imas

NEW ENGINEERING STANDARDS

MULTIPLEXA
Plansifter
MQA

Milleral
INTEGRATED MILLING SYSTEMS

INTRODUCTION

Reliability, Performance, Sanitation, and Insulation. Imagine All Together…

Multiplexa plansifter is designed by Imas R&D team, with the synthesis of over 30 years experience in grain milling and '**New Engineering Standards**'.

The plansifter is used for the sieving operation of milled grains, and grading them by particle size. It is mainly used in flour, semolina, and maize milling processes, also suitable for sieving operation of similar granular and powdered foods.

The new Multiplexa presents increased reliability, performance, insulation, and sanitation as it is perfectly designed in each single detail…

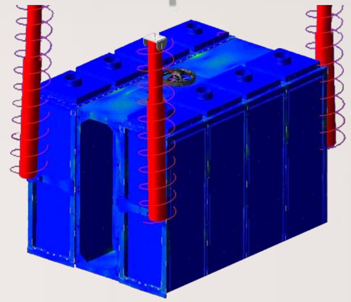
BENEFIT OF MULTIPLEXA PLANSIFTER

1) Performance
2) Structure
3) Sanitation
4) Less manufacturing time
5) Reduced manufacturing defect caused by the welding
6) More standard manufacturing

PERFORMANCE

1) **Finite Element Analysis (FEA)**
2) **Drive System**

R&D TESTS AT PLANSIFTER'S DEVELOPMENT

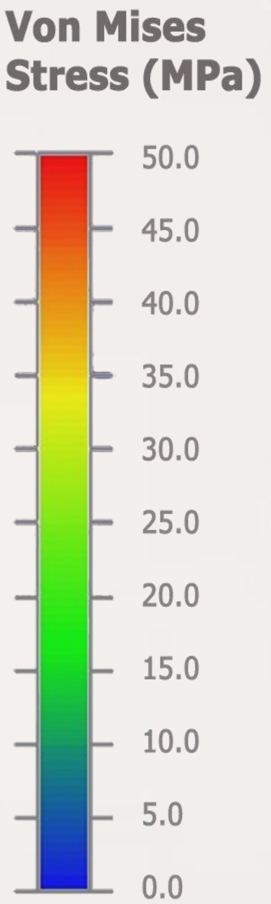


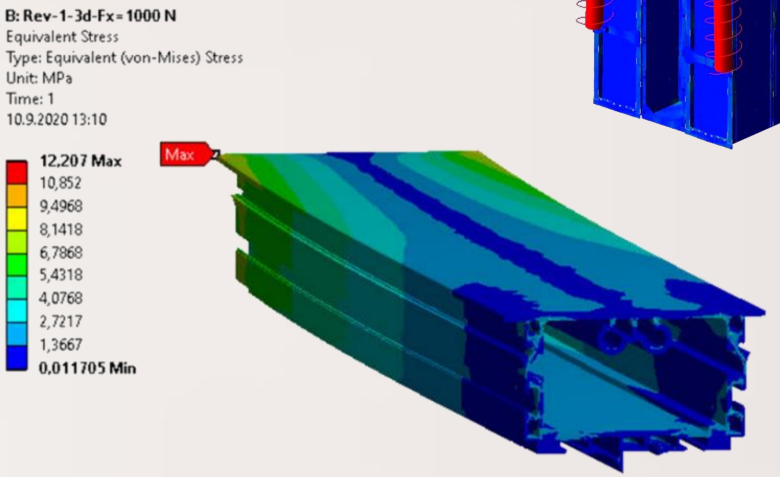
Developed Using Software-Based Testing and Analysis Methods

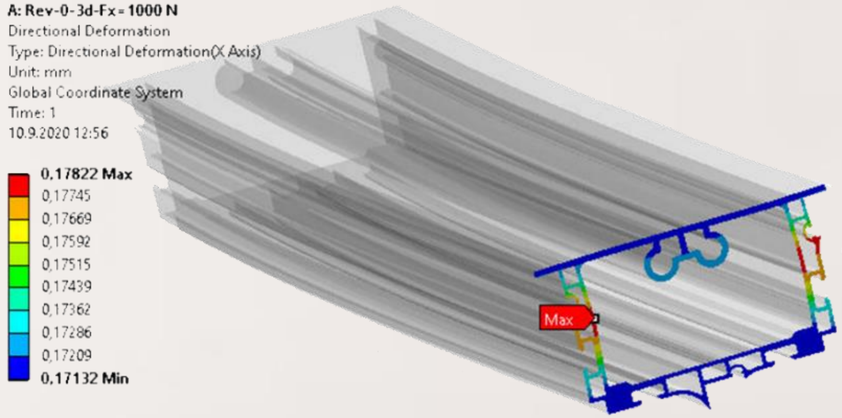
Finite Element Analysis (FEA) is a virtual modelling technology, that is used to predict a machine's dynamic load under real operating conditions, means how it responds to real-world forces of acceleration, vibration, heat, fluid flow, etc.

We use FEA modelling technology for **dynamic behaviour analysis,** and determination of maximal tension points on our plansifters.

Then, we carry out various **validation tests** ie. Strain Gauge, acceleration, and tension points, to measure the actual strain on prototype sifters.







PERFORMANCE

DRIVE SYSTEM

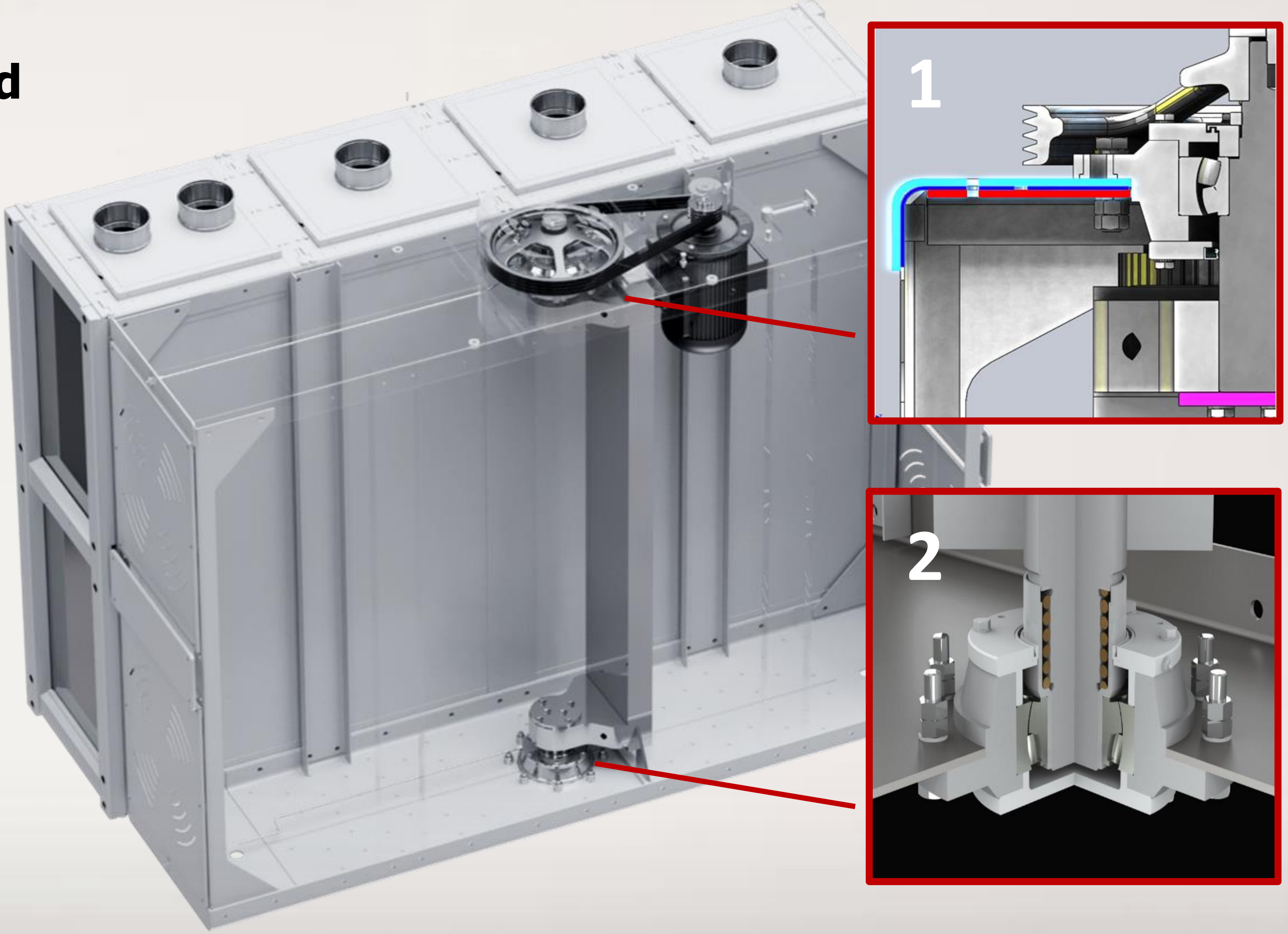
Multiplexa presents non-stop and trouble free operation, thanks to its strong drive system.

Strong Weight Chassis (1)

The weight chassis is made of three layered steel sheet, providing high durability against vibration loads.

Balance Spring (2)

is used on the top and bottom of housings and ball bearings, to balance and distribute the operational load and vibration.



STRUCTURE

1) **No welding design**
2) **Increased Insulation**
3) **Passage Doors**
4) **Tension boxes**

STRUCTURE
NO WELDING DESIGN

The traditional manufacturing method of a plansifter chassis is to use welding in joints, which may result in cracks, wears, and tears by time.

'No Welding' design helps eliminating standardization problems by welding during the manufacturing of Multiplexa plansifter. In this method, special aluminium extrusion profiles and cast iron top/bottom frames of the plansifter are connected each other with special 'screwing' technique.

This structure provides higher reliability and extended long term durability for the new Multiplexa.

STRUCTURE

NO WELDING DESIGN

When you join two materials by welding, over time the welded area can crack or break because the material changes shape. This happens because of heat, vibrations, or stress.

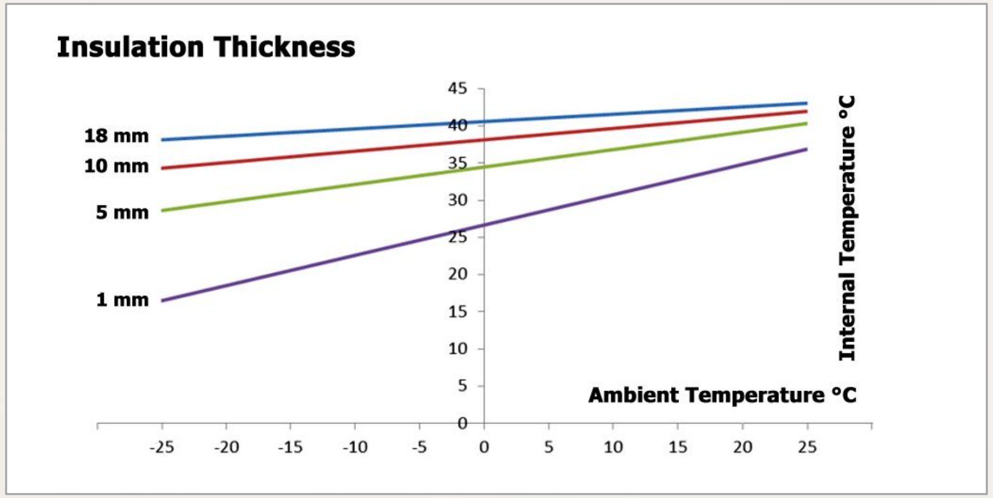
Welding can also make the metal weaker, which reduces the life of the product.If we don't use welding, and instead connect the materials with screws or other methods, it's much better.
This stops the metal fatigue and helps the product last longer. Plus, with the less welding, the design is more reliable and there are fewer problems during production.

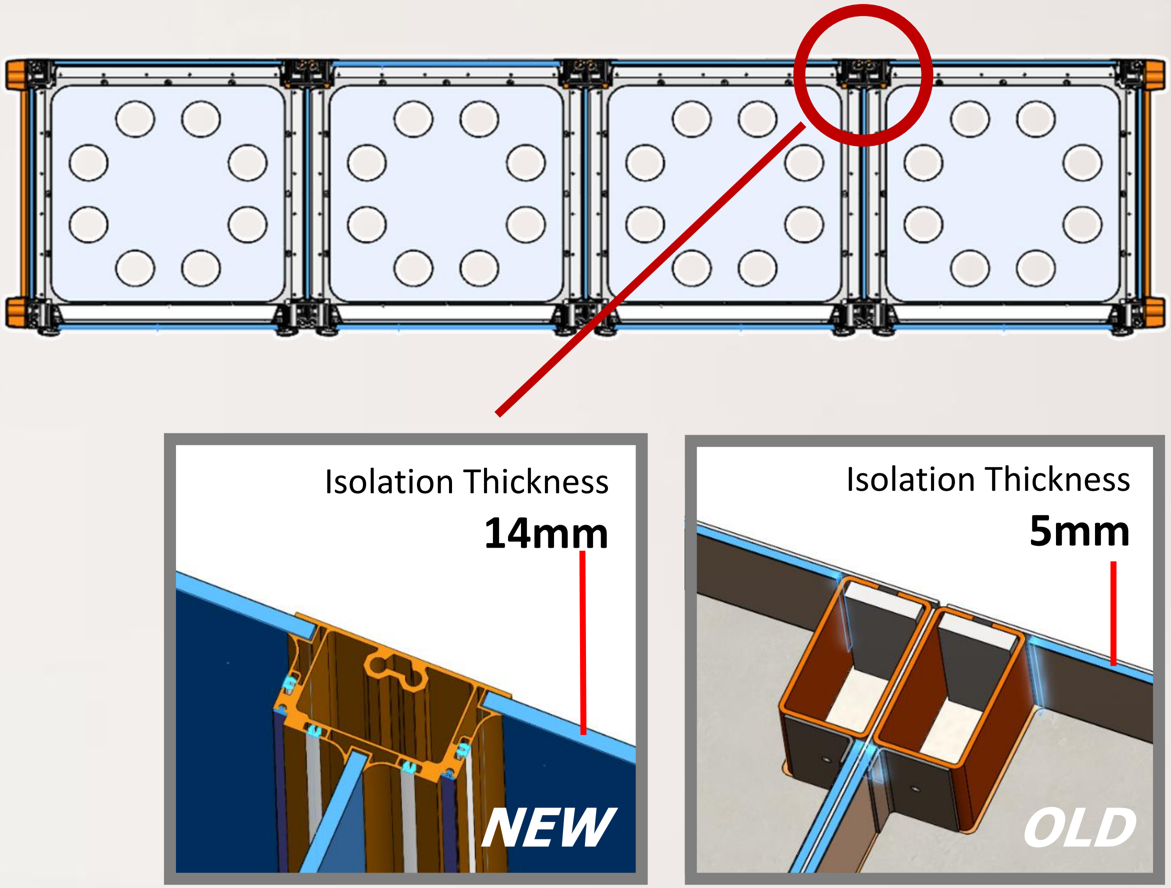
STRUCTURE

INCREASED INSULATION

Optimal thermal insulation is ensured in the plansifter, thanks to the increased isolation thickness of the machine's passage walls and also doors up to 14 mm.

This prevents high internal temperatures, condensation, and food safety related risks accordingly.





STRUCTURE
PASSAGE DOORS

New design of passage doors includes:

Stainless steel coating (1)

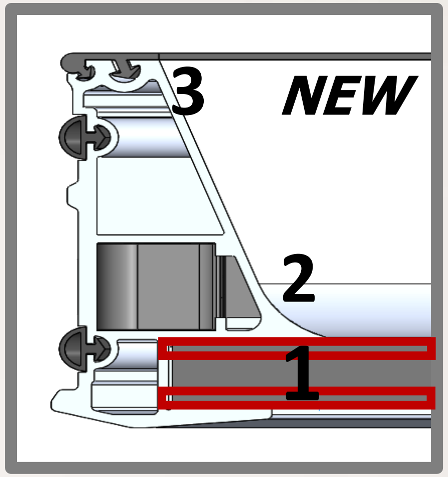
Laminated chipboard passage doors are still used by many manufacturers, however they can be deformed easily by time due to humidity in the ambient. We use stainless steel coating on passage doors, also with an increased isolation thickness.

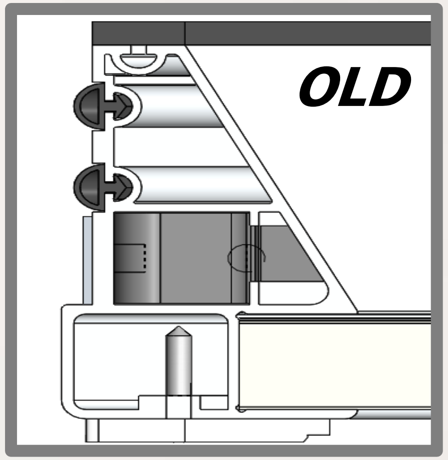
Internal corners of doors (2)

are rounded with a wide radius against product adhesion or accumulation, contamination, molding, etc. risks.

Industrial type door sealings (3)

Leakproof rubber sealings are used on passage doors, which can be also easily replaced.





STRUCTURE

TENSION BOXES

Wooden tension boxes can be damaged by time due to the humidity in ambient working conditions. Also, they can cause some sanitary problems.

Aluminium extrusion tension boxes (1)

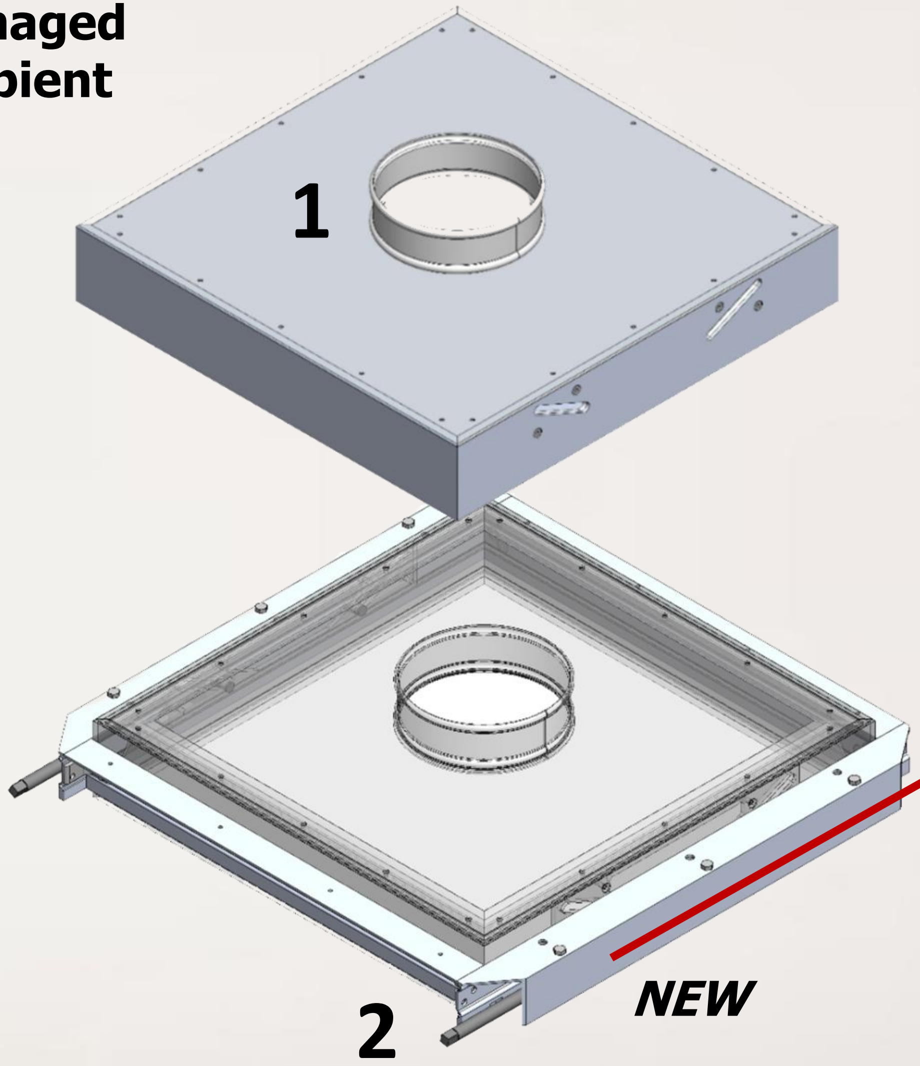
are lighter in weight, and also far better in durability than the wooden boxes.

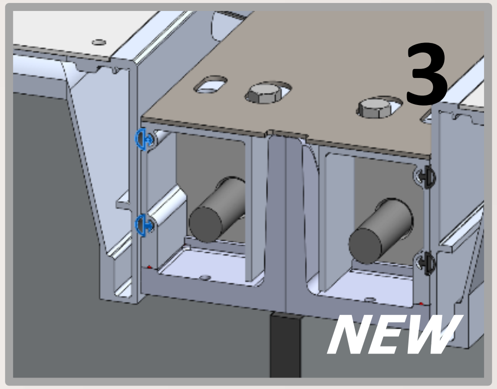
The new Jack mechanism design (2)

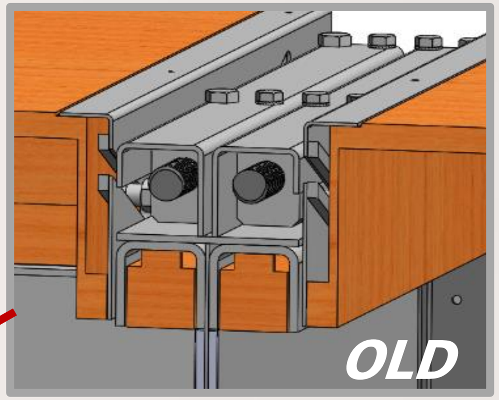
Also made of aluminium extrusion profiles, surrounds the tension box in a frame form. Thanks to its rigid structure, it directly transfers the compression force onto the sieve frames.

Double isolation sealings (3)

between the tension box and jack mechanism ensures perfect impermeability, while there was no isolation in previous models.







SANITATION

1) **Stainless Steel Contact Surfaces**
2) **Rounded Corners**

SANITATION

Percftly Designed in each single detail...

The plansifter's increased insulation and excellent impermeability against leaking, insect development, etc. provides excellent sanitary conditions.

Stainless Steel Contact Surfaces

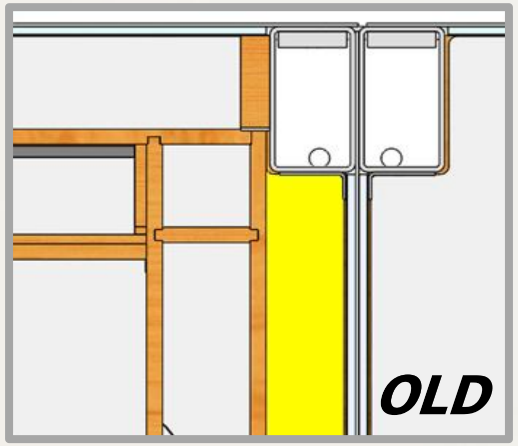
All interior walls in contact with the product are covered with stainless steel insulation (optional), which significantly reduces the condensation.

This is a perfect solution for B1- B2 passages, which is at generally high ambient humidity and temperatures.

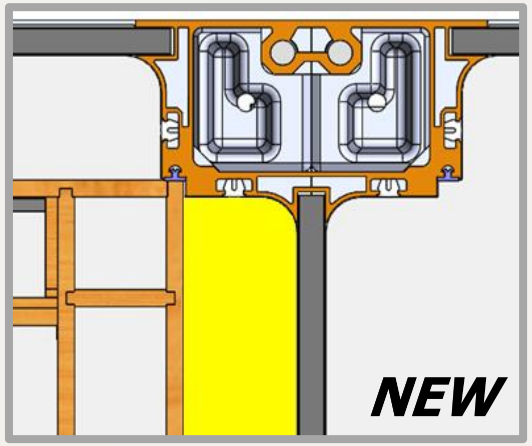
SANITATION

INCREASED DISTANCE OF FLOW CHANNELS

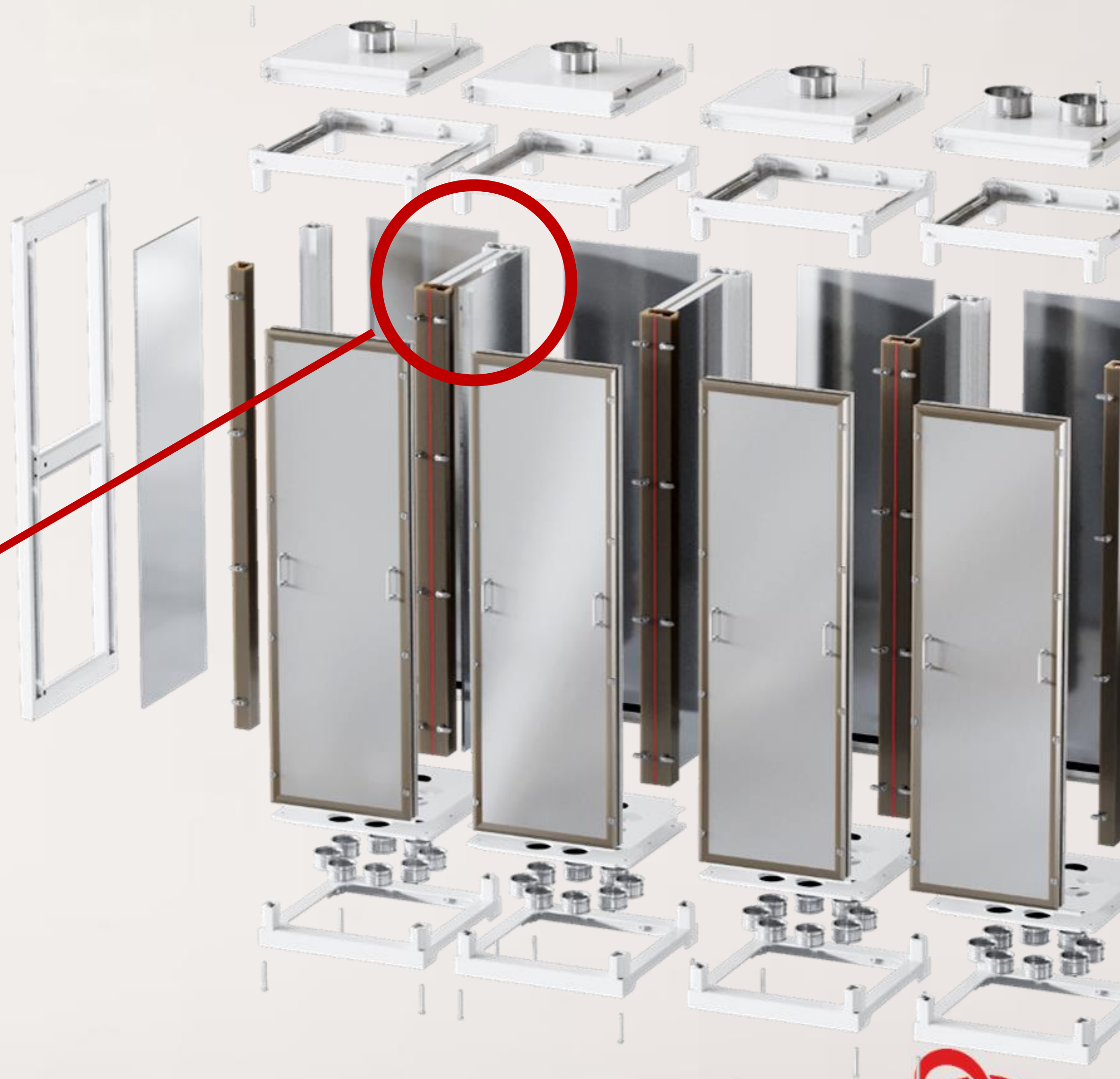
The distance between the plansifter passage walls and sieve boxes are increased, in order to ensure smooth product flow and better sanitary conditions in the plansifter.



45 mm



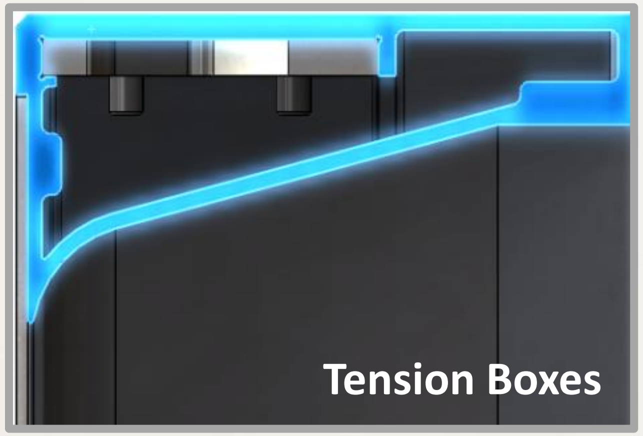
63 mm

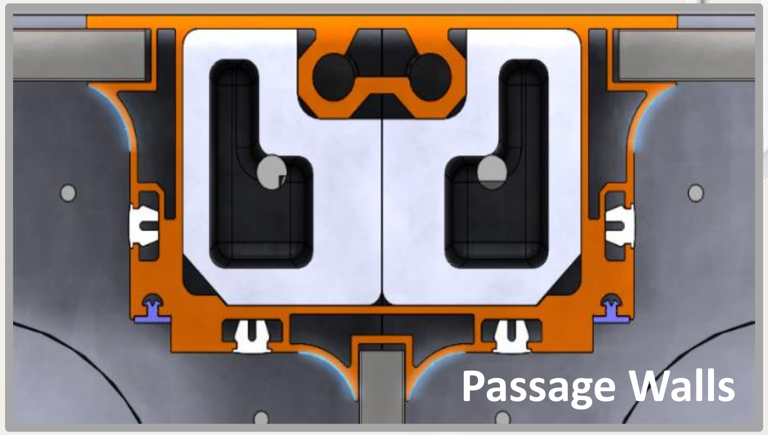


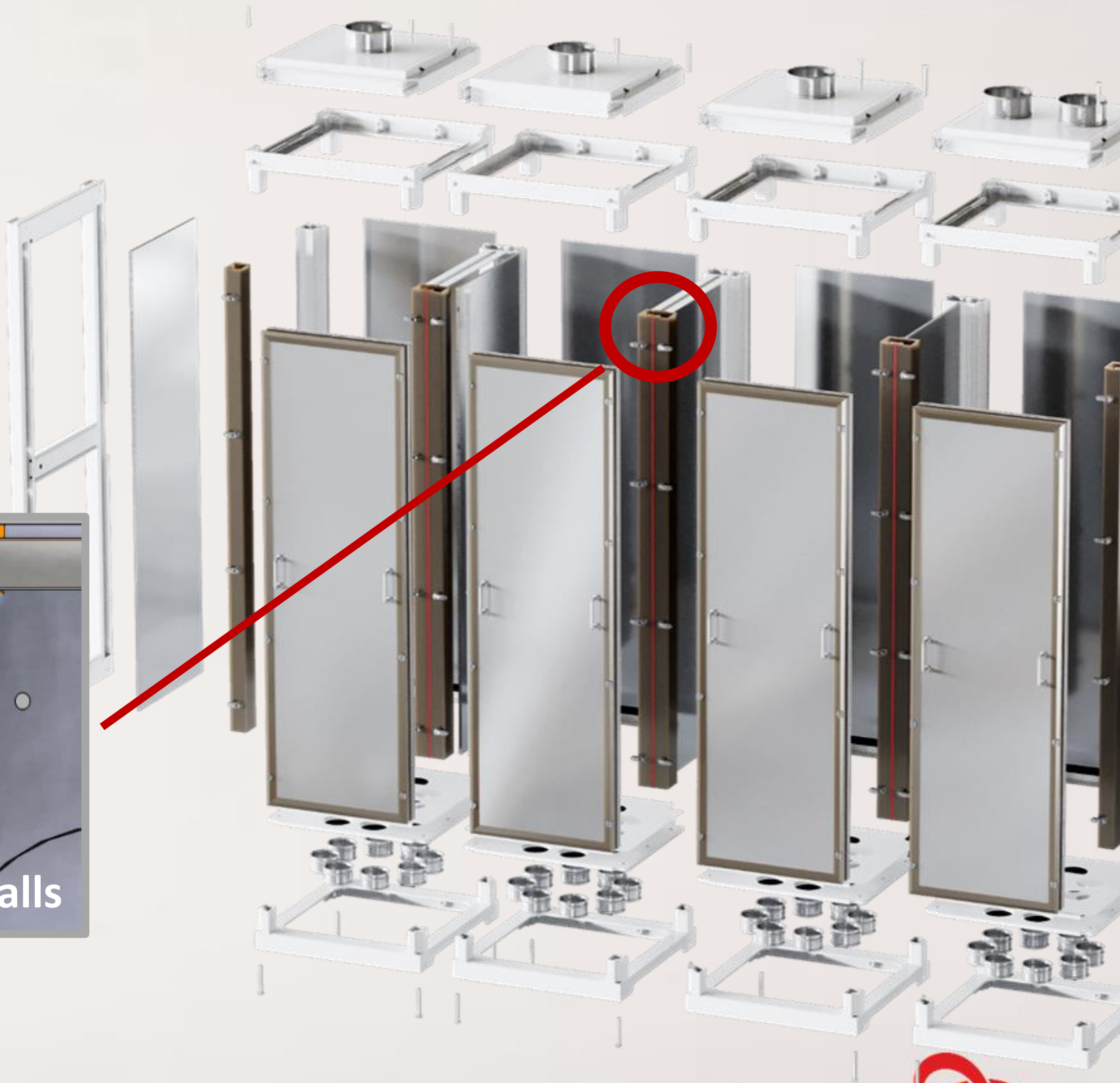
SANITATION
ROUNDED CORNERS

Internal corners of plansifters are very suitable places for product adhesion, accumulation etc, mold growth etc. problems.

Internal corners of passage walls, doors, and tension boxes are rounded with a wide radius, which provides better sanitation. In addition, it provides easy cleaning.







SIEVES AND OPTIONS

The plansifter frames are made of high quality and special moisture-resistant plywood, where sieve frames are manufactured as a single piece with aluminum injection method.

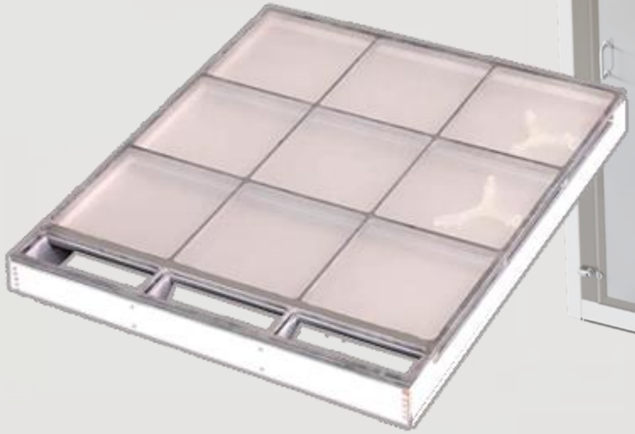
Efficient cleaning of sieves is ensured with specially designed and tested **sieve cleaners.**

Nr of Sieves Per Passage

up to 24 sieves in standard plansifters
up to 28 sieves in jumbo plansifters

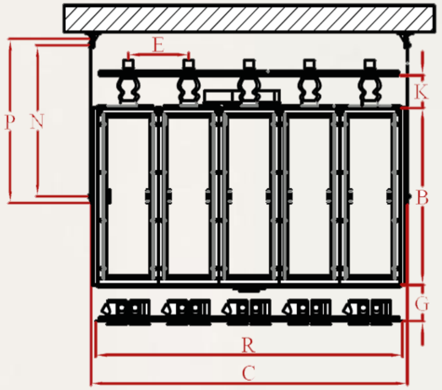
Sieve Dimensions

Standard plansifters 640x640 mm
Jumbo plansifters 730x730 mm.

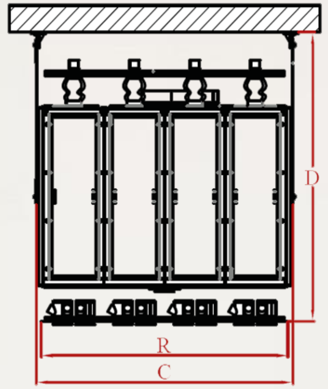


SPECIFICATIONS

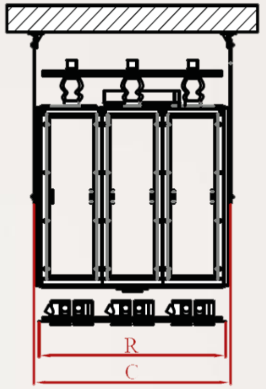
10 passages



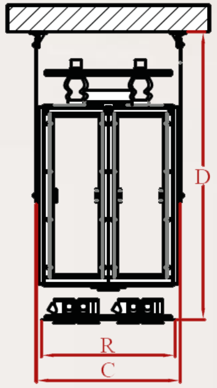
8 passages

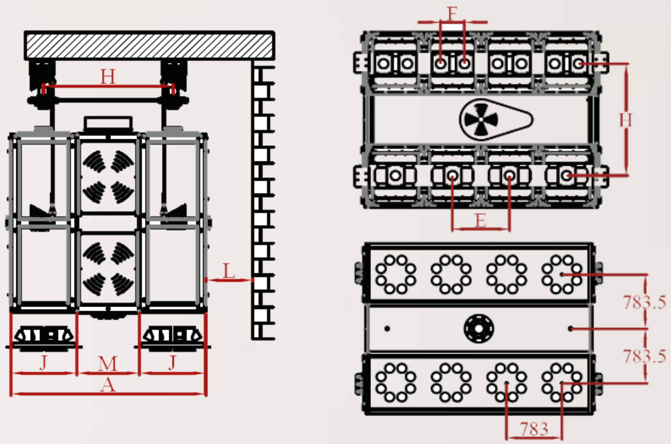


6 passages



4 passages





Dimensions

	A	B	C	D(min)	E	F	G	H	J	K	L(min)	M	N	P(min)	R
MQA 424	2378	1910	1758	3392	783	328	450	1578	806	405	1000	760	2280	N+170	1630
MQA 428		2210		3542									2430		
MQA 624	2378	1910	2540	3392									2280		2413
MQA 628		2210		3542									2430		
MQA 824	2378	1910	3323	3392									2280		3196
MQA 828		2210		3542									2430		
MQA 1024	2378	1910	4107	3392									2280		3979
MQA 1028		2210		3542									2430		

Technical Features

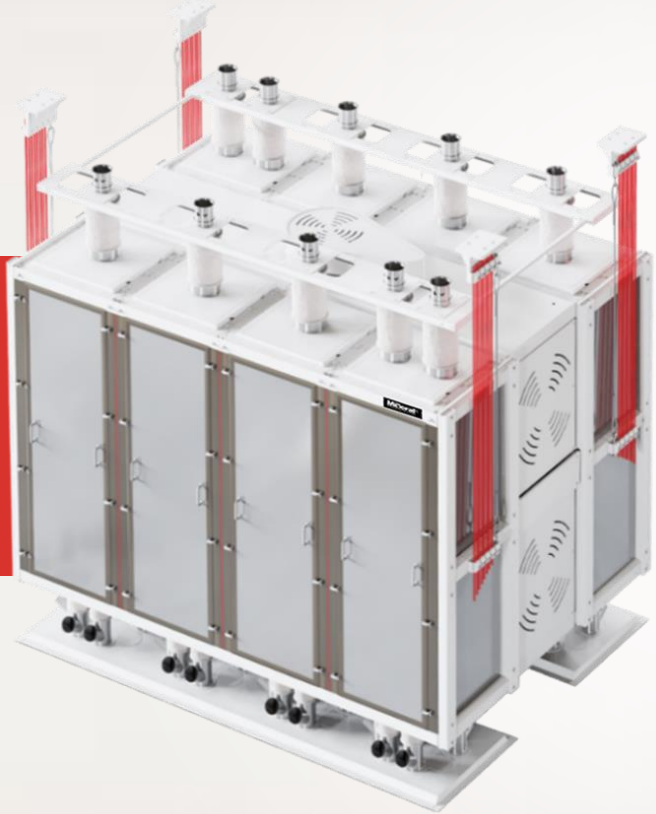
		MQA 424	MQA 428	MQA 624	MQA 628	MQA 824	MQA 828	MQA 1024	MQA 1028
Nr of Passages		4	4	6	6	8	8	10	10
Nr of Maximum Sieves		24	28	24	28	24	28	24	28
Net Sieving Area	N type (m^2)	21,1	24,6	31,68	37	42,2	49,3	52,8	61,6
	B type (m^2)	26,9	31,4	40,32	47	53,8	62,7	67,2	78,4
Weight (kg)		3230	3490	4385	4670	5220	5795	6470	7000
Motor Power (kW)		4	4	5,5	5,5	7,5	7,5	7,5	7,5
Gross Volume(m^3)		9	10	12	14	16	18	18,5	22

NOTE: The sieving area is given for wooden sieve frames. And, it is approximately 14% higher for N type, and 10% higher for B type aluminium sieve frames.

imas

NEW ENGINEERING STANDARDS

MULTIPLEXA PLANSIFTER



Milleral — INTEGRATED MILLING SYSTEMS | Viteral — INTEGRATED FEED MILLING SYSTEMS | Cuteral — INTEGRATED CUTTING SYSTEMS | Steral — PREFABRICATED METAL CONSTRUCTION | PRO SUPPORT — TECHNICAL SERVICES