

RADIAL GRADER R

The radial grader is designed for grading a wide range of vegetables, including carrots, potatoes, onions, parsnips, flower bulbs, beets, rutabaga, and other similarly shaped produce.



General description

The radial grader is designed for grading a wide range of vegetables, including carrots, potatoes, onions, parsnips, flower bulbs, beets, rutabaga, and other similarly shaped produce. The Allround radial grader is a two-dimensional grading system designed for efficient produce sorting based on diameter size. The grading size can be adjusted manually or automatically. The grading size is adjustable on every belt except the last, because the largest size is always sorted on the last belt.

The produce is transported and rotated over rollers. The distance between the rollers increases, so as the produce is being transported, it will fall from small to large between the rollers. The produce falls onto a belt, which continues transportation. Several belts are mounted for several grading sizes. Adjustable angles are mounted to get the size faster and give produce more time to drop on the belt.

All dimensions in cm

Grading size minimum – maximum (mm)								
Roll diameter	Pitch 63 mm	Pitch 76.2 mm	Pitch 80 mm	Pitch 90 mm	Pitch 100 mm	Pitch 110 mm	Pitch 125 mm	Pitch 150 mm
57 mm	6 – 69	–	–	–	–	–	–	–
70 mm	–	6.2 – 82.4	10 – 90	20 – 110	30 – 130	40 – 150	–	–
76 mm	–	–	–	14 – 104	–	–	–	–
84 mm	–	–	–	–	16 – 116	–	40 – 165	–
89 mm	–	–	–	–	–	–	–	–

Estimated capacity (tons / hour)							
	R 80	R 120	R 150	R 165	R 180	R 200	R 260
Carrots	3 – 4	8	14	–	20	25	35
Baby carrots	3 – 4	5 – 8	10 – 12	–	14 – 16	18 – 22	25 – 30
Red beet	5 – 6	8 – 10	14 – 16	–	22 – 30	35	45
Potatoes	6 – 7	8 – 10	15 – 18	–	22 – 30	35 – 40	45 – 50
Parsnips	2 – 3	3 – 4	6 – 8	–	12	18	24
Onions	6 – 7	8 – 10	15 – 18	–	22 – 30	35 – 40	60
Set onions	3 – 5	6 – 8	10 – 12	–	14 – 16	18 – 22	25 – 30

All capacities are indications based on experience from the past and depend on the agro climatic, soil and logistic conditions of the product, Allround VP does not guarantee any of these.

Characteristics

- ✓ Sorts produce by diameter using rotating rollers with progressively increasing gaps
- ✓ Smaller produce falls through earlier, while larger ones continue forward for precise separation
- ✓ Each size category is collected on a dedicated conveyor belt for organized and continuous handling
- ✓ Adjustable angles improve grading precision and optimize product drop timing
- ✓ Grading size can be adjusted manually or automatically
- ✓ Ensures high efficiency, accuracy, and gentle product handling
- ✓ Anti-lift on every belt except the last. This option prevents the rollers from being lifted by produce and is typically used for elongated produce
- ✓ The frame can be made from painted mild steel, stainless steel AISI304, or zinc-sprayed painted mild steel. But the bearings and drive/idle rollers are always made from mild steel

Options:

■ Material and treatment (frame)

Painted mild steel	Frame is made from painted mild steel. The bearings and drive/idle rollers are from mild steel
Stainless steel	Frame is made from stainless steel AISI304. The bearings and drive/idle rollers are from mild steel
Zinc sprayed painted mild steel	Frame is made from sandblasted, zinc sprayed and painted mild steel. The bearings and drive/idle rollers are from mild steel

■ Material and treatment (plating)

Zinc plated steel	The plating is made from zinc plated steel
Stainless steel	The plating is made from stainless steel AISI304)

■ Belt

Belt Width	The width of the belt is 40, 60, 80, 100 or 120
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■ Electrical control

No electric	Motors and necessary sensors
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Options:

Stand-alone	Motors, necessary sensors and control panel with or without HMI. The length of the cable is 5, 10, 15 or 20 meter
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Central control in line	Motors and necessary sensors
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■ Material and treatment (electrical panel)

Painted mild steel	The electrical panel is made from painted mild steel
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Stainless steel	The electrical panel is made from stainless steel AISI304
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■ Material and treatment (subframe)

Painted mild steel	It is made of painted mild steel
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Stainless steel	It is made of stainless steel AISI304
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Galvanized steel	It is made of galvanized steel
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■ Height of subframe

Height of subframe	0 – 7 meters
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■ Adjustment grading size

Manual	The grading size can be adjusted manually by spindles. The position of the spindles is on the left or right side of the machine (produce perspective). The grading size is adjustable on every belt except the last, because the largest size is always sorted on the last belt
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Automatic	The grading size can be adjusted automatically. The grading size is adjustable on every belt except the last, because the largest size is always sorted on the last belt
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■ Conveyor movement

Fixed conveyors	Conveyors can not be moved inside the radial grader
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Manual	Conveyors can be moved manually inside the radial grader
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Automatic	Conveyors can be moved automatically inside the radial grader
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■ Alignment

Brush on top	A brush is included to align product
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Anti-lift	Anti-lift on every belt except the last. This option prevents that the rollers are lifted by produce, typically used for elongated products
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Brake flap	There are 1, 2 or 3 brake flaps included to align the produce
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■ Cleaning

Cleaning brush	A brush is included to clean the rollers
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Roll cleaning mat	A roll cleaning mat is mounted inside the machine to clean the rollers
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Spray tube	A spray tube is included to either disinfect the product or keep the rollers slippery
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■ Chain greasing

Manual	The chain can be greased manually
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Automatic	The chain is greased automatically
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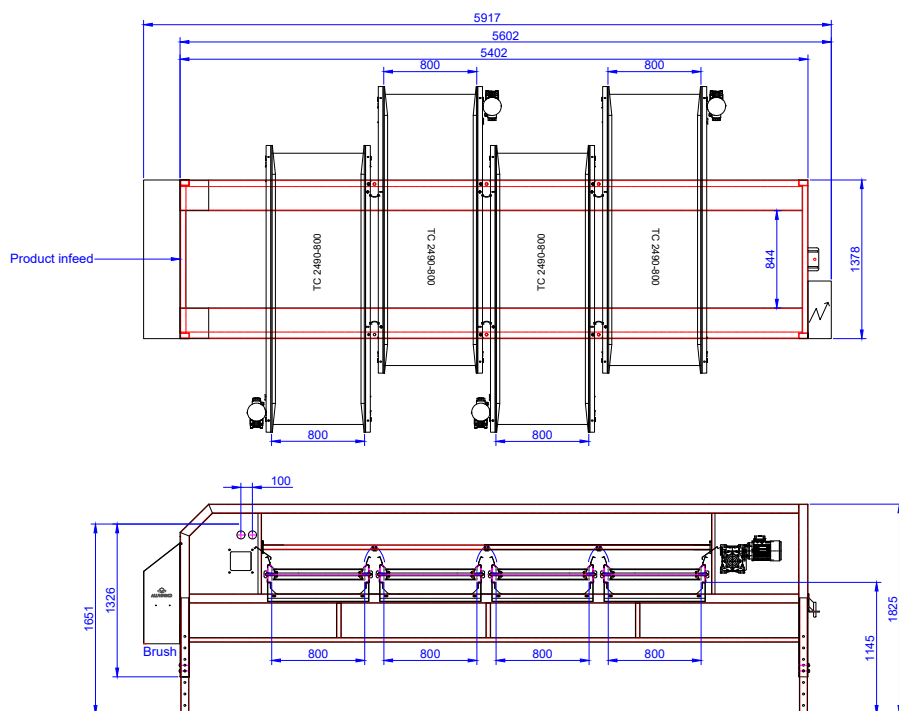
■ Oversize valve

Oversize valve	The machine shuts down when product gets stuck between the rollers
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■ Oversize sail


Oversize sail	A sail is included to catch the oversized product
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R 80

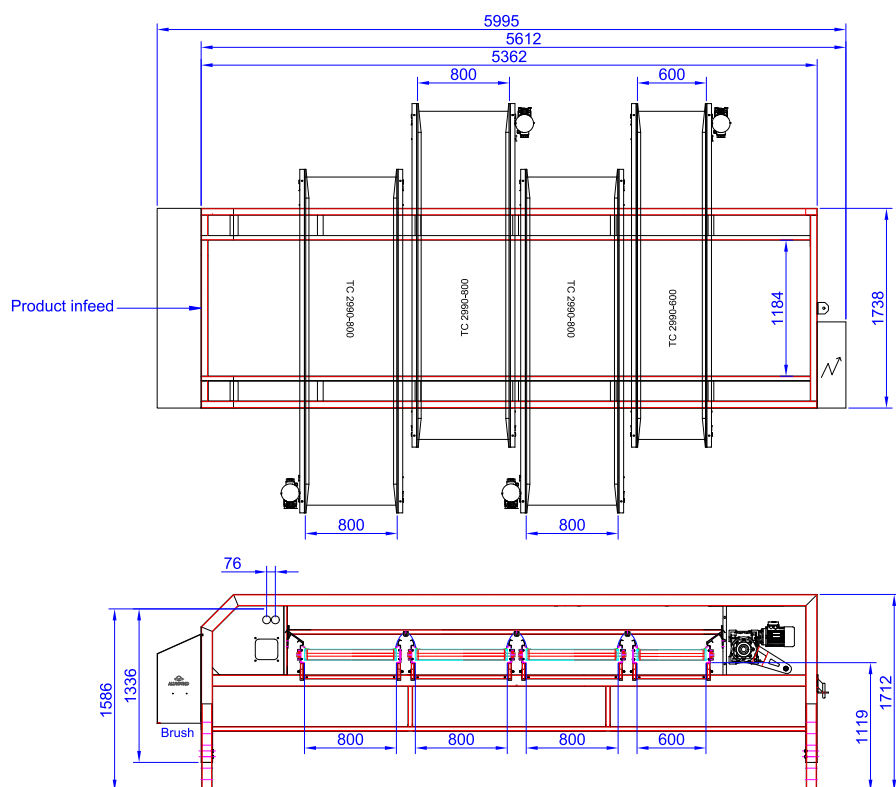


Note= 1. Ht of radial grader is Adjustable.
 2. Belts Length & Direction is as per Client Demand.

For discussion only!
 The dimensions are approximately.
 We are free to resize and change the machines,
 When we deem it necessary.


			
R80-70-4 stc63 stc80 stc90 stc100			
Engineer: DS	Project: Standard	Product:	
Checked by: DS	Drawing Nr: 05	Capacity:	
Scale: 1:30 A3	Date: 05-07-2021	Box size:	

R 120

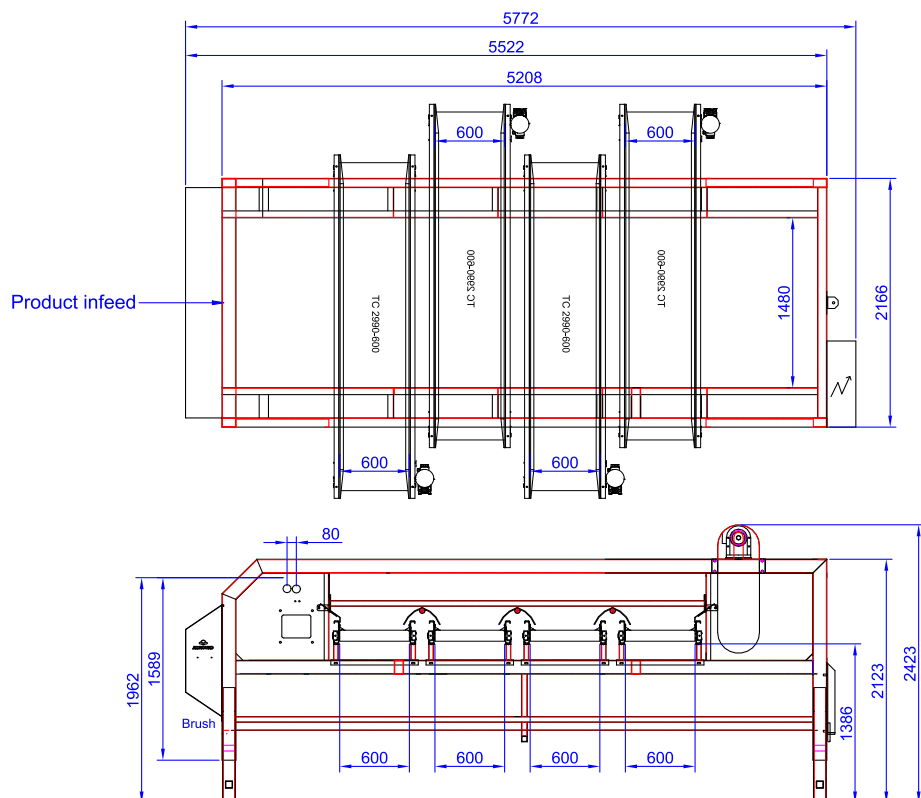


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R 120-70-4 stc76			
Engineer: DS	Project: Standard	Product:	
Checked by: SR	Drawing Nr: 13	Capacity:	
Scale: 1:30 A3	Date: 07-07-2021	Box size:	

R 150

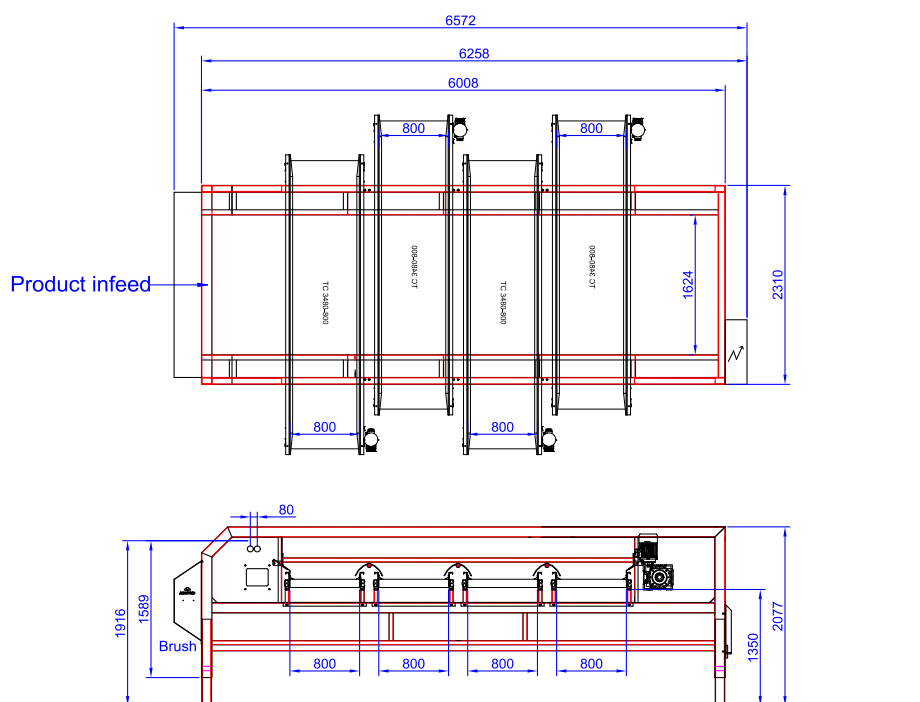


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		R 150-70-4 stc 80	
Engineer: DK	Project: Standard	Product:	
Checked by:	Drawing Nr: 01	Capacity:	
Scale: 1:30 A3	Date: 17-07-2021	Box size:	

R165

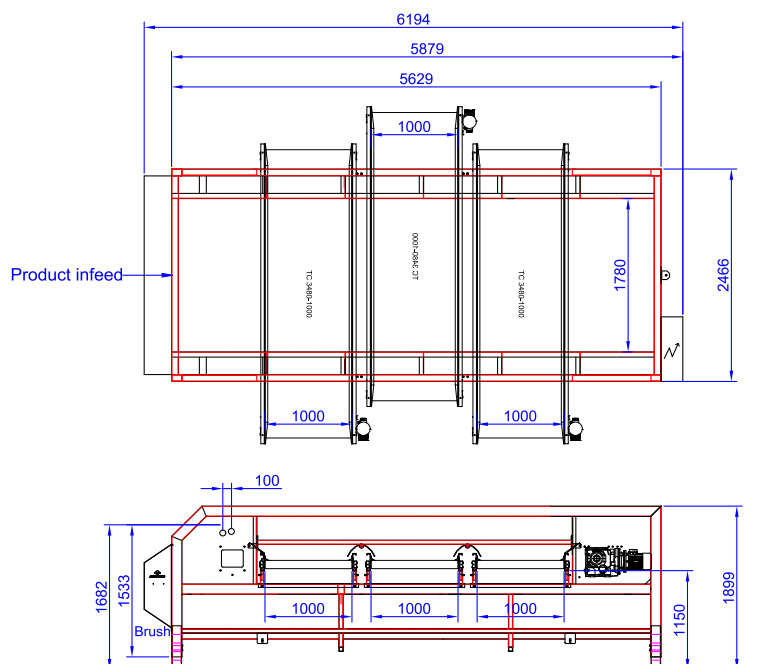


Note= 1. Ht of radial grader is Adjustable.
 2. Belts Length & Direction is as per Client Demand.

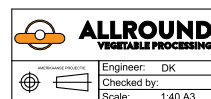
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		R 165-70-4 stc 80	
Engineer: DK	Project: Standard	Product:	
Checked by:	Drawing Nr: 01	Capacity:	
Scale: 1:40 A3	Date: 26-07-2021	Box size:	

R 180

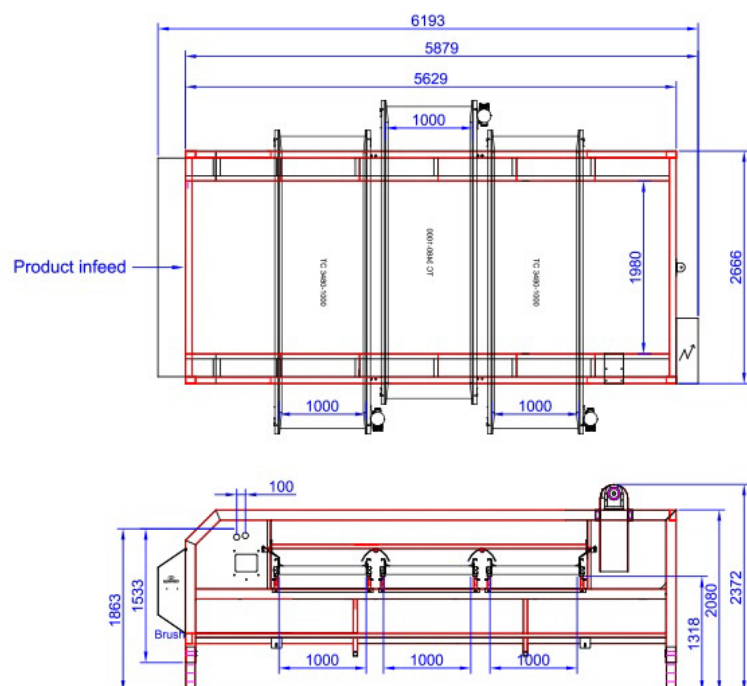


Note= 1. Ht of radial grader is Adjustable.
 2. Belts Length & Direction is as per Client Demand.


		R 180-70-3 stc 100	
Engineer: DK	Project: Standard	Product:	
Checked by:	Drawing Nr: 01	Capacity:	
Scale: 1:40 A3	Date: 27-07-2021	Box size:	

For discussion only!
 The dimensions are approximately.
 We are free to resize and change the machines,
 When we deem it necessary.

R 200

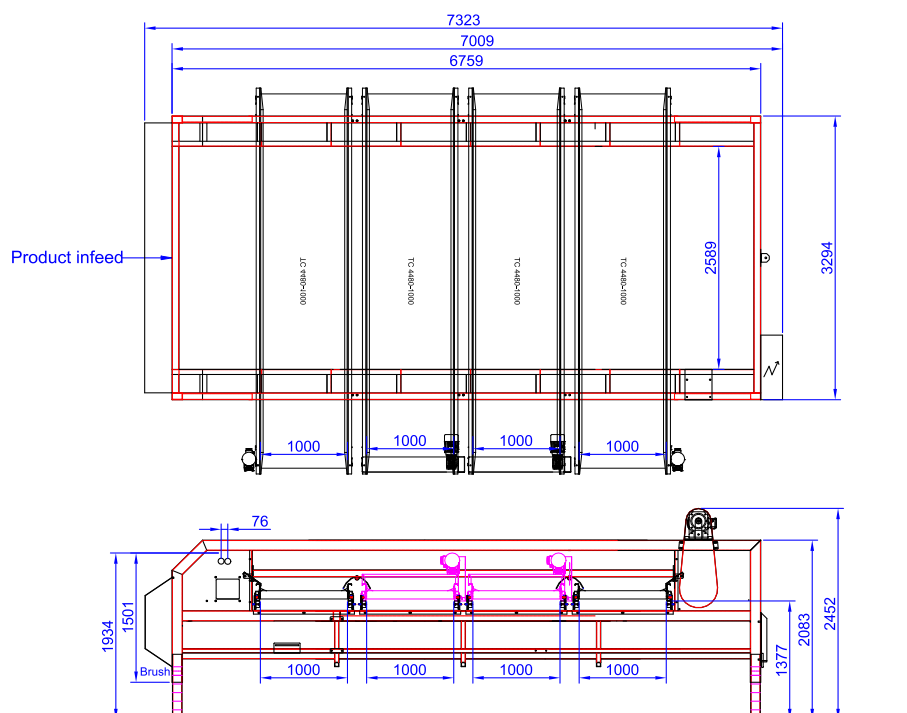


Note= 1. Ht of radial grader is Adjustable.
 2. Belts Length & Direction is as per Client Demand.

		R 200-70-3 stc 100	
Engineer: DK	Project: Standard	Product:	
Checked by:	Drawing Nr: 01	Capacity:	
Scale: 1:40 A3	Date: 27-07-2021	Box size:	


For discussion only!
 The dimensions are approximately.
 We are free to resize and change the machines,
 When we deem it necessary.

R 260



Note= 1. Ht of radial grader is Adjustable.
 2. Belts Length & Direction is as per Client Demand.

For discussion only!
 The dimensions are approximately.
 We are free to resize and change the machines,
 When we deem it necessary.

		R 260-70-4 stc 76	
Engineer: DK	Project: Standard	Product:	
Checked by:	Drawing Nr: 01	Capacity:	
Scale: 1:40 A3	Date: 02-08-2021	Box size:	