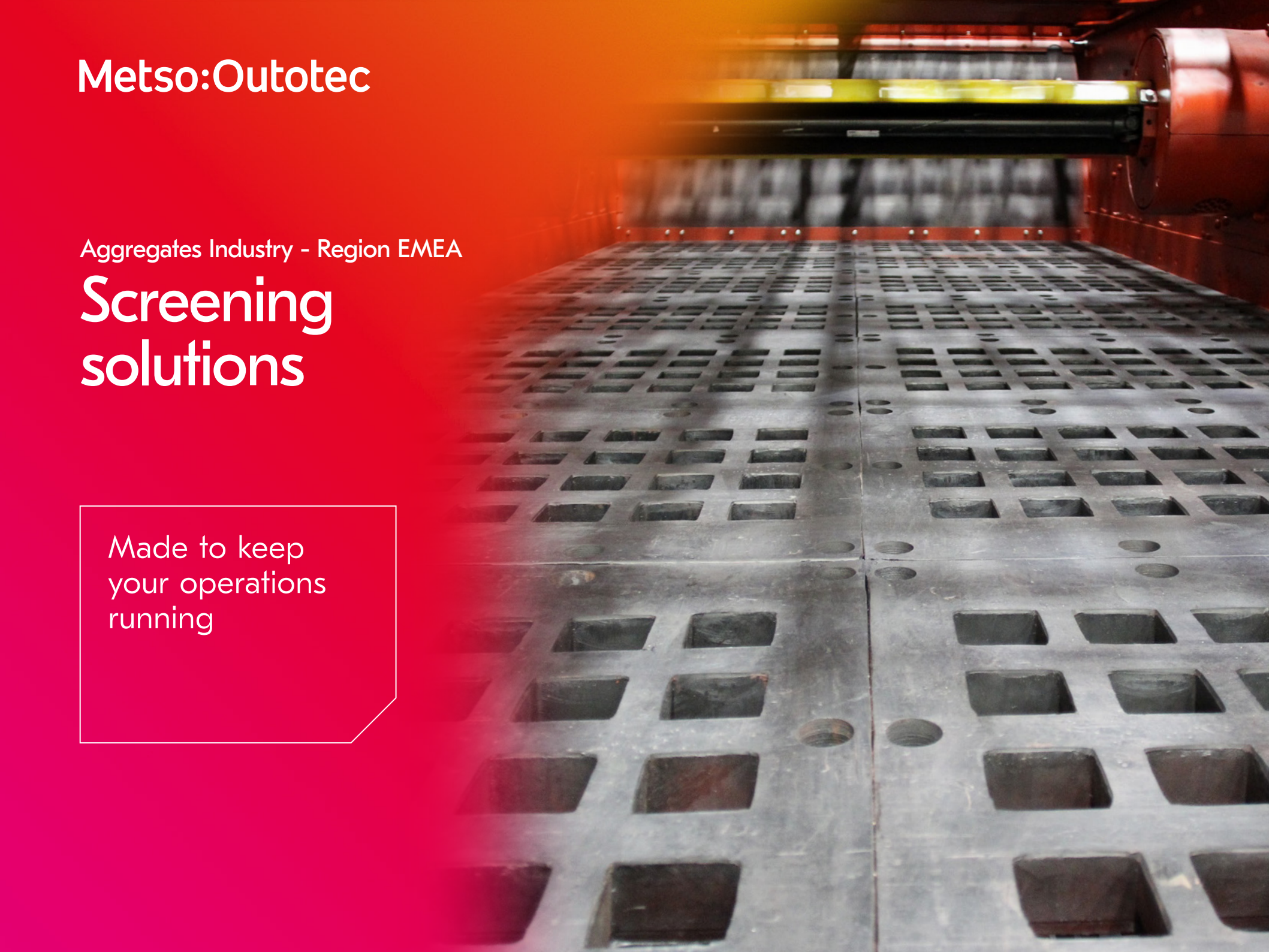
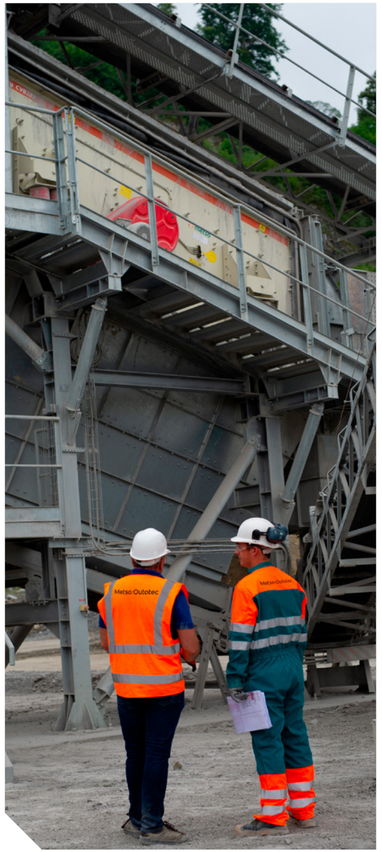
Metso:Outotec

Aggregates Industry - Region EMEA

Screening solutions

Made to keep your operations running





Reliable screening day in, day out

Availability is a critical factor in the aggregates industry today. Your screen needs to be up and running with minimal downtime. Metso Outotec can take a holistic approach to your screening circuit, and we look at how your screen, screening media and spare parts function together.

From the world's leading manufacturer

Metso Outotec offers the most technologically advanced products, supported by dedicated people with unique expertise. By working closely with our customers, we can offer optimized solutions that help maximize capacity and productivity.

Metso Outotec is one of the world's largest producers of vibrating equipment. Banana screens, horizontal screens, inclined screens, mobile screens, portable screens, and ultrafine screens. Whatever your process requirements, Metso Outotec has the screening equipment to fit your needs.

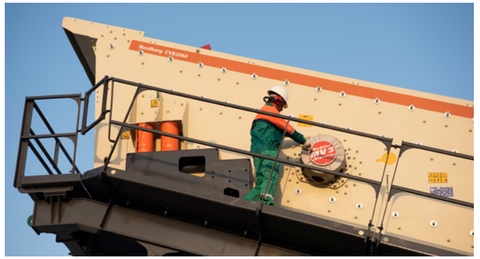
All screens are supported by OEM parts with perfect fit and global availability to ensure trouble-free operation. In addition, we can help optimize your screening process by selecting screening media designed to fit your specific screen and process.

Improved health and safety

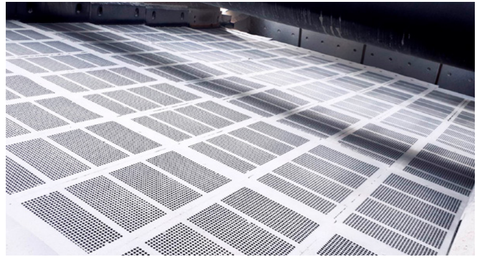
Increased availability

Maximized throughput

Contents



Screens



Screening media

Screening spare parts and services

Efficient screening process solutions

The performance of the screen is crucial and has a great impact on productivity. The choice of screen, screening media and associated components is therefore important. Our experience, combined with the market's widest range of screens, media, parts and services mean we can select exactly the right solution and help the rest of the process perform at the expected level e.g. optimize the process.

All screens as well as all screening media systems and materials have their benefits and limitations, it is important to match the screening media to the screen type and the material being processed, e.g, from large stroke, low frequency screens for coarse high impact materials to short stroke high frequency fine wet abrasive materials and everything in between that includes circular and elliptical motion screening. The final choice is always determined by type of process/ application and objectives.

Metso Outotec offers screening solutions optimized for each specific mining and aggregates process. Our wide product range, knowledge and experience makes it possible for us to offer a solution tailored to meet your challenges and targets. Our approach to screening solutions is focused on screening performance, screen uptime, safety and importantly the overall process.

Cost-efficient screens for reliable results

Metso Outotec's screens offering consists of banana screens, horizontal screens, inclined screens, mobile screens, portable screens, and ultrafine screens. Each screen type has its benefits and restrictions. This brochure presents our screening solutions packed with performance to optimize your time and output. A call to your local Metso Outotec partner will finalize and confirm your application needs.

Quick selection guide

Type of screen	Primary feeding	Reclaim feeders	Grizzly scalping	Primary screening	Technical intermediate sizing	Final sizing	Wet screening
DF-S Series screens					●	●●	
DF-P Series screens				●●●	●●	●	
TS Series screens					●●	●	●
COMPACT CVB Series screens					●●	●●	
COMPACT CVB-P Series screens				●●●	●		
CVB Series screens					●●	●●	●●
CVB-P Series screens				●●●	●		
ES Series screens					●	●●●	●●●
TK Series feeders and scalpers	●	●	●				●
VF Series feeders	●						
VG Series scalpers			●				
PF Series pan feeders	●						

Curved deck screens
DF Series™ screens

DF Series screens have a very robust and compact design, which allows them to operate in tough conditions. They are particularly effective at removing the fines between crushing stages.

Features

- Inclined banana screen with two slopes per deck (DuoFlow)
- Very efficient screening for feed with a high fines content
- Electrical unbalanced motors for simplicity and reliability
- Linear motion for self-synchronization

Benefits

- High capacity
- Very compact
- Easy to install

Options

- Rubber flat panels (Panelcord®) or perforated steel plates on top deck

Machine	W x L (m)	Decks	Power (kW)	Operating speed (rpm)	Weight (kg)	Capacity (tph)	Top deck max. opening (mm)
DF1210P	1.0 x 1.2	3	2 x 2.7	1000	2000	180	100
DF2012P	1.2 x 2.0	3	2 x 4.5	1000	3000	250	100
DF2016P	1.6 x 2.0	3	2 x 6.6	1000	4800	350	125
DF1210S	1.0 x 1.2	3	2 x 2.3	1000	1000	220	75
DF2012S	1.2 x 2.0	3	2 x 2.7	1000	1600	330	75
DF2016S	1.6 x 2.0	3	2 x 6.6	1000	4100	385	75
DF2616S	2.6 x 1.6	3	2 x 6.6	1000	4600	440	75

Curved deck screens
TS Series™ screens

TS Series screens were launched in 1999 and their design is still unique in the screening market, helping to make them the most popular high capacity screens available.

Features

- Banana curved decks; each deck consists of 3 slopes
- Vibrators are located above the centre of gravity which generates the variable elliptical motion
- The material speed is high at the feed end and slows down at the discharge end creating very high capacities compared to normal screens
- Available with 2 or 3 decks
- MV Vibrators (Modular cartridge design, grease lubricated)
- Coil spring suspension
- Side plates without welding and huck-bolted assembly. Very safe regarding fatigue stress

Options

- Modular panels, Trellex LS rubber or polyurethane
- Tensioned rubber or polyurethane panels (Trellex Trellecord)
- Dust encapsulation
- Wear lining on the crossmembers
- Wet screening (spray pipes)
- Galvanized body components
- Automatic greasing system

Machine	W x L (m)	Decks	Power (kW)	MV vibrator	Weight (kg)	Top deck max. opening (mm)
TS2.2 **TS2.3**	1.5 x 5.0	2 3	15 22	MV2 MV3	6000 6500	75
TS3.2 **TS3.3**	1.8 x 6.0	2 3	22	MV3	8800 11000	75
TS4.2 **TS4.3**	2.4 x 6.0	2 3	30	MV4	12500 15000	75
TS5.2 **TS5.3**	2.4 x 8.3	2 3	30 2 x 22	MV4 2 x MV3	16000 20000	75
TS6.2 **TS6.3**	3.0 x 8.3	2 3	2 x 22 2 x 30	2 x MV3 2 x MV4	18000 26000	75

Inclined screens

Compact CVB Series™ screens

Compact CVB Series screens are field-proven for technical/final sizing.
Their tough and reliable design makes them a popular choice.

Features

- Inclined screen 18°, vibrators located at center of gravity: Circular motion
- Available with 2, 3 or 4 decks
- MV Vibrators (Modular cartridge design, grease lubricated)
- Side plates without welding and huck-bolted assembly.
  Very safe regarding fatigue stress

Options

- Tensioned rubber or polyurethane panels (Trellex Trellecord)
- Vibrating canvas cover for dust emission control

Machine	W x L (m)	Decks	Weight (kg)	Capacity (tph)	Top deck max. opening (mm)	MV vibrator	Power (kW)
CVB1540-2		2	3150			MV2	15
CVB1540-3	1.5 x 4.0	3	4050	300	75	MV2	15
CVB1540-4		4	5000			MV2	15
CVB1845-2		2	4200			MV2	15
CVB1845-3	1.8 x 4.5	3	5200	400	75	MV2	15
CVB1845-4		4	6800			MV2	15
CVB2050-2		2	4700			MV2	15
CVB2050-3	2.0 x 5.0	3	6300	600	75	MV3	22
CVB2050-4		4	7600			MV3	22
CVB2060-2		2	6500			MV2	15
CVB2060-3	2.0 x 6.0	3	8500	800	75	MV3	22
CVB2060-4		4	10400			MV3	22
CVB2661-2		2	11000			MV3	22
CVB2661-3	2.6 x 6.1	3	13000	1000	75	MV4	30
CVB2661-4		4	15000			MV4	30

Inclined screens

Compact CVB-P Series™ screens

Compact CVB-P Series screens have proven themselves in primary screening applications. Their simple and robust design has made them the most popular compact Metso Outotec screen.

Features

- Inclined screen 18°, vibrating machinery located at center of gravity: Circular motion
- Available with 1, 2 or 3 decks
- MV Vibrators (Modular cartridge design, grease lubricated)
- Side plates without welding and huck-bolted assembly. Very safe regarding fatigue stress
- Flat bolted panels on 1st deck

Options

- Trellex Panelcord or Perforated AR steel plates
- Tensioned rubber or polyurethane panels (Trellex Trellecord) on 2nd and 3rd deck

Benefits

- Versatility
- Compacity

Machine	W x L (m)	Decks	Weight (kg)	Capacity (tph)	MV vibrator	Power (kW)
CVB1540-2P CVB1540-3P	1.5 x 4.0	2 3	3650 4500	200	MV2 MV2	15 15
CVB1845-2P CVB1845-3P-	1.8 x 4.5	2 3	4500 5800	200	MV2 MV3	15 22
CVB2060-2P CVB2060-3P	2.0 x 6.0	2 3	6700 9100	200	MV3 MV3	22 22

Inclined screens

CVB Series™ screens

CVB Series screens are versatile and durable, and fully configurable with options. They are designed to incorporate any type of screening media for maximum operational flexibility with easy and safe maintenance.

Features

- The screen angle is adjustable from 15° to 22° to adjust between accuracy and capacity
- Stroke and Revolutions Per Minute (RPM) parameters can be set over a wide range for optimal performance
- The integrated feedbox is very deep and long for easy interfacing with the feed conveyor. Moreover, it allows for full screen width rock distribution from the beginning for higher efficiency
- Replace panels quickly and safely thanks to large spacing between the decks, compliant to latest standard

Options

- Trellex LS modular panels (rubber or polyurethane)
- Tensioned panels (wire mesh or rubber or polyurethane)
- Wear lining crossmember protection
- Dust sealing system
- Spray pipes system
- Galvanized body
- Automatic greasing unit

Benefits

- Fully configurable with options
- For more demanding processes and applications
- Maximum uptime
- Versatility
- Meets high health and safety standards

Machine	W x L (m)	Decks	W x L (Foot)	Weight (kg)	Area (m²)	MV size	Power (KW)
CVB101	1.56 x 3.66	1	5 x 12	4100	5.7	MV2	15
CVB102		2		6100		MV2	15
CVB103		3		6800		MV2	15
CVB104		4		9100		MV2	15
CVB201	1.87 x 4.88	1	6 x 16	6500	9.1	MV2	15
CVB202		2		8000		MV3	22
CVB203		3		11000		MV3	22
CVB204		4		14500		MV3	22
CVB301	1.87 x 6.1	1	6 x 20	7500	11.4	MV2	15
CVB302		2		9500		MV3	22
CVB303		3		11000		MV3	22
CVB304		4		14000		MV4	30
CVB401	2.48 x 6.1	1	8 x 20	8100	15.1	MV3	22
CVB402		2		12000		MV3	22
CVB403		3		16200		MV4	30
CVB404		4		20400		MV4	30
CVB501	2.48 x 7.31	1	8 x 24	12000	18.1	MV3	22
CVB502		2		14600		MV4	30
CVB503		3		22300		2 x MV3	2 x 22
CVB601	3.09 x 7.31	1	10 x 24	17000	22.6	MV4	30
CVB602		2		19100		2 x MV3	2 x 22
CVB603		3		28900		2 x MV4	2 x 30

Inclined screens

CVB-P Series™ screens

CVB-P Series screens are well proven for primary screening applications.
Their simple and robust design has made them the most popular Metso Outotec screen.

Features

- Inclined screen from 15° to 22°, vibrating machinery located at center of gravity: Circular motion
- Available with 1, 2 or 3 decks
- MV Vibrators (Modular cartridge design, grease lubricated)
- Side plates without welding and huck-bolted assembly. Very safe regarding fatigue stress
- Flat bolted panels on 1st and 2nd deck (steel plates or Trellex Panelcord)

Options

- Modular screening Trellex LS panels (rubber or polyurethane) on 2nd and 3rd deck
- Tensioned rubber or polyurethane panels (Trellex Trellecord) on 2nd and 3rd deck
- Dust encapsulation: stationary (type Trellex)
- Wet screening (spray pipes)
- Wear lining crossmember protection
- Galvanized body
- Automatic greasing unit

Benefits

- Fully configurable with options to match the most demanding applications
- Maximum uptime
- Meets high health and safetystandards
- Versatility

Machine	W x L (m)	Decks	Foot	Weight (kg)	Area (m^2)	MV size	Power (KW)
CVB101 - P		1		4000		MV2	15
CVB102 - P	1.56 x 3.66	2	5 x 12	5900	5.7	MV2	15
CVB103 - P		3		8100		MV3	22
CVB201 - P		1		6000		MV2	15
CVB202 - P	1.87 x 4.88	2	6 x 16	8000	9.1	MV3	22
CVB203 - P		3		10500		MV3	22
CVB301 - P		1		9000		MV2	15
CVB302 - P	1.87 x 6.1	2	6 x 20	10200	11.4	MV3	22
CVB303 - P		3		11500		MV3	22
CVB401 - P		1		9500		MV3	22
CVB402 - P	2.48 x 6.1	2	8 x 20	13400	15.1	MV3	22
CVB403 - P		3		17600		MV4	30
CVB501 - P		1		13000		MV3	22
CVB502 - P	2.48 x 7.31	2	8 x 24	15200	18.1	MV4	30
CVB503 - P		3		19800		2 x MV3	2 x 22

Horizontal screens

ES Series™ screens

Ramp up your screening accuracy with the revolutionary high-energy elliptical-motion Metso Outotec ES Series screens.
They are designed for any type of screening media and maximum flexibility.

Features

- The combination of horizontal decks, high acceleration and aggressive elliptical vibration gives strong stratification of the bed depth and the highest screening accuracy
- The screen angle is adjustable from 0-10° to increase capacity when needed
- Stroke and Revolutions Per Minute (RPM) parameters can be set over a wide range for optimal performance
- The integrated feedbox is very deep and long for easy interfacing with the feed conveyor
- Long and deep integrated feedbox allowing full screen width rock distribution from the beginning for higher efficiency
- Replace panels quickly and safety thanks to good spacing between the decks, compliant to latest standard

Options

- Trellex LS modular panels (rubber or polyurethane)
- Tensioned panels (wire mesh or rubber or polyurethane)
- Wear lining crossmember protection
- Dust sealing system
- Spray pipes system
- Galvanized body
- Automatic greasing unit

Benefits

- Fully configurable with options to meet the most demanding applications
- Maximum uptime
- High accuracy screening
- Easy installation
- Meets high health and safety standards

Machine	W x L (m)	Decks	W x L (Foot)	Weight (kg)	Area (m^2)	MV size	Power (kW)
ES202	1.87 x 4.88	2	6 x 16	6000	9.1	MV2+MV3	15+22
ES203		3		6500		MV2+MV3	15+22
ES302	1.87 x 6.1	2	6 x 20	8800	11.4	MV2+MV3	15+22
ES303		3		11000		MV2+MV3	15+22
ES402	2.48 x 6.1	2	8 x 20	12500	15.1	MV3+MV4	22+30
ES403		3		15000		MV3+MV4	22+30
ES502	2.48 x 7.31	2	8 x 24	16000	18.1	MV3+MV4	22+30
ES503		3		20000		2x MV3 + 1x MV3	55+22

Feeders and scalpers

TK Series™ feeders and scalpers

TK Series feeders and scalpers compliment. Mostly utilized in mobile units (tracks or wheels) but can also be easily installed in stationary plants.

User-friendly

- The linear motion of TK Series™ feeders is generated by the timeproven V150 175 exciters (hydraulic drive) or by unbalanced motors (electrical drive)
- TK Series feeders are very efficient at removing waste material with different types of grizzlies (vibrating rods, bars, grizzly cassettes, zig zag plates, etc.)

Type of Machine	Model	W x L (m)	Vibrating machinery	Capacity (tph)	Maximum feed size (mm)	Compatible crushers (see page 22-23)	
Grizzly Scalpers	TKG10-15-2V	1.0 x 1.5	Electrical unbalanced motors	250	250	TKP08-17	C80, C96
	TKG13-20-3V	1.3 x 2.0	Electrical unbalanced motors	350	250	TKP10-20	C106, C116, C120
	TKG16-20-3V	1.6 x 2.0	Electrical unbalanced motors	500	250	TKP12-25	C130, C150
Grizzly Feeders	TKF8-32-2V	0.8 x 3.2	Electrical unbalanced motors (or) V150 exciter (hyd.driven)	250	250	C80	
	TKF9-42-2V	0.9 x 4.2	Electrical unbalanced motors (or) V150 exciter (hyd.driven)	500	700	C96	
	TKF11-42-2V	1.1 x 4.2	Electrical unbalanced motors (or) V175 exciter (hyd.driven)	500	700	C100, C106, C116	
	TKF11-48-2V	1.2 x 4.8	Electrical unbalanced motors	500	700	C100, C106, C116	
	TKF12-48-2V	1.2 x 4.8	Electrical unbalanced motors	550	700	C120	
Pan feeders	TKP08-17	0.8 x 1.7	Electrical unbalanced motors	200	150	TKG10-15-2V	Primary, secondary or tertiary crushers
	TKP10-20	1.0 x 2.0	Electrical unbalanced motors	350	170	TKG13-20-3V	
	TKP12-25	1.2 x 2.5	Electrical unbalanced motors	400	200	TKG16-20-3V	

*Note: max feed rate values are given for a material bulk density of 1.6 t/m³ in dry conditions and are indicative only.

Feeders and scalpers

VF Series™ feeders

VF primary feeders have been designed for high capacity and the toughest applications, and they are able to process abrasive material in either stationary or mobile plants.

Features

- Adjustable speed and stroke for better feed control of the primary crusher
- Long stroke capability for better scalping efficiency (when feed material contains a high ratio of flaky material)
- MV vibrators
- Coil spring suspension

Options

- Electrical or hydraulic drive
- Steel or rubber pan bottom liners
- Vibrating chute (underneath grizzly sections)
- Automatic greasing system

Benefits

- Easy and fast scalping adjustability

Machine	W x L (m)	Power (kW)	MV vibrator	Capacity (tph)	Maximum feed size (mm)	Weight (kg)	Compatible crushers (see page 22-23)
VF544-2V	1.3 x 4.9	15	MV2	600	700	5400	C120 C116 NP1313
VF561-2V	1.3 x 6.1	30	MV3	750	900	7000	C120, C116, C13 NP1415
VF661-2V	1.6 x 6.1	30	MV3	1000	1200	10500	C150 NP1415 C160 NP1620
VF866-2V	2.0 x 6.6	55	2 x MV3	1800	1500	15000	C160 C200 NP1620 NP2023

Feeders and scalpers

VG Series™ Primary scalper

VG primary scalpers have been designed for the toughest applications, high capacity and the ability to process abrasive material in either stationary or mobile plants. They can maximize the efficiency of the primary plant across a wide variety of applications.

Features

- Adjustable speed and stroke
- Long stroke capability for better scalping efficiency (when feed material contains a high ratio of flaky material)
- Linear vibration with high G force (5.5 G)
- Scalping grizzlies are inclined slightly at 5° to reduce blinding when the feed is sticky and contains fines (to increase capacity)

Options

- Coil spring suspension
- Electrical or hydraulic drive
- Automatic greasing unit

Benefits

- Easy and fast scalping adjustability

Machine	W x L (m)	Power (kW)	MV vibrator	Capacity(tph)	Maximum feed size (mm)	Compatible crushers (see page 22-23)
VG527-2V	1.3 x 2.7	15	MV2	500	900	C100 C110 C125 C3054
VG540-3V	1.3 x 4.0	22	MV3	600	900	C120 C130 NP1315M NP1415M NP1313 NP1415
VG635-3V	1.6 x 3.5	22	MV3	750	1000	C140 NP1415
VG645-3V	1.6 x 4.5	30	MV4	1000	1200	C150 NP1415
VG745-3V	1.8 x 4.5	30	MV4	1200	1350	C150 C160 NP1620
VG860-4V	2.0 x 6.0	55	2 x MV3	1500	1500	C160 C200 NP1620 NP2023

Integration into the primary scalping section

Metso Outotec VG primary scalpers can be fed by different types of feeders: push feeders, apron feeders, vibrating pan feeders, etc.

Feeders and scalpers

PF Series™ Pan feeders

PF primary pan feeders have been designed for high capacity and the toughest applications, and they are able to process abrasive material in either stationary or mobile plants.

Metso Outotec primary pan feeders can maximize the efficiency of the primary plant across a wide variety of applications.

Features

- Adjustable speed and stroke
- Linear vibration with high G force (5G) to reduce blinding when the feed is sticky and contains fines (to increase capacity)
- Automatic greasing system
- MV vibrators
- Integration into primary feeding section
- Metso Outotec PF primary pan feeders can feed different types of grizzly scalpers (VG) or grizzly screens.

Options

- Electrical or hydraulic drive

Machine	W x L (m)	Power (kW)	MV vibrator	Capacity (tph)	Maximum feed size (mm)	Compatible crushers (see page 22-23)
PF561	1.3 x 6.1	15	MV2	700	900	VG540-3V
PF661	1.6 x 6.1	30	MV3	1000	1200	VG745-3V

*Note: max feed rate values are given for a material bulk density of 1.6 t/m3 in dry conditions and are indicative only.

Classic screens

Legacy compatibility

Metso Outotec has a long tradition in screening and we support several legacy brands of screens and feeders. We offer replacement screens and all the required spare parts for most screen models - so you can count on the same benefits you got the day you ran your machine for the first time.

Direct, one-to-one replacement of classic legacy machines

Do you have a classic screen in operation that is nearing replacement or upgrading? If so, Metso Outotec can definitely help you find a solution.

As an OEM supplier, we can help replace your current screen with exactly the same screen or with an improved version. And, if your requirements have changed, we can help you find a screen from our standard range that will meet your current needs and targets.

Supply based on your scope

You don't need to change a complete unit, since we offer all parts assembled according to your specifications. This allows you to keep on site the usable components that are still in working condition, such as motor drive units, base frames and others. If you wish to change the type of screening media, our engineers will help you find the most suitable conversion kit.

When choosing spare parts, your decision impacts the lifespan of your screen. Your goal is longer wear life, with few - if any - maintenance needs. In this sense, choosing the right part becomes more than essential to a long operating life. By providing spare parts manufactured according to original drawings and the right work methods, we guarantee the best results for your process and longer machine life.

Nordberg | GIA | HEWITT ROBINS | SVEDALA | ATELIERS BERGEAUD MACON FRANCE | Lokomo

Benefits of Legacy Classic screens and feeders

- Replacements fit in the same space as the old units, with no changes or modifications to the steelwork structure and chutes
- OEM technology

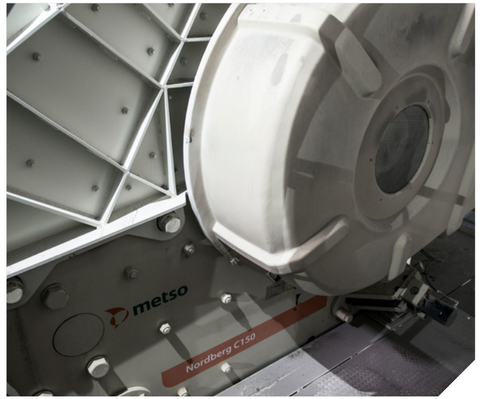
Turnkey packages

- Machine supply
- OEM spare parts
- Screening media
- Installation
- Commissioning

Crushing and screening

Compatibility with primary plants

Understanding the whole process and optimize every step indivudual as well as together is crucial. We work closely with our customers and carefully follow their process to make sure the screen parameters and the media are always optimized for current conditions. This in combination with Metso Outotec's broad knowledge of the aggregate industry and our range of equipment and services for each part of the process makes us equipped to help you optimize your process.



Impact crushers

Impact crusher	Grizzly feeder	Separate feeder + grizzly scalper			Recommended for			Capacity t/h*	Top feed size mm*
		-Pan feeder	Push feeder	Grizzly scalper	Regular	Sticky feed	A lot of fines n the feed		
NP1313™	VF561-2V				●			600	900
	VF544-2V				●				800
		PF561		VG540-3V			●		900
			HRBM60-12			●			900
NP1415™	VF661-2V				●			750	1000
		PF661		VG745-3V			●		1000
			HRBM60-15			●			1000
NP1620™	VF866-2V				●			1000	1300
			HRBM65-17	VG745-3V		●	●		1100
			HRBM70-19	VG860-4V		●	●		1300
			Apron	LH18-48		●	●		1300
NP2023™	VF866-2V				●			1800	1500
			HRBM70-19	VG860-4V		●	●	2000	1500
			Apron	LH24-61		●	●	2000	1500

*Note: max feed rate values are given for a material bulk density of 1.6 t/m³ in dry conditions and are indicative only.

Crushing and screening

Jaw crushers

Jaw crusher	Grizzly feeder	Separate feeder + grizzly scalper			Recommended for				Capacity t/h*	Top feed size mm*
		Pan feeder	Push feeder	Grizzly scalper	Regular	Sticky feed	Very sticky feed	A lot of fines in the feed		
C80™	TK8-32-2V				●				300	450
C96™	TK9-32-2V				●				350	500
C100™	B10-52-2V				●				500	700
	TK11-42-2V				●					
	TK11-48-2V				●					
			DET10-38	VG540-3V		●		●		
C106™	TK11-42-2V				●				500	700
	TK11-48-2V				●					
C116™	TK11-42-2V				●				500	700
	TK11-48-2V				●					
C120™	TK12-48-2V				●				600	800
	VF561-2V				●					
	VF544-2V				●					
		PF561		VG540-3V				●		
			HRBM60-12				●	●		
C130™	VF561-2V				●				700	900
		PF561		VG540-3V		●		●		
C150™	VF661-2V				●				1000	900
		PF661		VG645-3V		●		●		
			HRBM60-15				●		600	
C160™	VF866-2V				●				1300	1200
		PF661		VG745-3V		●		●	1000	1000
			HRBM65-17	VG745-3V			●		1100	
			HRBM70-19	VG860-4V			●		1300	1200
			Apron	LH18-48			●		1300	
C200™	VF866-2V				●				1500	
			HRBM70-19	VG860-4V			●	●	1300	1200
			Apron	LH21-48			●	●	1800	

*Note: max feed rate values are given for a material bulk density of 1.6 t/m³ in dry conditions and are indicative only.

Screening media

Trellex® offer a complete range of screening media to meet all your requirements. Our solutions will decrease your cost per ton. Here is how:

Trellex® LS modular range

The Trellex LS modular system consists of the Trellex LS standard range and the Trellex LS HiPer range, which are designed to accommodate the requirements of various applications, including availability, capacity and nonblinding.

The Trellex LS System is directly compatible with standard sub-frames used around the globe and can be easily retrofitted to existing systems. Our profiled upgrade strips fit the majority of screens available on the market.

The complete Trellex LS range includes:

- Screen modules
- Sideliners/side wall protection
- Rails
- Upgrade strips
- Surface accessories

Trellex LS Standard range

Trellex LS is our platform for modular screening. This modern range of modular screening media helps you achieve higher volume processing with minimal interruptions.

- Maximum volume
- Maximum availability
- Minimum downtime
- Maximum life and performance

Trellex HiPer range

HiPer is our most advanced product line and it includes four top-performing series:

- HiPer Flow,
- HiPer Life,
- HiPer Drain and
- HiPer Clean.

LS HiPer Flow modules and LS Standard modules can be combined to get the most from your application.

Features

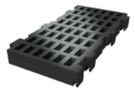
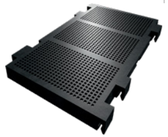
- High open area for improved performance
- Prevents blinding and pegging for high availability and maximum capacity
- Modular design
- Convenient module size and weight for easy and safe installation
- Modules can be changed individually to reduce costs and downtime
- Easily adapted to fit all existing vibrating screens and media systems

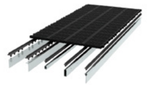
Options

- Rubber or polyurethane modular screen deck panels
- Perforated or blank rubber modules can be installed where impact is at a maximum
- A selection of polyurethane modules for installation further down the deck to maximize fine-screening performance and screening accuracy

Screening

Screening media

Product	Description
	**Trellex LS HiPer Flow modules** These have at least 20% more active open area than standard screens for at least 20% more active screening surface. • More open area • More capacity • More efficient material screening • Zero interruptions caused by pegging or blinding • Recyclable
	**Trellex LS HiPer Life** Built tough with an injection-molded wear-resistant rubber compound for maximum load handling and exceptional wear resistance. • Lasts at least 30% longer • Higher temperature resistance • Molded aperture reduces risk of pegging
	**Trellex LS HiPer Clean** These modules deliver the precision you need when screening fine materials while limiting costly downtime. • Precision production without interruption • Guaranteed to stay clean, even with high moisture content material • Highly accurate, ideal for finer separations
	**Trellex LS HiPer Drain** Designed for precision and exceptional dewatering • Accuracy-optimized injection molded apertures 0.3 x 11- 0.8 x 11 • Solid, reinforced frames to carry high bed depth • Available with slotted apertures

Product	Descript-ion
	**Accessories** Trellex LS accessories are compatible with almost all screening systems, so you can change your flat modular screening system to Trellex LS, irrespective of whom your present supplier is. • Improve production efficiency • Reduce costs • Increase productivity
	**Trellex LS Accessories** • Upgrade strip for competitive systems • Trellex ABR - Anti-blinding Rods • Trellex LS Dambars • Trellex LS Wire Inserts
	**Panelcord — Trellex PCO** Trellex PCO is a self-supporting screening panel made of rubber for demanding applications in coarse and medium screening operations. • Apertures shaped to minimize pegging and maximize throughput • Thicker panels have skid-bars to increase wear life and allow undersized material to pass more easily • Max panel size 1800 x 1200 mm (4'x6') • Standard attachment with side hold-down bars and center hold-downs or with integrated fixing holes • Standard build heights: 37, 41, 45, 55, 70 and 80 mm

Screening media

Upgrade Strips
Upgrade strips are a vital part of the Trellex LS system, and they simplify installation significantly.

- No drilling
- No cutting
- No welding
- Easy to select the right upgrade strip

Trellcord — Trellex TCO
This all-round cloth is designed primarily for final products of 4 - 100 mm. Trellex TCO is made of T60 wear-resistant rubber and features special heat-treated cord reinforcement that facilitates tensioning and also maintains the proper tension without the need for continual adjustment. For screen widths exceeding 1300 mm, center hold-downs should be used. Trellex TCO is normally used for thicknesses of 5-50 mm.

- Reinforcement reduces the degree of tensioning for longer service life
- Fitted with tension hooks as standard
- Custom-made to fit any screen cross tension or longitudinal tension

Wear lining
Metso wear lining products minimize wear and reduce noise while increasing service life in equipment like screens, crushers, mills, washing drums, concrete mixers etc.

Trellex® Poly-Cer
This is designed to be extremely resistant to abrasion even with high material flows and speeds. The unique ceramic insert design improves wear life and impact resistance. Poly-Cer also reduces noise and vibration.

Trellex ABR
The Trellex ABR system combines anti-clogging ropes and anti-blinding rods to prevent your screen deck from blinding and pegging. The system is a three-armed assembly consisting of polyurethane cylinders connected by an extremely soft ligament. The hard polyurethane cylinders knock on the screens during operation and, together with the soft ligaments, ensure maximum movement and flexibility.

Long service-life and lower total costs
The combination of the best properties of rubber and ceramics in our linings ensures an extra long life cycle compared to other wear protection.

- Unique resistance to wear
- Effective shock and impact absorption
- Covers angles of impact that are difficult for rubber and steel
- Ensures greater availability

Screening

Screen planner

Metso Outotec ScreenPlanner®software makes it possible to track wear life and analyze performance for optimization.

"When you put the screen in operation, you enter all the performance parameters you want monitored into the software and you can then digitally monitor the wear online. All the monitoring data is collected so you can analyze the history. After a while, you can see trends. '

For example, you can identify where you have the shortest lifetime, pegging or flow issues and what you need to do to change that."

Trellex® LS modular range

You can start making wear updates after the screen has been in operation long enough for wear to occur. The appropriate timing is case-specific. Together, several wear updates create the history of a screen. For best results:

Wear updates should be entered into Screen Planner on the same day as the actual inspection on site takes place.

Because the tool is based on visual analysis, always use the same method or individual to evaluate wear for a particular screen.

Remember to update Process Information and Particle Size Distribution as well.

Key features and benefits

- Equip your screen with modular screen media 300LS, 305LS and 305PS (1"x1) Build an exact color mapped layout of the screen deck
- Add applicable accessories to form a complete bill-of material that can be used for future wear parts orders
- Share your screen with other users
- Add application details and set the screen in operation
- Make wear updates, document spots subjected to special conditions
- Generate reports detailing wear status and parts to order
- Modify application conditions
- Improve your OPEX (cost per ton)

Reports - a valuable feature in Screen Planner

Provided that you've entered the data correctly, reports allow you to:

- Keep track of maintenance and
- process conditions
- Plan when to order new media and
- generate a Bill of Materials (BOM)
- Plan maintenance
- Discover wear patterns and evaluate the impact of different process conditions on wear

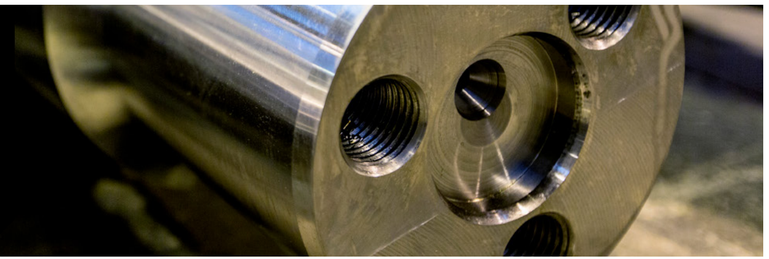
Screening

Main components

When choosing spare parts, your decision impacts the lifespan of your screen. Your goal is longer wear life, with few - if any - maintenance needs. In this sense, choosing the right part becomes more than essential to a long operating life. By providing spare parts manufactured according to original drawings and the right work methods, we guarantee the best results for your process and longer machine life.

Heritage brands

Allis Chalmers	Bergeaud
Svedala	Cfbk
Nordberg	Dragon
Hewitt Robins	Loro & Parisini
Missouri Rodgers	Nerytec
Seco	Yernaux
GfA	Altairac
W.S. Tyler	Babbitless



Experience and quality that you trust

The expertise that is designed into our screens and feeders is apparent. Metso Outotec has gained a worldwide reputationas a specialist in vibrating equipment demonstrated by thousands of installations.

Parts readily available close to you

Our comprehensive distribution network is composed of more than 150 strategically located distributors to ensure shorter lead times. Our skilled service team provides support from the moment you order a part to delivery and installation.

Benefits

- Keep track of maintenance and Extended wear life
- Improved overall availability
- Maximized performance
- Minimized downtime (by using mechanism exchange program)

Mechanisms

Made to withstand the rigors of constant high velocity movement. Bearings have the highest quality designed for our industry.

Shafts and beams

Made to precise tolerances to ensure they perform start up after start up. Standardized between lines for greater availability.

Side plates

Cut from high quality steel plate, the side plates provide integral support for screening and feeding.

Decks

Reinforced design elements and protected from wear and abrasion ensures long life.

Crossmembers

Replaceable cleat to allow screen media flexibility.

Feed box and discharge lip

Large area and lined for maximum protection.

Available upgrades

- Cartridge mechanism exchange program
- Dust encapsulation
- Spray pipes (rigid or flexible)
- Easily convert deck from standard media to polyurethane or rubber
- Auto-lubrication
- Isolation frames/ travel truck isolation frame

Screening

ScreenCheck® offers improved efficiency

Metso Outotec developed specific and dedicated tools to check and monitor its screens and feeders operations and conditions.

The ScreenCheck® system is a rugged, wireless sensor and software system. It combines precision measurements with easy to use software to enable complete testing and documentation of screen and feeder operation. It's a Metso Outotec technology development.

The system is used during the shop test at Metso Outotec factories and during commissioning or troubleshooting at customer sites.

This tool is a key to success for screen and feeder reliability. It ensures the delivery of a machine to the customers that meets Metso Outotec quality requirements and has the optimal set up. It is also helpful to support the customers during all the operating life of the machine.

Metso Outotec develops specific and dedicated tools to check and monitor its screens and feeders operations and conditions. ScreenCheck® is used by Metso Outotec service teams and service representatives across the globe. It offers:

- Orbit analysis
- FFT analysis
- Side motions analysis

Steel structure controlIn addition, many other features that enable clear reading though reports available and visible to the specialized Metso Outotec technical staff.

The system instructs user to perform the following tests and automatically assesses the values:

- Natural frequency (bump) test
- Structural support evaluations (per ISO 10816)
- Screen motion analysis (orbit, stroke, angle, g-force)
- Side plate displacement (side motion)
- Spring height
- Bearing temperature
- Other basic screen evaluations

Screening

Metso Outotec service footprint

Ensuring rapid global response time through our service centers and partners.

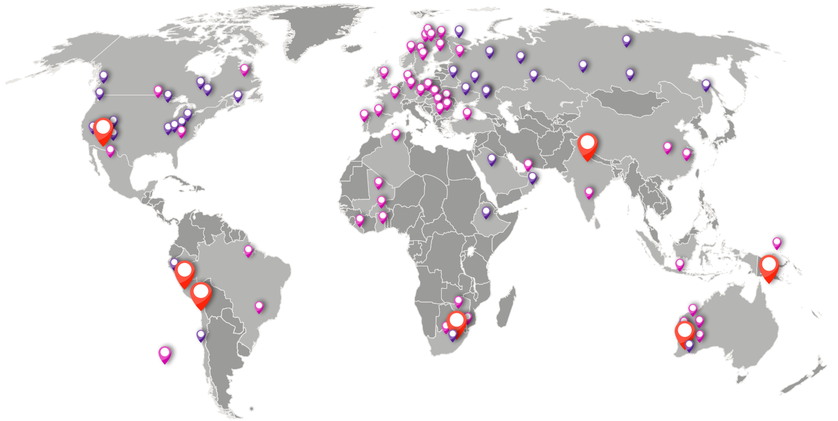
Metso Outotec offer a comprehensive set of field services to help meet your maintenance, repair and refurbishment needs. Each service is fully customizable to your exact requirements. Our highly specialized services cover all Metso Outotec crushing, screening, conveying and bulk material handling equipment.

20+ Factory hubs

40+ Service centers

1500+ Field service technicians

150+ Distributors in our partner network



Metso Outotec Repair Centers

Metso Outotec Service Centers

Authorized Partner Service Centers

Other locations covered by Metso Outotec sales and distribution network

Metso Outotec is a frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By improving our customers' energy and water efficiency, increasing their productivity, and reducing environmental risks with our product and process expertise, we are the partner for positive change.

Metso Outotec is committed to limiting global warming to 1.5°C with Science Based Targets. We ranked 8th on the 2021 Global 100 list of the world's most sustainable companies.

Headquartered in Helsinki, Finland, Metso Outotec employs over 15,000 people in more than 50 countries and its sales for 2020 were about EUR 3.9 billion. The company is listed on the Nasdaq Helsinki.

Partner for positive change

Metso:Outotec

Metso Outotec, Lokomonkatu 3, P.O.Box 306, FI-33101 Tampere, Finland
tel. +358 20484 142, fax +358 20 484 143
mogroup.com