

TECHNICAL BROCHURE · ROASTERS

RS series roasters

Moist-heat preparation of oilseeds before pressing: multi-vat machines with automatic control of process parameters.

40

MODELS IN RANGE

25–1100

T/DAY

3–12

VATS, MULTI-TIER DESIGN

Purpose

RS series roasters (roasting pans) are designed for moist-heat preparation of oilseeds before pressing. They provide even heating, mixing and, if required, moistening of the raw material for maximum oil yield. The multi-vat design ensures a continuous and stable process, and an automatic control system maintains optimal process parameters.

The roaster is a key machine in an oilseed processing line (sunflower, rapeseed, soybean): oil yield and product quality depend directly on how well it works.

How a multi-vat roaster works

- **Feeding.** Crushed seed (mash) continuously enters the top vat.
- **Mixing and transport.** A central shaft with paddles mixes the mass, prevents overheating at the walls and moves the mash evenly to the next vat.
- **Heat transfer.** The bottom, and often the walls, of each vat have steam jackets, so every tier holds its own heating regime.

How to choose a roaster

1 Capacity

The main criterion is daily capacity on raw material. The RS range covers 25 to 1100 t/day; choose a model with a margin over the actual plant capacity.

2 Number of vats and diameter

A multi-vat design gives each tier its own regime. Diameter and number of vats define residence time of the mash and capacity.

3 Heating area

The surface of the steam jackets determines how fast and evenly the material is heated; match it to the moisture and oil content of your raw material.

4 Drive and weight

Drive power, shaft speed and weight without drive are needed to design the foundation, power supply and installation.

5 Plant dimensions

Check column height and diameter: a multi-vat roaster is a vertical machine that needs adequate ceiling height.

6 Adjacent sections

The roaster sits before pressing or extraction, so it is selected together with the pressing section, steam supply and automatic control system.

Important

Indicative selection only. The final model is defined by the technical specification together with D.ENERGY engineers.

RS model parameters

Model	Diameter, mm	Capacity, t/day	Vats	Vat height, mm	Column height, mm	Heating area, m ²	Volume, m ³	Weight w/o drive, t	Speed, rpm	Drive power, kW
RS.203	2000	25	3	550	1650	9.3	3.3	4.5	28	11
RS.204	2000	35	4	550	2200	12.5	4.4	—	28	11
RS.205	2000	50	5	550	2750	15.7	5.5	—	28	18.5
RS.224	2200	50	4	550	2400	15	5.28	—	25	22
RS.253	2500	50	3	600	1800	15.2	4.5	7.5	23	22
RS.206	2000	55	6	550	3300	18.9	6.6	8.5	28	18.5
RS.225	2200	55	5	550	3000	18.9	6.6	—	25	22
RS.254	2500	60	4	600	2400	20.4	6	9.6	23	22
RS.207	2000	65	7	550	3850	22.1	7.7	—	28	22
RS.226	2200	65	6	550	3600	22.7	7.92	—	25	30
RS.313	3100	65	3	600	1800	23.7	5.58	11	18	30
RS.208	2000	80	8	550	4400	25.3	8.8	—	28	22
RS.227	2200	80	7	550	4200	26.5	9.24	—	25	30
RS.255	2500	85	5	600	3000	25.5	7.5	11.8	23	37
RS.228	2200	100	8	550	4800	30.4	10.56	—	25	37
RS.256	2500	100	6	600	3600	30.4	9	14	23	37
RS.314	3100	100	4	600	2400	31.6	7.44	14.5	18	30
RS.257	2500	140	7	600	4200	35.7	10.5	16.2	23	37
RS.229	2200	160	9	550	5400	40.4	11.88	—	25	37
RS.315	3100	160	5	600	3000	39.5	9.3	18	18	55
RS.258	2500	170	8	600	4800	40.8	12	19	23	45
RS.259	2500	200	9	600	5400	45.9	13.5	21.5	23	45
RS.316	3100	200	6	600	3600	47.4	11.16	21.5	18	55
RS.317	3100	230	7	600	4200	55.3	13.02	25	18	55
RS.405	4000	260	5	800	4000	60	16	—	13	90
RS.318	3100	270	8	600	4800	63.2	14.88	29	18	90
RS.319	3100	300	9	600	5400	71.1	16.74	33	18	90
RS.406	4000	300	6	800	4800	72	19.2	—	13	90
RS.407	4000	350	7	800	5600	84	22.4	—	13	90
RS.455	4500	350	5	900	5100	64	22.95	44.5	11	110
RS.456	4500	380	6	900	6000	81.5	27	51.5	11	110
RS.408	4000	400	8	800	6400	96	25.6	—	13	110
RS.409	4000	450	9	800	7200	108	28.8	—	13	110

Model	Diameter, mm	Capacity, t/day	Vats	Vat height, mm	Column height, mm	Heating area, m²	Volume, m³	Weight w/o drive, t	Speed, rpm	Drive power, kW
RS.457	4500	450	7	900	6900	90	31.05	58.5	11	110
RS.458	4500	500	8	900	7800	102.4	35.1	65.5	11	132
RS.506	5000	500	6	900	6000	102	30	—	11	132
RS.459	4500	600	9	900	8700	115.2	39.15	72.5	11	132
RS.509	5000	800	9	900	8700	153	43.5	—	11	160
RS.511	5000	1000	11	900	10500	187	52.5	—	11	200
RS.512	5000	1100	12	900	11400	204	57	110.5	11	220

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This material is for information only. Final configuration and parameters are defined by the technical specification and agreed with D.ENERGY engineers. Data as of 08.10.2026.