

Ring Granulators



- Highest capacity ring granulator developed in country.
- Specially designed for high capacity crushing of coal and lignite (range from 40 to 1600 TPH).
- Unique crushing action results in higher output and lower power consumption.
- Maximum feed size is up to 500 mm.
- Ideal for product size of (-) 20 mm. with uniform granular product.
- Crushing action involves minimum attrition and hence produces minimum fines.
- Maximum accessibility is provided to ease the routine inspection.

Ring Granulators

TRF's Ring Granulators are rugged, dependable units, specially designed for continuous high capacity crushing of ROM coal and other medium hard friable materials. These are ideal machines for crushing coal to a size suitable for pulverisation, in power stations.

The unique crushing action by combining impact and rolling compression in a Ring Granulator results in higher output with lower power consumption. They offer better overall economy in terms of power consumption and maintenance.

Ring Granulators are available with operating capacities from 40 to 1600 tonnes per hour and feed size upto 800 mm. Positive adjustment of clearnace between the cage and the path of the rings is provided to compensate for wear and to adjust or maintain product gradation.

Internal parts such as breaker plate, cage bars or screen plate, cushioning rings and liners are made of abrasion and shock resistant steels for optimum working life.

CONSTRUCTION FEATURES

Frame

Fabricated from heavy steel plates with large inspection front and rear doors, fitted with dust tight seals. Access for further maintenance is provided on the top. Doors on the sides above the rotor shaft facilitate removal of the rotor without completely dismantling the machine. Hydraulic door opening arrangement (optional) can be provided, if required.

Frame and Hopper Liners

Replaceable abrasion-resistant steel.

Rotor Assembly

Statically/dynamically balanced to operate with minimum of vibration and noise. Weight concentrated within rotor eliminates the external fly-wheels.

Rotor Shaft

Forged and heat treated alloy steel.

Suspension Bars

EN-24 duplex suspension bars are provided in all models.

Crushing Rings

Heavy cast Mn-steel toothed and/or plain Crushing Rings depending upon applications.



Cage Frame

Fabricated from heavy steel plate and supported from heavy hinged cage shaft at top and provided with adjusting mechanism at the bottom.

Cage Adjustment

Cage assembly can be easily moved by a ratchet wrench and worm gear assembly either towards or away from the path of crushing rings. Adjustment which can be made while the granulator is in operation, provides control over the product size within permissible limits. The cage hinge bearing is so located that in any adjusted position all parts of cage face are practically equidistant from the rotor assembly. This ensures even wear.

Cage Bars or Screen Plate

Trapezoidal cage bars are of replaceable cast Mn-steel, ensuring free discharge. Screen plates are made from abrasion resistant steel. Selection of cage bars or screen plates depends on application.

Breaker Plate

Replaceable abrasion resistant steel, depending on requirement.

Tramp Iron Pocket

Tramp iron and uncrushables are prevented from continuing around and back into the crushing zone by a heavy deflector plate. The debris is collected in a pocket and removed from access door.

Bearing

Heavy duty double row spherical roller bearings with cast steel split type bearing housings with labyrinth type seals.

Lubrication

Grease lubrication for small and medium size granulators. Oil splash lubrication system for bigger models.

Drive

Direct coupled drives are recommended. For smaller models V-Belts drive may be used.

SPECIAL FEATURES

Positive Adjustability - Quick, easy external adjustment of the cage assembly...can be done while the crusher is running

Longer Parts Life - screen plate or cage bar wear compensated by simple adjustment to desired clearance

Automatic Removal of Tramp iron - rear access door allows fast, easy removal of debris

Hinged Cage - adjustable concentricity with the rotor balances wear evenly among all cage bars

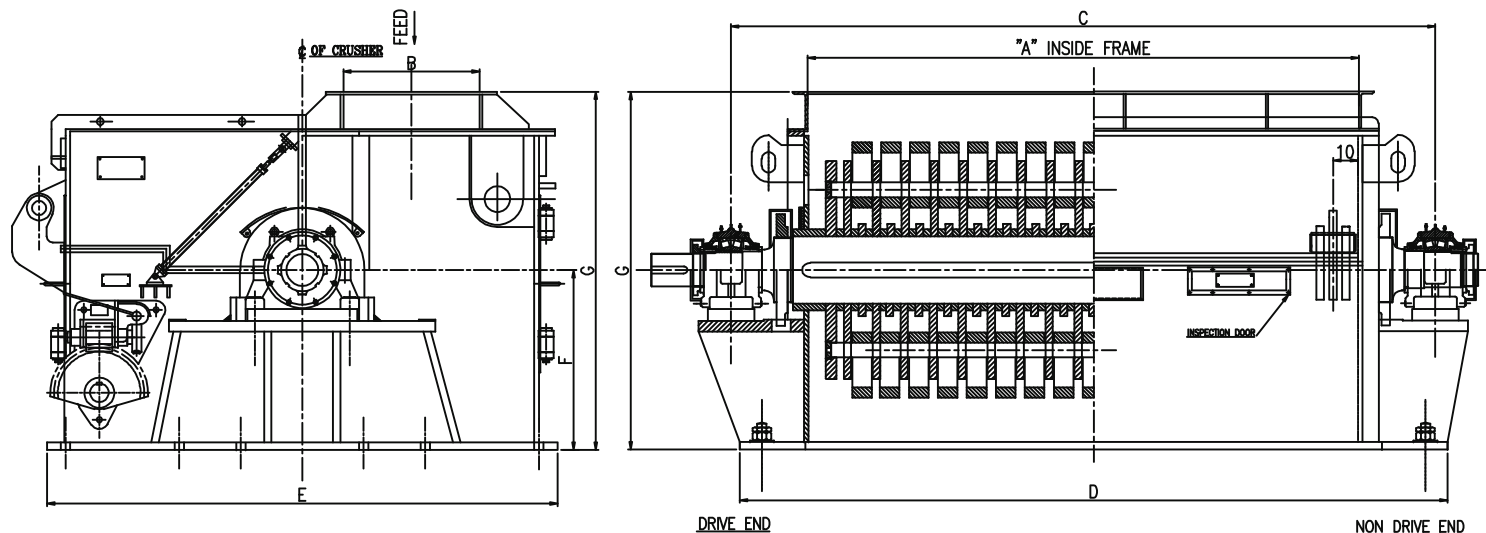
Wide Hopper Opening - results in uniform, even feeding... no bridges and material build-up

General data

Model No.	TR-41	TR-42	TR-51	TR-52	TR-54	TRM-51	TRM-52	TRM-53	TRM-54	TR - 120 x 270	TR - 160 x 330	TR - 180 x 330
Rotor Dia (mm)	1120	1120	1370	1370	1370	1370	1370	1370	1370	1210	600	1800
Rotor Length (mm)	1816	2108	2045	2333	3077	2363	2538	2923	3231	2720	3300	3300
Rotor Speed (RPM)	720	720	720	720	720	720	720	720	720	720	600	600
Max Feed size (mm)	550	550	650	650	650	650	650	650	650	~650	~600	~650
Approximate Capacity (TPH)	550-600	600-700	700-800	800-900	1100-1200	800-900	900-1000	1000-1200	1200-1400	800-100	1500	2000
Weight of rotor Assy. (less Bearing & P.B.) (Kg.)	5600	6400	7600	9000	11000	8900	9700	10700	11500	9000	14000	16000
Total weight (Kg) (less Drive)	13,000	15,000	23,500	26,500	29,000	27,000	28,000	30,000	32,000	21,000	35,000	43,000

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TRF LIMITED
A **TATA** Enterprise



IMPORTANT DIMENSIONS OF RING GRANULATOR

Model No:	A	B	C	D	E	F	G
TR-41	1930	660	2860	2465	2210	760	1525
TR-42	2210	660	3150	2745	2210	760	1525
TR-51	2135	710	3090	2920	2745	965	1930
TR-52	2490	710	3380	3300	2745	965	1930
TR-54	3225	710	4250	4090	2745	965	1930
TRM-51	2480	710	3380	3510	2745	965	1930
TRM-52	2685	710	3600	3720	2745	965	1930
TRM-53	3070	710	4050	4100	2745	965	1930
TRM-54	3370	710	4350	4400	2745	965	1930
TR-120X270	2700	628	3662	3652	2680	865	1820
TR-160X3300	3490	862	4420	4504	3082	1090	2185
TR-180X330	3490	1012	4420	4504	3380	1230	2436

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