



GRAIN CLEANING MACHINE

Technical Comparison

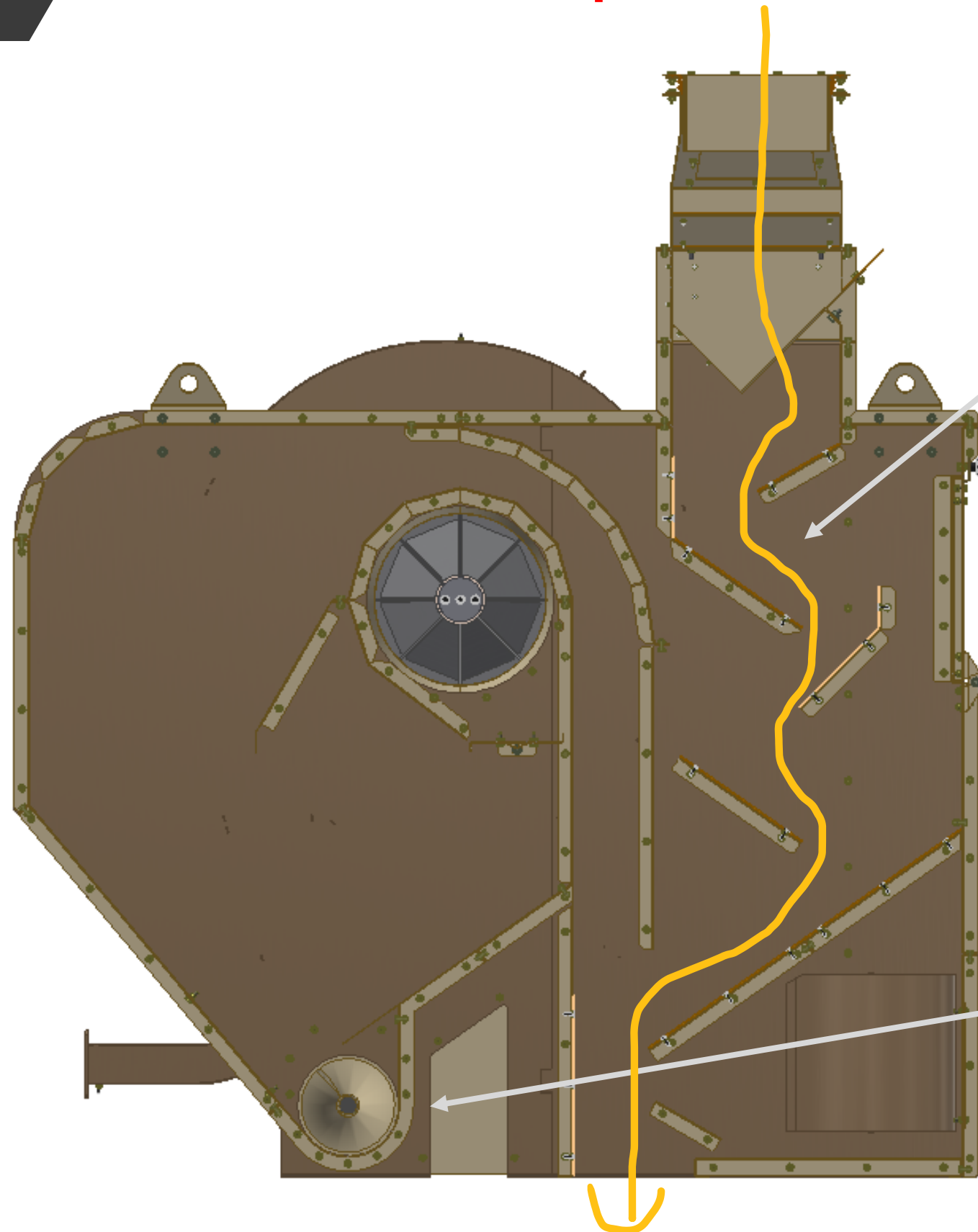
New HE 19/750

Previous Model HE 18 750

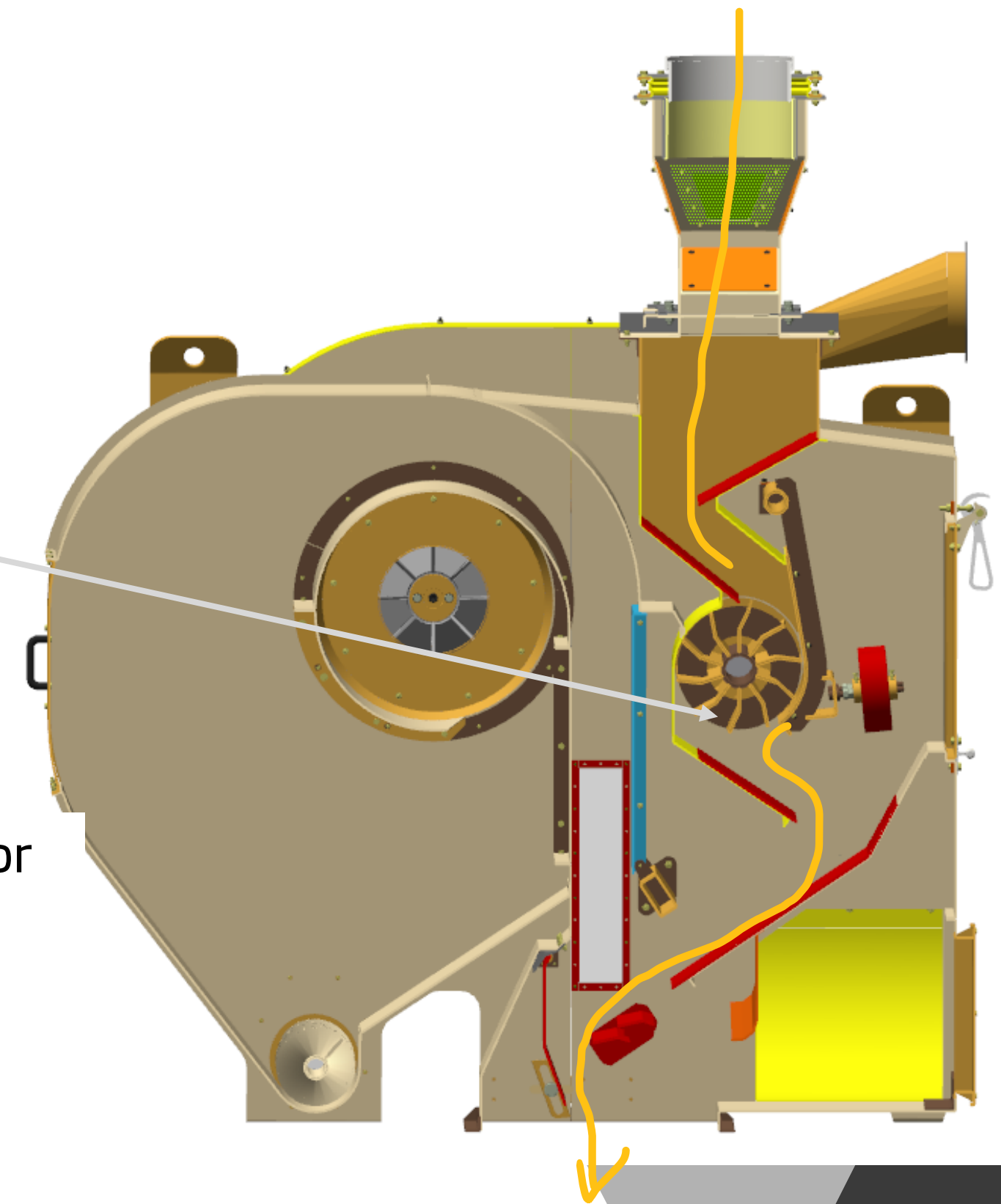


Aspiration: General characteristics

New HE 19/750 Aspiration



Previous HE 18/750 Aspiration



Reduction of moving components: motors
Product distribution by cascading system

Feeder removed

More robust conveyor
Increased screw diameter

Aspiration: Uniform product inlet

New HE 19/750 Aspiration

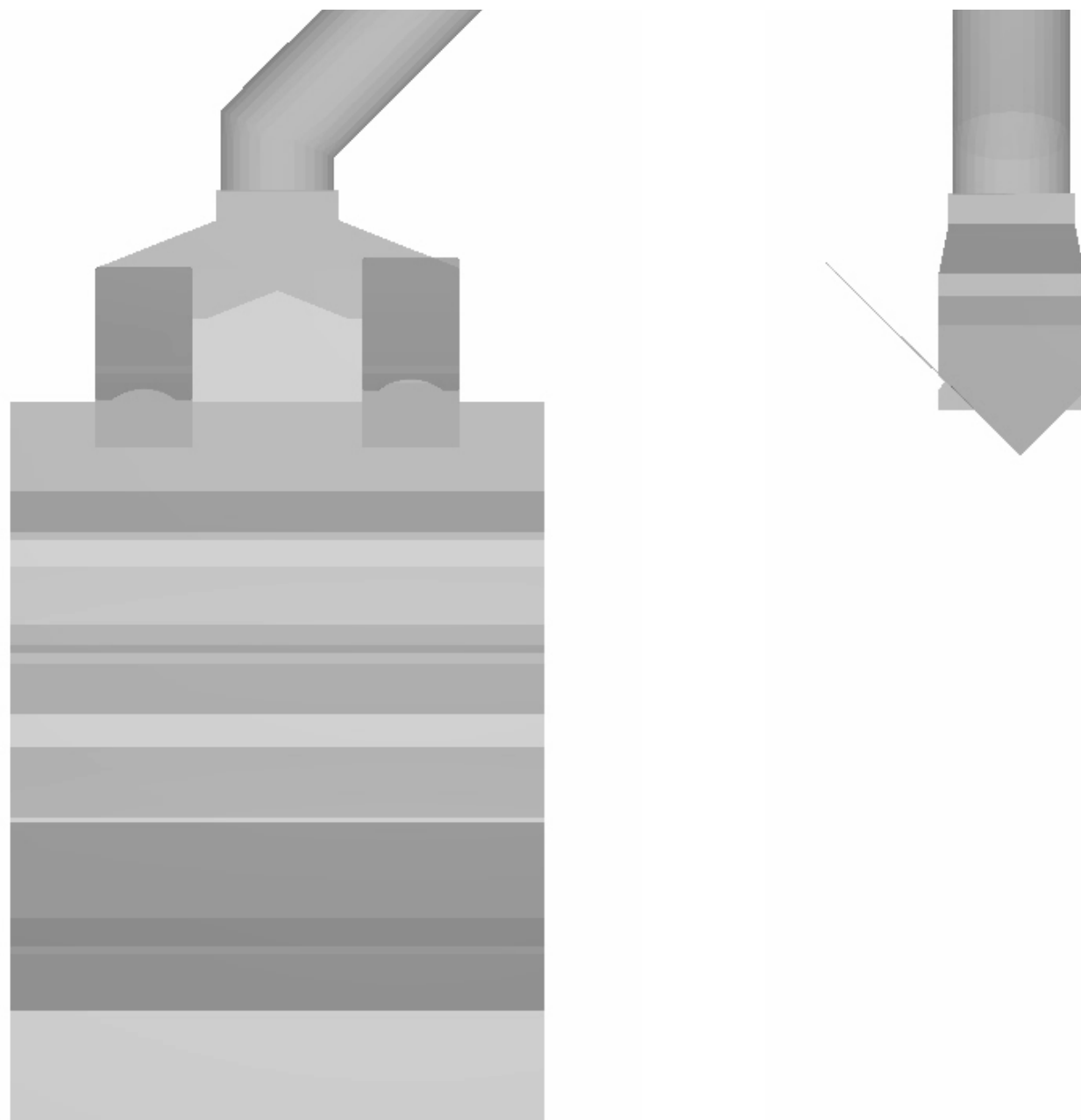
Simulation of Ventus Feeding

Uniform product distribution by cascade

Note: the color scale indicates product velocity:

Blue → lower velocity

Red → higher velocity



Actual behavior of the cascade feeder



Advantages

Reduction of moving components: motors

Removal of feeder

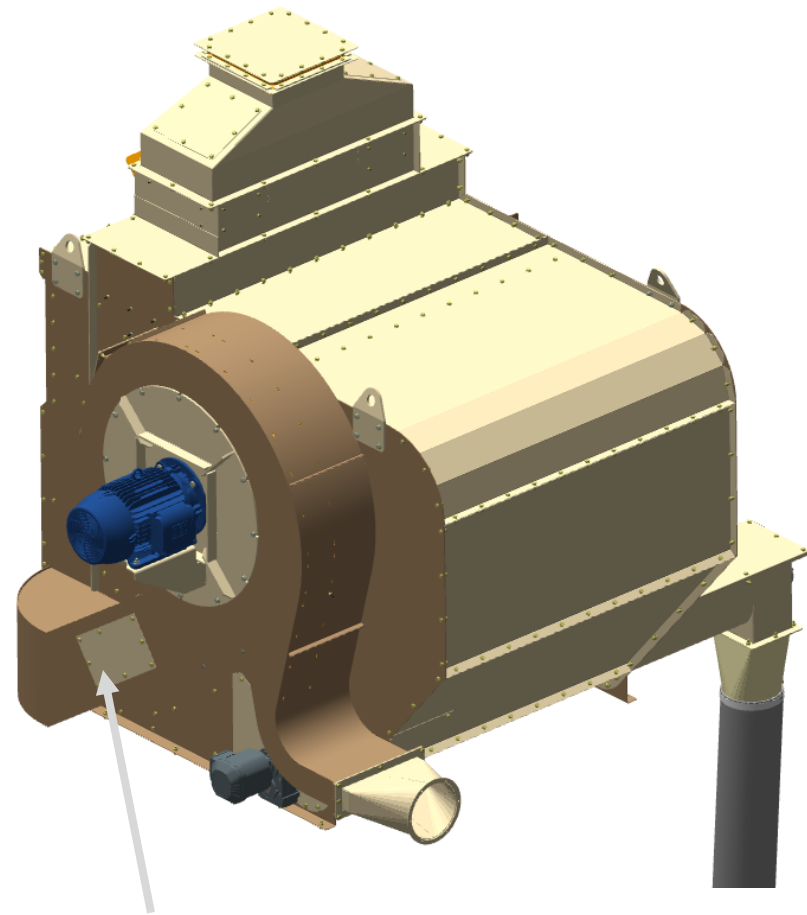
More robust conveyor

Increased conveyor screw diameter

Product distribution by cascading system

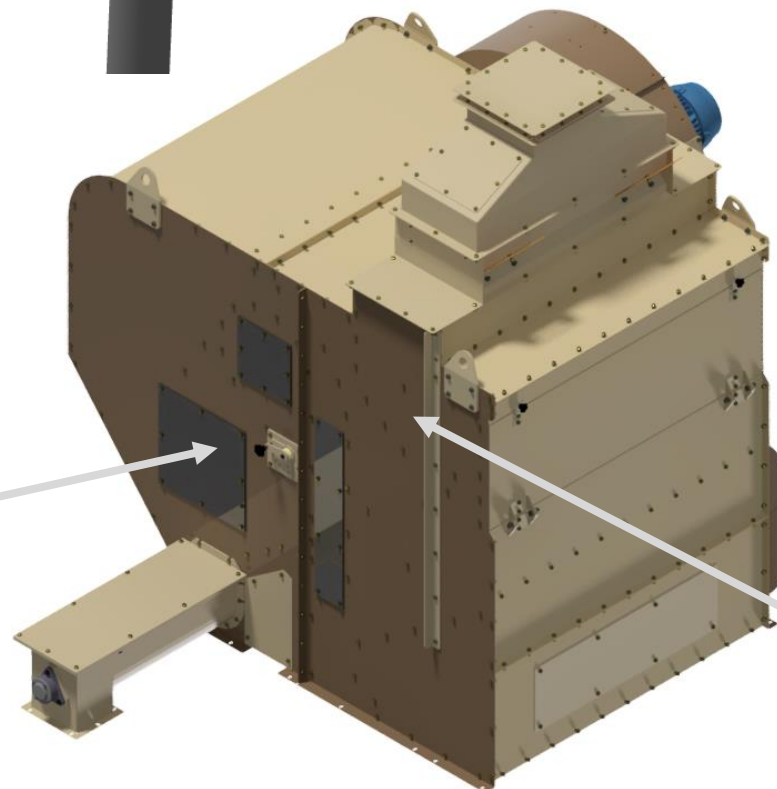
Aspiration: General characteristics

New HE 19/750 Aspiration



No adjustment in the return air flow: interferes with filter flow rate

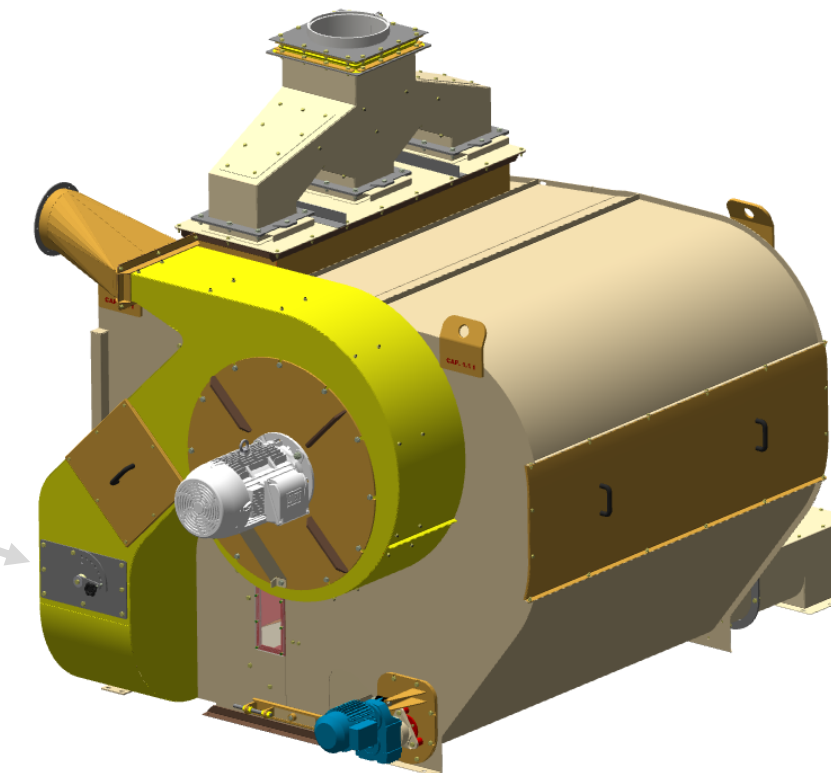
Butterfly valve for global air flow regulation



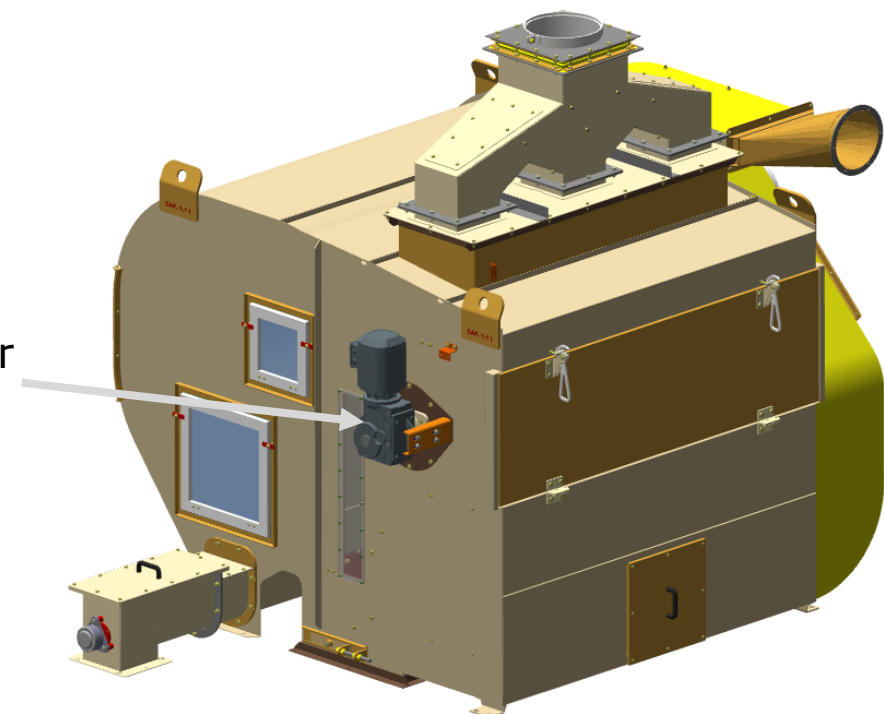
Without rotary feeder

Low-efficiency control.
Diverts airflow to the filter but
does not reduce the total flow rate.

Previous HE 18/750 Aspiration

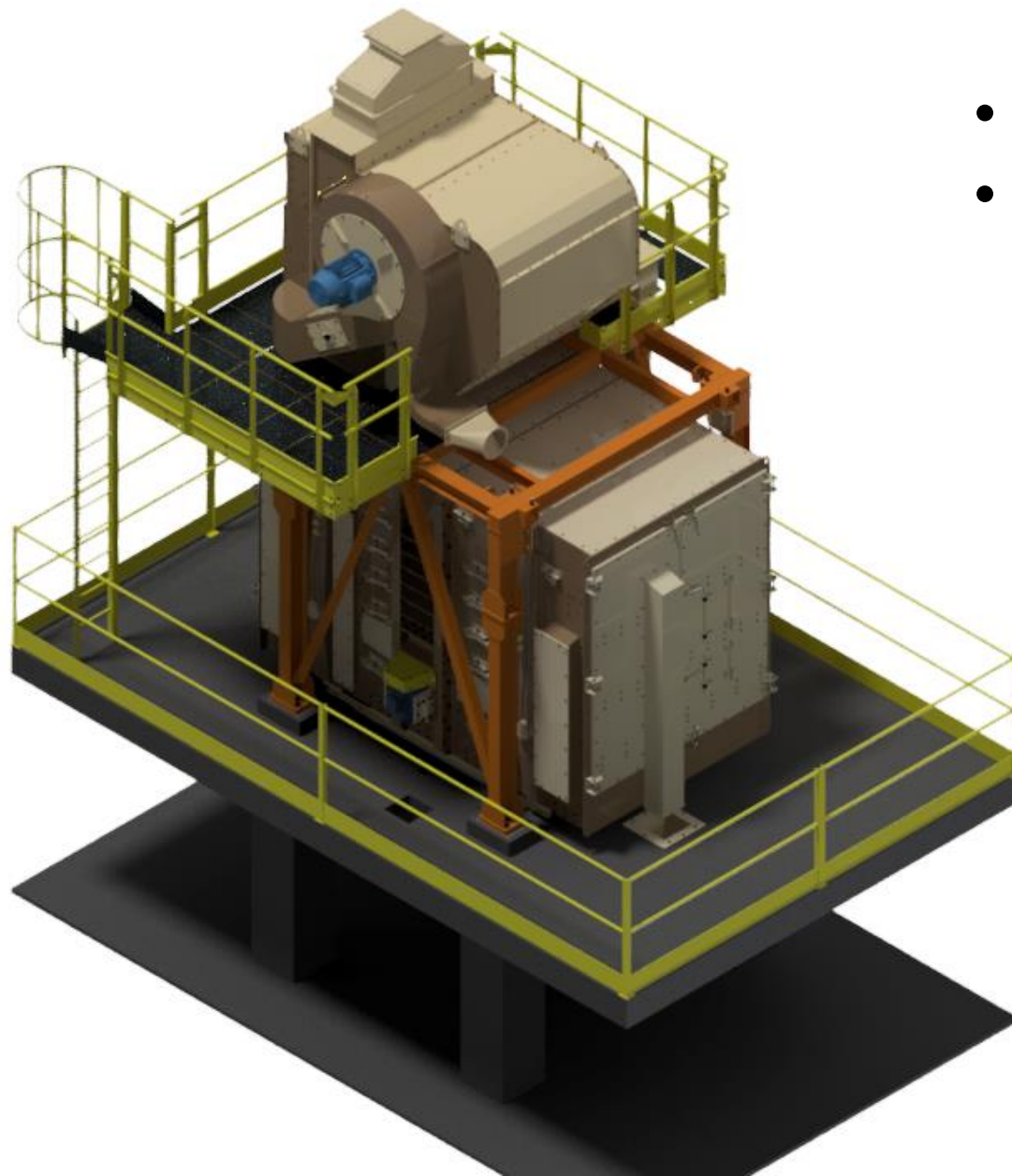


With rotary feeder



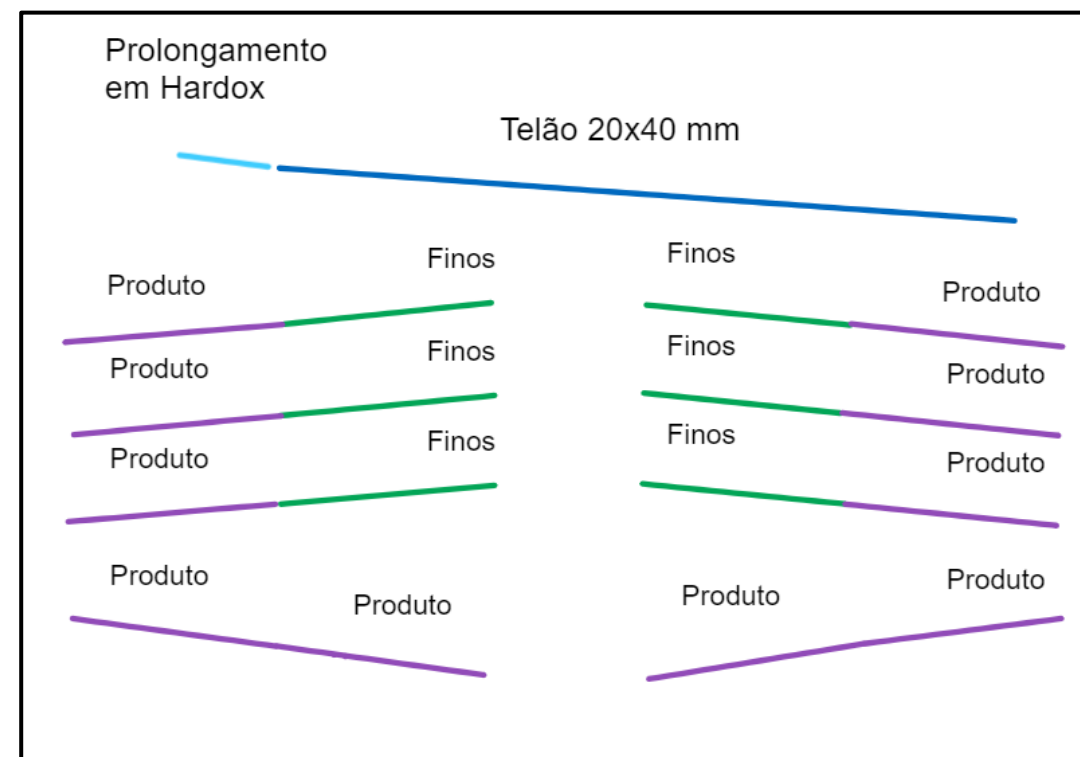
General Sieve Arranjment

General View



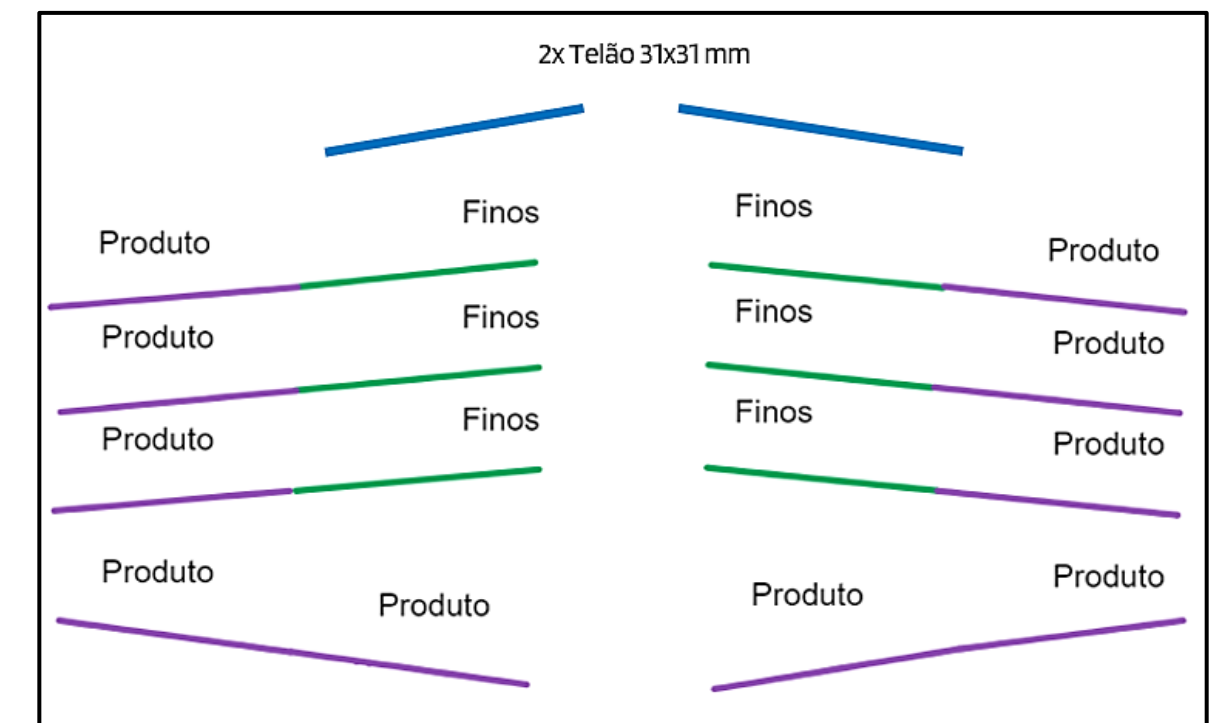
New HE 19/750:

- 3 screens on the upper deck
 - 3x (20x40) mm
- 3 intermediate decks (Symmetrical)
- 1 recovery deck (Symmetrical)



Previous Model HE 18 x 750

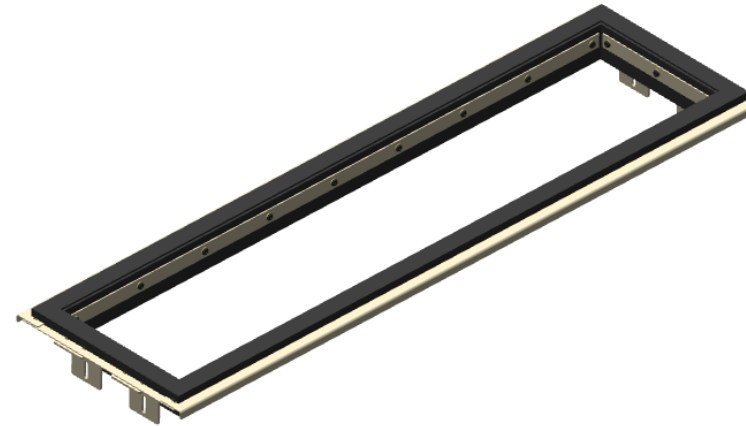
- 2 screens on the upper deck (Symmetrical)
 - 2x (31x31) mm
- 3 intermediate decks (Symmetrical)
- 1 recovery deck (Symmetrical)



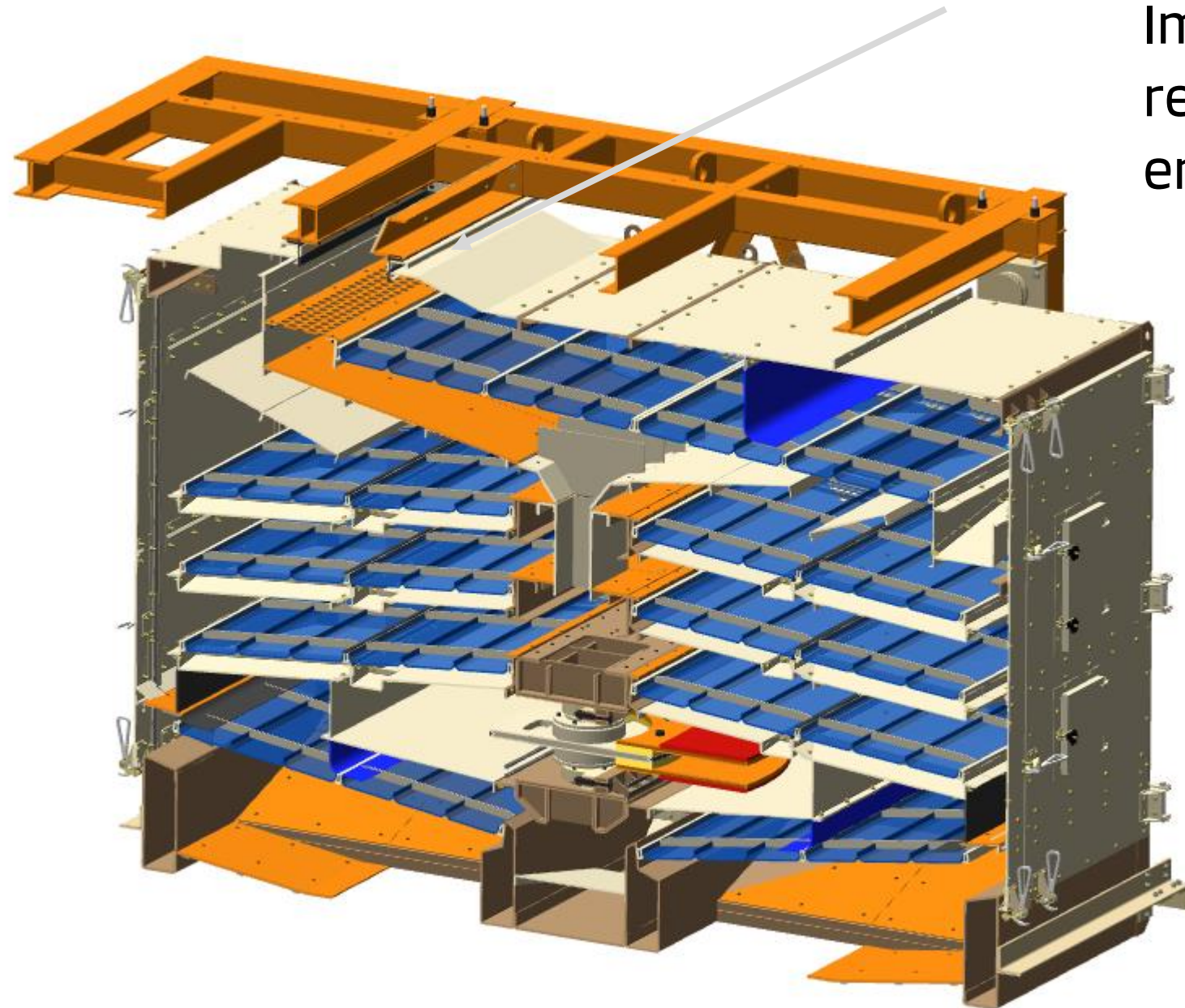
Dust Suppression

New HE 19/750:

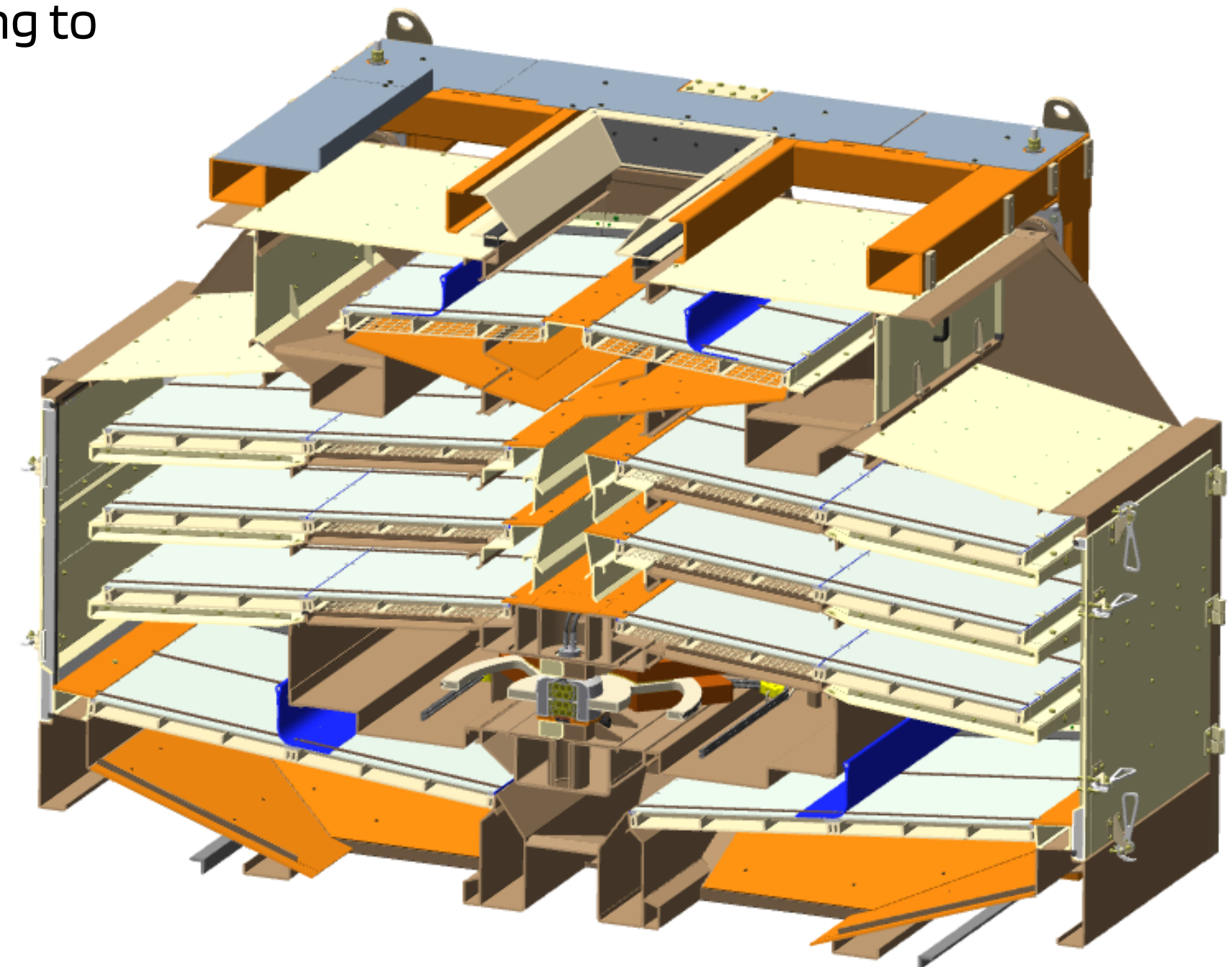
Particulate Emission
Control



Improved sealing to
reduce dust
emission



Previous Model HE 18 x 750

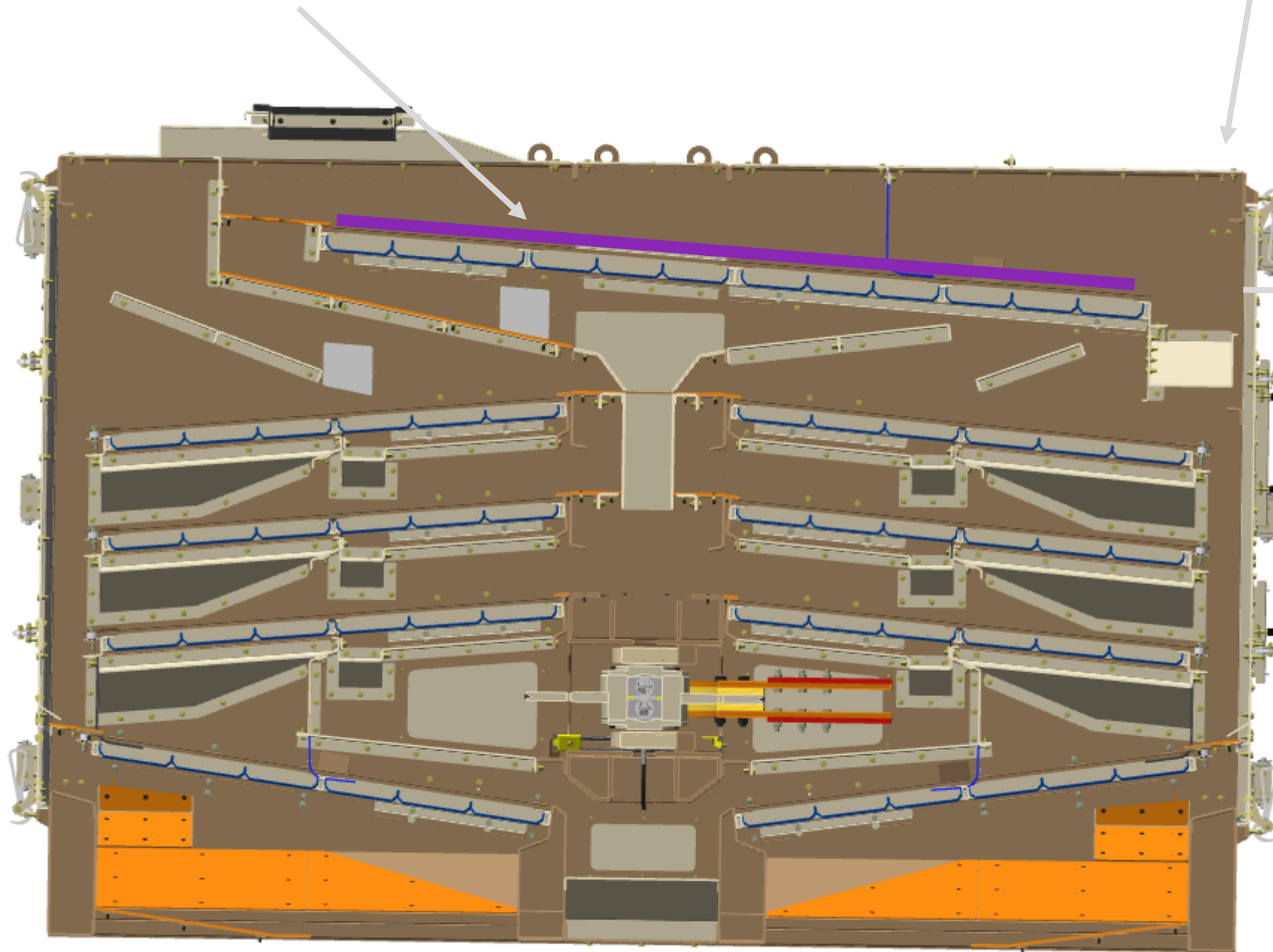


Increase Upper Sieve Length

New HE 19/750:

Upper Sieve:
Sieve holes 20x40 mm
Length = $3 \times 900 = 2700$ mm

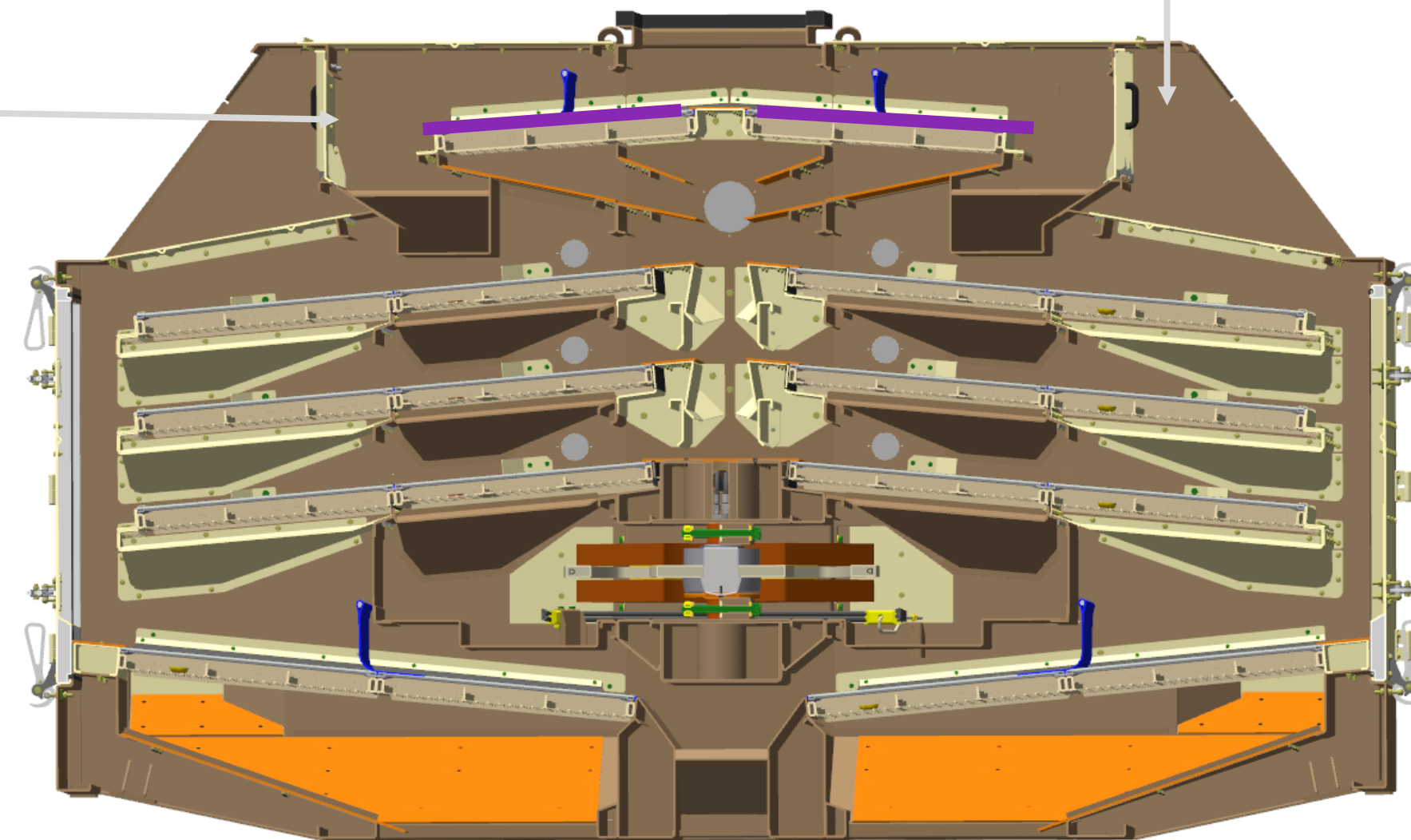
Single door for
screen access



Previous Model HE 18 x 750

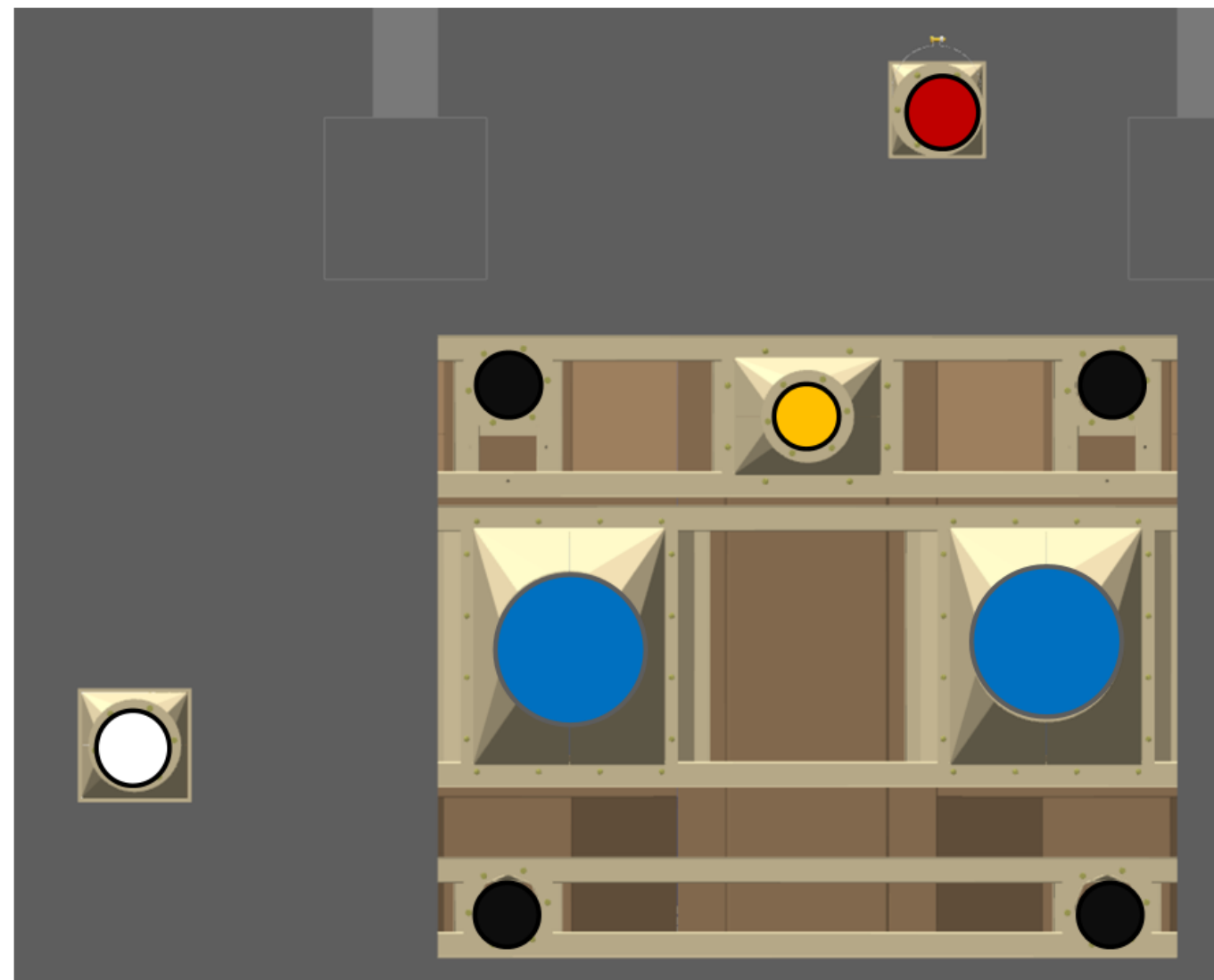
Mesh 31x31
Sieve Clogging
Cleaning difficulty

Limited access for
screen replacement



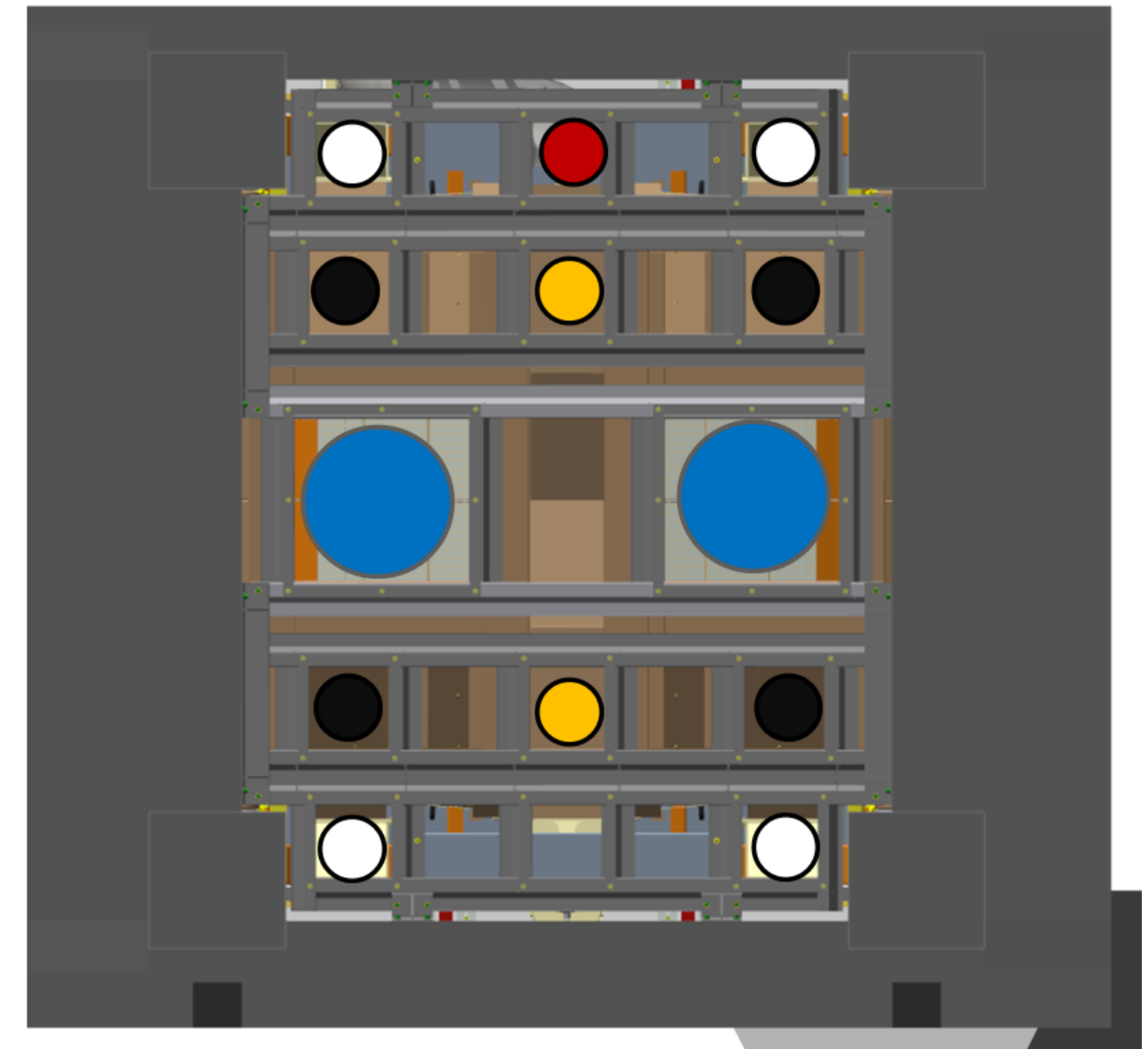
Product and impurities outlet

New HE 19/750:



- 1 outlet for coarse impurities
- 1 outlet for medium impurities
- 1 outlet for light impurities (Aspiration)
- 2 outlets for clean product
- 4 outlets for fine impurities

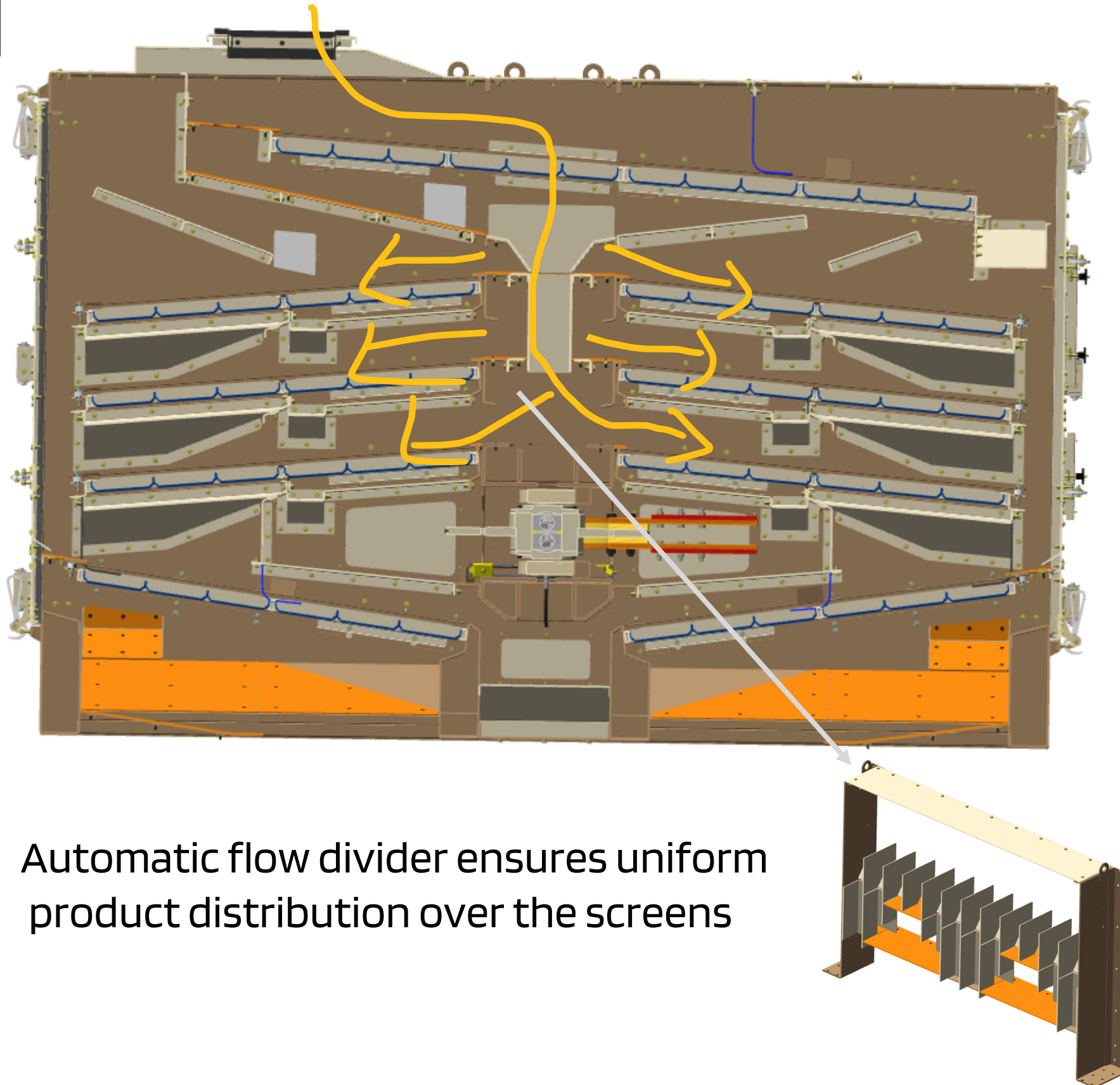
Previous Model HE 18 x 750



- 4 outlets for coarse impurities
- 2 outlets for medium impurities
- 1 outlet for light impurities (Aspiration)
- 2 outlets for clean product
- 4 outlets for fine impurities

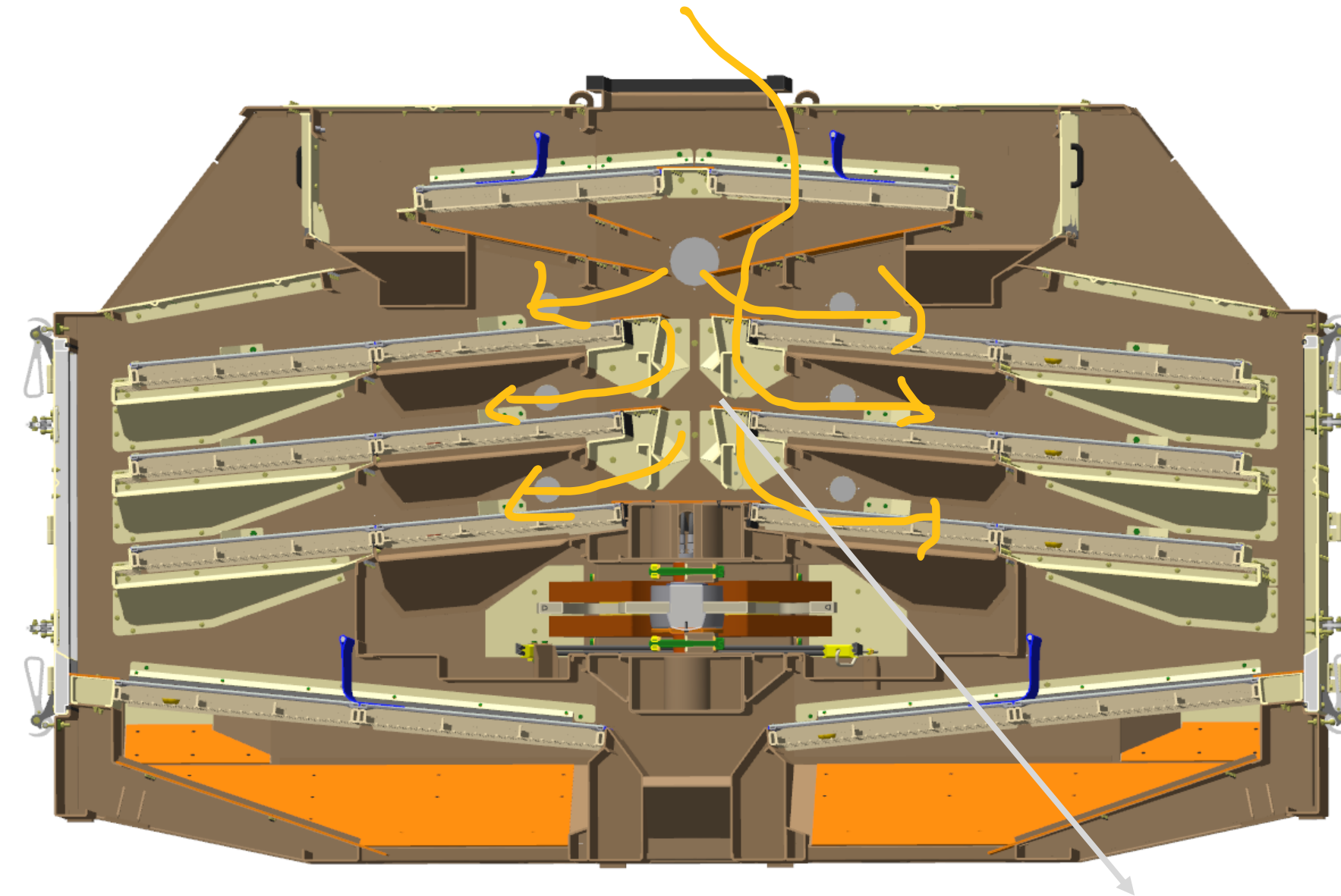
Inlet Flow Divider

New HE 19/750:

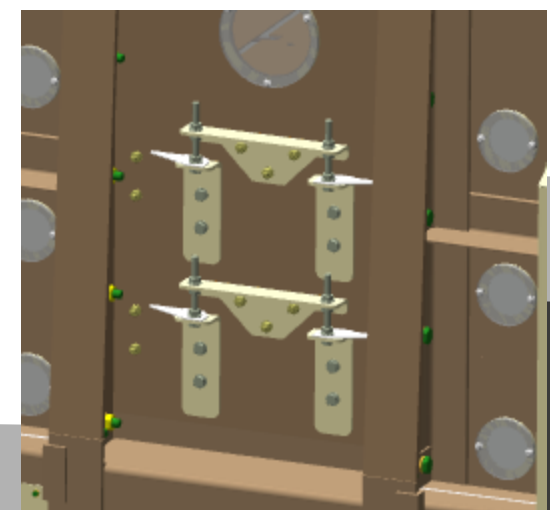


Automatic flow divider ensures uniform product distribution over the screens

Previous Model HE 18 x 750



Manual adjustment to ensure uniform product distribution over the screens



Inlet Flow Divider

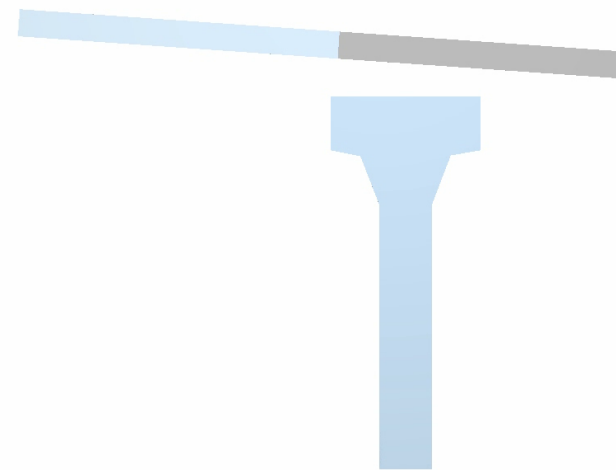
New HE 19/750:

DEM Simulation: Uniform product distribution across all screens without interventions or adjustments

Time: 0 s



Time: 0 s



Note: the color scale indicates product velocity:
Blue → lower velocity
Red → higher velocity

New HE 19/750:

Actual product flow behavior in the machine



Screen Details

New HE 19/750:

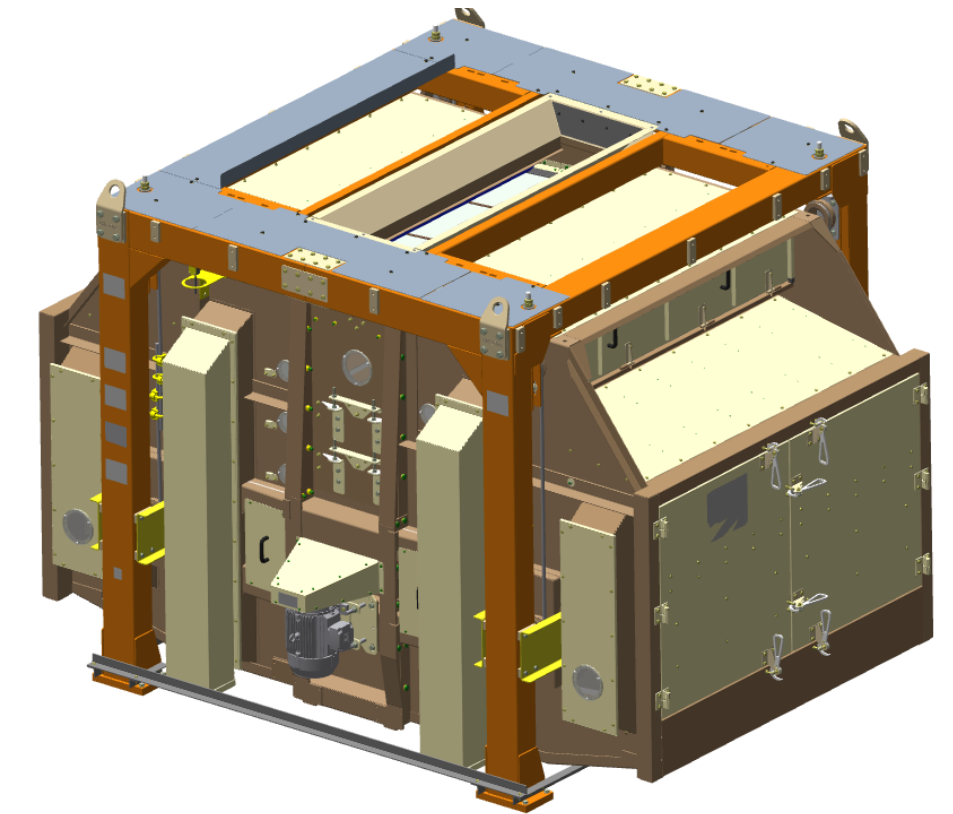
Full-size door allows access to all screens

Screen clamping system ensures quick screen replacement

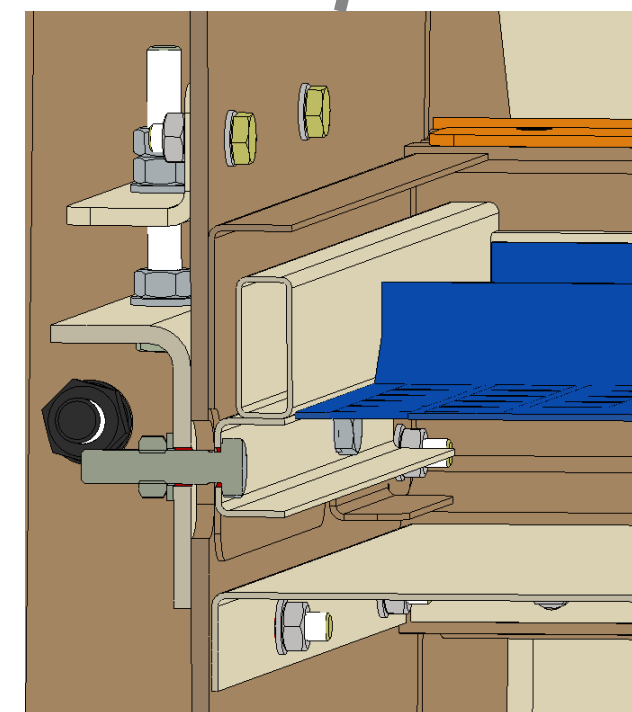
Allows screen loosening from the outside

Prevents grain leakage into fines

Previous Model HE 18 x 750



Requires increased attention to screen sealing to avoid product leakage

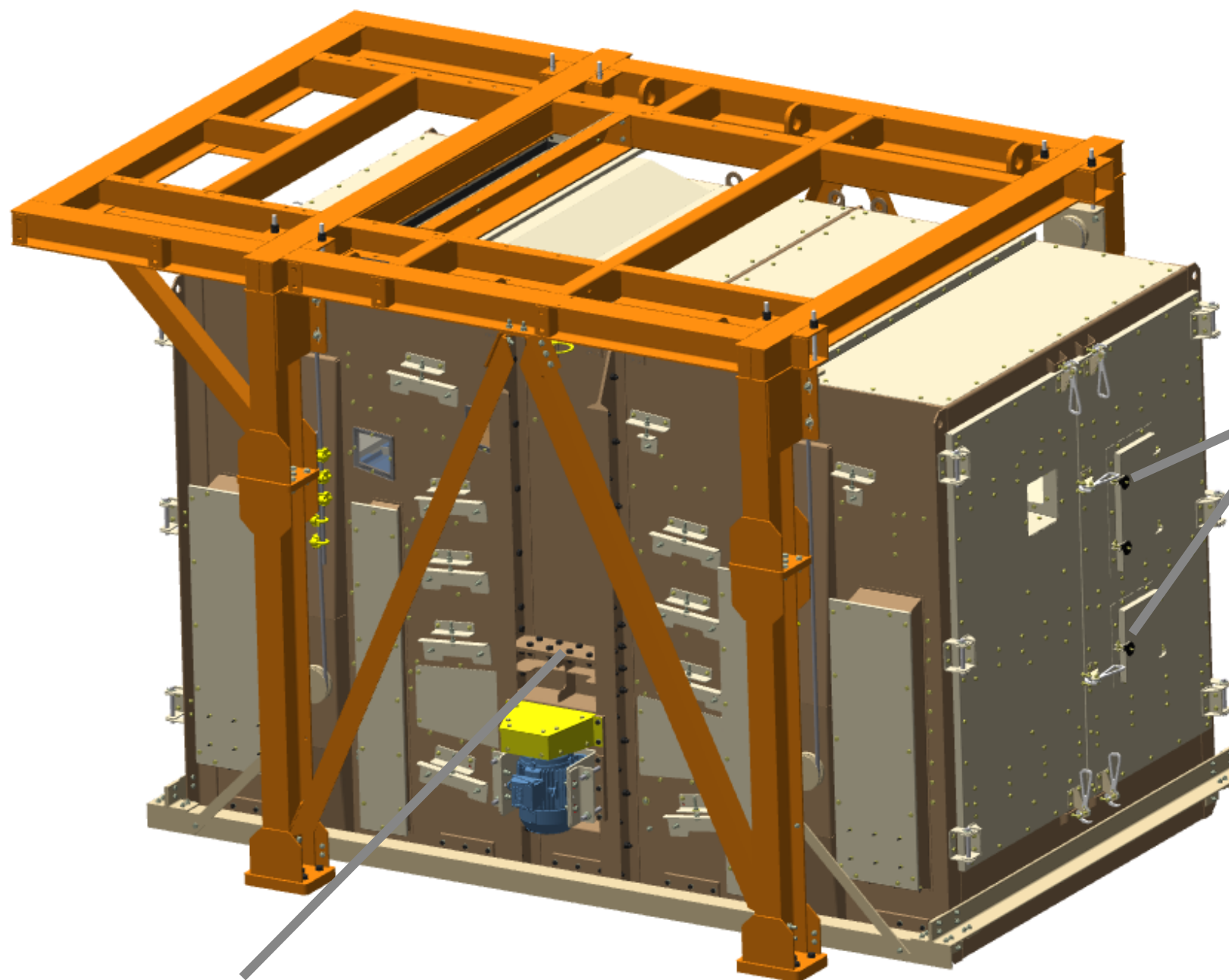


Screen Details

New HE 19/750:

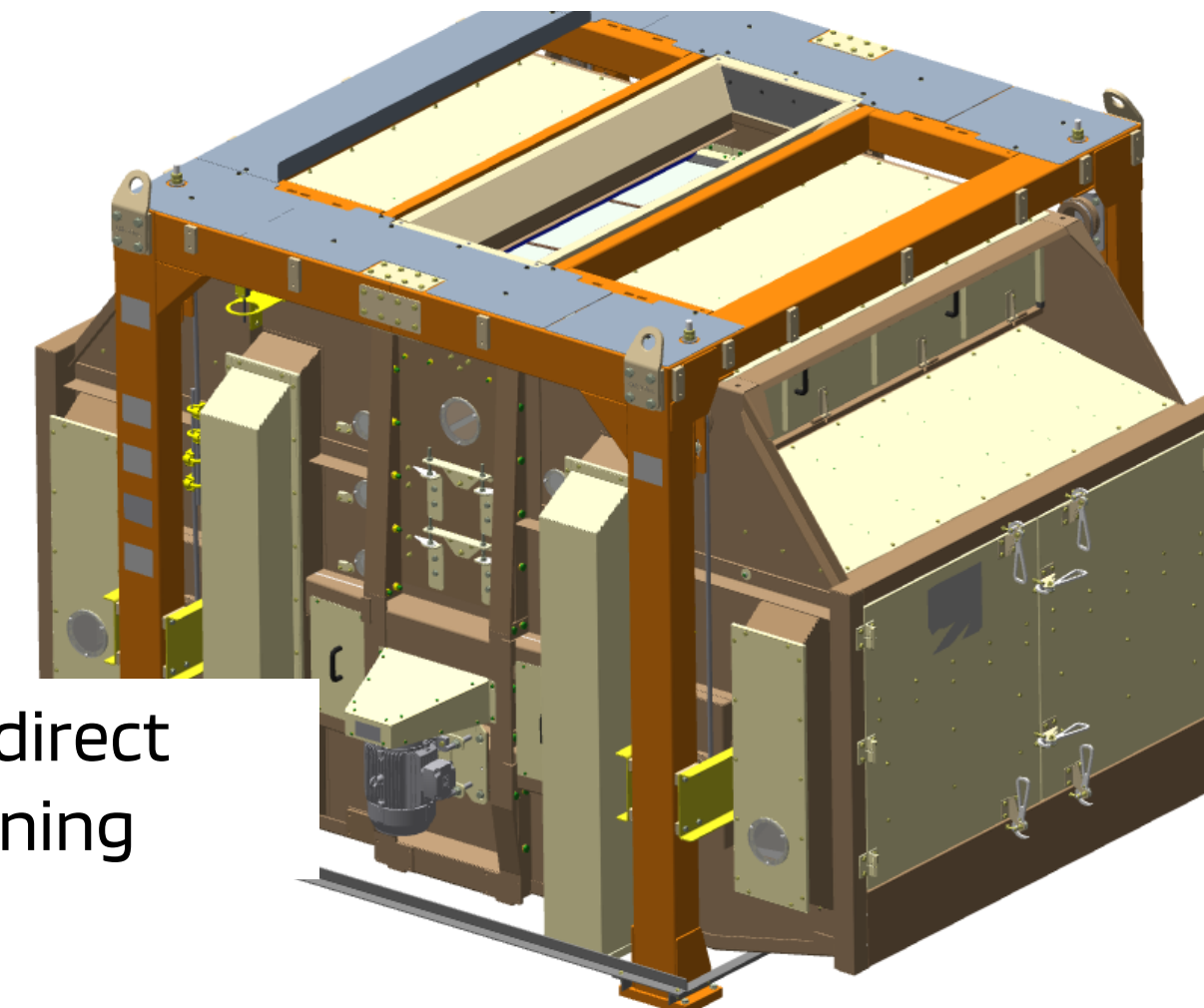


Previous Model HE 18 x 750

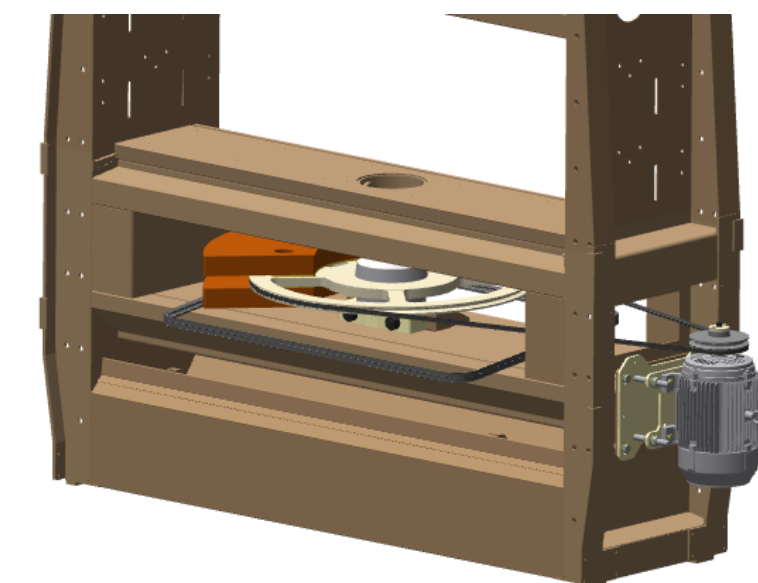
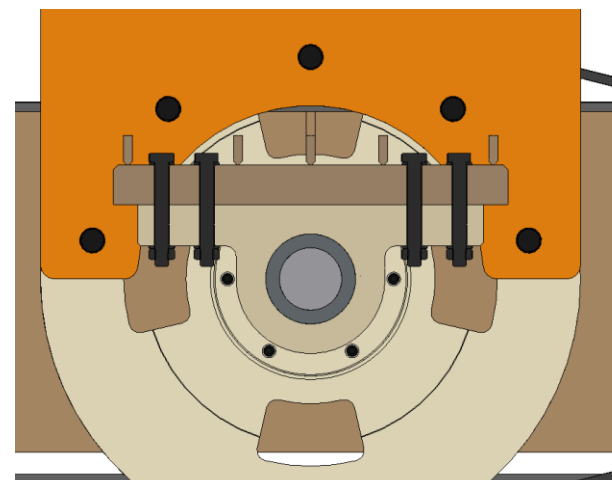
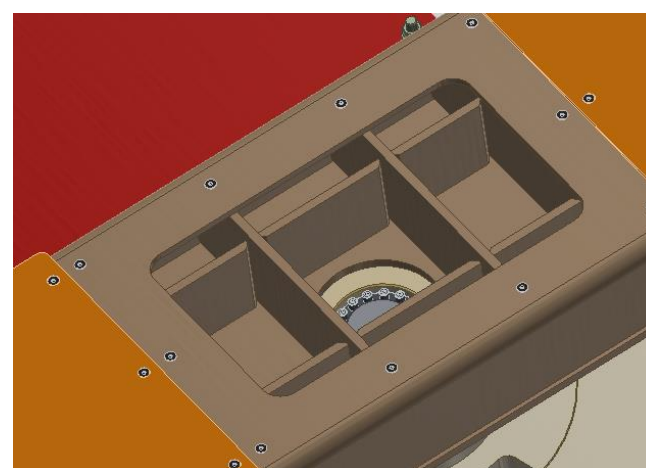


Inspection doors

Shaft assembly with direct bearing house tightening

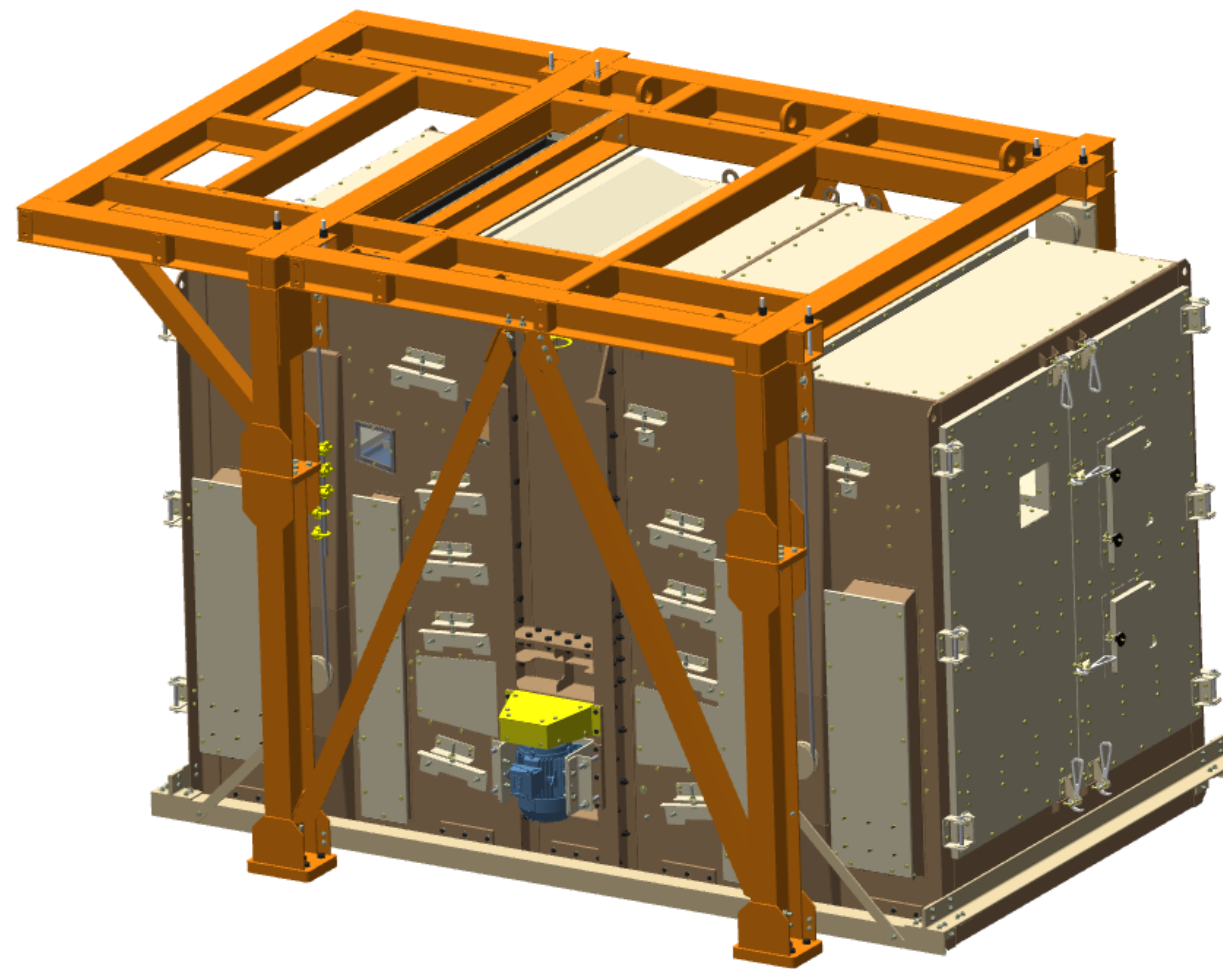


Shaft assembly with expansion rings
Ensures easier disassembly and a technical solution with longer service life

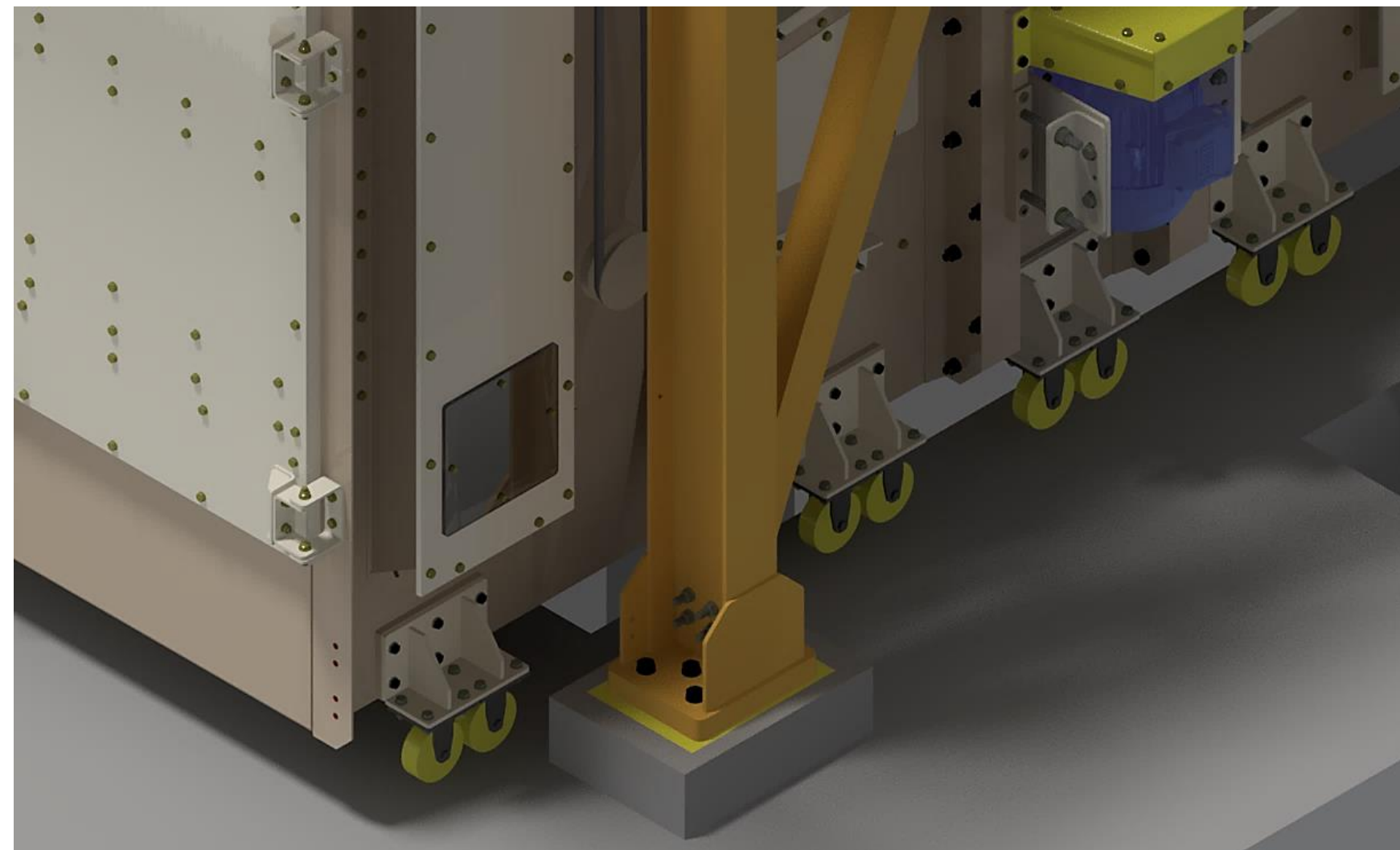


Maintenance

New HE 19/750:



**Standardized
maintenance rollers**



Thank You!

Matriz:
Av. Bernardino Silveira
Pastoriza, 710
CEP 91160-310
Porto Alegre - RS Brasil

Filial São Paulo:
Rua Salete, 200 - Cjs
81/82
CEP 02016-001
São Paulo - SP Brasil

Filial Minas Gerais:
Av. Professor Mário
Werneck, 434 – 4º Andar
CEP 30.455-610
Belo Horizonte - MG Brasil

Mercosul (Bulktech)
Catamarca 1950 Piso 2
ofic.10
CP 1640 - Martínez
Buenos Aires - Argentina

Entre em contato conosco pelos canais:



(51) 99259-2833



Av. Bernardino Silveira Pastoriza,
710 - Porto Alegre - RS



www.tmsa.ind.br



comercial@tmsa.ind.br

Siga nossas redes:



@grupoTMSA



@TMSA - Tecnologia em Movimentação S/A



TMSA Tecnologia em Movimentação