

# **NON-FERROUS SEPARATOR CONCENTRIC ROTOR**

**L 0429 e**

***Recovery Of Valuable Raw Materials -  
Protection Of Machines And Plants***

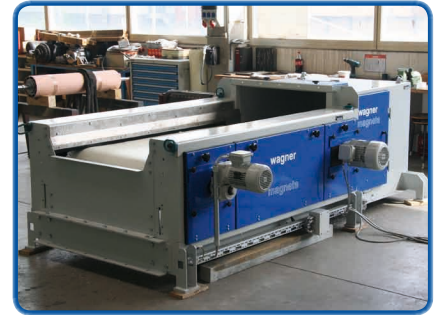


***Technology  
Full Of  
Attraction***

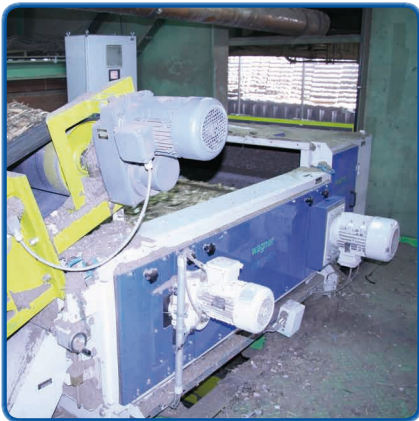


**wagner  
magnete**

The eddy current separator type 0429 with excentric rotor system can be delivered with several pole numbers and working widths up to 2000 mm. The rotor diameters 370 mm and 490 mm are available. Both variants have identical machine and flange dimensions.



*High compatibility to 0428 series with concentric rotor*



The eddy current separator type 0429 nearly has identical dimensions like the eddy current type 0428 with concentric rotor systems. This ensures high flexibility regarding the rotor system during all project phases.

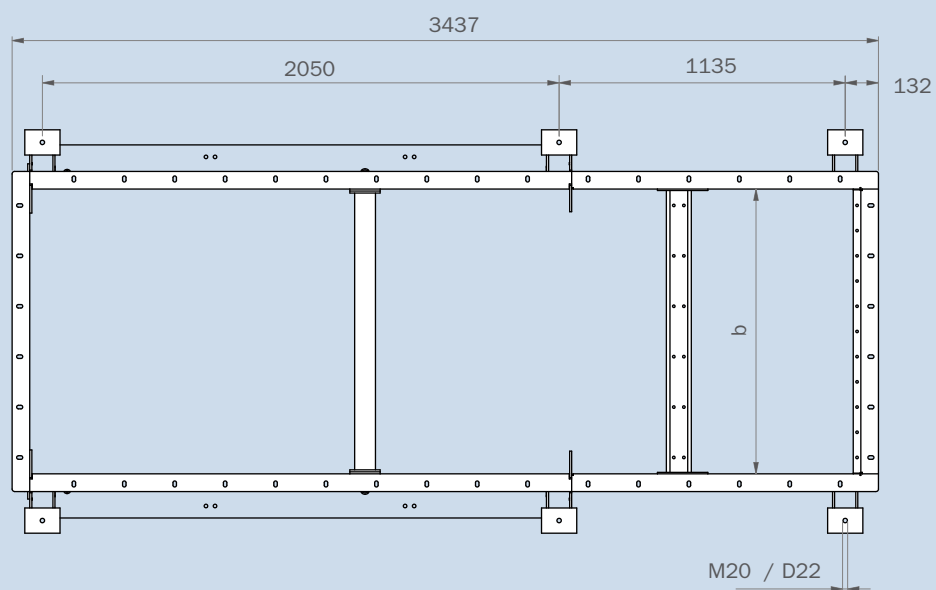
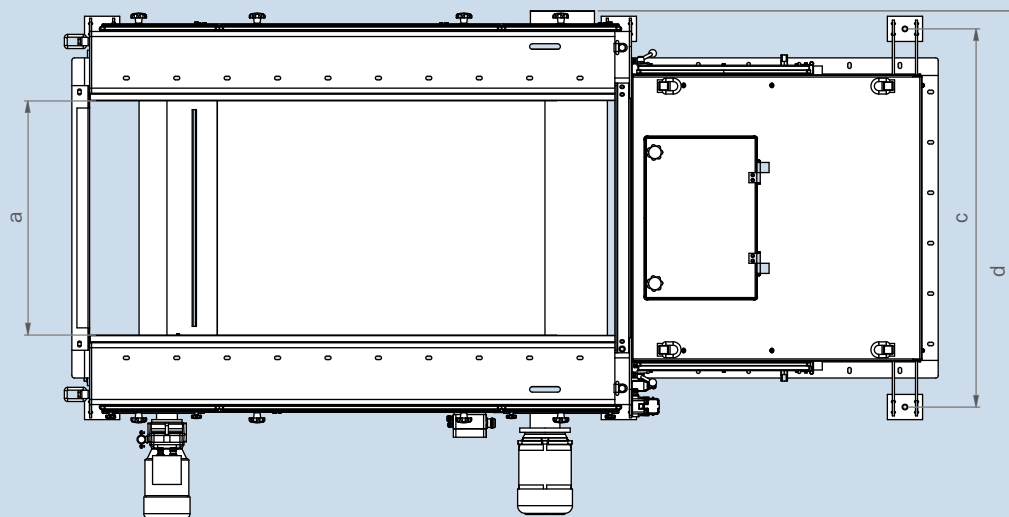
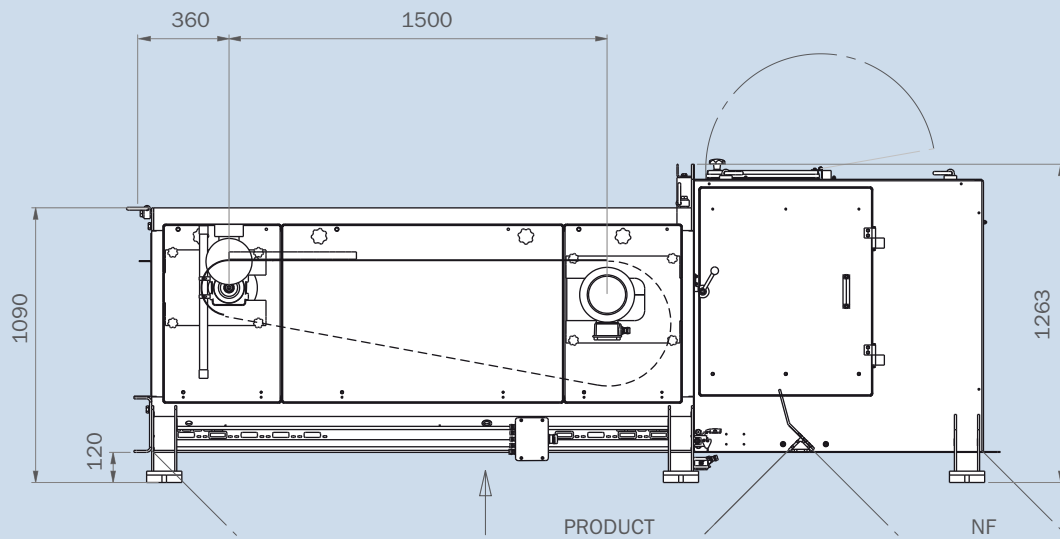
Depending on the application the eddy current separator type 0429 is available in open or closed dustproof variation. It is possible to build the machine with peak roller at the separation edge and automatic rotating brush for belt cleaning.

The machine can be controlled and adjusted via touch panel.

#### **NF-SEPARATOR TYPE 0429-37 and 0429-49**

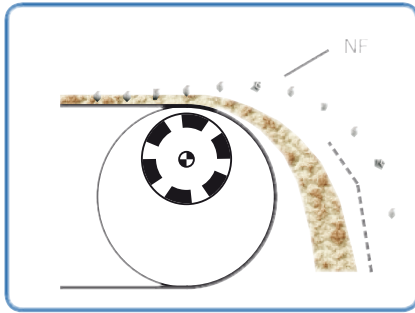
##### **ABMESSUNGEN**

type	throughput cbm/h	a mm	b mm	c mm	d mm	weight approx. kg
0429- 37/60	25-45	600	830	1200	1715	1350
0429- 37/90	40-65	900	1130	1500	2015	1550
0429- 37/120	60-85	1200	1430	1800	2315	1700
0429- 37/150	75-110	1500	1730	2100	2615	1900
0429- 49/60	25-45	600	830	1200	1715	1600
0429- 49/90	40-65	900	1130	1500	2015	1800
0429- 49/120	60-85	1200	1430	1800	2315	2000
0429- 49/150	75-110	1500	1730	2100	2615	2200
0429- 49/200	100-150	2000	2230	2600	3115	2400



Changes of dimensions and design are subject to alterations. Please ask for latest drawings.

*non-ferrous separation using  
the eddy current technique*



*Separierbarkeit von Nicht-  
eisen-Metallen*

*Separable metals*

*Good material feed = effective  
sorting*

Operation of the non-ferrous separator is based on the induction principle. At a high frequency, a fast rotating magnet pole system induces eddy currents in the conductive non-ferrous metal parts. This creates magnetic fields on them with the same polarity as the magnet rotor, which causes a buildup of the repelling “Lorentz force”. This force works against gravity. Together with the force of inertia, this causes the items to be thrown out of the material flow. The distance they are thrown is mostly determined by the size and form of the item in addition to the specific material properties. Large items are thrown further than small ones. Flat items are subject to higher induction per volume unit than thick items. Wire formed items only create very small eddy currents.

The strength of the induced currents and therefore their repelling forces depends on the specific electrical conductivity of the metal. The gravitational force depends on the specific weight. Therefore the quotient of these two values (=material parameter) is a measurement of the ability to be separated.

Aluminum, magnesium, copper, aluminum alloys and silver can be separated easily. The relationship of the values is not so good for zinc, brass and tin. Stainless steel, many steel alloys and lead cannot be separated.

All materials lying over non-ferrous metals that can be separated make it difficult to eject items or prevent ejection from the material flow. For this reason, the basic requirement for optimal sorting and minimal obstruction of material goods is having a single layer. We recommend that the material on the conveyor is well distributed over the entire working width and fed to the eddy current separator with a vibratory feeder.