

Metso Mining Crushing Stations

Combining legacy and expertise

Webinar will begin in...
30 minutes



Metso Mining Crushing Stations

Combining legacy and expertise



Webinar will begin in...
20 minutes

Metso Mining Crushing Stations

Combining legacy and expertise

Webinar will begin in...
10 minutes



Metso Mining Crushing Stations

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Webinar will begin in...
5 minutes



Metso Mining Crushing Stations

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Webinar will begin in...
1 minute



Metso Mining Crushing Stations

Combining legacy and expertise



Agenda

1. Introduction
2. Introduction of Metso Mining Crushing Stations
3. Q&A
4. Webinar closure

Key information

- Webinar will be recorded
- Use the question box for all questions you have during the presentation
- If you require any assistance during presentation, please write into the question box as well. Moderator will be monitoring throughout the presentation
- Recording and reference materials will be distributed post-webinar
- Questions not answered during the webinar will be answered post-webinar by email



Exit

Today's speaker



Daniel Silva

Daniel.silva@metso.com

- **Mechanical Engineering Manager, Crushing and Material Handling Systems**
- **Joined Metso in 2005**
- **Responsible for supporting the development of mining crushing systems concepts and helping to drive customer success.**

Introducing Metso Mining Crushing Stations

Combining legacy and expertise

Tailor-made crushing plants

- End to end process
- Complex brownfield
- Underground operations



More than 100 existing plants in mining operations

Crushing Stations

- Configurable and modularized crushing and screening stations
- 3 offerings to respond to the specific needs of each operation



Widest range of modular solutions in industry

Overview of benefits



Time Saving

Design information available, global supply chain and modularity



Flexibility

Wide portfolio, customization to local regulation



Ease of maintenance

Mining duty

Crushing stations – Scope of supply

New Mining Crushing Station

Within scope

Standard

Equipment
Performance Warranty
Engineering
*Steel structures
*Electric and automation

Optional

*Auxiliary equipment
*Auxiliary systems
*Site supervision

Out of scope

Civil
Installation

*Can be customized to meet specific needs

Wide range of solutions

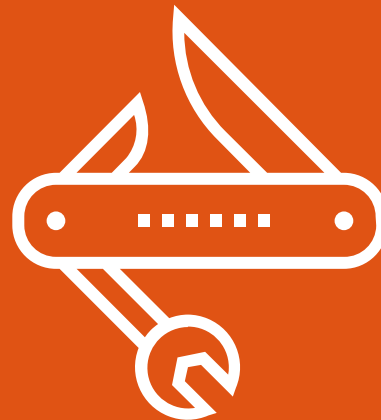
NW Rapid™ plants

Plug and play



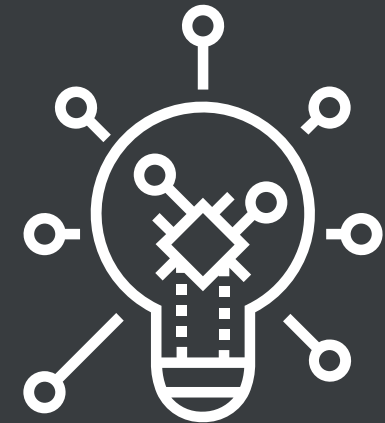
FIT™ stations

Speed and flexibility



Foresight™ stations

Smart and autonomous



NW Rapid™ MINING plants



**Quick
Set-up**

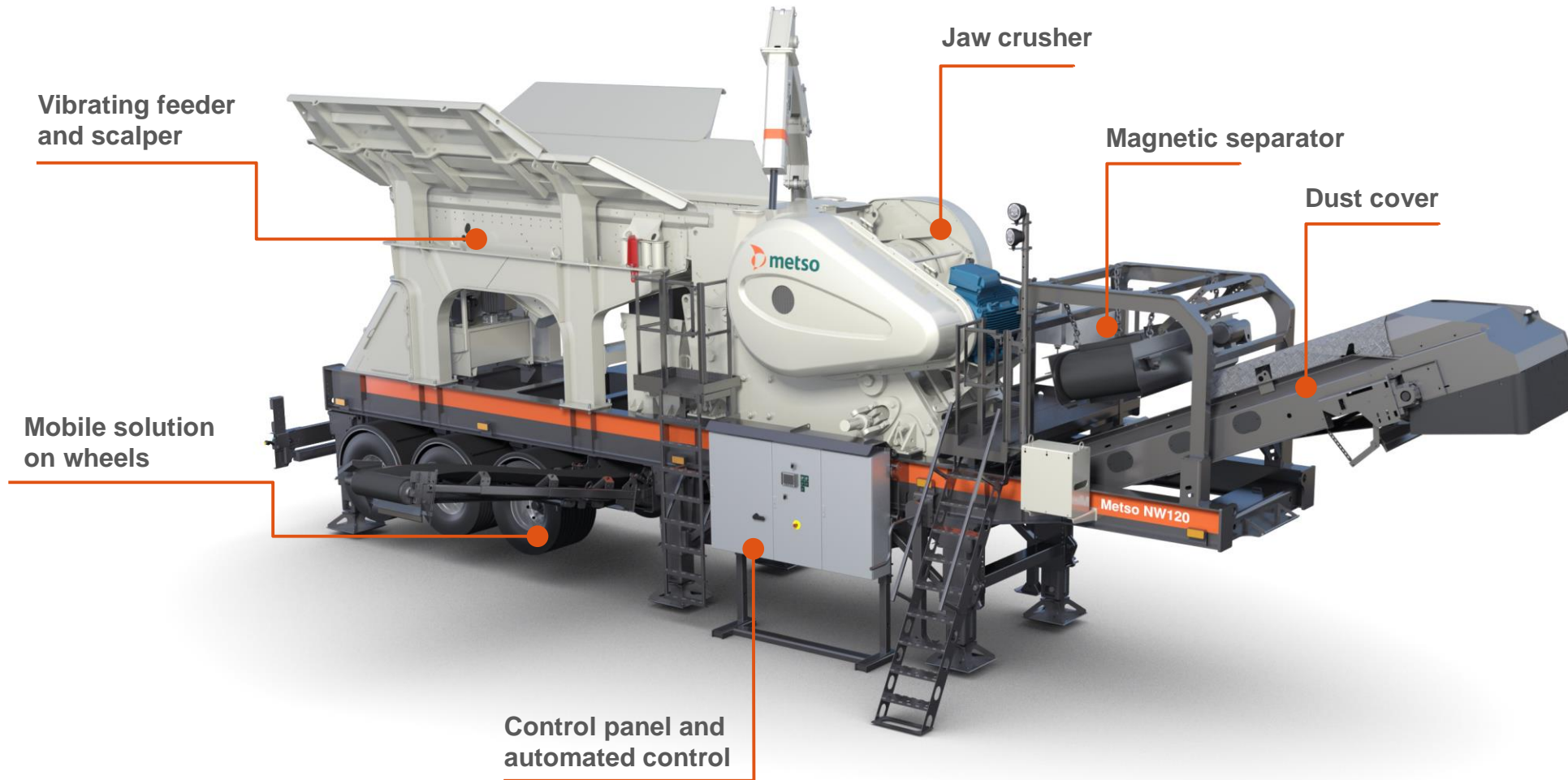
**Plug and
play**

Capacity	≤ 1,000 t/hour
Lead time	10-14 weeks (FCA)
Crusher model(s)	C106, C120, C130, C150 or HP200, HP300
Application(s)	Primary, secondary and tertiary crushing
Design(s)	Wheel mounted Conveyors included

Technical details

	Circuit	Min mtph	Max mtph	Feed (mm)	Indicative P80 range (mm)
1	NW106+NWHP200D	150	250	400-600	16-30
2	NW106+NWHP200D+NWHP200D	150	250	400-600	8-15
3	NW116/NW120+NW300HPS	250	400	400-700	17-40
4	NW116/NW120+NW300HPS+NW300HPS	250	400	400-700	8-15
5	NW120 + Conveyor	300	500	600-700	110+
6	NW130 + Conveyor	400	600	700	120+
7	NW150 + Conveyor	500	700	900	160+

Plant components



FIT™ stations

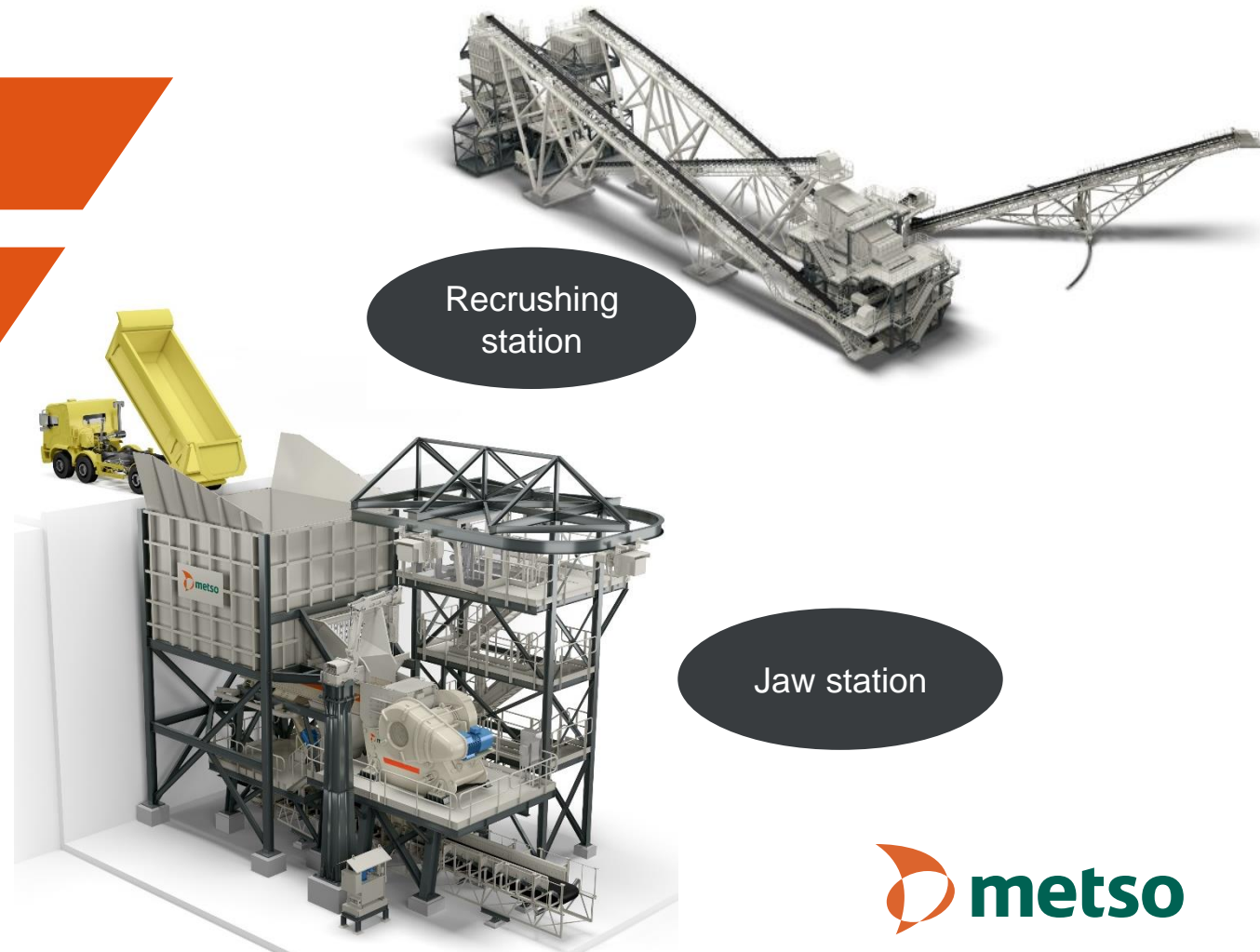
Speed and flexibility

Multiple station configurations

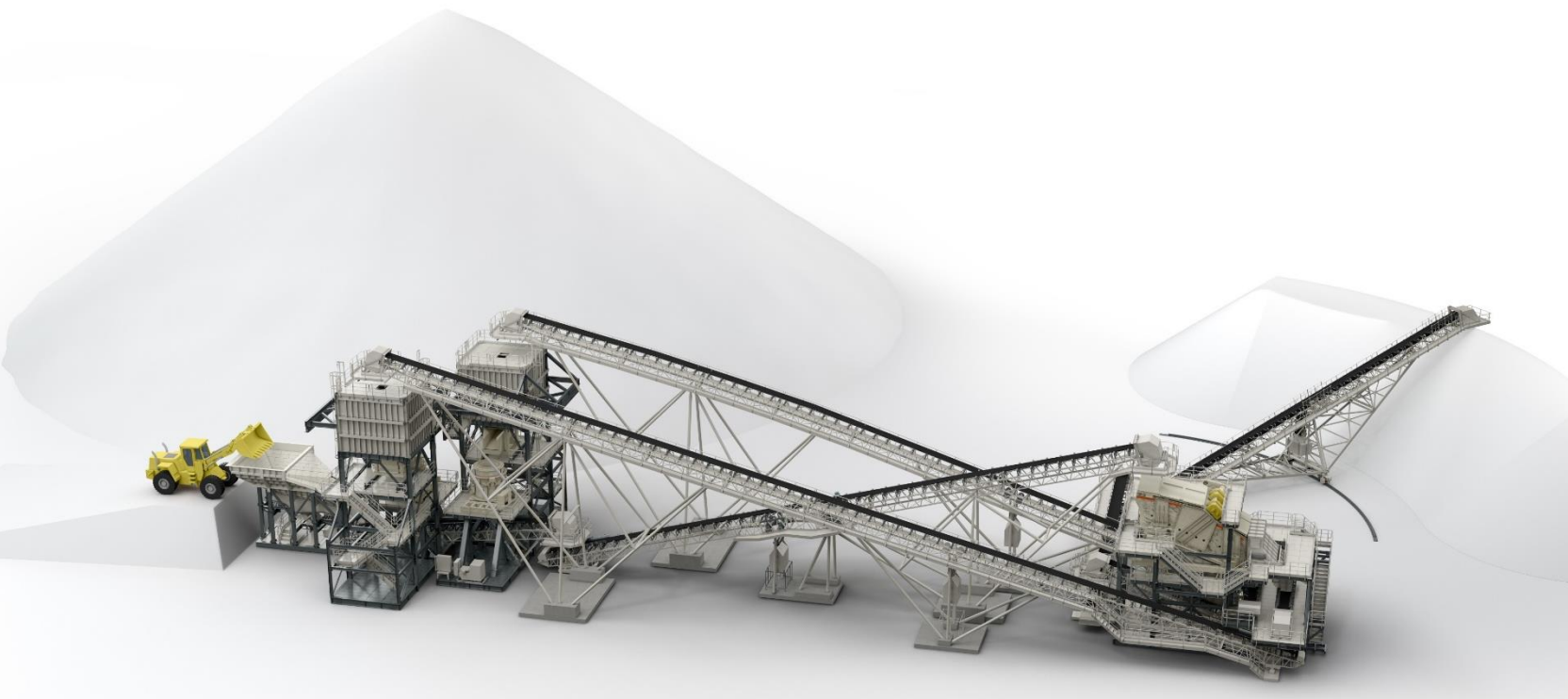
Delivery time reduced by up to 25%

Erection time reduced by up to 15%

200 up to 3,000 t/hour capacities



Recrushing station



Boost SAG mill capacity by up to 15%

**Supplemental plants
Reprocessing plants**

Capacity	≤ 750 t/hour
Lead time	25 weeks (FCA)
Crusher model(s)	HP400 HP500
Application(s)	Stockpile recrushing (Secondary and tertiary)
Design(s)	Skid mounted Fed by excavator, Close installation to stockpile Conveyors included

Recrushing station



Hopper and feeder
Fed by Excavator
Fed by trucks
(Optional)

Civil Base
Conventional Design
Skid Design (Optional)

Cone crusher
Secondary
Tertiary (Optional)

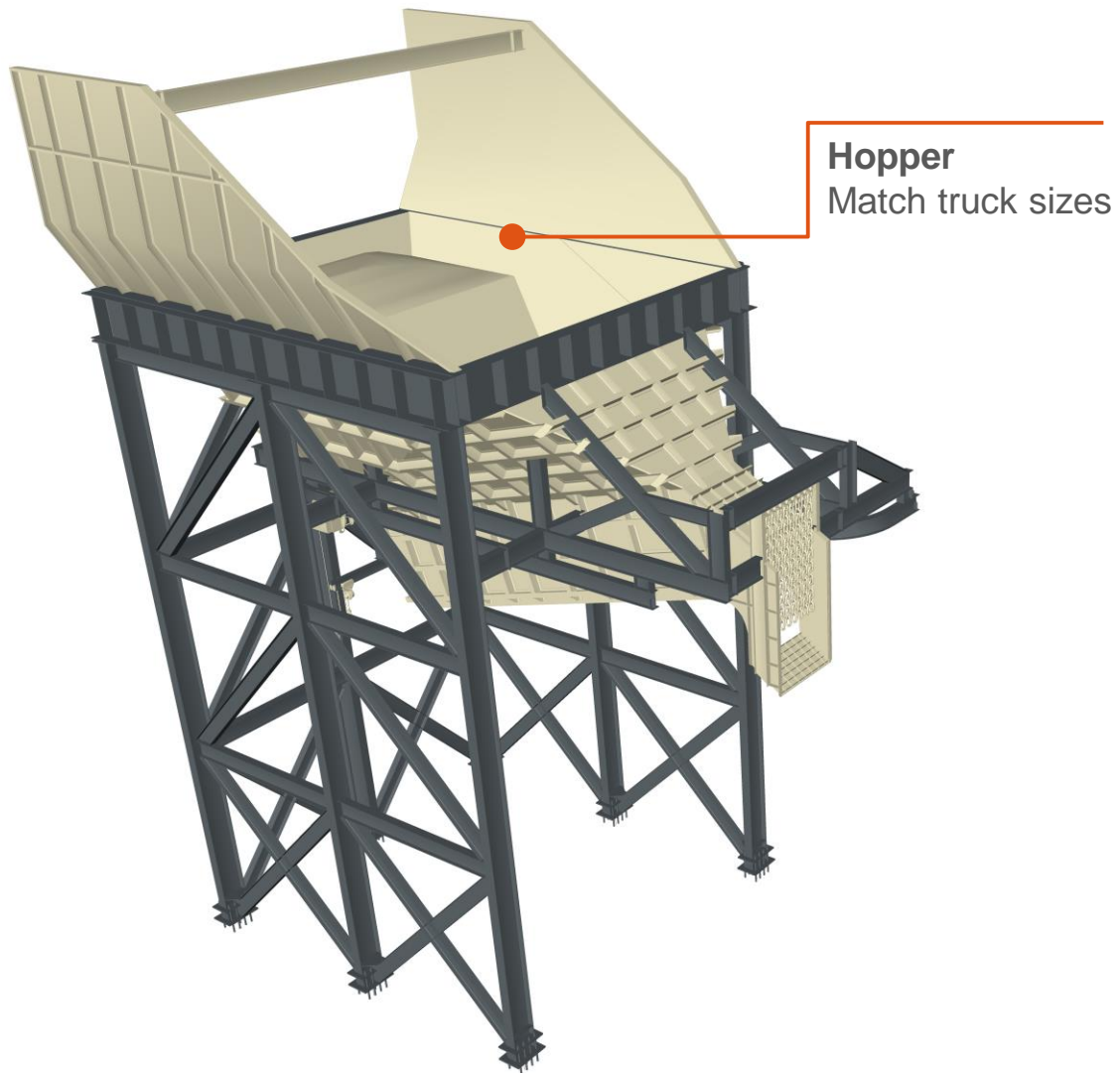
Jaw station



30+
configurations

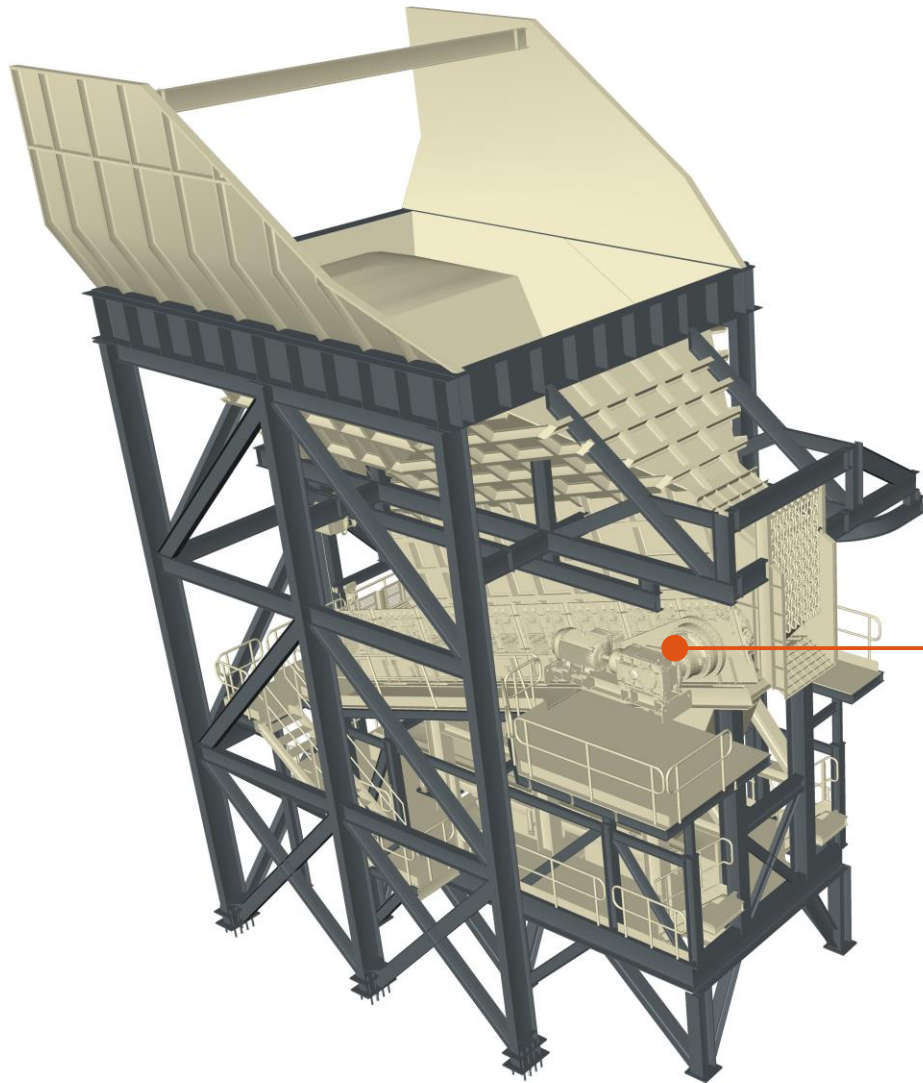
**Ease of
maintenance**

Capacity	≤ 3,000 t/hour
Lead time	25 weeks (FCA)
Crusher model(s)	C120, C130 C150, C160
Application(s)	Primary crushing
Design(s)	Stationary or skid mounted



Hopper Module

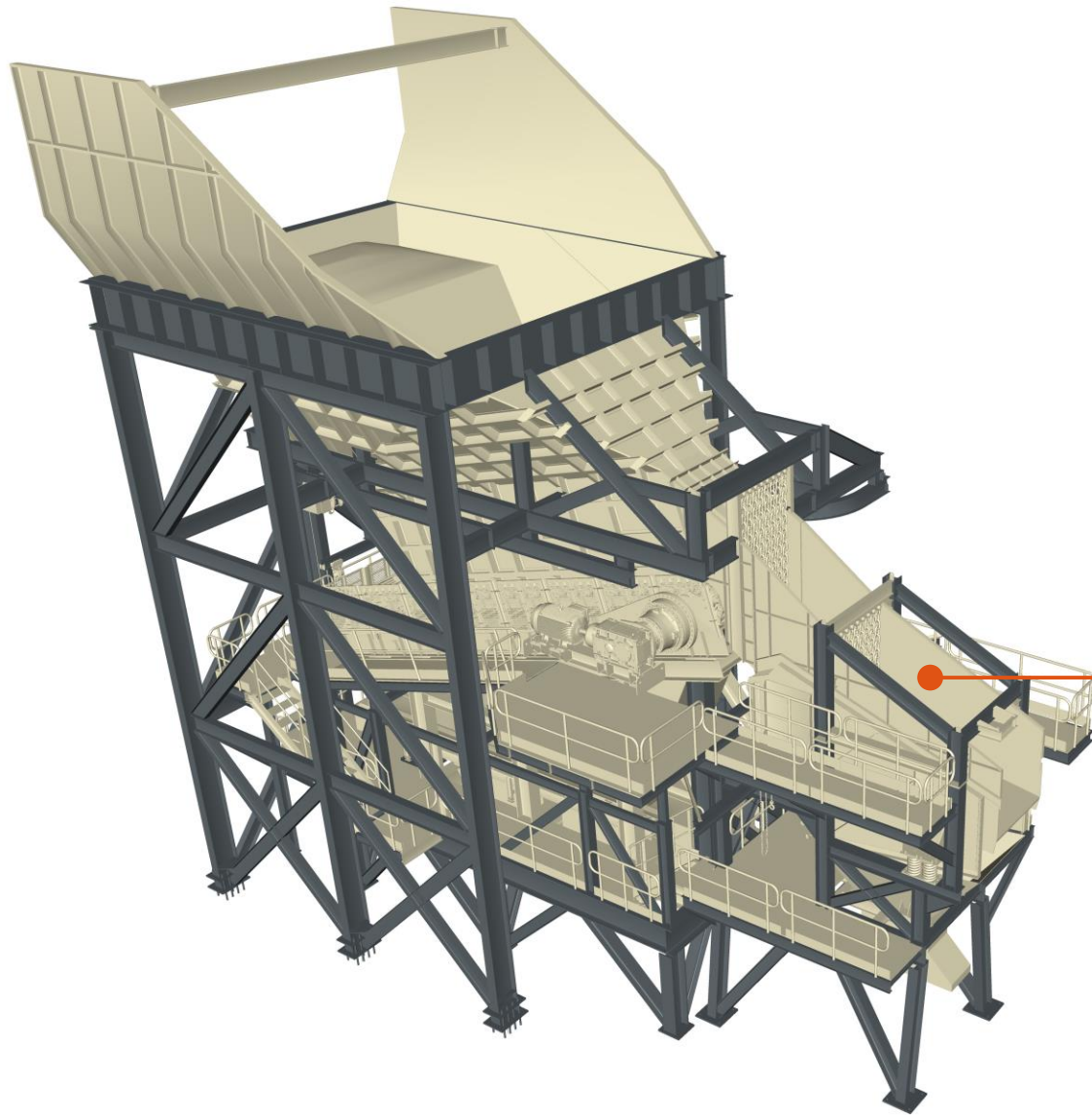
+ Feeder Module



Apron feeder

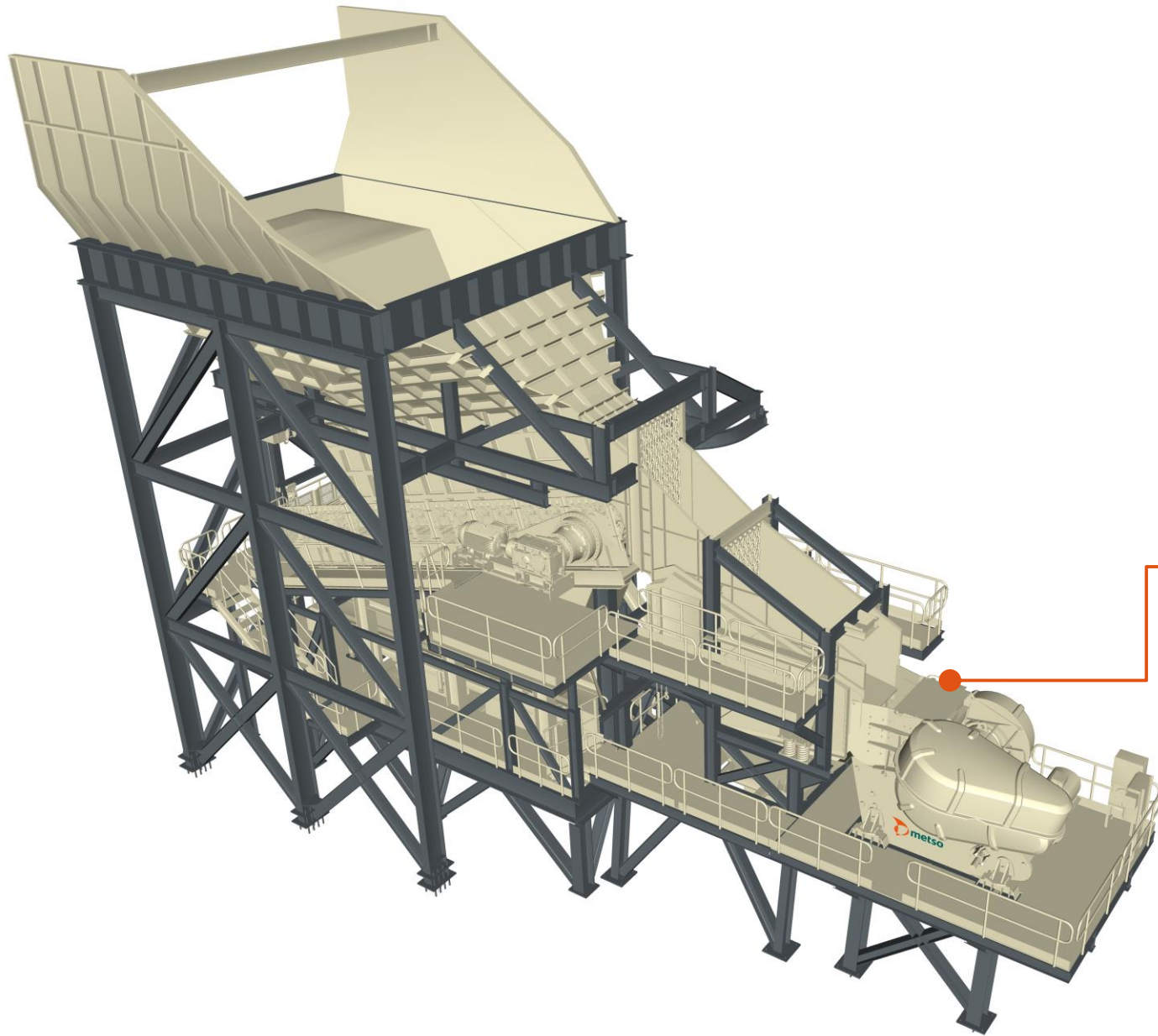
Based on capacity, feed size and fine content
Dribble conveyor - Optional

+ Grizzly Module



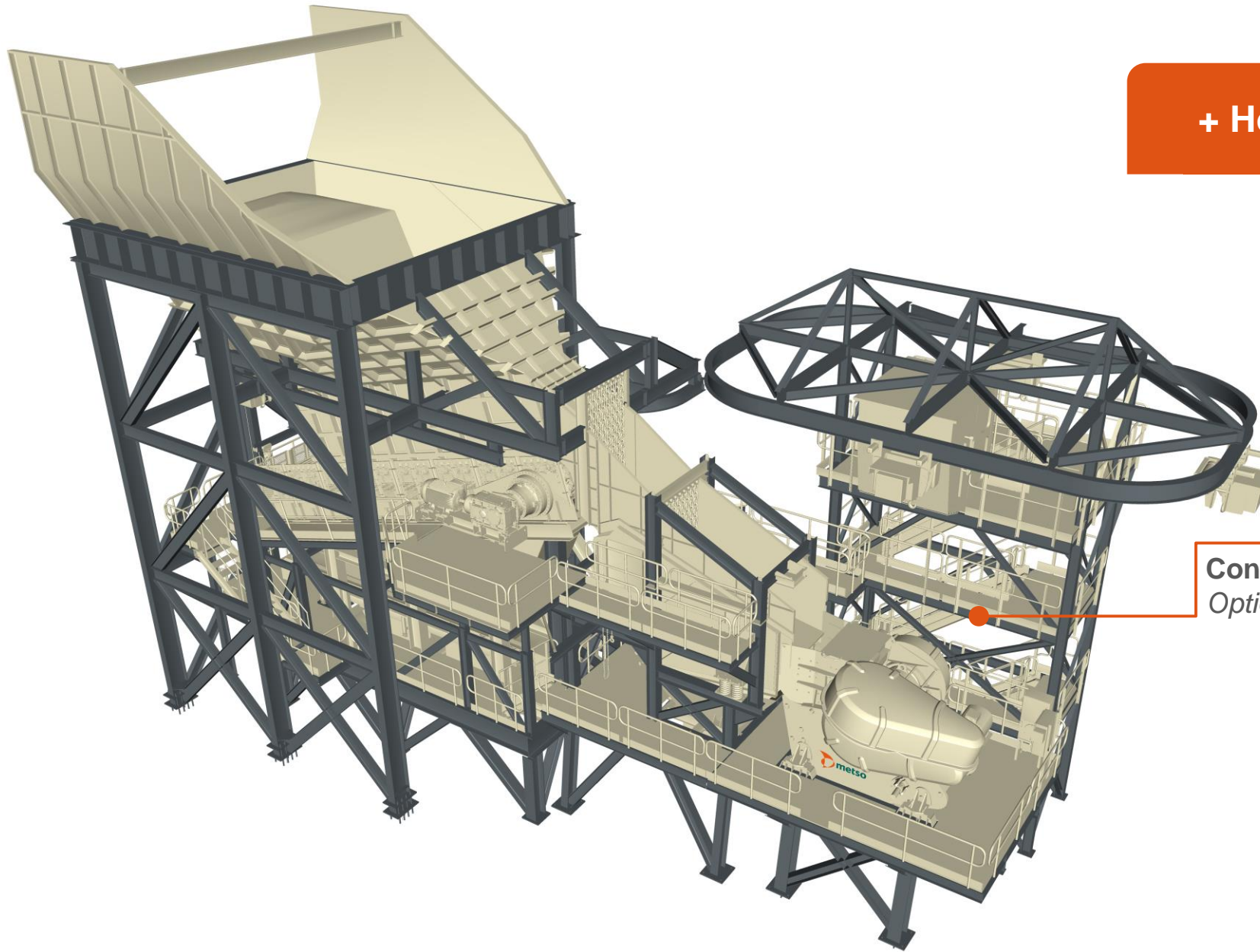
Grizzly
Scalper
Optional

+ Crusher Module



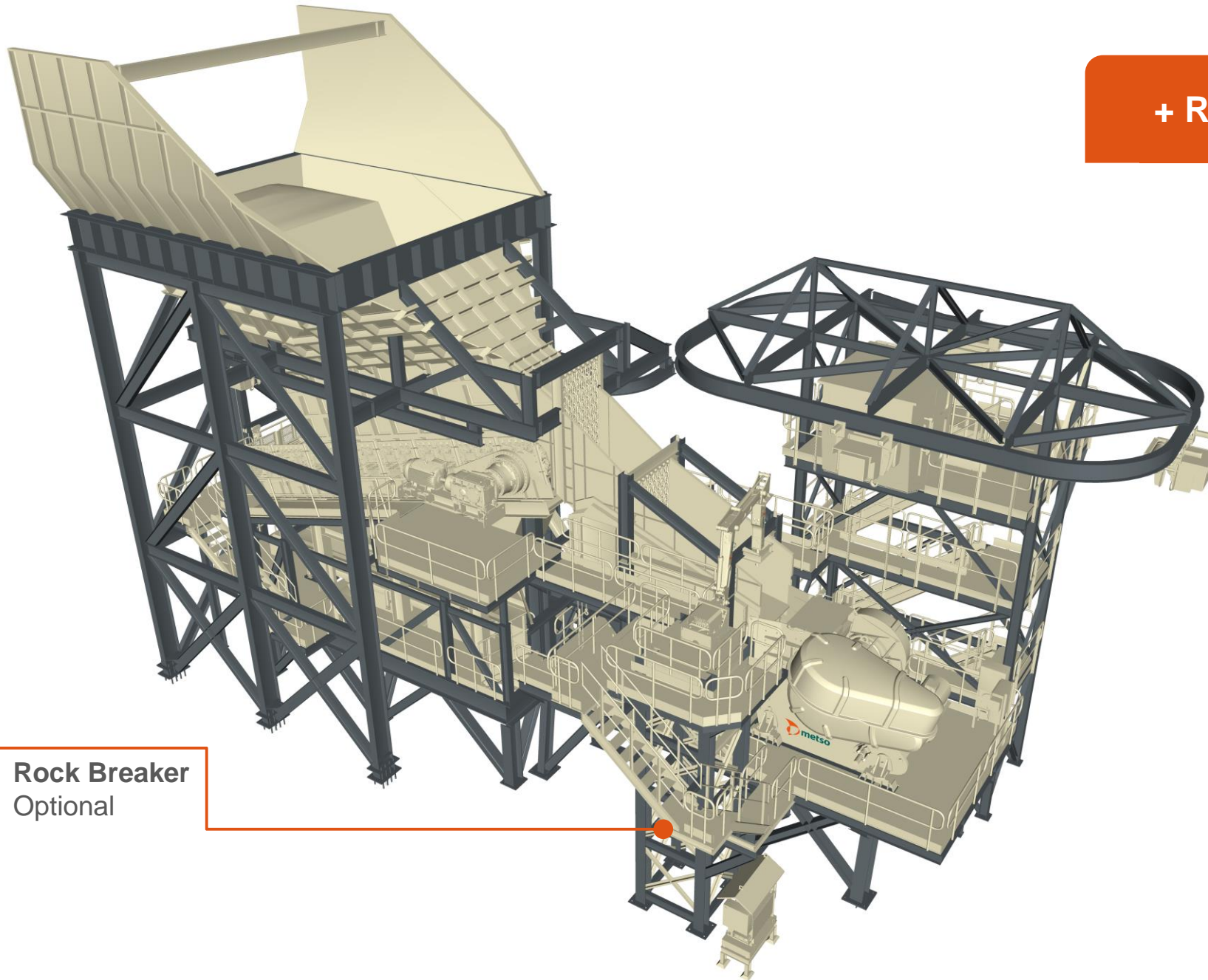
Jaw Crusher
Based on capacity and feed size

+ Hoist Module



Control Cabinet and Hoist
Optional

+ Rock Breaker Module



Rock Breaker
Optional

Apron + Grizzly + Jaw

Feed Bin
150 / 250 ton
Up to CAT 785 truck

Apron Feeder
AF5-1219-8800
AF8-1524-9050
AF8-1829-9050

Grizzly
VG540-3V
LH1836-1G
LH2148-1G

Jaw Crusher
C120 / C130 / C150 / C160

Apron + Jaw

Feed Bin
150 / 250 ton
Up to CAT 785 truck

Apron Feeder
AF5-1219-8800
AF8-1524-9050
AF8-1829-9050

Jaw Crusher
C120 / C130 / C150 / C160

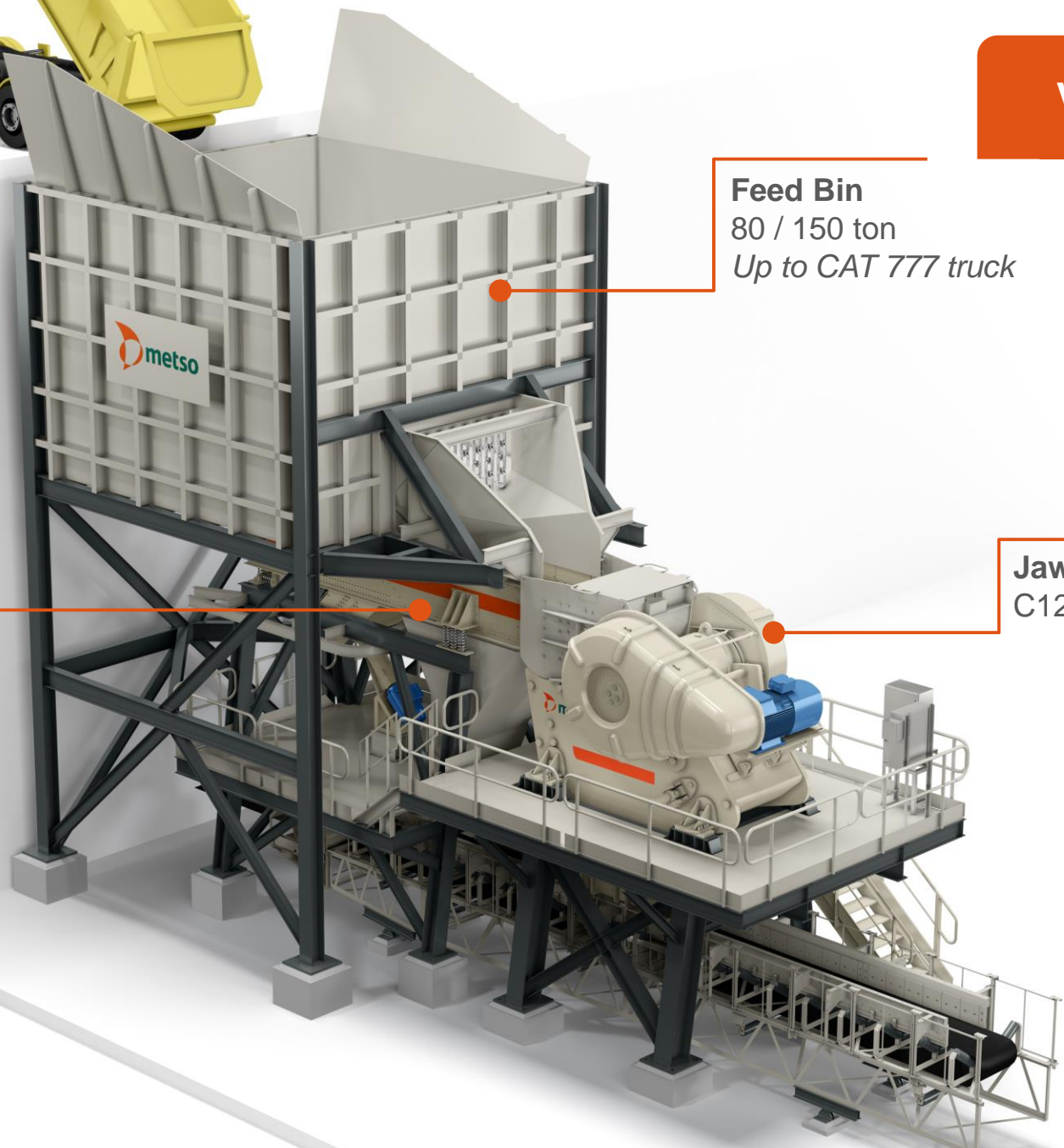
VGF + Jaw



Feed Bin
80 / 150 ton
Up to CAT 777 truck

Vibrating Grizzly Feeder
VF561-2V / VF661-2V

Jaw Crusher
C120 / C130 / C150 / C160

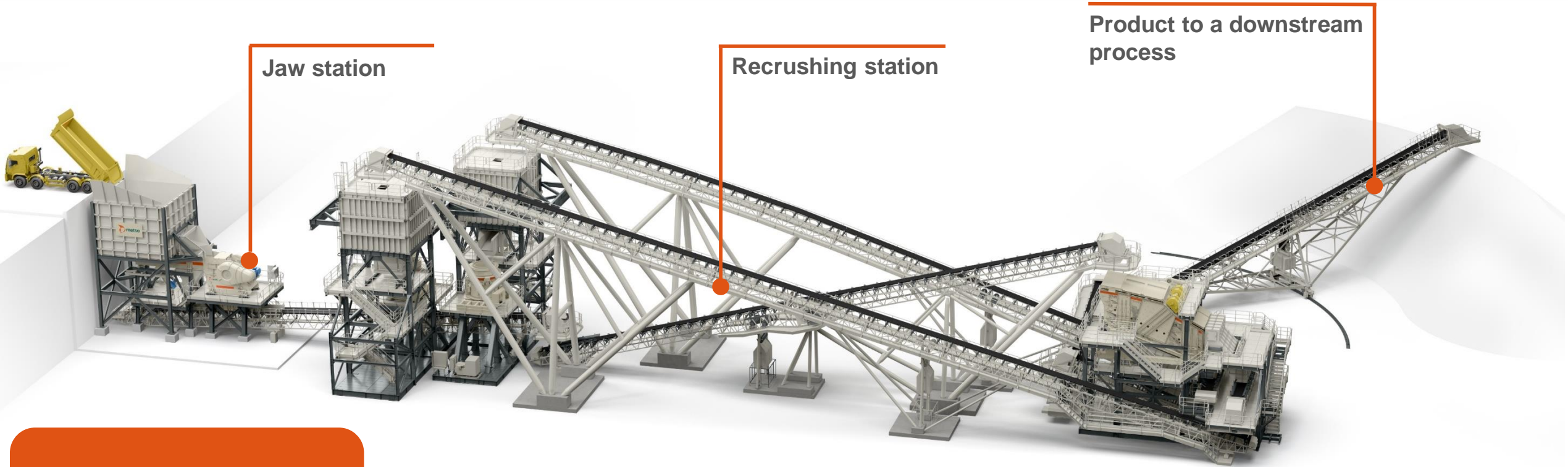


Primary crushing station – Jaw

Crusher		Duty	Feed Bin		Vibrating Grizzly Feeder	Apron Feeder	Grizzly Scalper
			Box Design (ton)	Inclined Sidewall Design (ton)			
Jaw	C120 C130	Heavy	80 / 150	-	VF561-2V	-	-
		Extra Heavy Fine to coarse curve	-	150	-	AF5-1219-8800	VG540-3V
		Extra Heavy Very Fine curve	-		-	AF8-1524-9050	LH1836-1G
		Extra Heavy Without Scalper	-		-	AF5-1219-8800	-
	C150 C160	Heavy	80 / 150	-	VF661-2V	-	-
		Extra Heavy Fine to coarse curve	-	150 / 250	-	AF8-1524-9050	LH1836-1G
		Extra Heavy Very Fine curve	-		-	AF8-1829-9050	LH2148-1G
		Extra Heavy Without Scalper	-		-	AF8-1829-9050	-
Extra Heavy Without Scalper	-	-	AF8-1524-9050		-		

FIT™ stations

Complete flow sheet



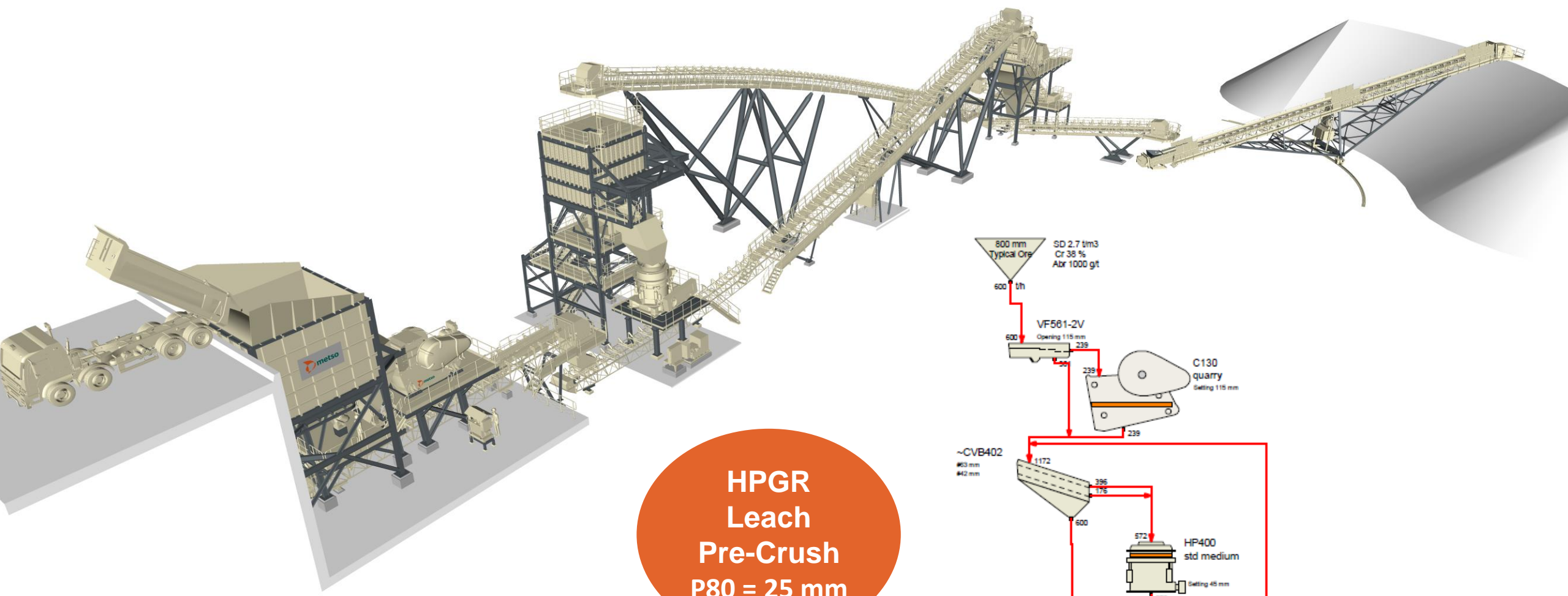
Jaw station

Recrushing station

Product to a downstream process

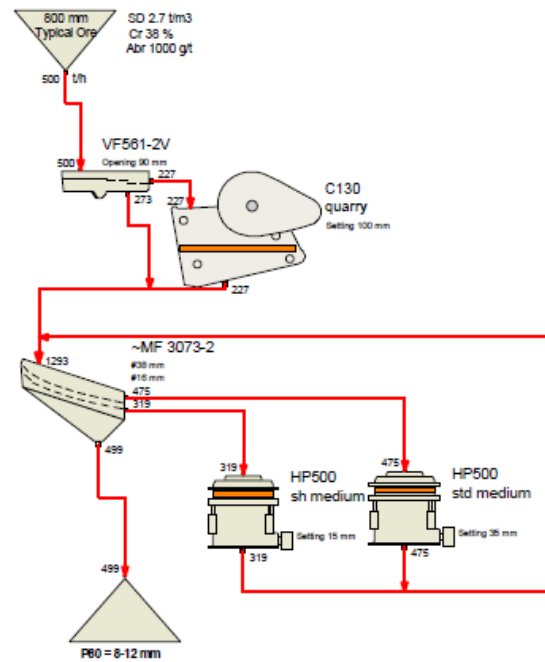
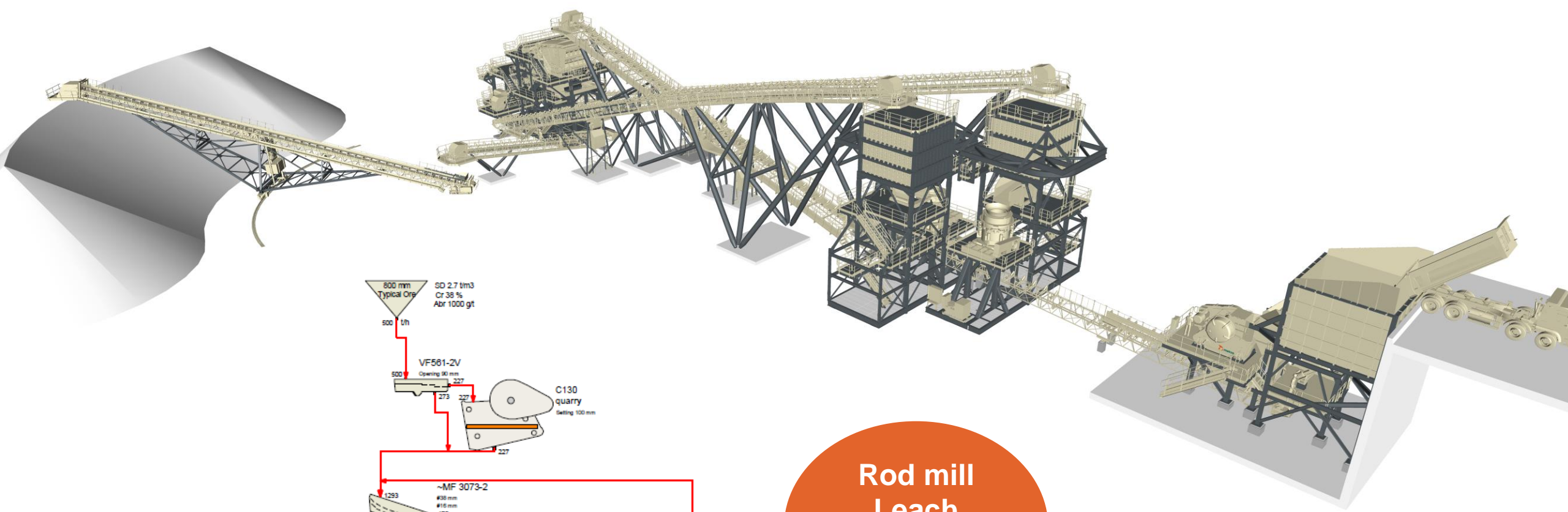
Jaw + Recrushing

Primary + Secondary in Closed Circuit



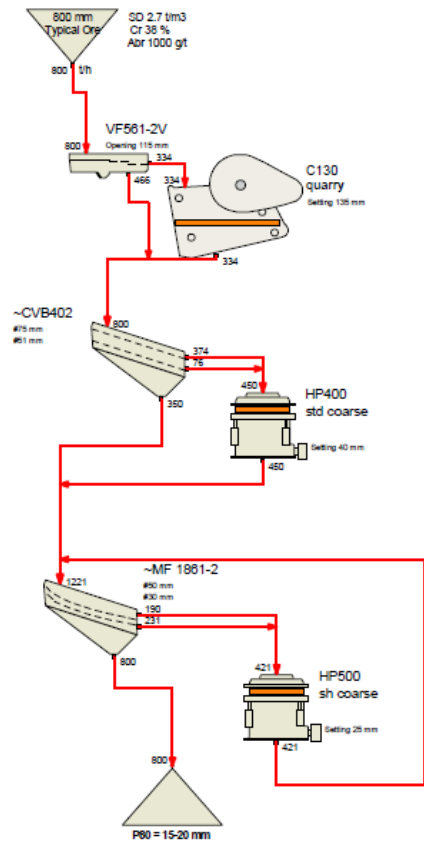
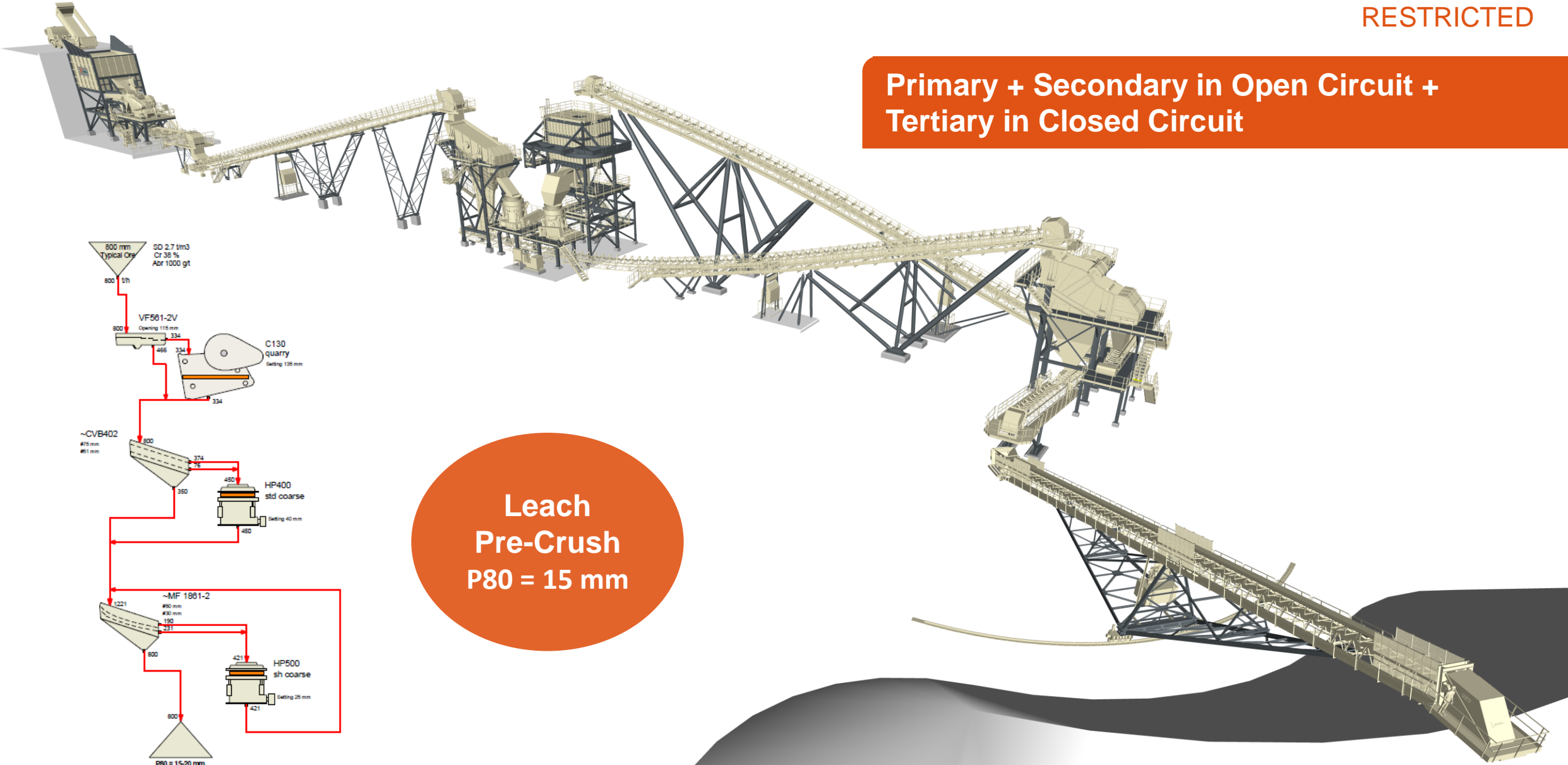
HPGR
Leach
Pre-Crush
P80 = 25 mm

Primary + Secondary in Closed Circuit + Tertiary in Closed Circuit



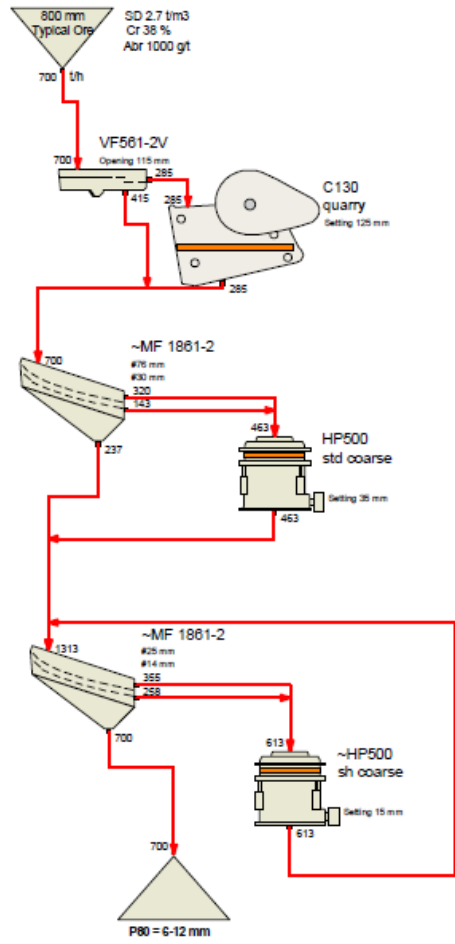
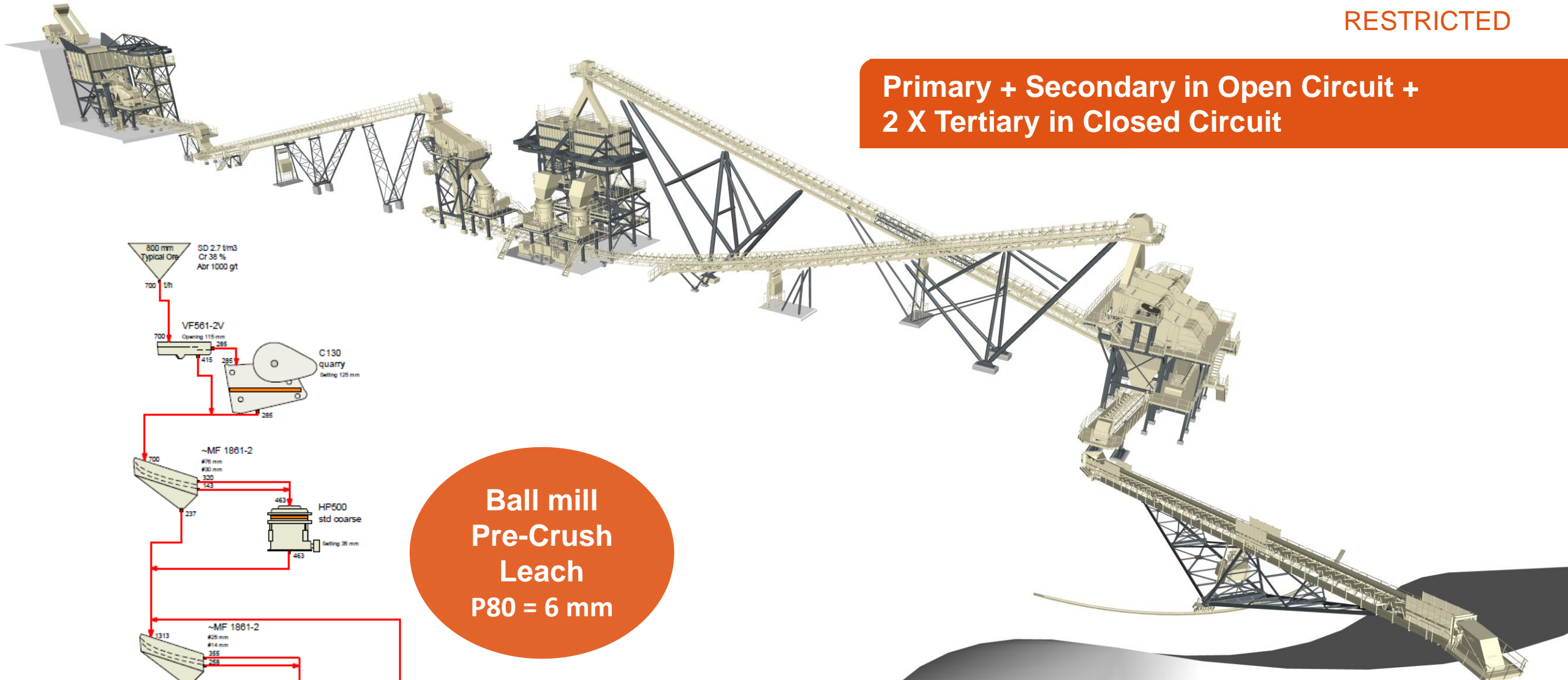
Rod mill
Leach
Pre-Crush
P80 = 8 mm

Primary + Secondary in Open Circuit +
Tertiary in Closed Circuit



Leach
Pre-Crush
P80 = 15 mm

Primary + Secondary in Open Circuit +
2 X Tertiary in Closed Circuit



Ball mill
Pre-Crush
Leach
P80 = 6 mm

FIT™ stations – Standard plants

FIT #	Crushing Plant Description	Application	Capacity (mtph) low	Capacity (mtph) high	Topsize (mm)	Minimum P80	FIT Jaw Crusher	Scalping screen	Secondary Crusher	Tertiary crusher	Sizing screen
1.1	Primary + Secondary in Closed Circuit	HPGR Leach Pre-Crush	350	450	700	25	C120	-	HP300		CVB402
1.2			500	700	800	25	C130	-	HP400		CVB402
1.3			700	900	900	25	C150	-	HP500		MF2461-2
2.1	Primary + Secondary in Closed Circuit + Tertiary in Closed Circuit	Rod mill Leach Pre-Crush	250	350	700	8	C120	-	HP300	HP300	CVB603
2.2			350	450	700	8	C120	-	HP400	HP400	MF2461-2
2.3			450	550	800	8	C130	-	HP500	HP500	MF3073-2
3.1	Primary + Secondary in Open Circuit + Tertiary in Closed Circuit	Leach Pre-Crush	500	600	800	15	C130	CVB402	HP300	HP400	CVB602
3.2			700	800	800	15	C130	CVB402	HP400	HP500	MF1861-2
4.1	Primary + Secondary in Open Circuit + 2 X Tertiary in Closed Circuit	Ball mill Pre-Crush Leach	500	600	800	6	C130	CVB402	HP400	2xHP400	2xCVB602
4.2			575	700	800	6	C130	MF1861-2	HP500	2xHP500	2xMF1861-2

Foresight™ stations

Smart and autonomous

Smart station technology

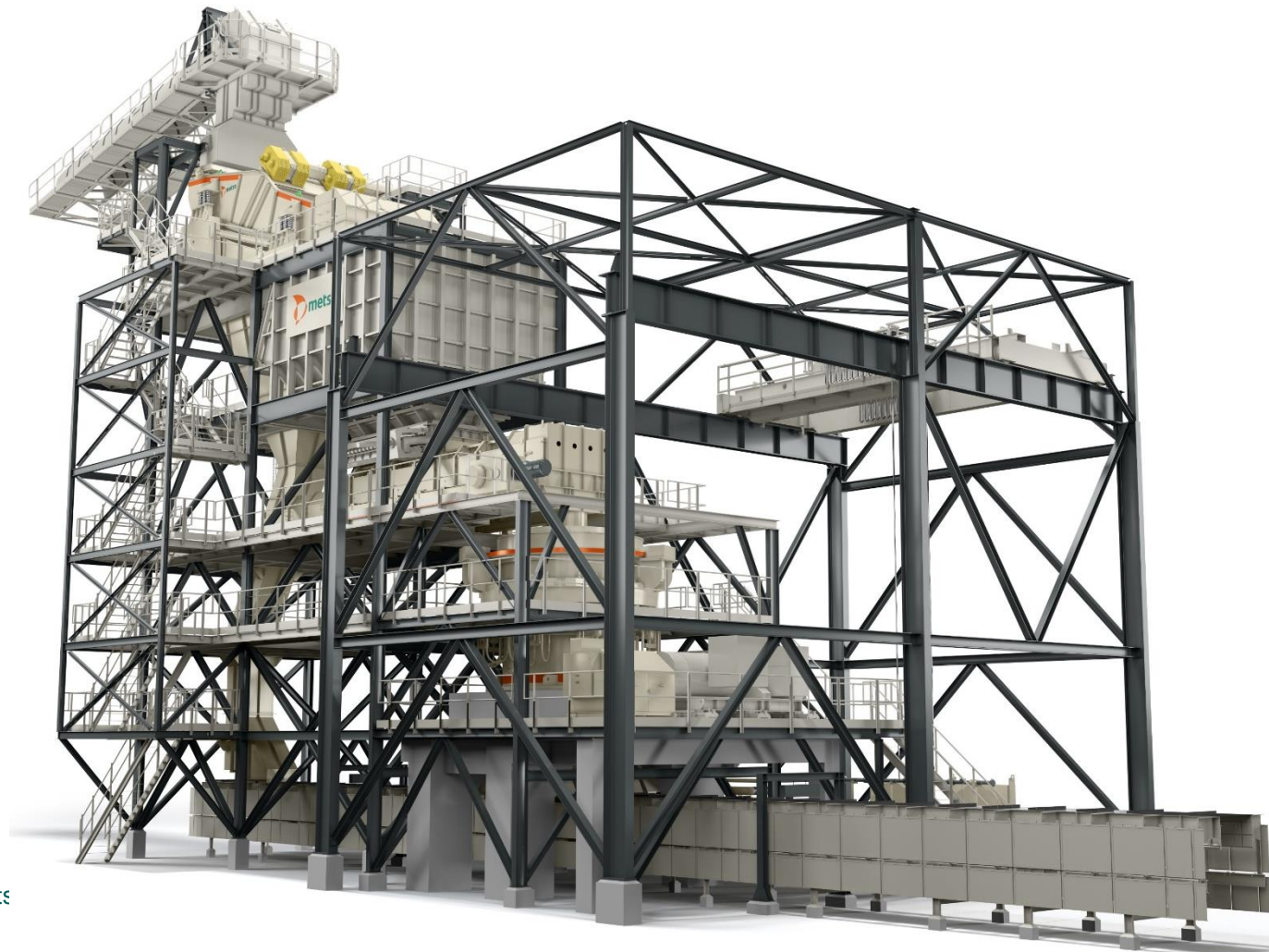
Top size control ability

Multiple steel structure modules

1,000 up to 6,000 tph capacities



MP cone station



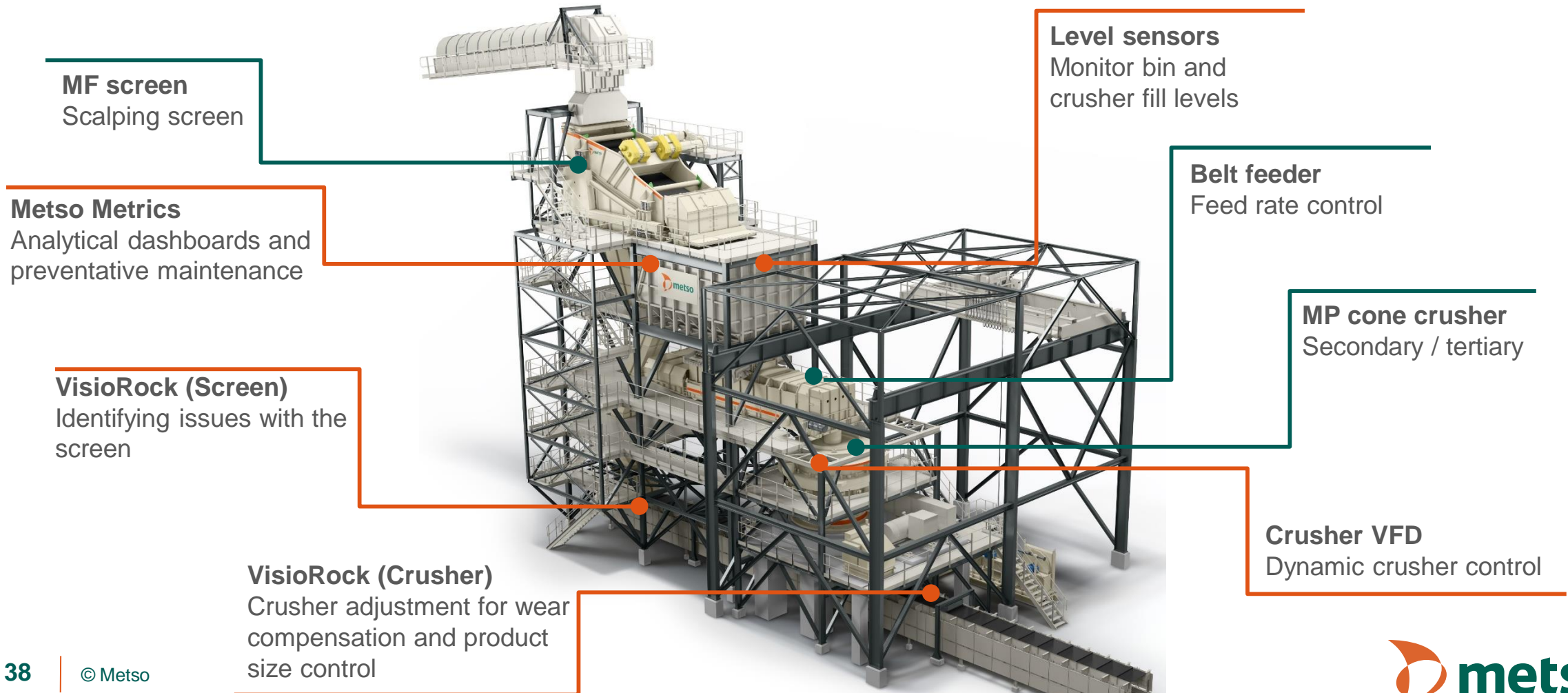
Fully
connected
plant

Reduced
plant
footprint

Capacity	≤ 6,000 t/hour
Lead time	40 weeks (FCA)
Crusher model(s)	MP800, MP1000, MP1250
Modular design components	Feed bin, crusher and overhead crane
Application(s)	Secondary or tertiary crushing, direct feed to HPGR or SAG mill
Smart station features	Metso Metrics, Crusher VFD, VisioRock, Level sensors

Foresight™ stations

Equipment and smart controls



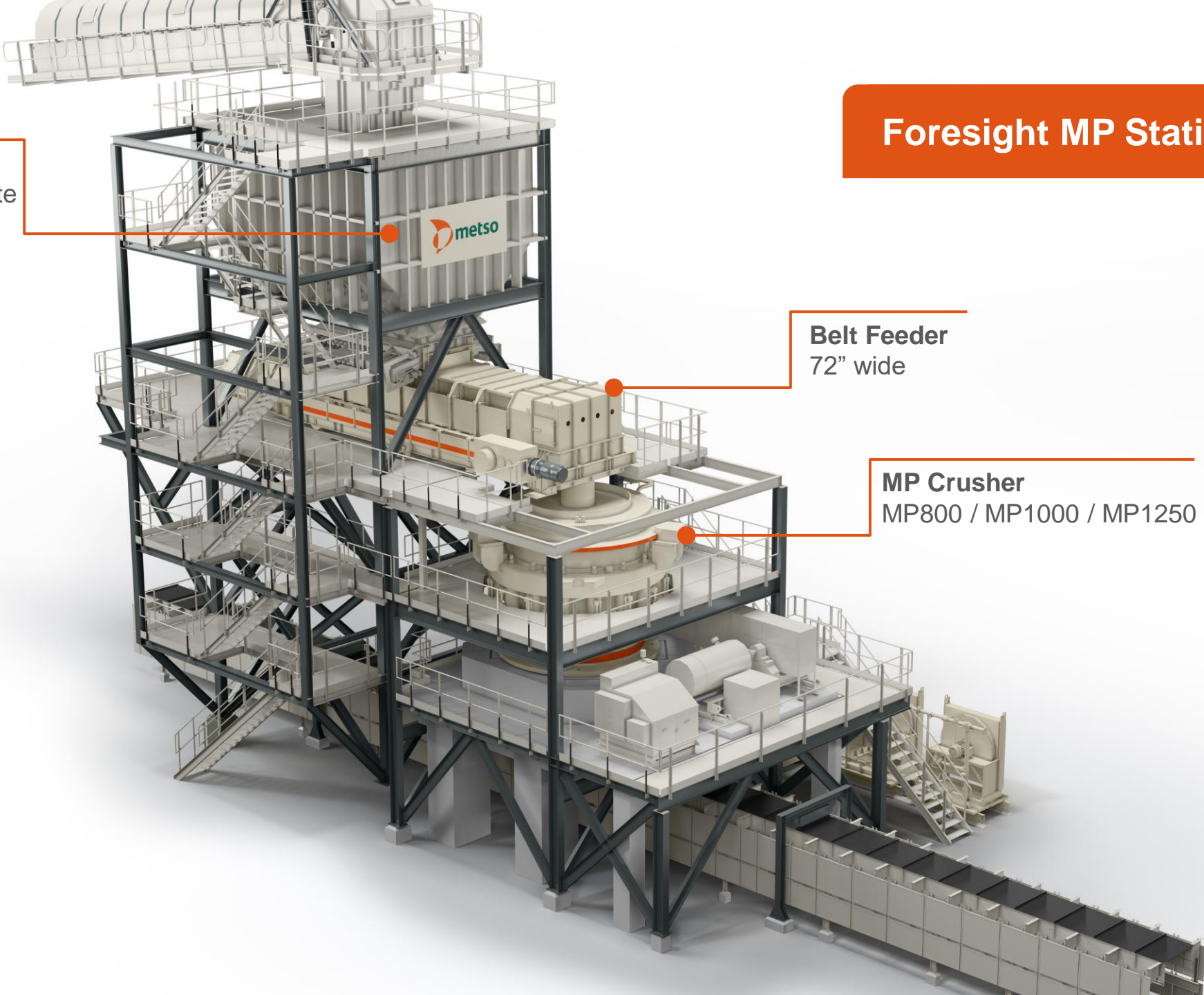
Foresight MP Station – w/o Screen

Feed Bin
With Spile Bar Gate



Belt Feeder
72" wide

MP Crusher
MP800 / MP1000 / MP1250



Foresight™ stations

Complete flow sheet



**SMPG + MP station
(Open Circuit) + HPGR**

Metso Mining Crushing Stations

Combining legacy and expertise

Experience

+100
plants delivered

Modular

Reduced
feasibility study,
engineering and
construction

Flexible

Industry leading
crushing stations
and semi-mobile
plants

Industry's widest
range of mining
crushing and
screening plants
providing solutions
that are unique, cost
efficient and flexible



Questions?

Thank you for joining!



Daniel Silva
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- Webinar recording and material will be emailed post-webinar
- Any unanswered questions from the chat will be replied to via email
- Still have a question? Please reach out to **mining.webinars@metso.com** and we will get back to you!

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