable nozzles



Screw intake for core



Paddle intake for surface



Glue blenders

Glue Blenders				Retention time	Cooling water	Required cooling power	Cooling water	Required cooling power
				in	FlakeT/water infeed T/ ΔT		FlakeT/water infeed T/ ΔT	
Surface:	Chamber	Capacity	Power	Max. capacity	45 °C / 7 °C / 5 °C		65 °C / 7 °C / 7 °C	
SL	d * L [mm]	t/h	[kW]	(s)	(l/h)	kW	(l/h)	kW
CB 48/25 SL	480*2500	0,7 - 4,0	37 - 45	21,5	4300	25	4300	34
CB 53/30 SL	530*3000	1,2 - 6,0	45 - 55	20,3	6000	35	6000	48
CB 60/30 SL	600*3000	1,9 - 8,0	55 - 75	19,5	7000	40	7000	56
CB 70/30 SL	700*3000	2,5 - 10,0	55 - 75	21,2	8000	46	8000	65
CB 70/35 SL	700*3500	3,1 - 12,0	75 - 90	21,1	9600	56	9600	78
CB 80/40 SL	800*4000	3,7 - 17,0	75 - 90	22,7	12100	71	12100	99
CB 85/45 SL	850*4500	4,4 - 22,0	90 - 110	22,6	16100	93	16100	130
CB 90/50 SL	900*5000	5,0 - 30,0	110 - 132	20,8	20400	118	20400	166
CB 90/60 SL	900*6000	7,5 - 40,0	132 - 160	18,9	24500	142	24500	199
CB 90/65 SL	900*6500	8,5 - 45,0	132 - 160	18,2	26500	153	26500	215
Based on density 150 kg/m ³		Filling rate = 40 %						
Core:	Chamber	Capacity	Power					
CL	d * L [mm]	t/h	[kW]					
CB 48/25 CL	480*2500	0,6 - 3,2	37 - 45	21,5	4300	25	4300	34
CB 53/30 CL	530*3000	1,0 - 4,8	45 - 55	20,3	6000	35	6000	48
CB 60/30 CL	600*3000	1,5 - 6,4	55 - 75	19,5	7000	40	7000	56
CB 70/30 CL	700*3000	2,0 - 8,0	55 - 75	21,2	8000	46	8000	65
CB 70/35 CL	700*3500	2,5 - 9,6	75 - 90	21,1	9600	56	9600	78
CB 80/40 CL	800*4000	3,0 - 14,0	75 - 90	22,0	12100	71	12100	99
CB 85/45 CL	850*4500	3,5 - 17,6	90 - 110	22,6	16100	93	16100	130
CB 90/50 CL	900*5000	4,0 - 24,0	110 - 132	20,8	20400	118	20400	166
CB 90/60 CL	900*6000	6,0 - 32,0	132 - 160	18,9	24500	142	24500	199
CB 90/65 CL	900*6500	6,6 - 36,0	132 - 160	18,2	26500	153	25500	207
CB 100/65 CL	1000*6500	8,3 - 42,5	132 - 160	19,0	29300	170	29300	238
CB 110/65 CL	1100*6500	10,0 - 50,0	160 - 200	19,5	32600	189	32600	265
CB 120/65 CL	1200*6500	12,0 - 60,0	160 - 200	19,4	39000	225	39000	317
Based on density 120 kg/m ³		Filling rate = 40 %						

Glue blenders (1)

Surface SL	Chamber D*L [mm]	Capacity t/h	Power [kW]	Retention time in Max. capacity (s)	Cooling water	Required cooling power	Cooling water	Required cooling power
					FlakeT/water infeed T/ ΔT 45°C / 7°C / 5°C		FlakeT/water infeed T/ ΔT 65°C / 7°C / 7°C	
CB 48/25 SL	480*2500	0,7 – 4,0	37-45	21,5	4300	25	4300	34
CB 53/30 SL	530*3000	1,2 – 6,0	45-55	20,3	6000	35	6000	48
CB 60/30 SL	600*3000	1,9 – 8,0	55-75	19,5	7000	40	7000	56
CB 70/30 SL	700*3000	2,5 – 10,0	55-75	21,2	8000	46	8000	65
CB 70/35 SL	700*3500	3,1 – 12,0	75-90	21,1	9600	56	9600	78
CB 80/40 SL	800*4000	3,7 – 17,0	75-90	22,7	12100	71	12100	99
CB 85/45 SL	850*4500	4,4 – 22,0	90-110	22,6	16100	93	16100	130
CB 90/50 SL	900*5000	5,0 – 30,0	110-132	20,8	20400	118	20400	166
CB 90/60 SL	900*6000	7,5- 40,0	132-160	18,9	24500	142	24500	199
CB 90/65 SL	900*6500	8,5 - 45,0	132-160	18,2	26500	153	26500	215

Glue blenders (2)

Core SL	Chamber D*L [mm]	Capacity t/h	Power [kW]	Retention time in Max. capacity (s)	Cooling water		Cooling water	
					FlakeT/water infeed T/ ΔT 45°C / 7°C / 5°C	Required cooling power	FlakeT/water infeed T/ ΔT 65°C / 7°C / 7°C	Required cooling power
CB 48/25 CL	480*2500	0,6 – 3,2	37-45	21,5	4300	25	4300	34
CB 53/30 CL	530*3000	1,0 – 4,8	45-55	20,3	6000	35	6000	48
CB 60/30 CL	600*3000	1,5 – 6,4	55-75	19,5	7000	40	7000	56
CB 70/30 CL	700*3000	2,0 – 8,0	55-75	21,2	8000	46	8000	65
CB 70/35 CL	700*3500	2,5 – 9,6	75-90	21,1	9600	56	9600	78
CB 80/40 CL	800*4000	3,0 – 14,0	75-90	22,0	12100	71	12100	99
CB 85/45 CL	850*4500	3,5 – 17,6	90-110	22,6	16100	93	16100	130
CB 90/50 CL	900*5000	4,0 – 24,0	110-132	20,8	20400	118	20400	166
CB 90/60 CL	900*6000	6,0 – 32,0	132-160	18,9	24500	142	24500	199
CB 90/65 CL	900*6500	6,6 - 36,0	132-160	18,2	26500	153	25500	215
CB 100/65 CL	900*6500	8,3 – 42,5	132-160	19,0	29300	170	29300	238
CB 110/65 CL	1100*6500	10,0 – 50,0	160-200	19,5	32600	189	32600	265
CB 120/65 CL	1200*6500	12,0 – 60,0	160-200	19,4	39000	225	39000	317

Based on density 120kg/m³

Filling rate = 40%