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Environmental report
„HILTI MQ System Parts

August 2013

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Contents

1 Life Cycle Assessment „HILTI MQ System Parts“

1.1 Technical data and material distribution

Table 1.1: Technical data and material distribution

IT- Number	Product name	Weight [kg]	Material
369591	MQ 41 3m	6,24	Steel
369602	MQ 21 D 6m	17,4	Steel
373797	MQ-72 3m	12,3	Steel
369609	MQK-300	1,03	Steel
369610	MQK-450	1,34	Steel
369611	MQK-600	1,7	Steel
369612	MQK-1000	2,61	Steel
369658	MQW-4/90°	0,22	Steel
369661	MQW-P2/90°	0,16	Steel
369642	MQV-4/3 D	0,77	Steel
369643	MQV-12	0,56	Steel
369654	MQP-G	1,06	Steel
369680	MQZ-L13	0,084	Steel
369651	MQP-21-72	1,15	Steel
2064293	Washer M10	0,008	Steel
369623	MQN	0,066	Steel
304890	MIA-OH 120	0,13	Steel
304887	MIA-EH90	0,16	Steel
388356	MC-S-M12	0,054	Polymer / Steel
382897	Hexagon Lock nut M12-F	0,02	Steel
369686	MQZ-E 31	0,005	PE
369685	MQZ-E 41	0,005	PE
304891	MIA-EH-P	0,28	Steel
369626	MQM	0,021	PA6/Steel

1.2 Representation of the procedure

A life cycle assessment according to DIN EN ISO 14040/44, was performed on a product of HILTI (MQ System Parts), which considers the entire life cycle of the product (cradle to grave).

The entire life cycle of the product is divided into the following stages:

- Raw material,
- Production,
- Use,
- End of life,
- Transportation.

The data for the “Raw material” distribution of the unit come from a dismantling and disassembling that was already carried out by an external partner.

The “Production” manufacturing process was verified in collaboration with HILTI AG and thus assigned to the various components.

The product produces no emissions in the “Use” phase.

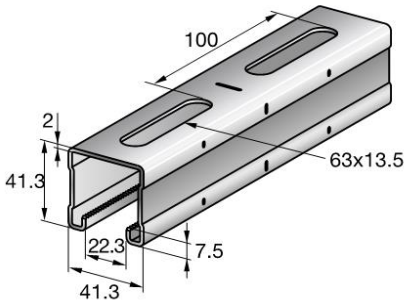
For the “End of life” it is assumed, that the product is completely deposited.

The “Transportation” scenario is based on the 2009 limit stretch EPTA study by PE International and is evaluated according to the weight of the product. The first transport reflects the transport distances, which are essential for bringing together the individual components (by sea- a container ship for 16800 kms for 30% of the product weight, by road- a truck for 4716 kms for 70% of the product weight). The second transport reflects the distribution of the product to the various sales companies within the EU (2300 km by road in a truck for 100% of the product weight). The emissions of both transports are added together in this report.

The accounting data come from the source: GaBi 6.0, and are evaluated after CML 2001, Nov. 2010.

1.3 Life Cycle Assessment

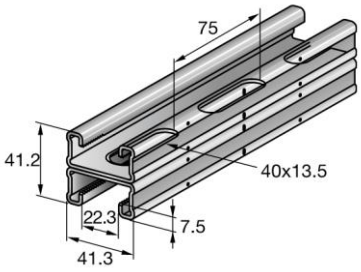
1.3.1 MQ 41 3m



IT- Number	Product name	Weight [kg]	Material
369591	MQ 41 3m	6,24	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	27,164	16,192	0,171	0,000	7,690	3,111
Acidification Potential (AP) [kg SO2-eq.]	7,74E-02	4,93E-02	7,33E-04	0,00E+00	7,45E-05	2,73E-02
Abiotic Depletion (ADP) [kg Sb-eq.]	1,46E-04	1,46E-04	1,72E-08	0,00E+00	3,18E-08	1,18E-07
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	1,86E-07	1,99E-07	1,16E-08	0,00E+00	-2,57E-08	1,14E-09
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,22E-02	7,92E-03	4,81E-05	0,00E+00	1,96E-03	2,30E-03
Energy (net calorific value) [MJ]	2,19E+02	1,76E+02	3,03E+00	0,00E+00	-1,98E+00	4,25E+01
Energy ren. (net calorafic value) [MJ]	5,83E+00	4,75E+00	4,34E-01	0,00E+00	-8,17E-01	1,47E+00
Dangerous Waste [kg]	1,28E-01	1,28E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	3,97E+01	3,58E+01	6,36E-01	0,00E+00	3,12E+00	1,43E-01
Radioactive Waste [kg]	2,05E-03	2,51E-03	4,25E-04	0,00E+00	-9,37E-04	5,87E-05
Hazard-free Waste [kg]	-6,00E+00	2,42E-01	0,00E+00	0,00E+00	-6,24E+00	0,00E+00
Water consumption [l]	-4,77E+02	1,08E+02	6,18E+02	0,00E+00	-1,32E+03	1,17E+02
Water pollution [m³]	1,52E+00	1,11E+00	1,52E-01	0,00E+00	1,76E-01	8,27E-02
Air pollution [m³]	2,82E+03	2,55E+03	5,78E+00	0,00E+00	1,18E+02	1,41E+02

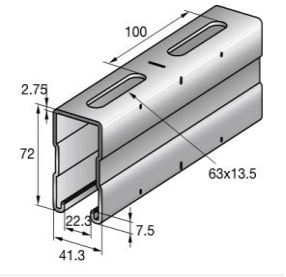
1.3.2 MQ 21 D 6m



IT- Number	Product name	Weight [kg]	Material
369602	MQ 21 D 6m	17,4	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	75,747	45,152	0,477	0,000	21,444	8,674
Acidification Potential (AP) [kg SO2-eq.]	2,16E-01	1,37E-01	2,04E-03	0,00E+00	2,08E-04	7,62E-02
Abiotic Depletion (ADP) [kg Sb-eq.]	4,07E-04	4,07E-04	4,80E-08	0,00E+00	8,87E-08	3,28E-07
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	5,19E-07	5,55E-07	3,25E-08	0,00E+00	-7,17E-08	3,19E-09
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,41E-02	2,21E-02	1,34E-04	0,00E+00	5,47E-03	6,42E-03
Energy (net calorific value) [MJ]	6,12E+02	4,90E+02	8,45E+00	0,00E+00	-5,51E+00	1,18E+02
Energy ren. (net calorafic value) [MJ]	1,63E+01	1,32E+01	1,21E+00	0,00E+00	-2,28E+00	4,09E+00
Dangerous Waste [kg]	3,58E-01	3,58E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,11E+02	9,98E+01	1,77E+00	0,00E+00	8,70E+00	3,99E-01
Radioactive Waste [kg]	5,73E-03	6,99E-03	1,18E-03	0,00E+00	-2,61E-03	1,64E-04
Hazard-free Waste [kg]	-1,67E+01	6,74E-01	0,00E+00	0,00E+00	-1,74E+01	0,00E+00
Water consumption [l]	-1,33E+03	3,02E+02	1,72E+03	0,00E+00	-3,68E+03	3,26E+02
Water pollution [m³]	4,23E+00	3,08E+00	4,23E-01	0,00E+00	4,92E-01	2,31E-01
Air pollution [m³]	7,85E+03	7,11E+03	1,61E+01	0,00E+00	3,30E+02	3,94E+02

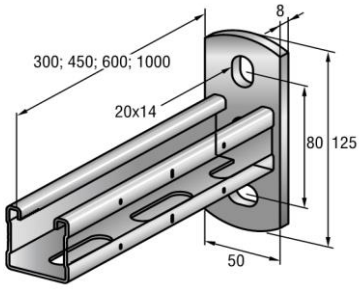
1.3.3 MQ-72 3m



IT- Number	Product name	Weight [kg]	Material
373797	MQ-72 3m	12,3	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	53,545	31,918	0,337	0,000	15,159	6,132
Acidification Potential (AP) [kg SO2-eq.]	1,53E-01	9,71E-02	1,44E-03	0,00E+00	1,47E-04	5,39E-02
Abiotic Depletion (ADP) [kg Sb-eq.]	2,88E-04	2,87E-04	3,40E-08	0,00E+00	6,27E-08	2,32E-07
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	3,67E-07	3,92E-07	2,30E-08	0,00E+00	-5,07E-08	2,25E-09
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	2,41E-02	1,56E-02	9,49E-05	0,00E+00	3,87E-03	4,54E-03
Energy (net calorific value) [MJ]	4,32E+02	3,47E+02	5,98E+00	0,00E+00	-3,89E+00	8,37E+01
Energy ren. (net calorafic value) [MJ]	1,15E+01	9,36E+00	8,56E-01	0,00E+00	-1,61E+00	2,89E+00
Dangerous Waste [kg]	2,53E-01	2,53E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	7,82E+01	7,06E+01	1,25E+00	0,00E+00	6,15E+00	2,82E-01
Radioactive Waste [kg]	4,05E-03	4,94E-03	8,37E-04	0,00E+00	-1,85E-03	1,16E-04
Hazard-free Waste [kg]	-1,18E+01	4,76E-01	0,00E+00	0,00E+00	-1,23E+01	0,00E+00
Water consumption [l]	-9,41E+02	2,14E+02	1,22E+03	0,00E+00	-2,60E+03	2,31E+02
Water pollution [m³]	2,99E+00	2,18E+00	2,99E-01	0,00E+00	3,48E-01	1,63E-01
Air pollution [m³]	5,55E+03	5,03E+03	1,14E+01	0,00E+00	2,33E+02	2,79E+02

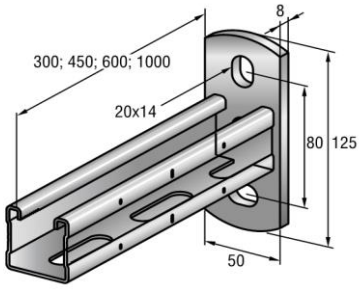
1.3.4 MQK-300



IT- Number	Product name	Weight [kg]	Material
369609	MQK-300	1,03	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	4,484	2,673	0,028	0,000	1,269	0,513
Acidification Potential (AP) [kg SO2-eq.]	1,28E-02	8,13E-03	1,21E-04	0,00E+00	1,23E-05	4,51E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	2,41E-05	2,41E-05	2,84E-09	0,00E+00	5,25E-09	1,94E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	3,07E-08	3,28E-08	1,92E-09	0,00E+00	-4,25E-09	1,89E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	2,02E-03	1,31E-03	7,94E-06	0,00E+00	3,24E-04	3,80E-04
Energy (net calorific value) [MJ]	3,62E+01	2,90E+01	5,00E-01	0,00E+00	-3,26E-01	7,01E+00
Energy ren. (net calorafic value) [MJ]	9,62E-01	7,84E-01	7,17E-02	0,00E+00	-1,35E-01	2,42E-01
Dangerous Waste [kg]	2,12E-02	2,12E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	6,55E+00	5,91E+00	1,05E-01	0,00E+00	5,15E-01	2,36E-02
Radioactive Waste [kg]	3,39E-04	4,14E-04	7,01E-05	0,00E+00	-1,55E-04	9,69E-06
Hazard-free Waste [kg]	-9,90E-01	3,99E-02	0,00E+00	0,00E+00	-1,03E+00	0,00E+00
Water consumption [l]	-7,88E+01	1,79E+01	1,02E+02	0,00E+00	-2,18E+02	1,93E+01
Water pollution [m³]	2,50E-01	1,83E-01	2,50E-02	0,00E+00	2,91E-02	1,37E-02
Air pollution [m³]	4,65E+02	4,21E+02	9,54E-01	0,00E+00	1,95E+01	2,33E+01

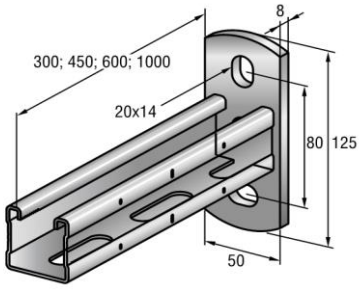
1.3.5 MQK-450



IT- Number	Product name	Weight [kg]	Material
369610	MQK-450	1,34	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	5,833	3,477	0,037	0,000	1,651	0,668
Acidification Potential (AP) [kg SO2-eq.]	1,66E-02	1,06E-02	1,57E-04	0,00E+00	1,60E-05	5,87E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	3,13E-05	3,13E-05	3,70E-09	0,00E+00	6,83E-09	2,53E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	3,99E-08	4,27E-08	2,50E-09	0,00E+00	-5,52E-09	2,46E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	2,63E-03	1,70E-03	1,03E-05	0,00E+00	4,21E-04	4,94E-04
Energy (net calorific value) [MJ]	4,71E+01	3,78E+01	6,51E-01	0,00E+00	-4,24E-01	9,12E+00
Energy ren. (net calorafic value) [MJ]	1,25E+00	1,02E+00	9,32E-02	0,00E+00	-1,75E-01	3,15E-01
Dangerous Waste [kg]	2,75E-02	2,75E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	8,52E+00	7,69E+00	1,37E-01	0,00E+00	6,70E-01	3,07E-02
Radioactive Waste [kg]	4,41E-04	5,39E-04	9,12E-05	0,00E+00	-2,01E-04	1,26E-05
Hazard-free Waste [kg]	-1,29E+00	5,19E-02	0,00E+00	0,00E+00	-1,34E+00	0,00E+00
Water consumption [l]	-1,03E+02	2,33E+01	1,33E+02	0,00E+00	-2,84E+02	2,51E+01
Water pollution [m³]	3,26E-01	2,37E-01	3,26E-02	0,00E+00	3,79E-02	1,78E-02
Air pollution [m³]	6,05E+02	5,48E+02	1,24E+00	0,00E+00	2,54E+01	3,03E+01

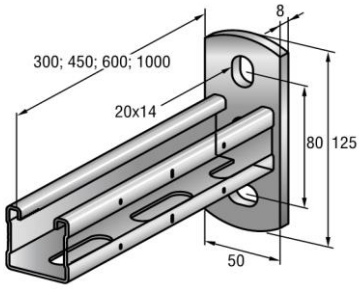
1.3.6 MQK-600



IT- Number	Product name	Weight [kg]	Material
369611	MQK-600	1,7	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	7,401	4,411	0,047	0,000	2,095	0,847
Acidification Potential (AP) [kg SO2-eq.]	2,11E-02	1,34E-02	2,00E-04	0,00E+00	2,03E-05	7,44E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	3,98E-05	3,97E-05	4,69E-09	0,00E+00	8,66E-09	3,21E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	5,07E-08	5,42E-08	3,17E-09	0,00E+00	-7,01E-09	3,12E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,33E-03	2,16E-03	1,31E-05	0,00E+00	5,35E-04	6,27E-04
Energy (net calorific value) [MJ]	5,98E+01	4,79E+01	8,26E-01	0,00E+00	-5,38E-01	1,16E+01
Energy ren. (net calorafic value) [MJ]	1,59E+00	1,29E+00	1,18E-01	0,00E+00	-2,23E-01	3,99E-01
Dangerous Waste [kg]	3,50E-02	3,50E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,08E+01	9,75E+00	1,73E-01	0,00E+00	8,50E-01	3,89E-02
Radioactive Waste [kg]	5,60E-04	6,83E-04	1,16E-04	0,00E+00	-2,55E-04	1,60E-05
Hazard-free Waste [kg]	-1,63E+00	6,58E-02	0,00E+00	0,00E+00	-1,70E+00	0,00E+00
Water consumption [l]	-1,30E+02	2,95E+01	1,68E+02	0,00E+00	-3,60E+02	3,19E+01
Water pollution [m³]	4,13E-01	3,01E-01	4,13E-02	0,00E+00	4,80E-02	2,25E-02
Air pollution [m³]	7,67E+02	6,95E+02	1,57E+00	0,00E+00	3,22E+01	3,85E+01

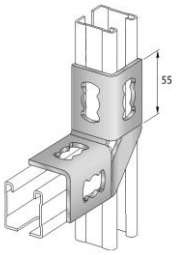
1.3.7 MQK-1000



IT- Number	Product name	Weight [kg]	Material
369612	MQK-1000	2,61	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	11,362	6,773	0,072	0,000	3,217	1,301
Acidification Potential (AP) [kg SO2-eq.]	3,24E-02	2,06E-02	3,06E-04	0,00E+00	3,12E-05	1,14E-02
Abiotic Depletion (ADP) [kg Sb-eq.]	6,11E-05	6,10E-05	7,21E-09	0,00E+00	1,33E-08	4,93E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	7,78E-08	8,32E-08	4,87E-09	0,00E+00	-1,08E-08	4,78E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	5,12E-03	3,31E-03	2,01E-05	0,00E+00	8,21E-04	9,63E-04
Energy (net calorific value) [MJ]	9,18E+01	7,35E+01	1,27E+00	0,00E+00	-8,26E-01	1,78E+01
Energy ren. (net calorafic value) [MJ]	2,44E+00	1,99E+00	1,82E-01	0,00E+00	-3,42E-01	6,13E-01
Dangerous Waste [kg]	5,37E-02	5,37E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,66E+01	1,50E+01	2,66E-01	0,00E+00	1,31E+00	5,98E-02
Radioactive Waste [kg]	8,60E-04	1,05E-03	1,78E-04	0,00E+00	-3,92E-04	2,46E-05
Hazard-free Waste [kg]	-2,51E+00	1,01E-01	0,00E+00	0,00E+00	-2,61E+00	0,00E+00
Water consumption [l]	-2,00E+02	4,53E+01	2,59E+02	0,00E+00	-5,53E+02	4,89E+01
Water pollution [m³]	6,34E-01	4,63E-01	6,35E-02	0,00E+00	7,38E-02	3,46E-02
Air pollution [m³]	1,18E+03	1,07E+03	2,42E+00	0,00E+00	4,95E+01	5,91E+01

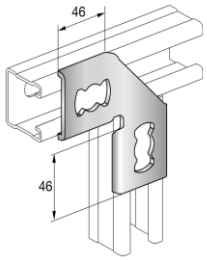
1.3.8 MQW-4/90°



IT- Number	Product name	Weight [kg]	Material
369658	MQW-4/90°	0,22	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,958	0,571	0,006	0,000	0,271	0,110
Acidification Potential (AP) [kg SO2-eq.]	2,73E-03	1,74E-03	2,58E-05	0,00E+00	2,63E-06	9,63E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	5,15E-06	5,14E-06	6,07E-10	0,00E+00	1,12E-09	4,15E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	6,56E-09	7,01E-09	4,11E-10	0,00E+00	-9,07E-10	4,03E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	4,31E-04	2,79E-04	1,70E-06	0,00E+00	6,92E-05	8,11E-05
Energy (net calorific value) [MJ]	7,73E+00	6,20E+00	1,07E-01	0,00E+00	-6,97E-02	1,50E+00
Energy ren. (net calorafic value) [MJ]	2,06E-01	1,67E-01	1,53E-02	0,00E+00	-2,88E-02	5,17E-02
Dangerous Waste [kg]	4,52E-03	4,52E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,40E+00	1,26E+00	2,24E-02	0,00E+00	1,10E-01	5,04E-03
Radioactive Waste [kg]	7,25E-05	8,84E-05	1,50E-05	0,00E+00	-3,30E-05	2,07E-06
Hazard-free Waste [kg]	-2,11E-01	8,52E-03	0,00E+00	0,00E+00	-2,20E-01	0,00E+00
Water consumption [l]	-1,68E+01	3,82E+00	2,18E+01	0,00E+00	-4,66E+01	4,12E+00
Water pollution [m³]	5,35E-02	3,90E-02	5,35E-03	0,00E+00	6,22E-03	2,92E-03
Air pollution [m³]	9,92E+01	8,99E+01	2,04E-01	0,00E+00	4,17E+00	4,98E+00

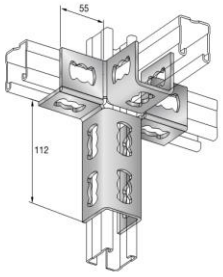
1.3.9 MQW-P2/90°



IT- Number	Product name	Weight [kg]	Material
369661	MQW-P2/90°	0,16	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,697	0,415	0,004	0,000	0,197	0,080
Acidification Potential (AP) [kg SO2-eq.]	1,98E-03	1,26E-03	1,88E-05	0,00E+00	1,91E-06	7,01E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	3,74E-06	3,74E-06	4,42E-10	0,00E+00	8,15E-10	3,02E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	4,77E-09	5,10E-09	2,99E-10	0,00E+00	-6,59E-10	2,93E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,14E-04	2,03E-04	1,23E-06	0,00E+00	5,03E-05	5,90E-05
Energy (net calorific value) [MJ]	5,62E+00	4,51E+00	7,77E-02	0,00E+00	-5,07E-02	1,09E+00
Energy ren. (net calorafic value) [MJ]	1,49E-01	1,22E-01	1,11E-02	0,00E+00	-2,10E-02	3,76E-02
Dangerous Waste [kg]	3,29E-03	3,29E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,02E+00	9,18E-01	1,63E-02	0,00E+00	8,00E-02	3,66E-03
Radioactive Waste [kg]	5,27E-05	6,43E-05	1,09E-05	0,00E+00	-2,40E-05	1,51E-06
Hazard-free Waste [kg]	-1,54E-01	6,20E-03	0,00E+00	0,00E+00	-1,60E-01	0,00E+00
Water consumption [l]	-1,22E+01	2,78E+00	1,59E+01	0,00E+00	-3,39E+01	3,00E+00
Water pollution [m³]	3,89E-02	2,84E-02	3,89E-03	0,00E+00	4,52E-03	2,12E-03
Air pollution [m³]	7,22E+01	6,54E+01	1,48E-01	0,00E+00	3,03E+00	3,62E+00

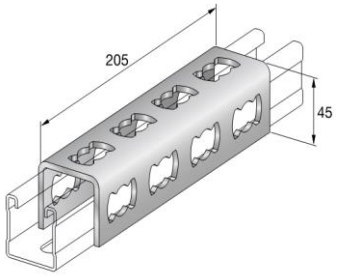
1.3.10 MQV-4/3 D



IT- Number	Product name	Weight [kg]	Material
369642	MQV-4/3 D	0,77	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	3,352	1,998	0,021	0,000	0,949	0,384
Acidification Potential (AP) [kg SO2-eq.]	9,55E-03	6,08E-03	9,04E-05	0,00E+00	9,20E-06	3,37E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	1,80E-05	1,80E-05	2,13E-09	0,00E+00	3,92E-09	1,45E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	2,29E-08	2,45E-08	1,44E-09	0,00E+00	-3,17E-09	1,41E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,51E-03	9,77E-04	5,94E-06	0,00E+00	2,42E-04	2,84E-04
Energy (net calorific value) [MJ]	2,71E+01	2,17E+01	3,74E-01	0,00E+00	-2,44E-01	5,24E+00
Energy ren. (net calorafic value) [MJ]	7,19E-01	5,86E-01	5,36E-02	0,00E+00	-1,01E-01	1,81E-01
Dangerous Waste [kg]	1,58E-02	1,58E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	4,90E+00	4,42E+00	7,85E-02	0,00E+00	3,85E-01	1,76E-02
Radioactive Waste [kg]	2,54E-04	3,10E-04	5,24E-05	0,00E+00	-1,16E-04	7,24E-06
Hazard-free Waste [kg]	-7,40E-01	2,98E-02	0,00E+00	0,00E+00	-7,70E-01	0,00E+00
Water consumption [l]	-5,89E+01	1,34E+01	7,63E+01	0,00E+00	-1,63E+02	1,44E+01
Water pollution [m³]	1,87E-01	1,36E-01	1,87E-02	0,00E+00	2,18E-02	1,02E-02
Air pollution [m³]	3,47E+02	3,15E+02	7,13E-01	0,00E+00	1,46E+01	1,74E+01

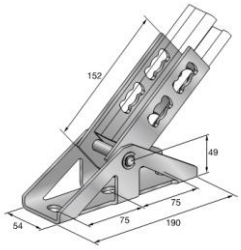
1.3.11 MQV-12



IT- Number	Product name	Weight [kg]	Material
369643	MQV-12	0,56	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	2,438	1,453	0,015	0,000	0,690	0,279
Acidification Potential (AP) [kg SO2-eq.]	6,95E-03	4,42E-03	6,58E-05	0,00E+00	6,69E-06	2,45E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	1,31E-05	1,31E-05	1,55E-09	0,00E+00	2,85E-09	1,06E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	1,67E-08	1,78E-08	1,05E-09	0,00E+00	-2,31E-09	1,03E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,10E-03	7,11E-04	4,32E-06	0,00E+00	1,76E-04	2,07E-04
Energy (net calorific value) [MJ]	1,97E+01	1,58E+01	2,72E-01	0,00E+00	-1,77E-01	3,81E+00
Energy ren. (net calorafic value) [MJ]	5,23E-01	4,26E-01	3,90E-02	0,00E+00	-7,33E-02	1,31E-01
Dangerous Waste [kg]	1,15E-02	1,15E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	3,56E+00	3,21E+00	5,71E-02	0,00E+00	2,80E-01	1,28E-02
Radioactive Waste [kg]	1,84E-04	2,25E-04	3,81E-05	0,00E+00	-8,41E-05	5,27E-06
Hazard-free Waste [kg]	-5,38E-01	2,17E-02	0,00E+00	0,00E+00	-5,60E-01	0,00E+00
Water consumption [l]	-4,28E+01	9,72E+00	5,55E+01	0,00E+00	-1,19E+02	1,05E+01
Water pollution [m³]	1,36E-01	9,92E-02	1,36E-02	0,00E+00	1,58E-02	7,42E-03
Air pollution [m³]	2,53E+02	2,29E+02	5,19E-01	0,00E+00	1,06E+01	1,27E+01

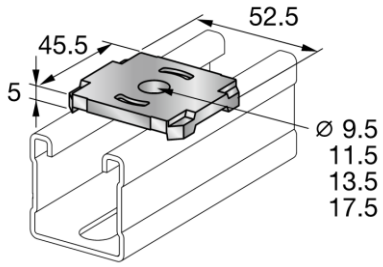
1.3.12 MQP-G



IT- Number	Product name	Weight [kg]	Material
369654	MQP-G	1,06	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	4,614	2,751	0,029	0,000	1,306	0,528
Acidification Potential (AP) [kg SO2-eq.]	1,31E-02	8,37E-03	1,24E-04	0,00E+00	1,27E-05	4,64E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	2,48E-05	2,48E-05	2,93E-09	0,00E+00	5,40E-09	2,00E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	3,16E-08	3,38E-08	1,98E-09	0,00E+00	-4,37E-09	1,94E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	2,08E-03	1,35E-03	8,18E-06	0,00E+00	3,33E-04	3,91E-04
Energy (net calorific value) [MJ]	3,73E+01	2,99E+01	5,15E-01	0,00E+00	-3,36E-01	7,22E+00
Energy ren. (net calorafic value) [MJ]	9,90E-01	8,06E-01	7,38E-02	0,00E+00	-1,39E-01	2,49E-01
Dangerous Waste [kg]	2,18E-02	2,18E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	6,74E+00	6,08E+00	1,08E-01	0,00E+00	5,30E-01	2,43E-02
Radioactive Waste [kg]	3,49E-04	4,26E-04	7,21E-05	0,00E+00	-1,59E-04	9,97E-06
Hazard-free Waste [kg]	-1,02E+00	4,11E-02	0,00E+00	0,00E+00	-1,06E+00	0,00E+00
Water consumption [l]	-8,11E+01	1,84E+01	1,05E+02	0,00E+00	-2,24E+02	1,99E+01
Water pollution [m³]	2,58E-01	1,88E-01	2,58E-02	0,00E+00	3,00E-02	1,40E-02
Air pollution [m³]	4,78E+02	4,33E+02	9,82E-01	0,00E+00	2,01E+01	2,40E+01

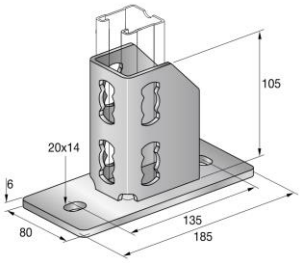
1.3.13 MQZ-L13



IT- Number	Product name	Weight [kg]	Material
369680	MQZ-L13	0,084	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,366	0,218	0,002	0,000	0,104	0,042
Acidification Potential (AP) [kg SO2-eq.]	1,04E-03	6,63E-04	9,86E-06	0,00E+00	1,00E-06	3,68E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	1,96E-06	1,96E-06	2,32E-10	0,00E+00	4,28E-10	1,59E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	2,50E-09	2,68E-09	1,57E-10	0,00E+00	-3,46E-10	1,54E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,65E-04	1,07E-04	6,48E-07	0,00E+00	2,64E-05	3,10E-05
Energy (net calorific value) [MJ]	2,95E+00	2,37E+00	4,08E-02	0,00E+00	-2,66E-02	5,72E-01
Energy ren. (net calorafic value) [MJ]	7,85E-02	6,39E-02	5,85E-03	0,00E+00	-1,10E-02	1,97E-02
Dangerous Waste [kg]	1,73E-03	1,73E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	5,34E-01	4,82E-01	8,56E-03	0,00E+00	4,20E-02	1,92E-03
Radioactive Waste [kg]	2,77E-05	3,38E-05	5,72E-06	0,00E+00	-1,26E-05	7,90E-07
Hazard-free Waste [kg]	-8,07E-02	3,25E-03	0,00E+00	0,00E+00	-8,40E-02	0,00E+00
Water consumption [l]	-6,43E+00	1,46E+00	8,32E+00	0,00E+00	-1,78E+01	1,57E+00
Water pollution [m³]	2,04E-02	1,49E-02	2,04E-03	0,00E+00	2,37E-03	1,11E-03
Air pollution [m³]	3,79E+01	3,43E+01	7,78E-02	0,00E+00	1,59E+00	1,90E+00

1.3.14 MQP-21-72



IT- Number	Product name	Weight [kg]	Material
369651	MQP-21-72	1,15	Steel

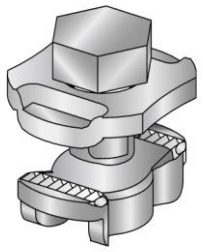
Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	5,006	2,984	0,032	0,000	1,417	0,573
Acidification Potential (AP) [kg SO2-eq.]	1,43E-02	9,08E-03	1,35E-04	0,00E+00	1,37E-05	5,04E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	2,69E-05	2,69E-05	3,17E-09	0,00E+00	5,86E-09	2,17E-08
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	3,43E-08	3,67E-08	2,15E-09	0,00E+00	-4,74E-09	2,11E-10
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	2,25E-03	1,46E-03	8,87E-06	0,00E+00	3,62E-04	4,24E-04
Energy (net calorific value) [MJ]	4,04E+01	3,24E+01	5,59E-01	0,00E+00	-3,64E-01	7,83E+00
Energy ren. (net calorafic value) [MJ]	1,07E+00	8,75E-01	8,00E-02	0,00E+00	-1,51E-01	2,70E-01
Dangerous Waste [kg]	2,36E-02	2,36E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	7,32E+00	6,60E+00	1,17E-01	0,00E+00	5,75E-01	2,63E-02
Radioactive Waste [kg]	3,79E-04	4,62E-04	7,83E-05	0,00E+00	-1,73E-04	1,08E-05
Hazard-free Waste [kg]	-1,11E+00	4,45E-02	0,00E+00	0,00E+00	-1,15E+00	0,00E+00
Water consumption [l]	-8,80E+01	2,00E+01	1,14E+02	0,00E+00	-2,43E+02	2,16E+01
Water pollution [m³]	2,79E-01	2,04E-01	2,80E-02	0,00E+00	3,25E-02	1,52E-02
Air pollution [m³]	5,19E+02	4,70E+02	1,07E+00	0,00E+00	2,18E+01	2,60E+01

1.3.15 Washer M10

IT- Number	Product name	Weight [kg]	Material
2064293	Washer M10	0,008	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,031	0,017	0,000	0,000	0,010	0,004
Acidification Potential (AP) [kg SO2-eq.]	9,62E-05	6,02E-05	9,39E-07	0,00E+00	9,56E-08	3,50E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	1,31E-09	1,10E-09	2,21E-11	0,00E+00	4,08E-11	1,51E-10
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	-6,57E-12	1,00E-11	1,49E-11	0,00E+00	-3,30E-11	1,47E-12
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,44E-05	8,85E-06	6,17E-08	0,00E+00	2,52E-06	2,95E-06
Energy (net calorific value) [MJ]	2,85E-01	2,29E-01	3,89E-03	0,00E+00	-2,53E-03	5,45E-02
Energy ren. (net calorafic value) [MJ]	6,81E-03	5,42E-03	5,57E-04	0,00E+00	-1,05E-03	1,88E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,17E-01	1,12E-01	8,15E-04	0,00E+00	4,00E-03	1,83E-04
Radioactive Waste [kg]	7,53E-07	1,33E-06	5,44E-07	0,00E+00	-1,20E-06	7,53E-08
Hazard-free Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	3,15E+00	3,90E+00	7,93E-01	0,00E+00	-1,69E+00	1,50E-01
Water pollution [m³]	1,25E-03	7,23E-04	1,95E-04	0,00E+00	2,26E-04	1,06E-04
Air pollution [m³]	3,08E+00	2,74E+00	7,41E-03	0,00E+00	1,52E-01	1,81E-01

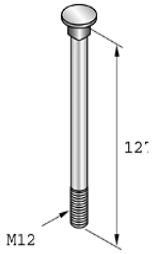
1.3.16 MQN



IT- Number	Product name	Weight [kg]	Material
369623	MQN	0,066	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,292	0,152	0,026	0,000	0,081	0,033
Acidification Potential (AP) [kg SO2-eq.]	9,45E-04	5,43E-04	1,12E-04	0,00E+00	7,88E-07	2,89E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	5,83E-08	5,43E-08	2,40E-09	0,00E+00	3,36E-10	1,25E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	1,65E-09	1,68E-10	1,75E-09	0,00E+00	-2,72E-10	1,21E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,32E-04	7,97E-05	7,10E-06	0,00E+00	2,08E-05	2,43E-05
Energy (net calorific value) [MJ]	2,86E+00	1,97E+00	4,62E-01	0,00E+00	-2,09E-02	4,49E-01
Energy ren. (net calorafic value) [MJ]	1,23E-01	4,97E-02	6,66E-02	0,00E+00	-8,64E-03	1,55E-02
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,12E+00	9,91E-01	9,75E-02	0,00E+00	3,30E-02	1,51E-03
Radioactive Waste [kg]	6,71E-05	1,12E-05	6,51E-05	0,00E+00	-9,91E-06	6,21E-07
Hazard-free Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	1,16E+02	3,35E+01	9,49E+01	0,00E+00	-1,40E+01	1,24E+00
Water pollution [m^3]	3,43E-02	8,37E-03	2,32E-02	0,00E+00	1,87E-03	8,75E-04
Air pollution [m^3]	2,84E+01	2,47E+01	8,85E-01	0,00E+00	1,25E+00	1,49E+00

1.3.17 MIA-OH 120



IT- Number	Product name	Weight [kg]	Material
304890	MIA-OH 120	0,13	Steel

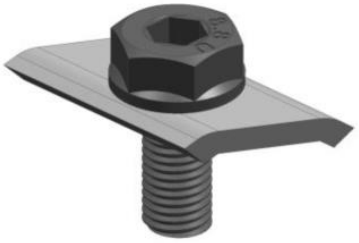
Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	1,481	0,748	0,204	0,000	0,377	0,152
Acidification Potential (AP) [kg SO2-eq.]	4,87E-03	2,67E-03	8,68E-04	0,00E+00	3,65E-06	1,34E-03
Abiotic Depletion (ADP) [kg Sb-eq.]	7,28E-08	4,69E-08	1,86E-08	0,00E+00	1,56E-09	5,77E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	1,28E-08	4,28E-10	1,35E-08	0,00E+00	-1,26E-09	5,60E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	6,50E-04	3,87E-04	5,50E-05	0,00E+00	9,61E-05	1,13E-04
Energy (net calorific value) [MJ]	1,50E+01	9,47E+00	3,58E+00	0,00E+00	-9,67E-02	2,08E+00
Energy ren. (net calorafic value) [MJ]	7,81E-01	2,33E-01	5,16E-01	0,00E+00	-4,00E-02	7,17E-02
Dangerous Waste [kg]	1,59E-04	1,59E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	5,87E+00	4,95E+00	7,57E-01	0,00E+00	1,53E-01	7,00E-03
Radioactive Waste [kg]	5,17E-04	5,43E-05	5,05E-04	0,00E+00	-4,59E-05	2,87E-06
Hazard-free Waste [kg]	-3,05E-01	2,61E-05	1,30E-05	0,00E+00	-3,06E-01	0,00E+00
Water consumption [l]	8,41E+02	1,64E+02	7,36E+02	0,00E+00	-6,47E+01	5,73E+00
Water pollution [m³]	2,22E-01	2,95E-02	1,80E-01	0,00E+00	8,63E-03	4,05E-03
Air pollution [m³]	1,40E+02	1,21E+02	6,87E+00	0,00E+00	5,79E+00	6,92E+00

1.3.18 MIA-EH90

IT- Number	Product name	Weight [kg]	Material
304887	MIA-EH90	0,16	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,826	0,409	0,140	0,000	0,197	0,080
Acidification Potential (AP) [kg SO2-eq.]	2,75E-03	1,46E-03	5,95E-04	0,00E+00	1,91E-06	7,01E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	4,14E-08	2,48E-08	1,27E-08	0,00E+00	8,15E-10	3,02E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	8,89E-09	2,33E-10	9,29E-09	0,00E+00	-6,59E-10	2,93E-11
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,58E-04	2,11E-04	3,77E-05	0,00E+00	5,03E-05	5,90E-05
Energy (net calorific value) [MJ]	8,55E+00	5,05E+00	2,46E+00	0,00E+00	-5,07E-02	1,09E+00
Energy ren. (net calorafic value) [MJ]	4,98E-01	1,27E-01	3,54E-01	0,00E+00	-2,10E-02	3,76E-02
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	3,31E+00	2,71E+00	5,19E-01	0,00E+00	8,00E-02	3,66E-03
Radioactive Waste [kg]	3,53E-04	2,91E-05	3,47E-04	0,00E+00	-2,40E-05	1,51E-06
Hazard-free Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	5,63E+02	8,86E+01	5,05E+02	0,00E+00	-3,39E+01	3,00E+00
Water pollution [m³]	1,46E-01	1,57E-02	1,23E-01	0,00E+00	4,52E-03	2,12E-03
Air pollution [m³]	7,74E+01	6,60E+01	4,71E+00	0,00E+00	3,03E+00	3,62E+00

1.3.19 MC-S-M12



IT- Number	Product name	Weight [kg]	Material
388356	MC-S-M12	0,05	Polymer / Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,262	0,132	0,036	0,000	0,067	0,027
Acidification Potential (AP) [kg SO2-eq.]	8,62E-04	4,71E-04	1,53E-04	0,00E+00	6,45E-07	2,36E-04
Abiotic Depletion (ADP) [kg Sb-eq.]	1,29E-08	8,29E-09	3,28E-09	0,00E+00	2,75E-10	1,02E-09
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	2,26E-09	7,57E-11	2,39E-09	0,00E+00	-2,23E-10	9,90E-12
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	1,15E-04	6,83E-05	9,72E-06	0,00E+00	1,70E-05	1,99E-05
Energy (net calorific value) [MJ]	2,66E+00	1,67E+00	6,34E-01	0,00E+00	-1,71E-02	3,68E-01
Energy ren. (net calorafic value) [MJ]	1,38E-01	4,12E-02	9,13E-02	0,00E+00	-7,07E-03	1,27E-02
Dangerous Waste [kg]	2,80E-05	2,80E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,04E+00	8,75E-01	1,34E-01	0,00E+00	2,70E-02	1,24E-03
Radioactive Waste [kg]	9,13E-05	9,60E-06	8,93E-05	0,00E+00	-8,11E-06	5,08E-07
Hazard-free Waste [kg]	-5,40E-02	4,62E-06	2,30E-06	0,00E+00	-5,40E-02	0,00E+00
Water consumption [l]	1,49E+02	2,90E+01	1,30E+02	0,00E+00	-1,14E+01	1,01E+00
Water pollution [m³]	3,93E-02	5,22E-03	3,18E-02	0,00E+00	1,53E-03	7,16E-04
Air pollution [m³]	2,48E+01	2,13E+01	1,21E+00	0,00E+00	1,02E+00	1,22E+00

1.3.20 Hexagon Lock nut M12-F

IT- Number	Product name	Weight [kg]	Material
382897	Hexagon Lock nut M12-F	0,02	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,111	0,054	0,023	0,000	0,025	0,010
Acidification Potential (AP) [kg SO2-eq.]	3,77E-04	1,92E-04	9,69E-05	0,00E+00	2,39E-07	8,76E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	5,76E-09	3,21E-09	2,07E-09	0,00E+00	1,02E-10	3,78E-10
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	1,46E-09	3,03E-11	1,51E-09	0,00E+00	-8,24E-11	3,67E-12
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	4,74E-05	2,76E-05	6,14E-06	0,00E+00	6,29E-06	7,38E-06
Energy (net calorific value) [MJ]	1,18E+00	6,50E-01	4,00E-01	0,00E+00	-6,33E-03	1,36E-01
Energy ren. (net calorafic value) [MJ]	7,63E-02	1,65E-02	5,77E-02	0,00E+00	-2,62E-03	4,70E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	4,52E-01	3,57E-01	8,45E-02	0,00E+00	1,00E-02	4,58E-04
Radioactive Waste [kg]	5,73E-05	3,73E-06	5,64E-05	0,00E+00	-3,00E-06	1,88E-07
Hazard-free Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	8,98E+01	1,15E+01	8,21E+01	0,00E+00	-4,23E+00	3,75E-01
Water pollution [m³]	2,29E-02	2,01E-03	2,01E-02	0,00E+00	5,65E-04	2,65E-04
Air pollution [m³]	1,03E+01	8,69E+00	7,67E-01	0,00E+00	3,79E-01	4,53E-01

1.3.21 MQZ-E 31

IT- Number	Product name	Weight [kg]	Material
369686	MQZ-E 31	0,005	PE

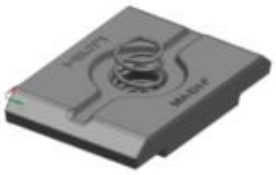
Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,025	0,012	0,005	0,000	0,006	0,002
Acidification Potential (AP) [kg SO2-eq.]	1,12E-04	7,11E-05	1,92E-05	0,00E+00	5,97E-08	2,19E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	1,08E-09	5,85E-10	3,72E-10	0,00E+00	2,55E-11	9,44E-11
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	4,86E-09	4,59E-09	2,94E-10	0,00E+00	-2,06E-11	9,16E-13
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,93E-05	3,47E-05	1,17E-06	0,00E+00	1,57E-06	1,84E-06
Energy (net calorific value) [MJ]	2,82E-01	1,71E-01	7,88E-02	0,00E+00	-1,58E-03	3,40E-02
Energy ren. (net calorafic value) [MJ]	1,20E-02	0,00E+00	1,15E-02	0,00E+00	-6,55E-04	1,17E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,95E-02	0,00E+00	1,69E-02	0,00E+00	2,50E-03	1,15E-04
Radioactive Waste [kg]	1,06E-05	0,00E+00	1,13E-05	0,00E+00	-7,51E-07	4,70E-08
Hazard-free Waste [kg]	1,00E-04	0,00E+00	1,00E-04	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	1,55E+01	0,00E+00	1,64E+01	0,00E+00	-1,06E+00	9,37E-02
Water pollution [m³]	6,22E-03	2,02E-03	4,00E-03	0,00E+00	1,41E-04	6,63E-05
Air pollution [m³]	8,39E-01	4,79E-01	1,53E-01	0,00E+00	9,48E-02	1,13E-01

1.3.22 MQZ-E 41

IT- Number	Product name	Weight [kg]	Material
369685	MQZ-E 41	0,005	PE

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,025	0,012	0,005	0,000	0,006	0,002
Acidification Potential (AP) [kg SO2-eq.]	1,12E-04	7,11E-05	1,92E-05	0,00E+00	5,97E-08	2,19E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	1,08E-09	5,85E-10	3,72E-10	0,00E+00	2,55E-11	9,44E-11
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	4,86E-09	4,59E-09	2,94E-10	0,00E+00	-2,06E-11	9,16E-13
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,93E-05	3,47E-05	1,17E-06	0,00E+00	1,57E-06	1,84E-06
Energy (net calorific value) [MJ]	2,82E-01	1,71E-01	7,88E-02	0,00E+00	-1,58E-03	3,40E-02
Energy ren. (net calorafic value) [MJ]	1,20E-02	0,00E+00	1,15E-02	0,00E+00	-6,55E-04	1,17E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,95E-02	0,00E+00	1,69E-02	0,00E+00	2,50E-03	1,15E-04
Radioactive Waste [kg]	1,06E-05	0,00E+00	1,13E-05	0,00E+00	-7,51E-07	4,70E-08
Hazard-free Waste [kg]	1,00E-04	0,00E+00	1,00E-04	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	1,55E+01	0,00E+00	1,64E+01	0,00E+00	-1,06E+00	9,37E-02
Water pollution [m³]	6,22E-03	2,02E-03	4,00E-03	0,00E+00	1,41E-04	6,63E-05
Air pollution [m³]	8,39E-01	4,79E-01	1,53E-01	0,00E+00	9,48E-02	1,13E-01

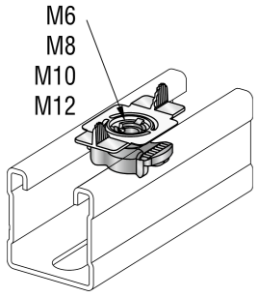
1.3.23 MIA-EH-P



IT- Number	Product name	Weight [kg]	Material
304891	MIA-EH-P	0,28	Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,025	0,012	0,005	0,000	0,006	0,002
Acidification Potential (AP) [kg SO2-eq.]	1,12E-04	7,11E-05	1,92E-05	0,00E+00	5,97E-08	2,19E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	1,08E-09	5,85E-10	3,72E-10	0,00E+00	2,55E-11	9,44E-11
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	4,86E-09	4,59E-09	2,94E-10	0,00E+00	-2,06E-11	9,16E-13
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,93E-05	3,47E-05	1,17E-06	0,00E+00	1,57E-06	1,84E-06
Energy (net calorific value) [MJ]	2,82E-01	1,71E-01	7,88E-02	0,00E+00	-1,58E-03	3,40E-02
Energy ren. (net calorafic value) [MJ]	1,20E-02	0,00E+00	1,15E-02	0,00E+00	-6,55E-04	1,17E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,95E-02	0,00E+00	1,69E-02	0,00E+00	2,50E-03	1,15E-04
Radioactive Waste [kg]	1,06E-05	0,00E+00	1,13E-05	0,00E+00	-7,51E-07	4,70E-08
Hazard-free Waste [kg]	1,00E-04	0,00E+00	1,00E-04	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	1,55E+01	0,00E+00	1,64E+01	0,00E+00	-1,06E+00	9,37E-02
Water pollution [m³]	6,22E-03	2,02E-03	4,00E-03	0,00E+00	1,41E-04	6,63E-05
Air pollution [m³]	8,39E-01	4,79E-01	1,53E-01	0,00E+00	9,48E-02	1,13E-01

1.3.24 MQM



IT- Number	Product name	Weight [kg]	Material
369626	MQM	0,021	PA6/Steel

Enviromental impact category	Total	Raw material	Produc-tion	Use	End of life	Transpor-tation
Global Warming Potential (GWP 100 years) [kg CO2-eq.]	0,025	0,012	0,005	0,000	0,006	0,002
Acidification Potential (AP) [kg SO2-eq.]	1,12E-04	7,11E-05	1,92E-05	0,00E+00	5,97E-08	2,19E-05
Abiotic Depletion (ADP) [kg Sb-eq.]	1,08E-09	5,85E-10	3,72E-10	0,00E+00	2,55E-11	9,44E-11
Ozone Depletion Potential (ODP, catalytic) [kg R11-eq.]	4,86E-09	4,59E-09	2,94E-10	0,00E+00	-2,06E-11	9,16E-13
Photochemical Oxidant Potential (POCP) [kg Ethene-eq.]	3,93E-05	3,47E-05	1,17E-06	0,00E+00	1,57E-06	1,84E-06
Energy (net calorific value) [MJ]	2,82E-01	1,71E-01	7,88E-02	0,00E+00	-1,58E-03	3,40E-02
Energy ren. (net calorafic value) [MJ]	1,20E-02	0,00E+00	1,15E-02	0,00E+00	-6,55E-04	1,17E-03
Dangerous Waste [kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Inert Waste [kg]	1,95E-02	0,00E+00	1,69E-02	0,00E+00	2,50E-03	1,15E-04
Radioactive Waste [kg]	1,06E-05	0,00E+00	1,13E-05	0,00E+00	-7,51E-07	4,70E-08
Hazard-free Waste [kg]	1,00E-04	0,00E+00	1,00E-04	0,00E+00	0,00E+00	0,00E+00
Water consumption [l]	1,55E+01	0,00E+00	1,64E+01	0,00E+00	-1,06E+00	9,37E-02
Water pollution [m³]	6,22E-03	2,02E-03	4,00E-03	0,00E+00	1,41E-04	6,63E-05
Air pollution [m³]	8,39E-01	4,79E-01	1,53E-01	0,00E+00	9,48E-02	1,13E-01