

Rotary dryer RT Euro-DH

All data at a sight

Rösler Oberflächentechnik GmbH – Productmanagement

Referent:

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REGISTERED AS PATENT

1. NEW DEVELOPMENT RT EURO-DH



RT Euro



RT Euro-DH

New heart of the RT Euro-DH dryer is the **Direct-Heating-system** inside of the machine. The heating energy warms up the drying media at a place, where the heating energy is most efficient for this process.

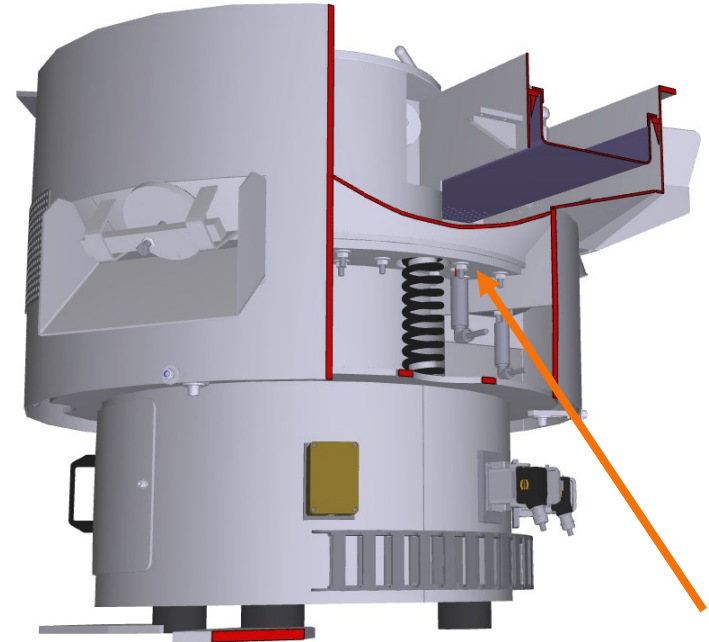
Result: less electrical power is needed and the power is used most efficient.

1. NEW DEVELOPMENT RT EURO-DH

CURCIAL DIFFERENCE: CONCEPT OF HEATING

The external appearance is the same.

Old heating-sticks changed to new developed **D**irect-**H**eatblock elements. This elements passing the thermal power direct into the ground of the processing media.



2. DETAIL OF RT EURO-DH

AVAILABLE SIZES

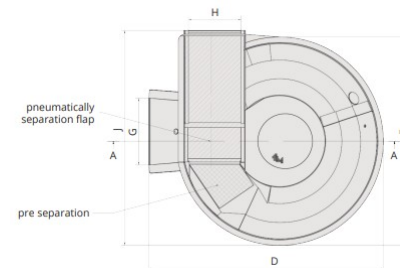
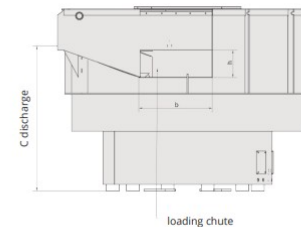
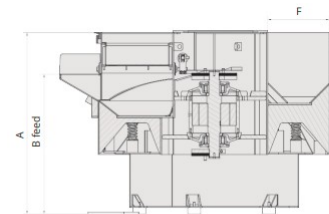
Following sizes of **RT Euro-DH** dryers are available:

RT Euro-DH	150	250	550	850	1500
	✓	✓	✓	✓	✗

2. DETAIL OF RT EURO-DH

DIMENSIONS OF RT EURO-DH

	RT 150 Euro-DH	RT 250 Euro-DH	RT 550 Euro-DH	RT 850 Euro-DH
Standard dimensions				
A – (mm) *3	985	1.035	1.220	1.310
B – Feed height (mm) *3	860	860	940	985
C – Discharge height (mm) *3	830	845	985	1.000
D – (mm)	1.240	1.380	1.770	2.150
E – (mm)	1.080	1.220	1.620	1.900
F – (mm)	246	304	410	477
G – (mm)	450	600	610	610
H – Width of separation sieve (mm)	250	325	430	485
J – (mm)	1.180	1.280	1.695	1.965
Loading chute (b)	350	530	650	560
Loading chute (h)	100	130	150	185
Maximum components dimension (diagonal measurement) (l)	up to 80	up to 135	up to 290	up to 450
Drive speed (Upm)	1.500	1.500	1.500	1.500



2. DETAIL OF RT EURO-DH

BENEFITS OF RT EURO-DH

- ▶ **Short heating-up** time
- ▶ **Heat block elements** guarantee a **high efficiency**
- ▶ Drying **without residual spots on the work pieces**
- ▶ **Drying of the work pieces in a single pass** (continuous feed mode) or in batches
- ▶ Possibility for **pre-setting the temperature**
- ▶ **Temperature controlled** by thermostat
- ▶ **Protection against overheating**
- ▶ Dryer can be **easily linked** with all kinds of **mass finishing systems**

3. COMPARSION OF RT EURO AND RT EURO-DH

COMPARSION OF THE ENERGY CONSUMPTION

Energy consumption and costs per hour:

RT ... Euro / RT ... Euro-DH								
Energy and Powercosts								
	Heating Power (installed)	power consumption - true values				consumption per hour		power: 0,20€/kWh
		2h (occasional use)	%	9h (permanent use)	%	at 1h (occasional use)	at 1h (permanent use)	approx. costs per hour costs/h (occasional use) costs/h (permanent use)
RT 150 Euro	4000 Watt	5,93 kW		17,08 kW		2,97 kW/h	1,90 kW/h	0,593 € 0,380 €
RT 150 Euro-DH	2010 Watt	3,57 kW		13,90 kW		1,79 kW/h	1,54 kW/h	0,357 € 0,309 €
saving	1990 Watt 49,75%	2,36 kW	40%	3,18 kW	19%	1,18 kW/h	0,35 kW/h	0,236 € 0,071 €
RT 250 Euro	4600 Watt	7,86 kW		27,73 kW		3,93 kW/h	3,08 kW/h	0,786 € 0,616 €
RT 250 Euro-DH	3500 Watt	5,29 kW		17,79 kW		2,65 kW/h	1,98 kW/h	0,529 € 0,395 €
saving	1100 Watt 23,91%	2,57 kW	33%	9,94 kW	36%	1,29 kW/h	1,10 kW/h	0,257 € 0,221 €
RT 550 Euro	9750 Watt	11,95 kW		42,52 kW		5,98 kW/h	4,72 kW/h	1,195 € 0,945 €
RT 550 Euro-DH	4200 Watt	7,17 kW		26,56 kW		3,59 kW/h	2,95 kW/h	0,717 € 0,590 €
saving	5550 Watt 56,92%	4,78 kW	40%	15,96 kW	38%	2,39 kW/h	1,77 kW/h	0,478 € 0,355 €
RT 850 Euro	18000 Watt	20,81 kW		67,86 kW		10,41 kW/h	7,54 kW/h	2,081 € 1,508 €
RT 850 Euro-DH	10000 Watt	10,77 kW		36,68 kW		5,39 kW/h	4,08 kW/h	1,077 € 0,815 €
saving	8000 Watt 44,44%	10,04 kW	48%	31,18 kW	46%	5,02 kW/h	3,46 kW/h	1,004 € 0,693 €



30% - 40%
energy- and
costs saving!

occasional use (2h): heat-up time 45min (100% heat-power) + 1h 15min (50% heat-power)

permanent use (9h): heat-up time 45min (100% heat-power) + 8h 15min (50% heat-power)

The values were determined under test conditions in Rösler CEC in 2020. Real consumption must be determined under operating conditions with the respective process.

4. COMPARSION WITH THE COMPETITORS

Installed power in comparsion with competitors

Rösler	Usable volume	Machine diameter	Vibration Motor Power	Heater Power	Walther Trowal	Usable volume	Machine diameter	Vibration Motor Power	Heater Power
RT 150 Euro-DH	80 ltr.	1080 mm	0,7 kW	2,0 kW	G100	70 ltr.	980 mm	0,6 kW	3 kW
RT 250 Euro-DH	135 ltr.	1220 mm	1,5 kW	3,5 kW	G200	140 ltr.	1200 mm	1,0 kW	6 kW
RT 550 Euro-DH	290 ltr.	1620 mm	3,0 kW	4,2 kW	G500	350 ltr.	1650 mm	3,0 kW	18 kW
RT 850 Euro-DH	450 ltr.	1900 mm	7,5 kW	10 kW	G1000	700 ltr.	1990 mm	3,5 kW	18 kW
RT 1500 Euro	750 ltr.	2250 mm	12,0 kW	36 kW					

Rösler	Usable volume	Machine diameter	Vibration Motor Power	Heater Power	SPALECK	Usable volume	Machine diameter	Vibration Motor Power	Heater Power
RT 150 Euro-DH	80 ltr.	1080 mm	0,7 kW	2,0 kW	SVT 2	?	1080 mm	0,75 kW	4,6 kW
RT 250 Euro-DH	135 ltr.	1220 mm	1,5 kW	3,5 kW	SVT 3	?	1160 mm	0,75 kW	4,6 kW
RT 550 Euro-DH	290 ltr.	1620 mm	3,0 kW	4,2 kW	SVT 5	?	1640 mm	1,5 kW	9,75 kW
RT 850 Euro-DH	450 ltr.	1900 mm	7,5 kW	10 kW					
RT 1500 Euro	750 ltr.	2250 mm	12,0 kW	36 kW					

Rösler	Usable volume	Machine diameter	Vibration Motor Power	Heater Power	Eurotec Innovation	Usable volume	Machine diameter	Vibration Motor Power	Heater Power
RT 150 Euro-DH	80 ltr.	1080 mm	0,7 kW	2,0 kW	RT20	80 ltr.	1050 mm	1,6 kW	3 kW
RT 250 Euro-DH	135 ltr.	1220 mm	1,5 kW	3,5 kW	RT27	140 ltr.	1200 mm	1,6 kW	4 kW
RT 550 Euro-DH	290 ltr.	1620 mm	3,0 kW	4,2 kW	RT37	350 ltr.	1650 mm	1,9 kW	6 kW
RT 850 Euro-DH	450 ltr.	1900 mm	7,5 kW	10 kW	RT41	450 ltr.	1900 mm	2,5 kW	10 kW
RT 1500 Euro	750 ltr.	2250 mm	12,0 kW	36 kW	RT55	750 ltr.	2200 mm	5,0 kW	14 kW

Notes:

The actual usable volume must be determined for the individual process. The information is only for comparison and represents the maximum values. The drive and heating outputs correspond to the installed maximum outputs. The drive performance of Rösler rotary dryers is higher in comparison, but with heavy work pieces and difficult discharge behavior there is a higher reserve for critical processes. The maximum power of the drive is usually never reached and is significantly lower in continuous operation. The main important thing for energy consumption is the heating power of the machine. The complete hating power is required during the heating-up time of the dryer.



Rösler RT Euro-DH dryers requires less heating power than conventional rotary dryer because of the efficient transfer of heat from the heat block elements.

5. REGISTERED AS PATENT

Note on patent application:

The new developed heating system is registered as patent at Germany with **Number 10 2019 118 899.7** „Direktheizung“.

The international Patent No. is **PCT/EP2020/068640**.



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www.rosler.com

Rösler Oberflächentechnik GmbH

Vorstadt 1

D-96190 Untermerzbach

Tel.: +49 9533 / 924-0

Fax.: +49 9533 / 924-300

E-Mail: info@rosler.com