

## ETB Series

### Demagnetisation Unit with Conveyor

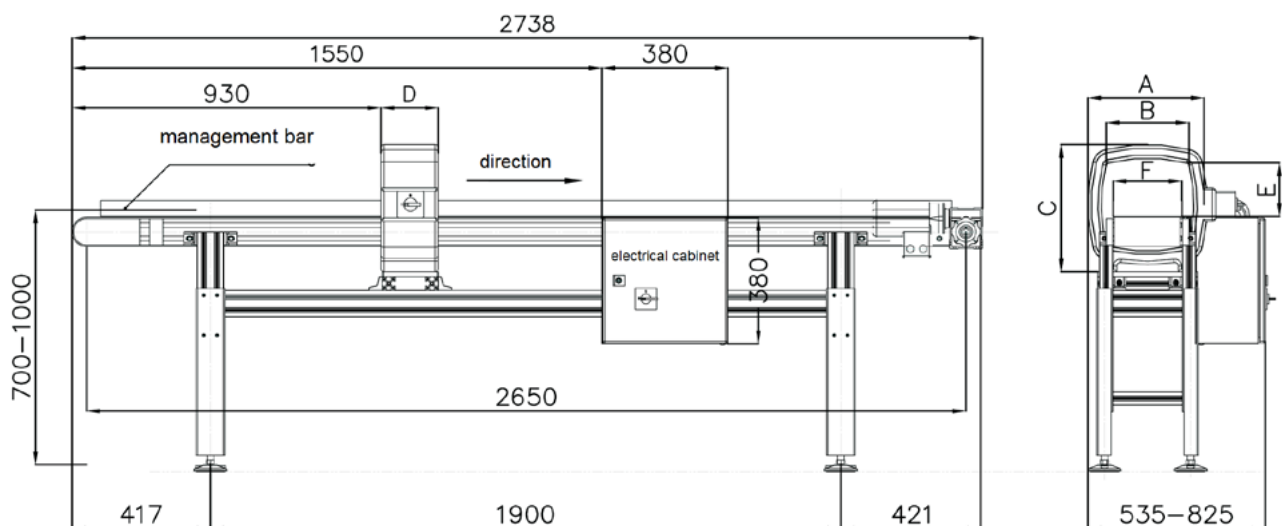
Demagnetisation units of the ETB series are used primarily with automated systems, where demagnetisation is carried out externally due to a testing issue, i.e. after a visual check. The test objects can be placed manually on the conveyor or with the aid of manipulators.

Optional lateral guides can allow for exact alignment along the entire length of the conveyor.



#### PRODUCT PROPERTIES AND PART NUMBERS

		ETB 250	ETB 350	ETB 450	ETB 550
<b>Part number</b>		103255	103355	103455	103555
<b>Field strength</b>	kA/m	10	10	8	6.2
<b>Mains connection</b>	V	400	400	400	400
<b>Current consumption</b>	I (A)	4.4	8.5	11	12
<b>Power consumption</b>	kVA	1.8	3.4	4.5	4.7
<b>Frequency</b>	Hz	50	50	50	50
<b>Measurement A</b>	mm	390	480	580	680
<b>Measurement B</b>	mm	250	350	450	550
<b>Measurement C</b>	mm	390	475	577	695
<b>Measurement D</b>	mm	173	339	330	332
<b>Measurement E</b>	mm	160	260	360	460
<b>Measurement F</b>	mm	200	300	400	500



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Demagnetisation is an important component of electromagnetic crack testing. Residual magnetism in test samples is an issue for many users and the industry demands increasingly better demagnetisation values.

Where workpieces are subjected to a magnetic field due to a magnetisation process - as part of a testing method, processing, or from magnetic lifting equipment - a residual magnetic field will remain in the component after the field-generating source has been disabled (remanence), which must be neutralised. Eliminating this magnetic residue will help avoid negative effects during later processing or when using the workpieces.

The demagnetisation of AC-supplied spools that have a frequency of 50 Hz, occurs by way of the slow retraction of the test object from the field-filled space of the demagnetisation spool, in direction of the spool axis.

At the start of demagnetisation, the field strength must be at least equal to the field strength of the magnetisation. Similarly, the entire area for demagnetisation must be captured. While a field saturation depth of approx. 2mm can be expected in magnetic particle testing with alternating magnetic field, for components that were manipulated with lifting equipment, the entire cross section of the test object must be covered. In the latter case, demagnetisation is achieved with an increased field saturation depth, whereby the field intensity is decreased with low-frequency AC or reversing DC current.

The most important basis for achieving good demagnetisation results is:

- for parts that were **AC**-magnetised: demagnetisation at 50 or 60 Hz AC or low-frequency AC.
- for parts that were **DC**-magnetised: demagnetisation with low-frequency AC only (e.g. 16 2/3 Hz).

### USER RECOMMENDATIONS

<b>NDT Method</b>	Magnetic Particle Testing
<b>Accessories</b>	Low-frequency generator 16 2/3 Hz (part number 104710)