

MATERIAL PROPERTIES

POLYMER CONCRETE	based on polyester resin, with natural minerals
COMPRESSION RESISTANCE	≥ 90 N/mm ²
FLEXURAL TENSILE STRENGTH	≥ 22 N/mm ²
MODULES OF ELASTICITY	2500 - 35000 N/mm ²
DENSITY	2,1 – 2,3 kg/dm ³
LINEAR EXPANSION COEFFICIENT	approx. 1,45 x 10 ⁻⁵ 1/K
HEAT RESISTANCE	100°C permanent exposure, short term exposure (5 min.) to 200°C
FROST RESISTANCE	- 50°C
WATER PENETRATION LEVEL	0 mm
WATER ABSORPTION	< 0,05% DIN 52 103 (A)
MATERIAL STRUCTURE	capillary free

APPLICATION

Channel system for drainage of rail bound transport vehicles that operate with electrical power.

TYPES

- / Channel and grating separate or pre-assembled
- / Intersection element
- / Interrail element
- / Side elements: gratings and end plates pre-assembled

ACCESSORIES

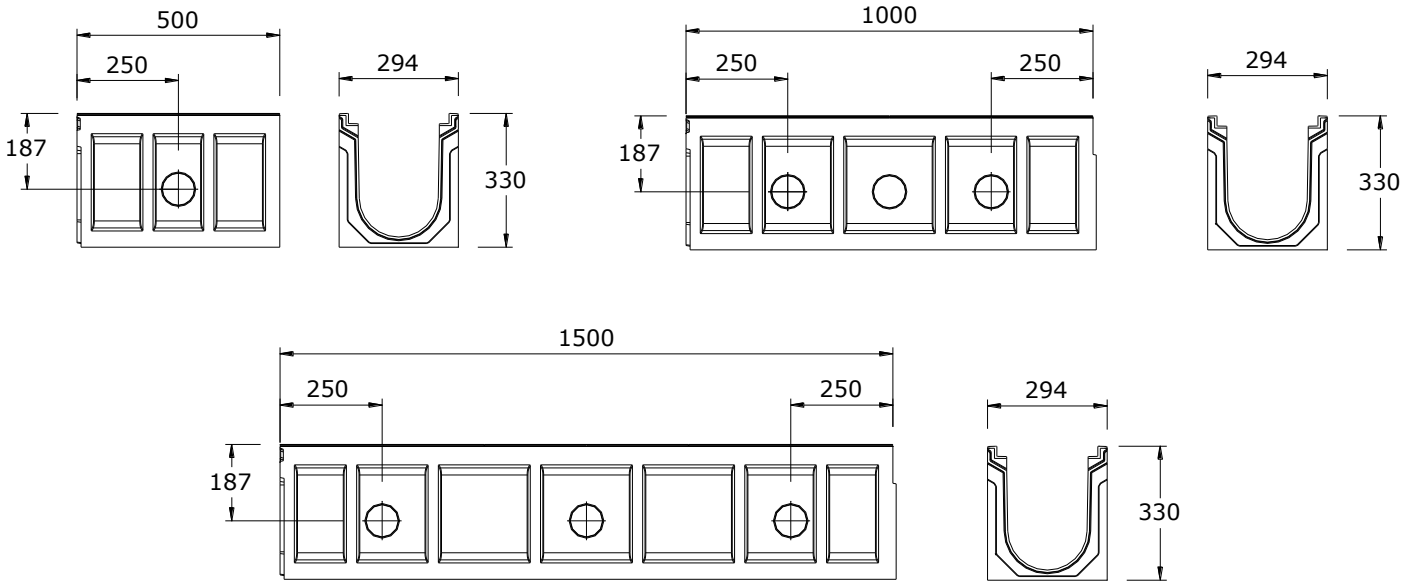
- / End cap closed
- / End cap with oval opening long and short
- / End cap with circular pipe connector Ø 160mm
- / Oval pipe connector
- / Rail connection
- / Insulation board for rail connection
- / Insulation disc
- / Insulation sleeve

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN ENS 2010 TRAM COMPLETE SYSTEM

Clear width of channel unit 200mm, construction width 294mm. Channel including channel cover. Loading classes A 15, B 125, C 250 and D 400 to EN 1433. Loading class as indicated, when installed in accordance to MEA installation instructions.



SIDE CHANNELS WITH 4-FOLD-BOLTED DUCTILE IRON GRATING, INCLUDING END CAP LONG WITH OVAL OPENING, OVAL PIPE CONNECTOR AND CLOSED END CAP

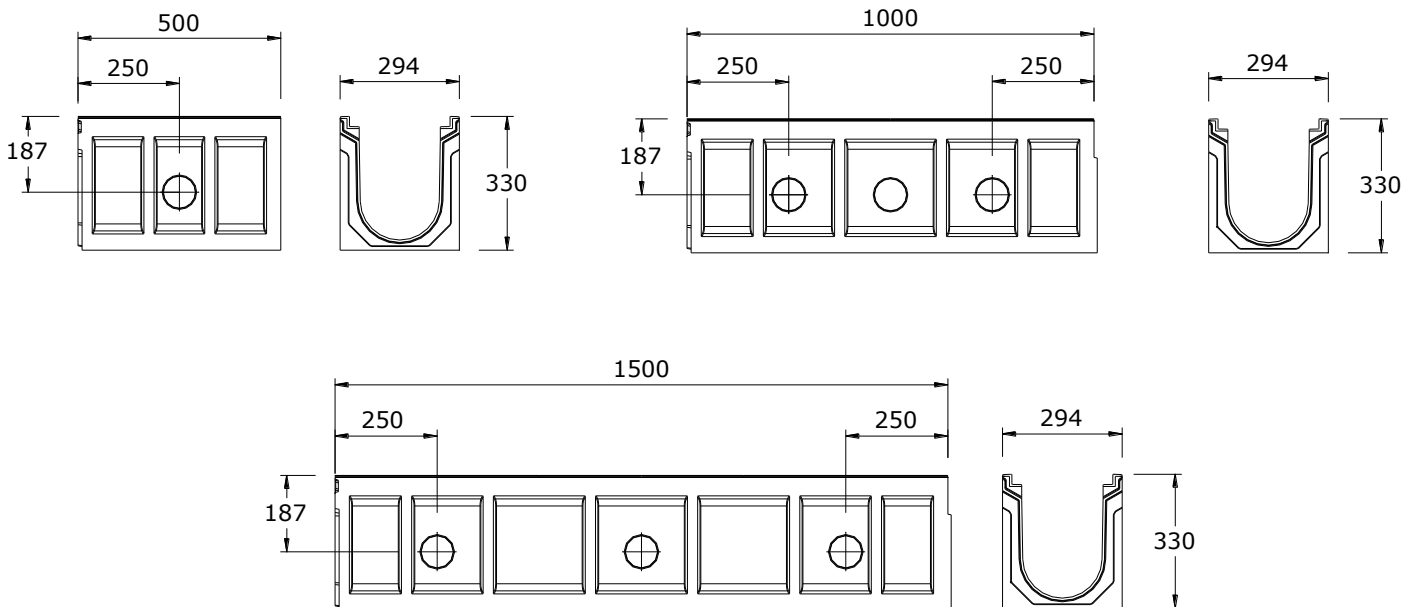
Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap closed	500	330	43,00	9	274156	156442	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap closed	750	330	81,70	9	274170	156446	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap closed	1000	330	93,30	9	274194	156450	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap closed	1250	330	115,60	9	274217	156454	MD

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN ENS 2010 TRAM COMPLETE SYSTEM

Clear width of channel unit 200mm, construction width 294mm. Channel including channel cover. Loading classes A 15, B 125, C 250 and D 400 to EN 1433. Loading class as indicated, when installed in accordance to MEA installation instructions.



SIDE CHANNELS WITH 4-FOLD-BOLTED DUCTILE IRON GRATING, INCLUDING END CAP LONG WITH OVAL OPENING, OVAL PIPE CONNECTOR AND END CAP WITH CIRCULAR PIPE CONNECTOR Ø 160MM

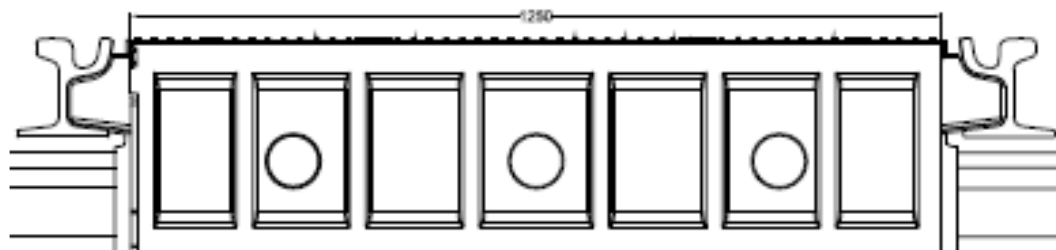
Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap with circular pipe connector Ø 160mm	500	330	43,00	9	274149	156440	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap with circular pipe connector Ø 160mm	750	330	81,70	9	274163	156444	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap with circular pipe connector Ø 160mm	1000	330	93,30	9	274187	156448	MD
ENS 2010 TRAM side channel + ductile iron grating D 400 + end cap long with oval opening + oval pipe connector + end cap with circular pipe connector Ø 160mm	1250	330	115,60	9	274200	156452	MD

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN ENS 2010 TRAM COMPLETE SYSTEM

Clear width of channel unit 200mm, construction width 294mm. Channel including channel cover. Loading classes A 15, B 125, C 250 and D 400 to EN 1433. Loading class as indicated, when installed in accordance to MEA installation instructions.



intersection element

INTERSECTION ELEMENT FOR INSTALLATION BETWEEN TWO RAILS OF A TRACK, INCLUDING DUCTILE IRON GRATING D 400, 2 END CAPS SHORT WITH OVAL OPENING AND ACCESSORIES

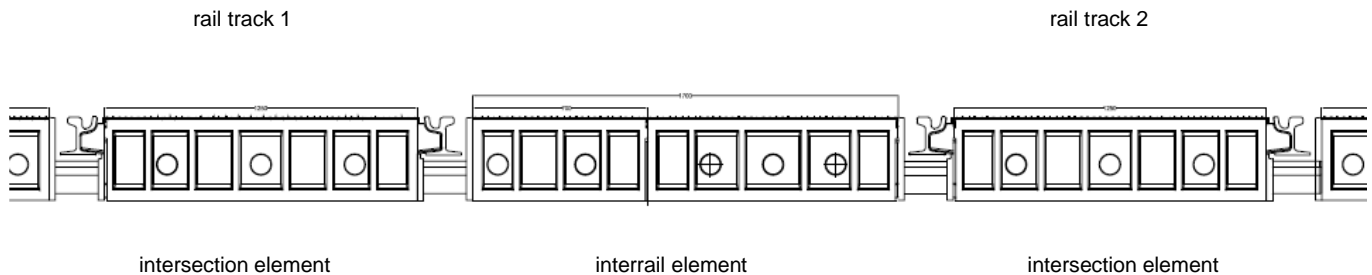
Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM Intersection element for installation between two rails of a track + ductile iron grating D 400 + 2 end caps short with oval opening + 2 rail connections + 2 insulation boards + 4 insulation discs + 2 insulation sleeves including fixing mechanism	1250	330	115,60	9	274224	156456	MD

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN ENS 2010 TRAM COMPLETE SYSTEM

Clear width of channel unit 200mm, construction width 294mm. Channel including channel cover. Loading classes A 15, B 125, C 250 and D 400 to EN 1433. Loading class as indicated, when installed in accordance to MEA installation instructions.



INTERRAIL ELEMENT FOR INSTALLATION BETWEEN TWO RAIL TRACKS, INCLUDING DUCTILE IRON GRATING D 400, 2 END CAPS LONG WITH OVAL OPENING AND 2 OVAL PIPE CONNECTORS

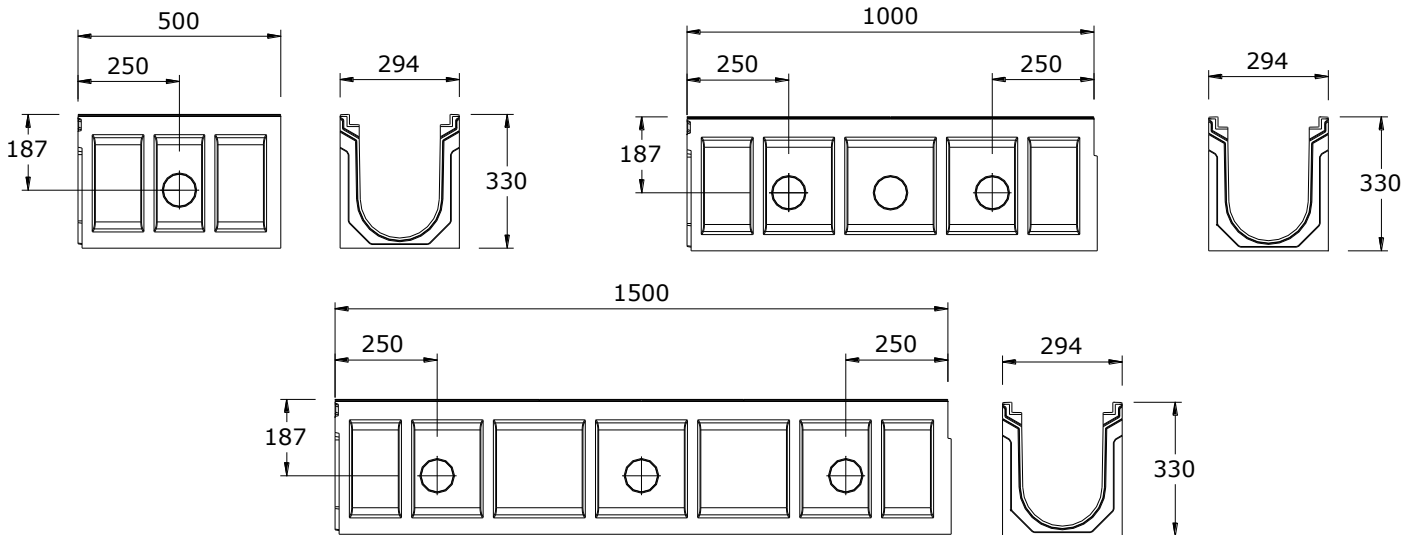
Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	500	330	43,00	9	274231	156458	MD
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	1000	330	93,30	9	274248	156460	MD
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	1500	330	141,40	9	274255	156462	MD
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	1750	330	175,00	9	274262	156464	MD
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	2000	330	186,00	9	274279	156466	MD
ENS 2010 TRAM interrail element for installation between two rail tracks + ductile iron grating D 400 + 2 end caps long with oval openings + 2 oval pipe connectors	2500	330	229,60	9	274286	156468	MD

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN ENS 2010 TRAM COMPLETE SYSTEM

Clear width of channel unit 200mm, construction width 294mm. Suitable for channel covers MEADRAIN Top ENS 2000 4-point bolting fixing mechanism. Loading classes A 15, B 125, C 250 and D 400 to EN 1433. Loading class as indicated, when installed in accordance to MEA installation instructions.



CHANNEL UNITS WITHOUT GRATINGS

Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM channel reinforced with vertical connection facility	500	330	32,30	9	273548	156420	MD
ENS 2010 TRAM channel reinforced with vertical connection facility	750	330	56,00	9	273555	153422	MD
ENS 2010 TRAM channel reinforced with vertical connection facility	1000	330	72,50	9	273562	156424	MD
ENS 2010 TRAM channel reinforced with vertical connection facility	1250	330	89,50	9	273579	156426	MD
ENS 2010 TRAM channel reinforced with vertical connection facility	1500	330	110,00	9	273586	156428	MD

CHANNEL UNITS INCLUDING 4-FOLD-BOLTED DUCTILE IRON GRATING D 400

Product description	length in mm	total height in mm	kg/ unit	units/ pallet	EAN-code 4001990...	EDP-No. 010...	material group
ENS 2010 TRAM channel + ductile iron grating D 400	500	330	43,00	9	273593	156430	MD
ENS 2010 TRAM channel + ductile iron grating D 400	750	330	81,70	9	274101	156432	MD
ENS 2010 TRAM channel + ductile iron grating D 400	1000	330	93,30	9	274118	156434	MD
ENS 2010 TRAM channel + ductile iron grating D 400	1250	330	115,60	9	274125	156436	MD
ENS 2010 TRAM channel + ductile iron grating D 400	1500	330	141,40	9	274132	156438	MD

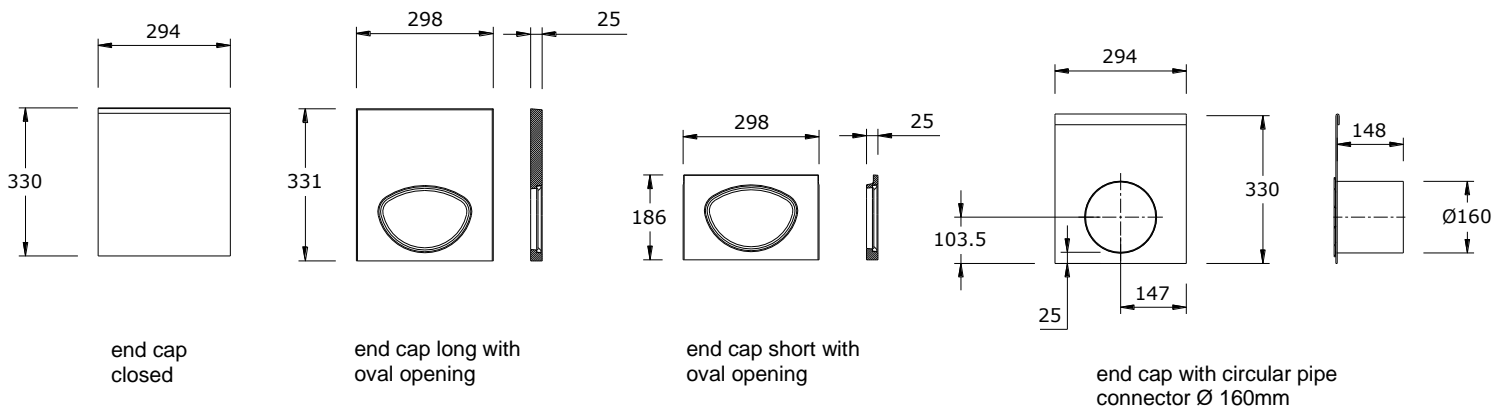
MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm



BUILDING SUCCESS

MEADRAIN ENS 2010 TRAM ACCESSORIES



END CAPS AND PIPE CONNECTORS

Product description	material	kg/ unit	units/ pallet	EAN- code 4001990...	EDP- No. 010...	material group
ENS 2010 TRAM.SE end cap closed for channel start/end	galv. steel	1,00	1	275566	153366	MD
ENS 2010 TRAM.SE end cap long with oval opening	polymer concrete	4,10	1	275542	153360	MD
ENS 2010 TRAM.SE end cap short with oval opening	polymer concrete	1,60	1	275535	153358	MD
ENS 2010 TRAM.SE end cap with circular pipe connector Ø 160mm	galv. steel	1,20	1	275559	153364	MD
Oval pipe connector for ENS 2010 TRAM	PVC	0,45	1	275573	153354	MD

ACCESSORIES

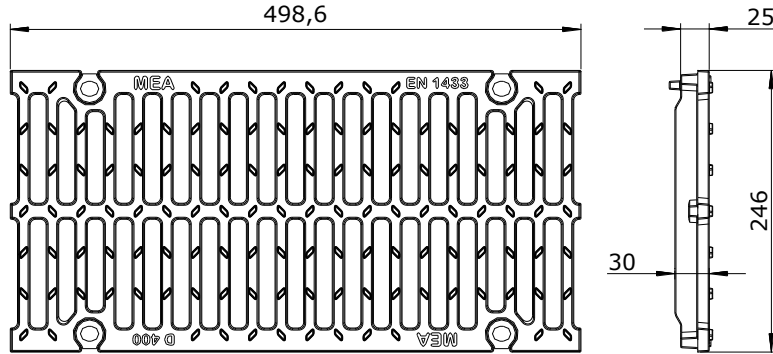
Product description	material	kg/ unit	units/ pallet	EAN- code 4001990...	EDP- No. 010...	material group
Rail connection	galv. steel	4,34	1	283370	153292	MD
Insulation board for rail connection	PP	0,34	1	283394	153304	MD
Insulation disc	PE	0,04	1	283417	153308	MD
Insulation sleeve	PE	0,04	1	283424	153310	MD
Screw (1x M16 x 70), nut (1x M16) and washers (2xd = 17mm)	-	0,20	1	275603	153368	MD

MEADRAIN ENS 2010 TRAM

Loading classes A 15, B 125, C 250, D 400 Clear width 200mm

MEADRAIN TOP ENS 2000 4-POINT BOLTING CHANNEL COVERS

With 4-point bolting channel cover fixing mechanism. Suitable for channel system MEADRAIN ENS 2000 and MEADRAIN ENS 2010 TRAM. For channel bodies and silt boxes, total width 246 mm. Fixing mechanism is optional available.



CLASS D 400 TO EN 1433, DUCTILE IRON WITH 4-POINT BOLTING CHANNEL COVER FIXING MECHANISM

Product description	material	length in mm	inlet sect. area \varnothing cm ² /m	kg/unit	units/pallet	EAN-code 4001990...	EDP-No. 010...	material group
Ductile iron slotted grating 14/95 class D 400	ductile iron	500	1020	10,50	96	275122	153334	MD
Ductile iron slotted grating 14/95 class D 400	ductile iron	750	1020	15,70	96	275115	153332	MD

FIXING MECHANISM

To provide a traffic save environment it is necessary to securely lock the gratings into the channel body

Product description	kg/unit	units/pallet	EAN-code 4001990...	EDP-No. 010...	material group
TRAM ENS square nuts + allen screw M10x35 4 pieces/cover required	0,07	1	275580	153356	MD

This edition of the technical data sheet is valid from October 2021 until the publication of a revised version and replaces earlier publications. The current version is available for download at www.mea-group.com.

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