

GRANULATORS

Reprocessing Plastic Scrap
into Valuable Regrind

world of innovation



Beside-the-press granulation

Sprues are typically composed of clean production scrap and can therefore be easily reused.

- » Material cost accounts for almost 80% of the value of injection molded parts. In-house recycling of all such production scrap is therefore highly desirable.
- » Closed-loop recycling gives a second life to in-house production scrap and also pre-empts waste disposal costs and the excessive use of virgin resin.
- » Granulated in-house scrap can constitute as much as 25% of new parts.
- » Beside-the-press granulation eliminates the storage or transportation of waste, thus minimizing the potential for contamination of the material.
- » The ROI (Return On Investment) for beside-the-press granulation is typically just a few months.



The G-Max series Smart engineering – Compact granulators

A smart automated waste input for a closed-loop granule conveying system is standard. It feeds directly back to the IMM (up to 500 tons) and grinds all soft to medium-hard plastics such as PP, PE, ABS, PU, PC.

- » Metered feeding via sprue-picker/conveyor and bulky wastes are made efficient by optimal feeding hopper clearance.
- » Tool-less screen changing and cleaning is made simple thanks to the tilting hopper. This allows much better access to the top of the cutting chamber and the swing-down screen cradle.

Achieving better cutting performance and maximizing cutting efficiency

- » The speed of 200 rpm @ 50 Hz reduces unnecessary repeated cuts. Particles go through an optimized rotor and screen, producing cleaner regrind and the best combination for throughput.
- » A powerful grinding action reduces a wide range of part sizes and shapes in order to process both thick and thin-walled materials using staggered or hybrid rotors.
- » Reduced noise, energy consumption and rotor-stalling is achieved through smaller blade design.

Automatic tensioning system on belt drive

- » A maintenance-free system of belt drive is supplied. The automatic self-tensioning system eliminates the constant need for retensioning the belt to prevent slipping and rotor-stalling.
- » Greater and more cost-effective cutting forces are achieved without adding horsepower thanks to the massive flywheel pulley which maximizes the inertia of the rotor.

Low noise levels during operation

- » The soundproofed feeding hopper includes sound-dampening material that is placed between two sheets of stainless steel. This reduces noise when material hits the inside walls.

G-Max Series: Technical specifications

wittmann

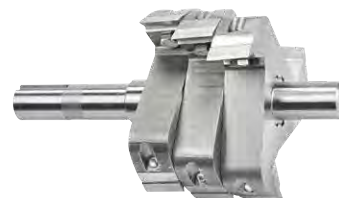
One size does not fit all

- » The G-Max 9 hopper comes in 3 different styles. The granulator can be exactly matched to application needs, and can be modified in the field.
- » Beside-the-press application with sprue picker or robot.
- » Mid-height in-feed hopper for placement under a conveyor belt or a drum separator.
- » Lower throat to be placed directly under a slide chute adjacent to an IMM.



G-Max 9

- » Cutting chamber: 130 x 260 mm
- » Staggered rotor: 9 blades
- » Motor output: 2.2 kW
- » Rotor diameter: 180 mm
- » Regrind bin inlet volume: 5 liters
- » Feeding height: 1,150 – 880 – 650 mm



Standard features

- » The staggered rotor allows faster processing, and also provides a powerful cutting force by concentrating the total granulation energy into one short knife at a time.
- » For convenience, the electrical panel can be relocated on the alternate side according to the placement of the granulator.
- » Regrind bin with fixed outlet.

Optional features

- » Locking in metallic particles can be prevented by placing a magnet along one side of the feeding hopper.
- » Grinding hot/warm materials with a water cooled cutting chamber.
- » Alarm sensor for regrind level provides audible and visual alarms to avoid the overfilling of the regrind bin.
- » Saving energy by shutting down the granulator via an electrical interface when the IMM is turned off.

G-Max Series: Technical specifications

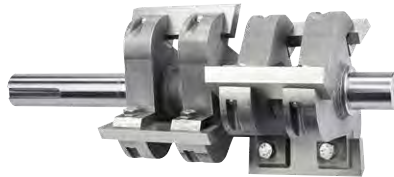
G-Max 13

- » Cutting chamber: 247 x 284 mm
- » Open rotor design: 3 blades
- » Motor output: 3 kW
- » Rotor diameter: 180 mm
- » Regrind bin inlet volume: 13 liters



G-Max 23

- » Cutting chamber: 310 x 235 mm
- » Hybrid-staggered rotor: 6 blades
- » Motor output: 3 kW
- » Rotor diameter: 220 mm
- » Regrind bin inlet volume: 13 liters



G-Max 33

- » Cutting chamber: 460 x 235 mm
- » Hybrid-staggered rotor: 9 blades
- » Motor output: 4 kW
- » Rotor diameter: 220 mm
- » Regrind bin inlet volume: 16 liters



Standard features

- » Efficient granulation of materials that are still warm from processing is helped via airflow in the cutting chamber and by open spaces between the rotating knives and the center of the shaft of the hybrid-staggered and open rotor design.
- » The electric panel can be located on both sides of the granulator.
- » Regrind bin with fixed outlet.

Optional features

- » Locking in metallic particles can be prevented by placing a magnet along one side of the feeding hopper.
- » Grinding hot/warm materials with a water-cooled cutting chamber.
- » Alarm sensor for regrind level provides audible and visual alarms to avoid the overfilling of the regrind bin.
- » Saving energy by shutting down the granulator via an electrical interface when the IMM is turned off.

Screenless granulators

witmann

The most efficient and cost-effective grinding of engineered resins as well as styrenics, acrylics, and glass-fiber-reinforced materials due to low speed (27 rpm @ 50 Hz).

Low speed means high torque, less wear on cutting tools for reduced maintenance, low sound levels, low energy consumption. The low speed decreases noise and flyback during operation and provides a consistent regrind and better quality.

Ideally suited for metered feed beside injection molding machines up to 300 tons.

The small footprint accommodates tight spaces and the wide-mouth, flared in-feed hopper easily handles a range of robot or conveyor drops and sprue/runner sizes.

Easy usage due to

- » Viewing window to provide visibility to the cutting chamber during operation.

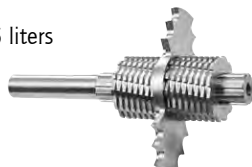
Low noise levels during operation

- » The soundproofed feeding hopper includes sound-dampening material that is placed between two sheets of stainless steel. This reduces noise when material hits the inside walls.



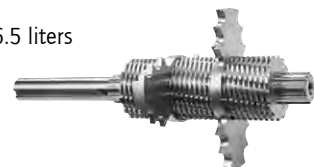
S-Max 1

- » Cutting chamber: 240 x 160 mm
- » Number of cutters: 1
- » Motor output: 0.75 kW
- » Regrind bin inlet volume: 4.5 liters



S-Max 2

- » Cutting chamber: 240 x 279 mm
- » Number of cutters: 2
- » Motor output: 1.1 kW
- » Regrind bin inlet volume: 6.5 liters



S-Max 2 plus

- » Cutting chamber: 240 x 346 mm
- » Number of cutters: 2
- » Motor output: 1.5 kW
- » Regrind bin inlet volume: 10.5 liters



S-Max 3

- » Cutting chamber: 240 x 467 mm
- » Number of cutters: 3
- » Motor output: 2.2 kW
- » Regrind bin inlet volume: 12 liters



Optional features

- » Granulation of thicker-walled or tougher plastics with **ARS (Automatic Reversing System)** to help avoid rotor blocking in case of jams.
- » Granulation of large and nested sprues or parts causing bridging into the feeding hopper, the second shaft (**S-Max 3** only) is a force feed system for pull-in and pre-break actions.
- » Locking in metallic particles can be prevented by placing a magnet along one side of the feeding hopper.
- » Grinding hot/warm materials with a water-cooled cutting chamber.
- » Saving energy by shutting down the granulator via an electrical interface when the IMM is turned off.
- » Alarm sensor for regrind level provides audible and visual alarms to avoid the overfilling of the regrind bin.

Screenless granulators for central scrap reclamation

S-Max Dual series

Equipped with two rotors in the cutting chamber for large sprues and parts, the S-Max Dual is typically used offline, located away from the process.

Material is fed into the granulator by a conveyor belt or by dumping the content of a box directly into the feed hopper of the granulator.

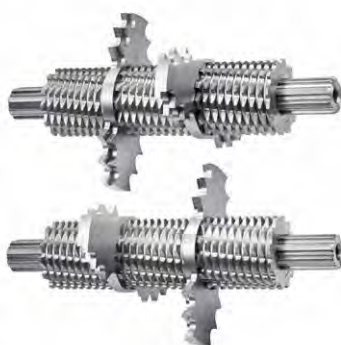
Alarm sensor for regrind level provides audible and visual alarms to avoid the overflowing of the regrind bin.

Possibility of different positions for vacuum take-off connection.



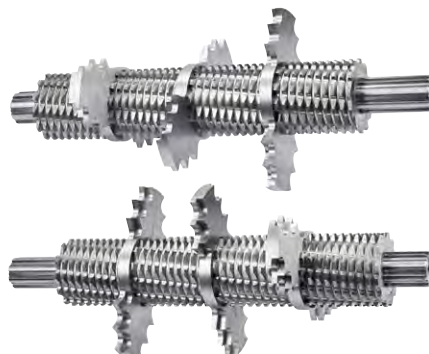
S-Max Dual 4

- » Cutting chamber: 530 x 346 mm
- » Number of cutters: 4
- » Motor output: 2 x 2.2 kW
- » Regrind bin inlet volume: 25 liters



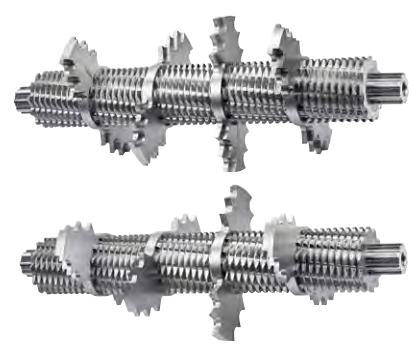
S-Max Dual 6

- » Cutting chamber: 530 x 467 mm
- » Number of cutters: 6
- » Motor output: 2 x 2.2 kW
- » Regrind bin inlet volume: 30 liters



S-Max Dual 8

- » Cutting chamber: 530 x 588 mm
- » Number of cutters: 8
- » Motor output: 2 x 3 kW
- » Regrind bin inlet volume: 40 liters



Optional features

- » Granulation of thicker-walled or tougher plastics with **ARS (Automatic Reversing System)** to help avoid rotor blocking in case of jams.
- » Granulation of large and nested sprues or parts causing bridging into the feeding hopper, the third shaft is a force feed system for pull-in and pre-break actions.
- » Locking in metallic particles can be prevented by placing a magnet along one side of the feeding hopper.
- » Grinding hot/warm materials with a water-cooled cutting chamber.
- » Automatic emptying system with a high capacity vacuum loader.

Medium-size blade granulator

Wittmann

G-Max XL

Efficient medium beside-the-press granulator for bulky parts from injection molding and/or blow molding applications.

Very rugged unit and extremely versatile, can be used in robot-fed, conveyor-fed or hand-fed applications.

Higher throughput with less motor power, less noise, and reduced fines and dust due to scissor cutting action and a slant-knife arrangement.

Efficient granulation of materials that are still warm from processing due to airflow through the cutting chamber by the open spaces between the rotating knives and the centre of the shaft of the 3-blade open rotor design.

Easy changing of blades which are adjustable and pre-adjusted to the proper gap outside the granulator with the use of the knife gap pre-adjustment fixture.

Longer knife life due to adjustable rotating and stationary knives.

No contamination of the regrind because motor bearings are positioned outside the cutting chamber.

Screen changing and cleaning are extremely simple without tools due to the tilting hopper which allows better access to the top of the cutting chamber and the swing-down screen cradle.

Easy to maintain a high level of cleanliness because the regrind collection bin is made of stainless steel.

A soundproofed feeding hopper includes sound-dampening material placed between two sheets of stainless steel, this reduces noise when material hits the inside walls.

G-Max XL

- » Cutting chamber: 300 x 300 mm
- » Motor output: 5.5 kW
- » Rotor diameter: 260 mm



Optional features

- » Mechanical high level sensor in the regrind collection bin.
- » Locking in metallic particles can be prevented by placing a magnet along one side of the feeding hopper.
- » Grinding hot/warm materials with a water-cooled cutting chamber.
- » Granulation of thicker-walled parts via a massive inertia flywheel that reduces the stalling of the rotor and minimizes motor amperage spikes.
- » Granulation of long parts via rear feeding – allowing a more direct access to the cutting chamber.
- » Automatic emptying system with a high capacity vacuum loader.



Under-the-press granulators

Scrap is gravity-fed directly from the processing machine, requiring no conveying or manual handling.

Low profile and compact design fits under most presses.

A multi-position swivel outlet pipe makes easier connection to the flexible hose of the hopper loader.

Easy to maintain a high level of cleanliness because the regrind collection bin is made of stainless steel.

Regular feeding of runners/sprues inside the cutting chamber due to a pre-cutting knife on the auger tube which pre-empts wrap-arounds and screw jams.

Screenless model Minor 2A

- » Low speed (27 rpm @ 50Hz) for the most efficient and cost effective grinding of glass-filled plastics.
- » Allows no "longs" and provides uniform regrind with minimal fines for efficient re-processing.
- » Low-speed single pass processing means less wear on cutting tools for reduced maintenance, low sound levels, and low energy consumption.
- » Cutting chamber: 240 x 249 mm
- » Number of cutters: 2
- » Opening of auger throat: 600 x 280 mm
- » Motor output: 2 x 1.1 kW
- » Feeding height: 595 mm (optional: 545 mm)



Blade model MAS 2A

Conventional model for processing soft to medium hard materials.

3-blade open rotor with adjustable rotating and stationary knives.

Scissor-type cutting action for efficient processing of thin, soft, flexible materials.

Open rotor allows for higher airflow through the cutting chamber for more efficient processing of hot scrap.

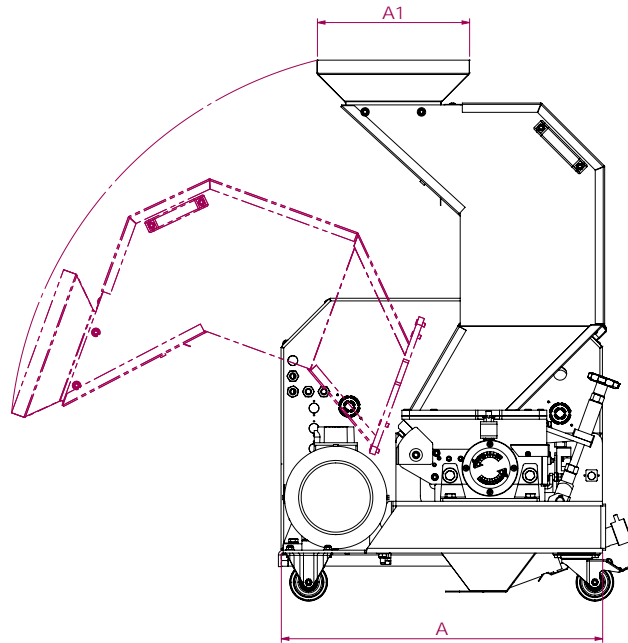
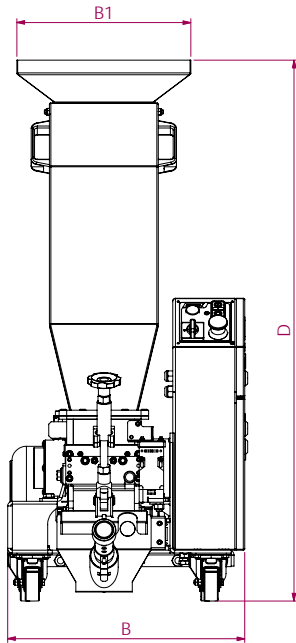
- » Cutting chamber: 247 x 255 mm
- » Open rotor: 3 blades
- » Opening of auger throat: 600 x 280 mm
- » Motor output: 4 kW + 1.1 kW
- » Feeding height: 602 mm (optional: 522 mm)

Optional features

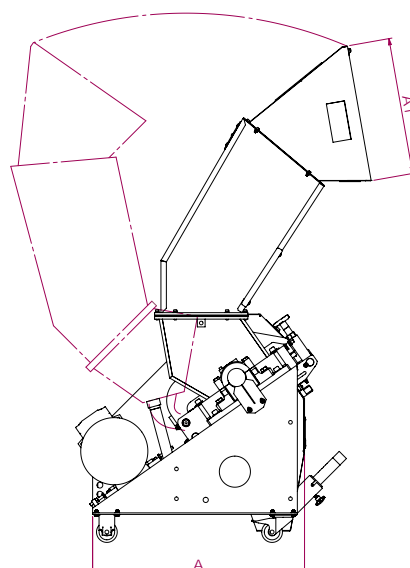
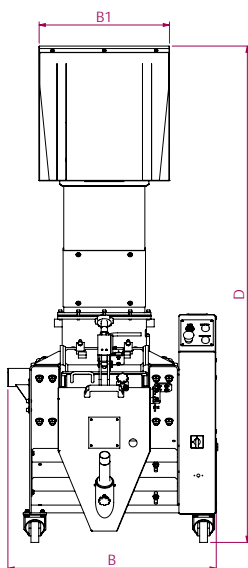
- » Prevents locking in metallic particles via a metal detection system.
- » Grinding hot/warm materials with a water cooled cutting chamber and/or auger.
- » Regular granulation with **Automatic Reversing System** on the auger rotor to reduce any stalling in case of jams.
- » High level sensor for regrind bin.
- » Link to the IMM's doors with On/Off function of the granulator's screw.
- » Remote control box to operate the granulator from the opposite side of placement.

Dimensions

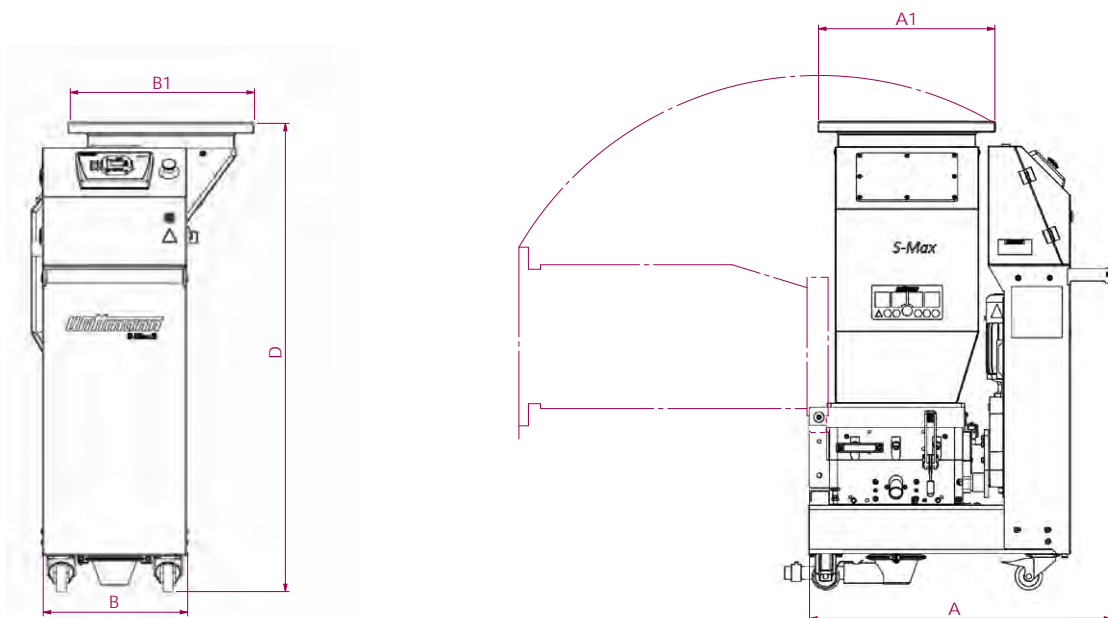
wittmann



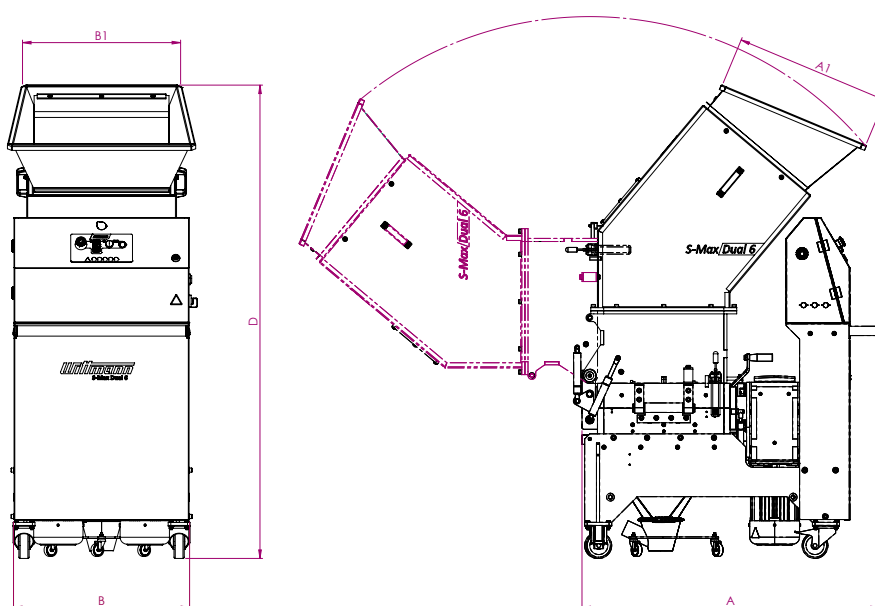
Model	Dimensions [mm]					Weight [kg]
	A	A1	B	B1	D	
G-Max 9	685	324	505	370	1,150	220
G-Max 9 Mid	685	130	505	217	880	210
G-Max 9 Low	685	200	505	160	645	210
G-Max 13	735	550	610	550	1,310	260
G-Max 23	782	420	636	428	1,400	300
G-Max 33	811	570	782	428	1,400	335



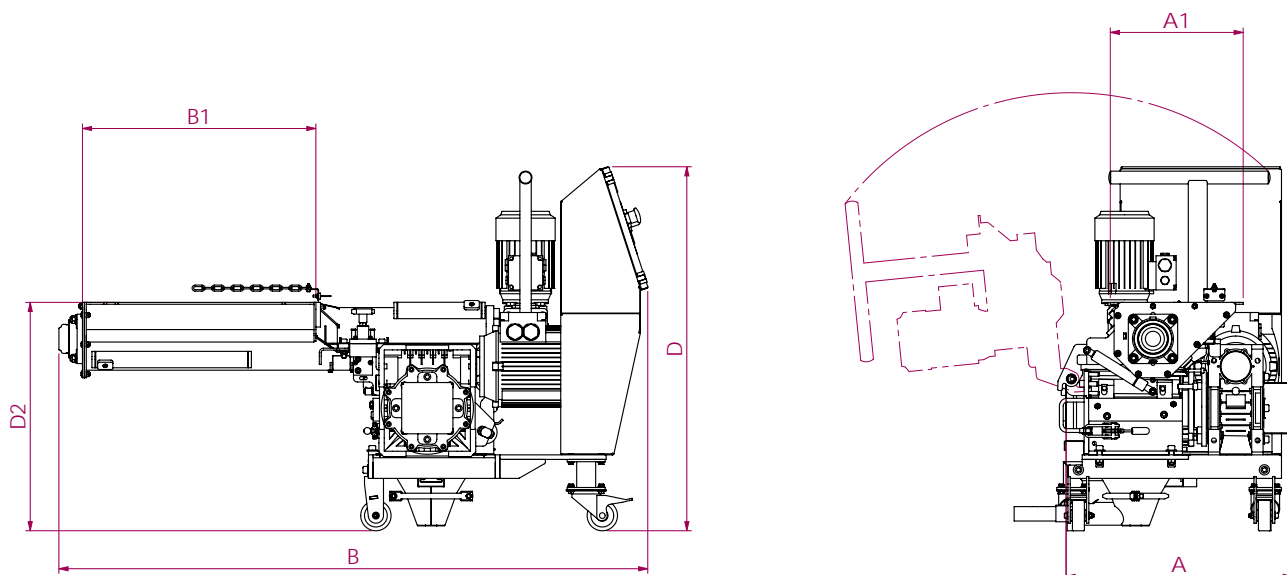
Model	Dimensions [mm]					Weight [kg]
	A	A1	B	B1	D	
G-Max XL	870	510	820	500	1,930	400



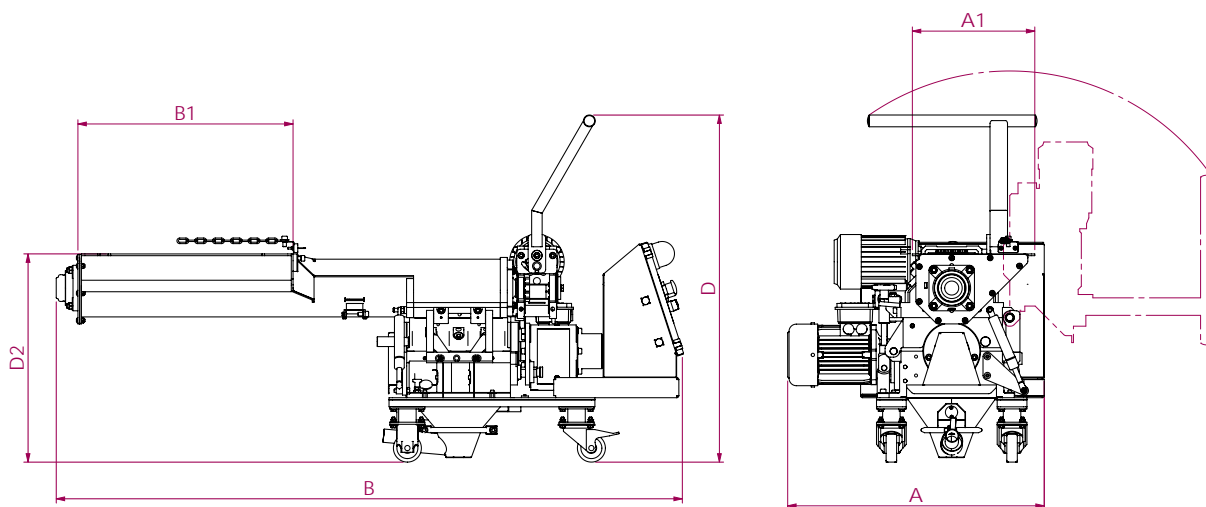
Model	Dimensions [mm]					Weight [kg]
	A	A1	B	B1	D	
S-Max 1	595	396	425	328	1,270	230
S-Max 2	810.5	400	425	390	1,265	250
S-Max 2 plus	908	524	425	549	1,386	330
S-Max 3	1033	645	425	549	1,386	360



Model	Dimensions [mm]					Weight [kg]
	A	A1	B	B1	D	
S-Max Dual 4	920	310	680	680	1,820	700
S-Max Dual 6	1,040	460	680	695	1,840	750
S-Max Dual 8	1,160	460	680	695	2,220	900



Model	Dimensions [mm]						Weight [kg]
	A	A1	B	B1	D	D2	
MAS 2A	596	350	1,551	615	959	600	320
MAS 2A Lower Frame	596	350	1,551	615	879	520	320



Model	Dimensions [mm]						Weight [kg]
	A1	A1	B	B1	D	D2	
Minor 2A	733	350	1,790	615	992	600	275

The Wittmann logo is a stylized, italicized wordmark in a dark red color, set against a white background that is part of a red parallelogram shape.

WITTMANN Technology GmbH

Lichtblaustrasse 10

1220 Vienna | Austria

Tel.: +43 1 250 39-0

info.at@wittmann-group.com

www.wittmann-group.com