



HOW IT WORKS

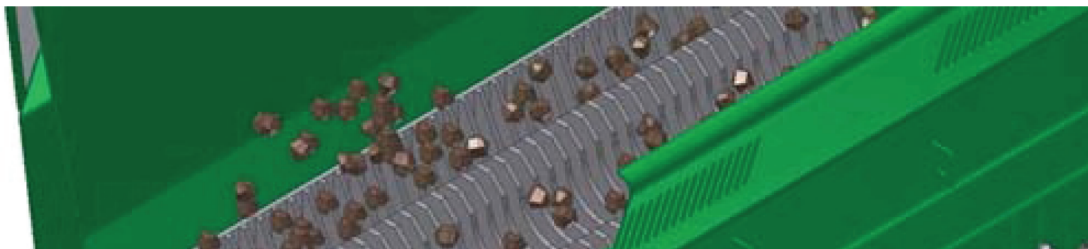
Think of the MISU unit as a giant Kitchen sieve.

It acts as a filtration system that screens different forms of material using the patented Multiple Spinning Rotor System. These rotors allow smaller particles to fall through, while holding back larger debris. The rotors will also mix and crush softer materials.

The action is one of each rotor 'floating' in position as it spins finding its own centre of gravity. The normal two-way operation of the rotors frees debris that can collect on the blades.

This is what makes MISU unique. The 'floating' rotors constantly 'free' or 'shake off' material that would otherwise stick to the rotors and block up the screen, making the work slower to complete and causing unnecessary downtime. With this floating motion in place the MISU can screen wet material as well as dry material, further opening your options.

The MISU's technique includes using intermeshing rotating discs on shafts in the open end of the unit to screen materials. Spacers at the side of the unit allow screened material to be sized from -20mm to -80mm.



Carrier requirements

The MISU Screening Unit sources its power from the carrier units hydraulic system.

The key criteria when selecting and matching a MISU screen to a carrier unit ultimately depends on two variables:

- 1: The carrier units weight – so the bucket and carrier unit are balanced and does not to exceed the static tipping load of the carrier
- 2: The carrier units hydraulic horsepower

When an order for a MISU screen occurs all specifications and variables are calculated out according to the specific carrier unit.

Excavator Units

Excavator machines need to be piped for 'Bi-Directional Flow' to run the screen in two directions or clockwise or anticlockwise directions.

The pressure in the circuit must be limited to no more than 200 Bar (2,900 p.s.i) and hydraulic oil flow set to the manufacturers specification's.

Loader Units

Loader units run off the 'Four-in-one' system, or the '3rd hydraulic function'

The pressure in the circuit must be limited to no more than 200 Bar and hydraulic oil flow set to the manufacturers specification's.

Skid Steer Units

Skid Steer units run off the attachment hydraulic flow system.

The pressure in the circuit must be limited to no more than 200 Bar and hydraulic oil flow set to the manufacturers specification's.

Ideally the weight of a carrier skid steer machine should be close to 3 ton for balance purposes.

Performance

MISU units are built to reliable and tested specifications, to ensure they are the right equipment for your application.

Production of MISU Units

As any experienced earthmoving equipment operator knows, production of any earthmoving machine is dependent on a number of variable parameters. These parameters range from moisture content, job layout, and plasticity of material through to operator technique to name just a few.

MISU advocate the most suitable method to determine an accurate production estimate of a particular material of a required size through a particular model MISU unit, is to physically do an onsite timed production demonstration where practicable.

The first step is to ensure that the correct build of the screening unit specification is applied, the approved installation to the carrier machine and fine-tuning of the side rakes produces a finished product that meets the required specification.

The next step is to cycle the unit noting the average cycle time and the conservative cubic capacity of the unit.

Theoretical Calculations for MISU units

As an example, let's assume we have a 1.2 cubic metre capacity EW140 correctly installed on a nominal 20 tonne excavator. Assuming we are happy with the finished product we can cycle the unit. Assuming the unit takes 45 seconds to cycle this is 0.75 of one minute. To be conservative we allow 1.1 cubic metres per cycle and production calculations are derived on 50-minute hours. (An average 10-minute loss is used to cover waiting time, positioning the machine and other unproductive time).

From the above we can conclude:

- 50 minutes divided by the average cycle of 45 seconds (0.75 of a minute) equals 67 cycles per (50minute) hour.
- 67 cycles multiplied by 1.1 cubic metres give a conservative average production of 73.7 cubic metres per hour.

Similarly with the above parameters, productivity for EW100 & EW180 model excavator screens would be:

EW100: @ 0.6 cubic metre capacity = 40.2 cubic metre's per hour

EW180: @ 1.6 cubic metre conservative capacity = 107.2 cubic metre's per hour

(The above information is provided as a theoretical guide only)

MODELS

Skid Steer Loader



model	weight	capacity	hyd flow	pressure
SS.20	430kg	.20m3	50-60 l/min	180 bar
SS.35	630kg	.35m3	60-80 l/min	180 bar

Small Wheel Loaders



For small wheel loaders we offer the BH.60

model	weight	capacity	hyd flow	pressure
BH.60	950kg	.8m3	70-100 l/min	170-190 bar

Wheel Loaders



A suitable loader model is determined by the availability of hydraulic flow from the carrier unit and the type of material required to be processed.

model	weight	capacity	hyd flow	pressure
WL.170	2,000kg	1.9m3	130-180 l/min	170-190 bar
WL.250	2,500kg	2.5 m3	140-200 l/min	170-190 bar
WL.320	4000kg	3.0 m3	200-250 l/min	170-190 bar

Excavator



Our Excavator Units are available in six models. The tonnage of the carrier unit and the flow capability of the hydraulic system determine the unit most suitable for your application.

model	machine availability
EW.20	5-5.5 ton
EW.40	6-7 ton
EW.100	10-18 ton
EW.140	18-22 ton
EW.180	22-40 ton
EW.220	45-50 ton

model	weight	capacity	hyd flow	pressure
EW.20	430kg	0.20 m3	50-60 l/min	180 bar
EW.40	620kg	0.35 m3	60-80 l/min	180 bar
EW.100	1,000kg	0.65 m3	80-100 l/min	170-190 bar
EW.140	1,800kg	1.2 m3	180 l/min	170-190 bar
EW.180	2,400kg	1.8 m3	180 l/min	170-190 bar
EW.220	3,200kg	2.6 m3	200-250 l/min	180-190 bar

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