



## Nordberg NW Series Portable Crushing and Screening Plants





## Nordberg NW Series - offering the best in portable plants

Metso Minerals, the world's leading rock and mineral processing company, is launching a new, comprehensive portable plant series for efficient fully mobile crushing, and screening applications.

The new Nordberg NW portable plant concept is fully adaptable to all mobile crushing needs, opening up a whole new range of business opportunities for contractors, quarry operators, recycling and mining applications.

### **Flexible operation - from coarse to fine crushing and screening**

The NW Series portable plant can be operated as independent units or as a two- or three-stage crushing application: from primary to secondary, tertiary and fine crushing. As required, a portable screen can be attached to the process.

### **Built around proven quality crushers**

NW series portable plants are built around the proven Nordberg and Barmac crushers, which are respected world-wide for their engineering quality, crushing efficiency, versatility and cost effectiveness.

Lightweight and superior in engineering design, these crushers offer exceptional crushing performance. They are ideally suited to the most demanding portable crushing and screening applications.

Take a closer look at Metso Minerals' NW portable plant series - it offers new possibilities in mobile crushing - always at the lowest cost per ton.

### **NW portable plant highlights**

- ✓ Built around proven Nordberg and Barmac crushers
- ✓ Everything on board: feeders, screens and power installations
- ✓ Suitable for two- and three-stage crushing applications
- ✓ Quick road transportation thanks to king pin arrangement
- ✓ Back-up with Metso Minerals' global customer service

# Product Presentation

## JAW PLANTS

NW80  
NW95  
NW105  
NW116  
NW110  
NW3054  
NW125

## CONE PLANTS

NW100GPC  
NW100HPC  
NW100HPC-CC  
NW1100C  
NW200GP  
NW200GPC  
NW200HPC  
NW300GP  
NW300GPD  
NW550GP

## VSI PLANTS

NW6150C  
NW7150  
NW7150C  
NW9100

## SCREEN PLANTS

NW302FS  
NW303FS  
NW353FS  
NW403FS  
NW1845CVB  
NW2060CVB

## COMPLETE PORTABLE PLANTS



## Jaw plants with unrivalled crushing capacity

Nordberg NW Series portable jaw plants for primary crushing are built around proven jaw and impact crusher concepts. Since the 1920s, Metso Minerals has installed over 10,000 jaw crushers world-wide.

### C Series - world's favourite jaw crushers

Today, the Nordberg C Series represents the world's favourite jaw crusher. Based on a revolutionary modular, non-welded frame construction, the C series offers superior strength, crushing performance and reliability even in the most demanding applications.

The C Series jaw crushers combine a high reduction ratio and increased capacity with any feed materials: from extra hard rock to recycled materials.

This is achieved through several unique features such as higher crushing speed, optimized kinematics, a longer stroke and easy adjustment. All C Series jaw crushers are equipped with a proven, rugged and fast wedge-setting adjustment system - available as manual or hydraulic alternatives. C Series jaw crushers are so well balanced they can be installed on mobile applications without bolting.

### You can choose from six jaw plants

In all there are six jaw crusher models for portable applications. The Nordberg NW80, NW95, NW105, NW110 and NW125 are recommended for operations that require efficient primary crushing for aggregate production, recycling or mining.

Besides reliable crushers, NW Series jaw plants feature strong, specially designed chassis reducing unit length and weight. Feeders, conveyors and electric parts are all manufactured from first-class components.

By choosing the options available, you can modify your NW to accurately suit your crushing application.

The Nordberg NW jaw plants have a typical capacity range of 100 - 830 mtp/h.

### NW jaw plant highlights:

- ✓ Efficient and reliable C Series jaw crushers
- ✓ Reduced length and weight thanks to compact chassis
- ✓ Process adaptation from single unit to multi-stage process
- ✓ Guaranteed customer service world-wide

*Nordberg NW105 portable plant for primary crushing at a quarry operation in Finland.*



*All Nordberg C Series jaw crushers incorporate modular, non-welded frame construction, oversized bearings and a fast setting adjustment system.*



*Thanks to its compact design, Nordberg NW105 can be easily transported on a standard truck.*



*All NW Series portable plants can be equipped with optional magnetic separator.*



## Cone plants with superior capacity and product quality

In portable applications with requirements for efficient secondary, tertiary and fine crushing with high productivity, good reduction ratio and excellent cubicity requirements, the ultimate choice is the Nordberg NW Series portable plant equipped with the proven GP or HP Series cone crushers.

GP and HP Series cone crushers feature a unique combination of crusher speed, throw and cavity design. This combination has proved superior in providing higher capacity and excellent product quality, and in providing a wider range of application suitability.

Both GP and HP Series cone frames are produced in high-quality foundries, guaranteeing reliable operation and a long lifetime. The GP and HP cone concepts allow large feed openings with a fairly small cone diameter, allowing larger capacities especially in secondary crushing.

### You can choose from seven GP and two HP plants

According to your crushing application, you can choose from seven different portable plants with GP cones and three with HPs. If your crushing project requires a portable plant with screen, NW100GPC, NW100HPC, NW1100C, NW200GPC, NW200HPC and NW300GPD are equipped with an on-board screen.

When needing secondary and tertiary cones for two- or three-stage portable processes, you can find the right cone crushers from the GP and HP series, ensuring accurate adaptability to your crushing process.

The Nordberg NW cone plants have a typical capacity range of 100 - 600 mtp/h for secondary crushing applications and 50 - 360 mtp/h for tertiary crushing applications.

### NW cone plant highlights:

- ✓ Built around proven and highly popular GP and HP cone crushers
- ✓ High capacity and excellent end-product cubicity
- ✓ Easy to use during multi-stage crushing processes
- ✓ Wide range available, also with on-board screens

*Nordberg NW300GPD is a complete process plant with a GP fine cone crusher, conveyors and a screen.*



*NW Series portable plants for secondary and tertiary crushing can be equipped with a GP Series (left) or HP Series (right) cone crushers.*



*Nordberg NW100HPC-CC, working in France, is built around a HP100 cone crusher.*



*Nordberg NW1100C producing several end products in Sweden.*



## Barmac plants with guaranteed highly cubical end products

If your portable application calls for highly cubical aggregates, the NW plant equipped with the famous Barmac rock-on-rock vertical shaft impactor (VSI) is the right choice. The Barmac VSI, the original proven producer, is widely used during the third or fourth crushing stage in order to secure high cubicity of the end products.

With over 3000 units operating in aggregate and mineral processing installations around the world, Barmac rock-on-rock crushers have an established track record of cost savings, durability and unmatched performance in the variety of tasks to which they are applied. These include the production of quality aggregates, sand, material for heap leaching, pre-grinding and finished industrial minerals products.

### Cascade feed system

The Barmac VSI uses the cascade feed system to introduce a second stream of material, in a controlled quantity, into the crushing chamber turbulence, causing a supercharging of the particle population within the chamber. This improves the energy transfer between the particles, resulting in a higher total product output tonnage for a given Hp/kW.

The Barmac has demonstrated a unique ability to operate in many demanding and diverse crushing operations in construction, industrial minerals, metallic minerals and waste and recycling applications. This is possible because of the unique free-impact crushing and grinding action and the ability to fine-tune this process by simply changing rotor speed or cascade ratio.

### You can choose from four Barmac plants

Metso Minerals has four Nordberg NW plants available with Barmac VSI crushers, of which NW6150C and NW7150C are equipped with a screen, allowing accurate classification of end products.

The Nordberg NW Barmac VSI plants have a typical capacity range of up to 1580 mtp/h.

### NW Barmac VSI plant highlights:

- ✓ Based on the original Barmac vertical shaft impactor
- ✓ Minimized wear part costs thanks to rock-on-rock technology
- ✓ Easy to add as the third/fourth crushing stage
- ✓ High end-product cubicity guaranteed

*NW Series portable plant with Barmac B7100 VSI crusher in Indonesia.*



*Barmac B Series vertical shaft impactor is the original rock-on-rock VSI crusher.*



*NW7100C, a portable Barmac plant with an inclined screen.*



*Portable plant with Barmac VSI crusher is working for the Kurdistan Regional Government in Northern Iraq.*



## Accurate classifying with high capacity portable screens

When requiring accurate classification of different end products after crushing, Metso Minerals offers portable screen plants to precisely match your application needs. Likewise with the portable crushing plants, the wheeled screens are based on our long experience and know-how in crushing and screening.

The key element in the portable screens are the Nordberg FS Series screens, designed to be both modular and robust with exceptional performance in a wide range of applications.

### Specially designed for mobile applications

The FS Series is designed specifically for mobile applications. Their construction is modular with most components being huck-bolted: the screen media support rails, cross members, feedbox, etc., and can be individually replaced.

The FS Series utilizes a triple shaftline MV mechanism configuration. The MV mechanisms consist of rotating external counterweights linked via cardan shaft. Each MV shaftline is geared together to produce an elliptical motion with a 45° stroke angle. The angle, size and shape of the elliptical stroke pattern can be easily adjusted. The stroke length can be as long as 20 mm. The FS Series Screens operate at high "G-forces" to keep screen media apertures clear and provide accurate sizing at high feed rates.

### You can choose from four portable screens

Metso Minerals has developed four different NW Series portable screens, one of which are equipped with a two-deck screen and three with a three-deck screen.

The Nordberg NW screen plants have a typical capacity range of 100-800 tph.

### NW screen plant highlights:

- ✓ Based on FS screens specially designed for mobile plants
- ✓ Modular design for easy service and parts change
- ✓ Efficient and easy to service MV modular vibrator mechanism
- ✓ Two- and three-deck screens available

*Secondary screening with NW Series portable screen in France.*



*Nordberg FS screens are built of modular components assembled with huck bolts which decrease any failure risk due to fatigue stress.*



*NW Series screen plant equipped with CVB2060-4 inclined screen working in Kazakhstan.*



*Nordberg NW302FS portable screen in transport position.*



## High-capacity complete plants to produce up to four fractions

The Nordberg NW Series portable plant allows you the use of various crushing and screening operations: from a single, stand-alone unit to two-, three-, even four-stage complete plants providing up to four end-product fractions.

The NW Series complete plants can be easily adjusted to accurately suit your crushing application. You can choose feeding to crusher or feeding to screen options to meet your end-product requirements.

Likewise, you can operate your NW plant as an open or closed circuit operation just by adding an extra return conveyor. This really enhances the versatile use of your equipment.

When knowing the feed material type and required end-product sizes, the Bruno simulation software developed by Metso Minerals helps you to create a reliable process flow and makes choosing the right crushers and screens easy.

## Easy to transport, quick set-up time

The NW Series portable plants' high chassis, short wheel base and tight turning radius mean they can be transported on highways and moved to crushing sites that otherwise might be difficult to access.

Compared to stationary applications, the set-up time of the wheeled plant can be counted in hours, not days. This means more flexible operation and cost savings thanks to maximized crushing time. The improved mobility of the NW Series portable plant increases opportunities to crush material on-site. This, in turn, substantially reduces the cost of transporting material for off-site crushing.

## Well adaptable to different crushing processes

Each crushing scenario is different for various reasons such as type of feed material or product requirements. What the NW Series portable plant offers you is maximum flexibility and cost efficiency to meet all your portable crushing and screening requirements.

For advice and assistance on how your NW Series portable plant should be set up for your specific operational needs, please contact your local Metso Minerals sales and service representative.

## NW complete plant highlights:

- ✓ Easy to modify into different crushing processes
- ✓ Can produce up to four accurate fractions
- ✓ Quick move and set-up times
- ✓ Process planning and customer service guaranteed

*NW1100C portable plant with GP cone crusher and a screen in India.*



*Complete crushing and screening process in Kazakhstan built with four portable crushig plants and three portable screens.*



*NW110 portable jaw plant and NW200GPC cone plants in Russia.*



*Two stage portable crushing and screening process in India with NW80 jaw plant and NW100GPC cone plant.*

## Nordberg NW Series Jaw Plants



NW JAW PLANTS	NW80	NW95	NW105	NW116	NW110	NW3054	NW125
<b>Transport dimensions</b>							
Length	9 400 mm	11 200 mm	12 900 mm	15200 mm	15 100 mm	15 100 mm	17 600 mm
Width	2 500 mm	2 500 mm	2 820 mm	3500 mm	3 320 mm	3 320 mm	3 350 mm
Height	4 050 mm	3 300 mm	3 620 mm	4000mm	4 330 mm	4 100 mm	4 800 mm
Weight	19 600 kg	27 000 kg	32 000 kg	47000 kg	61 600 kg	58 000 kg	82 100 kg
Axle weight	9 100 kg	13 400 kg	19 900 kg	30600kg	39 000 kg	36 500 kg	53 900 kg
King pin weight	10 400 kg	13 600 kg	15 300 kg	16400kg	22 600 kg	21 500 kg	28 200 kg
<b>Crusher</b>							
Nordberg jaw crusher	C80	C95	C105	C116	C110	C3054	C125
- intake width	800 mm	930 mm	1 060 mm	1150 mm	1 100 mm	1 375 mm	1 250 mm
- intake depth	510 mm	580 mm	700 mm	800 mm	850 mm	760 mm	950 mm
Setting range (c.s.s.)	40-175 mm	60-175 mm	70-200 mm	60-175 mm	70-200 mm	70-200 mm	100-250 mm
<b>Feeder</b>							
Feed hopper volume	4 m <sup>3</sup>	4 m <sup>3</sup>	9 m <sup>3</sup>	14 m <sup>3</sup>	20 m <sup>3</sup>	20 m <sup>3</sup>	18 m <sup>3</sup>
- width	2 500 mm	2 500 mm	3 600 mm	4900 mm	4 800 mm	4 800 mm	4 800 mm
Nordberg grizzly feeder	TK8-27-2V	TK8-32-2V	TK11-42-2V	TK11-48-2V	VF561-2V	VF561-2V	B13-56-2V
- length	2 700 mm	3 200 mm	4 200 mm	4800mm	6 100 mm	6 100 mm	5 600 mm
- width	800 mm	800 mm	1 100 mm	1100mm	1 300 mm	1 300 mm	1 300 mm

## Nordberg NW Series GP and HP Cone Plants



NW CONE PLANTS	NW200GP	NW300GP	NW550GP	NW100GPC	NW100HPC
<b>Transport dimensions</b>					
Length	10 600 mm	10 700 mm	11 467 mm	12 600 mm	16 400 mm
Width	3 000 mm	3 500 mm	3 500 mm	2 500 mm	2 500 mm
Height	4 000 mm	4 300 mm	4 100 mm	4 060 mm	4 000 mm
Weight	20 200 kg	30 000 kg	44 500 kg	25 400 kg	25 000 kg
Axle weight	14 100 kg	20 000 kg	29 400 kg	12 000 kg	11 700 kg
King pin weight	6 100 kg	10 000 kg	15 100 kg	13 400 kg	13 300 kg
<b>Crusher</b>	GP200, GP200S	GP300	GP500	GP100, GP100S	HP100
Feed opening	40-210 mm (GP200) 250-330 mm (GP200S)	40-260 mm (GP300) 280-380 mm (GP300S)	40-220 mm -	40-150 mm (GP100) 200-250 mm (GP100S)	20-150 mm -
Setting range (c.s.s.)	10-30 mm (GP200) 24-52 mm (GP200S)	22-41 mm (GP300) 28-53 mm (GP300S)	11-46 mm -	15-22 mm (GP100) 29-46 mm (GP100S)	6-21 mm -
Motor Power	160 kW	250 kW	315 kW	90 kW	90 kW
<b>Screen</b>	-	-	-	CVB1540-4	CVB1540-4
- length	-	-	-	4 000 mm	4 000 mm
- width	-	-	-	1 500 mm	1 500 mm
- number of decks	-	-	-	4	4
NW CONE PLANTS	NW100HPC-CC	NW1100C	NW200GPC	NW200HPC	NW300GPD
<b>Transport dimensions</b>					
Length	16 300 mm	13 600 mm	13 300 mm	13 500 mm	19 400 mm
Width	3 000 mm	2 980 mm	2 900 mm	2 980 mm	3 100 mm
Height	4 300 mm	4 290 mm	4 315 mm	4 370 mm	4 500 mm
Weight	31 400 kg	35 000 kg	34 400 kg	35 000 kg	51 000 kg
Axle weight	10 900 kg	18 000 kg	19 000 kg	19 500 kg	32 000 kg
King pin weight	20 500 kg	17 000 kg	15 400 kg	15 000 kg	19 000 kg
<b>Crusher</b>	HP100	GP11F	GP200, GP200S	HP200	GP300
Feed opening	20-150 mm -	40-200 mm -	40-210 mm (GP200) 250-330 mm (GP200S)	95-185 mm -	40-260 mm -
Setting range (c.s.s.)	6-21 mm -	5-29 mm -	10-30 mm (GP200) 24-52 mm (GP200S)	14-19 mm -	22-41 mm -
Motor power	90 kW	160 kW	160 kW	132 kW	250 kW
<b>Screen</b>	CVB1540-3	CVB 1845-4	CVB 1845-4	CVB 1845-4	S3U160/0210M120
- length	4 000 mm	4 500 mm	4 500 mm	4 500 mm	2 000 mm
- width	1 500 mm	1 800 mm	1 800 mm	1 800 mm	1 600 mm
- number of decks	3	4	4	4	3
<b>Feeder</b>	-	-	-	-	Nordberg TK8-32-2V
Size	-	-	-	-	3200x800 mm

## Nordberg NW Series VSI Plants



NW VSI PLANTS	NW7150	NW9100	NW6150C	NW7150 C
<b>Transport dimensions</b>				
Length	11 605 mm	11 605 mm	12 560 mm	12 400 mm
Width	2 990 mm	2 990 mm	2 500 mm	2 990 mm
Height	4 410 mm	4 410 mm	4 060 mm	4 280 mm
Weight	26 300 kg	26 300 kg	24 200 kg	28 500 kg
Axle weight	16 700 kg	16 700 kg	11 200 kg	14 500 kg
King pin weight	9 600 kg	9 600 kg	13 000 kg	14 000 kg
<b>Crusher</b>	Barmac 7150SE	Barmac 9100SE	Barmac 6150SE	Barmac 7150SE
Max feed size	66 mm	66 mm	43 mm	66 mm
Throughput capacity range	260-1580 tph	260-1580 tph	40-330 tph	90-860 tph
Feed hopper volume	9 m <sup>3</sup>	9 m <sup>3</sup>	-	-
<b>Screen</b>	-	-	Nordberg CVB1540-4	Nordberg CVB1845-4
- length	-	-	4 000 mm	4 500 mm
- width	-	-	1 500 mm	1 800 mm
- number of decks	-	-	4	4

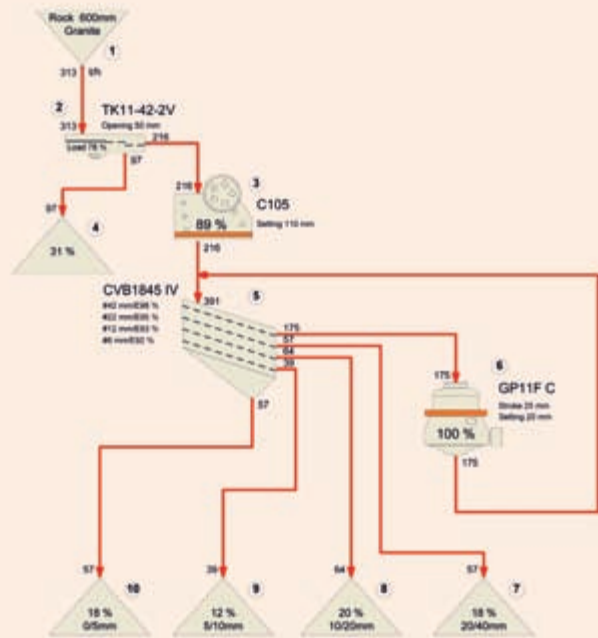
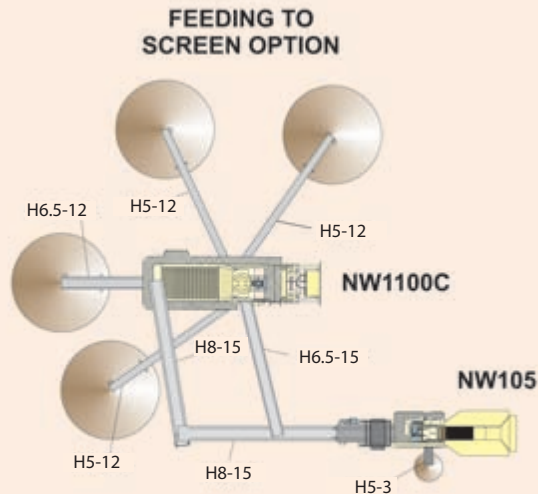
## Nordberg NW Series Screen Plants



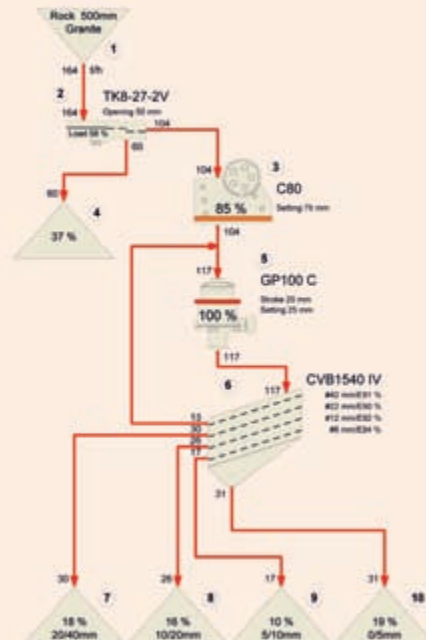
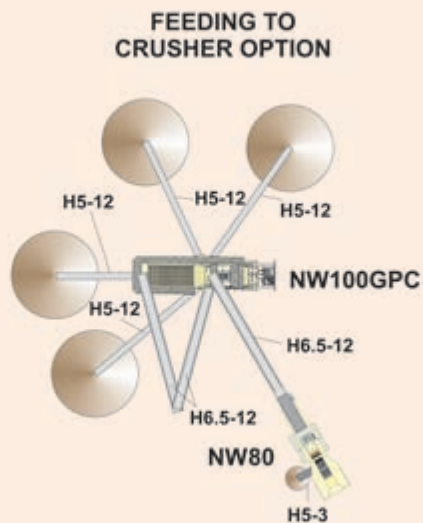
NW SCREEN PLANTS	NW302FS	NW303FS	NW353FS	NW403FS	NW1845CVB	NW2060CVB
<b>Transport dimensions</b>						
Length	16 700 mm	17 600 mm	16 400 mm	13 400 mm	9 280 mm	12 100 mm
Width	3 500 mm	3 500 mm	3 500 mm	3 500 mm	3 000 mm	3 000 mm
Height	4 450 mm	4 250 mm	4 495 mm	4 500 mm	4 260 mm	5 100 mm
Weight	32 200 kg	35 500 kg	39 300 kg	32 900 kg	15 000 kg	25 000 kg
Axle weight	26 300 kg	21 000 kg	24 350 kg	20 500 kg	10 300 kg	16 500 kg
King pin weight	5 900 kg	14 500 kg	14 950 kg	12 400 kg	4 700 kg	8 500 kg
<b>Screen</b>	FS302	FS303	FS353	FS403	CVB1854-4	CVB2060-4
- length	6 100 mm	6 100 mm	6 100 mm	6 100 mm	4 500 mm	6 000 mm
- width	2 242 mm	2 242 mm	2 242 mm	2 547 mm	1 800 mm	2 000 mm
- number of decks	2	3	3	3	4	4

## Two-stage Process Examples

### Nordberg NW105 + NW1100C

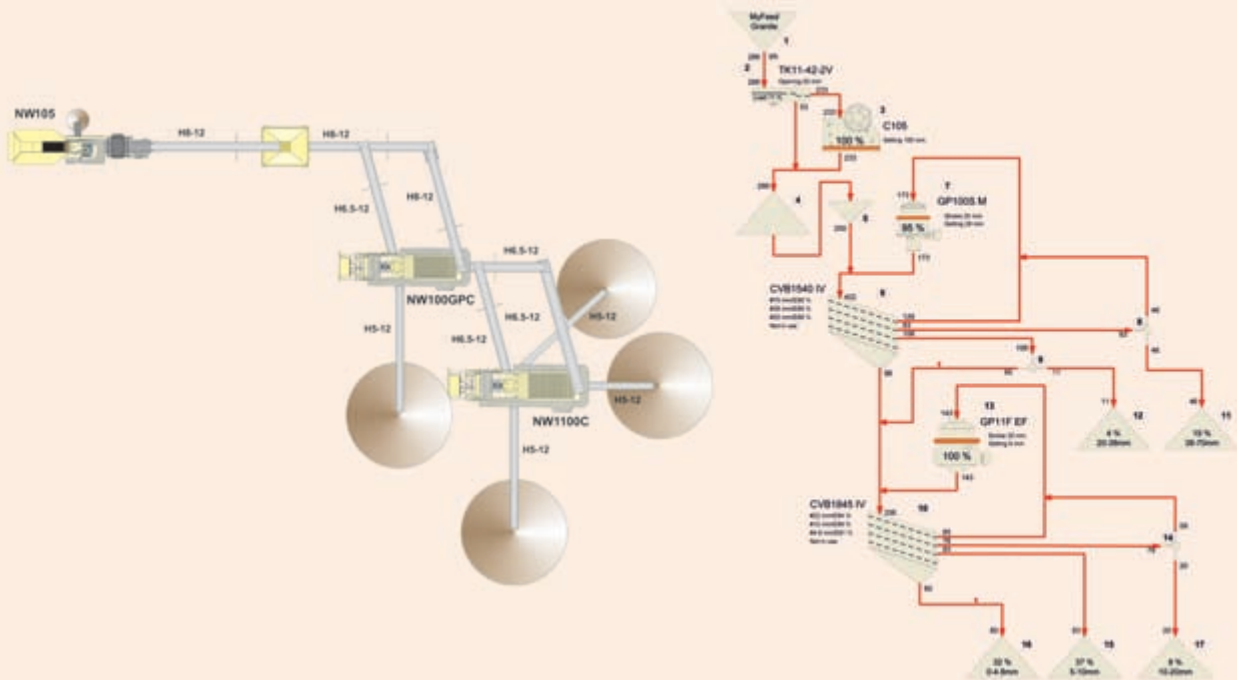


### Nordberg NW80 + NW100GPC

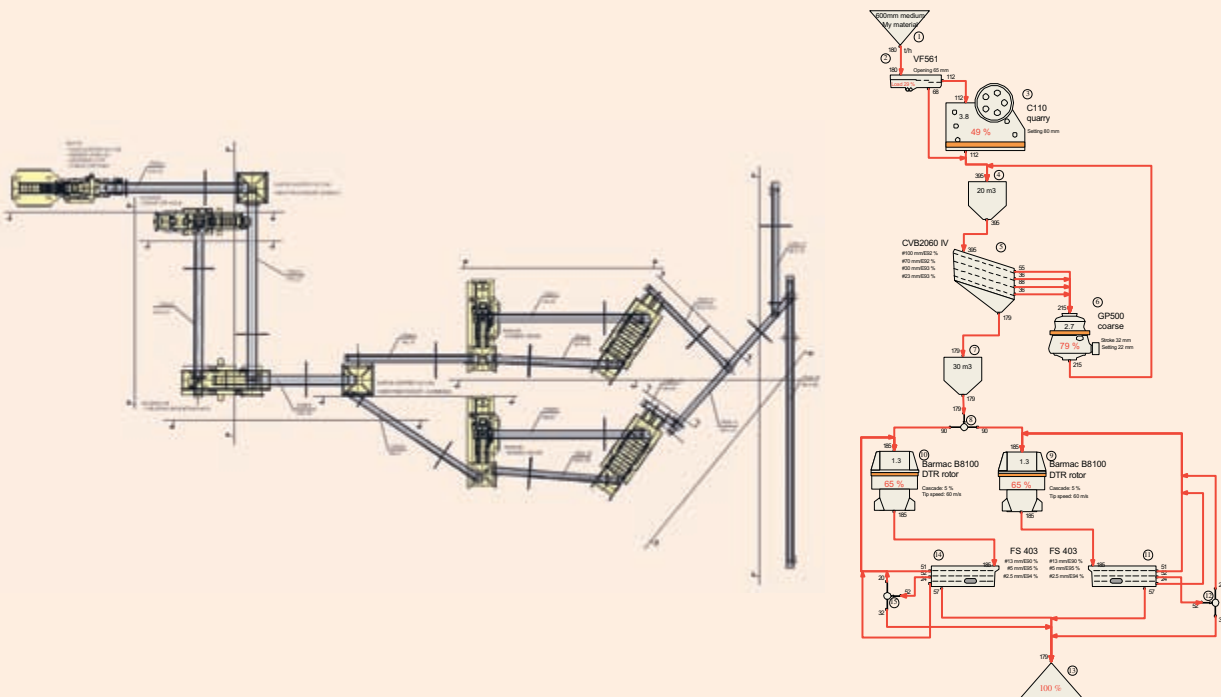


## Three-stage Process Examples

Nordberg NW105 + NW100GPC and NW1100C



Nordberg NW110 + NW500GP + NW2060CVB + NW8100 + NW403FS



## Metso Minerals Crushing Equipment Our ranges:

### Unit Crushers

C Series jaw crushers  
Primary gyratory crushers  
GP Series cone crushers  
HP Series cone crushers  
MP Series cone crushers  
NP Series horizontal impact crushers  
VI Series vertical impact crushers  
Barmac Series vertical impact crushers  
Lindemann Series metal crushers  
Nordberg laboratory crushers

### Mobile Equipment

LT Series mobile crushing plants  
NW Series portable plants

### Complete Plants

Complete plants for aggregate production  
Complete plants for recycling

### Metso Minerals

#### Construction

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*All Metso Minerals  
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equipment is produced  
in accordance with  
a quality assurance  
system that complies  
with the ISO 9001  
standard, as certified by  
DNV Certification Oy.*

