

HAYER & BOECKER

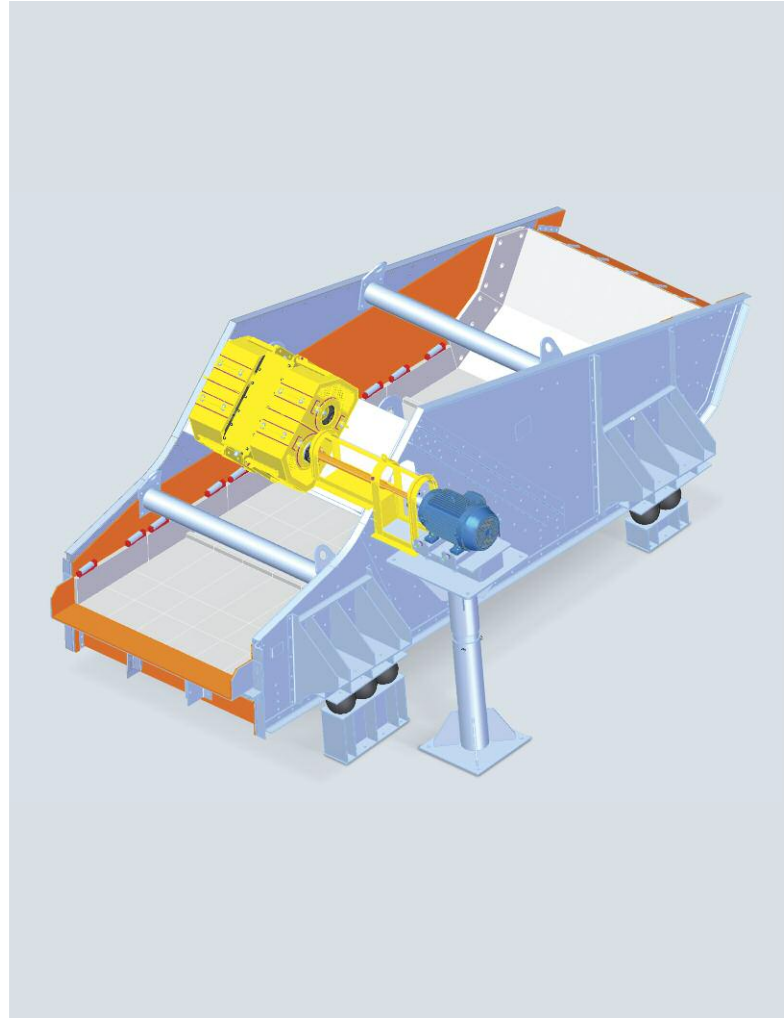


XL-CLASS HIGH CAPACITY SCREENS

A HAYER & BOECKER Company



XL-Class 3660 x 7320



XL-Class 1830 x 4880

NIAGARA® XL-CLASS



EXCITER DRIVEN



HIGH CAPACITY



PROCESS RELIABILITY

The challenge

The XL-Class vibrating screen meets the demands for high capacity machines with greater screening surface and without the size limitations of traditional shaft driven vibrating screen technology.

The solution

The XL-Class combines years of HAVER & TYLER engineering experience with exciter technology and has been designed with the latest engineering tools including:

- 3D Design
- Structural calculation based on Finite Element Analyses (FEA)
- Calculation testing through tension measurement with strain gauges
- Vibration Analysis
- High-performance exciter drives

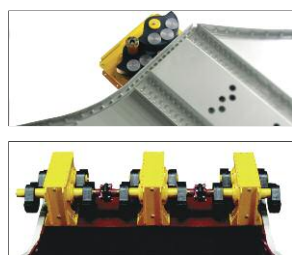
Areas of application

- Wide range of applications in the mining, industrial minerals and aggregate industries
- Wet and dry classification
- Scalping
- Dewatering
- Reject screening
- Desliming
- Drain and Rinse

Features & Benefits

DESIGN

- Application specific body design, supported by Finite Element Analysis (FEA), technically optimises the design according to customer requirements
- Reinforcement plates and bending as well as HuckBolt® construction offer optimum structural reliability



Exciter Drive



HAVER-Snap-Guard®

CAPACITY

- Large deck sizes maximise feed rates and increase screening capacity
- Allows for different configurations of classification decks to increase productivity and efficiency

MAINTENANCE

- Easy adjustable stroke to meet ideal G-Force depending on machine load
- Allows for implementation of HAVER & TYLER's Pro-Deck to optimise vibrating screen performance

OPERATION

- Designed for up to 50.000 hour bearing life
- Easy to maintain oil lubrication system increases production time

HAVER-Snap-Guard® – Crossbeam wear protection for your screening machine

HAVER-Snap-Guard® is a patented crossbeam wear protection system. In combination with the crossbeam system the HAVER-Snap-Guard® elements are easy to install. HAVER-Snap-Guard® wear protection components are standardized and compatible with the crossbeam system

Your benefits

With the HAVER-Snap-Guard®-system, extend your maintenance intervals, reduce downtime, lower your operations costs and raise your profit per ton.

- Low-wear polyurethane
- Absorption of the impact energy
- Easy assembly without tools and disassembly
- Partial exchange of single elements
- Can be retrofit based on brand
- Completely encapsulated crossbeam



Crossbeam wear protection for your screening machine





XL-Class

The X-Class is a high capacity screen for effective dry and wet classification.

- Isolation frame to minimize dynamic forces into/in the steel structure (option)
- Spring mount, combination of spring and oscillating mount or oscillating mount suspension systems available to meet different requirements
- External motor drive with rubber claw coupling or V-belt drive for easy maintenance
 - Optional: direct drive with VFD (variable frequency drive)



XL-Class Tandem

The XL-Class Tandem screen features two modules for additional screening surface compared to the standard XL-Class design.

- Significantly increased screening surface
- Tandem design reduces stress on machine body
- Flexible inclination and stroke adjustment



XL-Class Dewatering

The XL-Class Dewatering screen was mainly developed for the iron ore industry to minimize the percentage of water residue in the product, enabling a substantial improvement in the handling, transport and piling up of ore. Used for dewatering of various products, the machine operates in a negative inclination to allow better material compacting and consequently leads to water expulsion.

The dewatering screen offers:

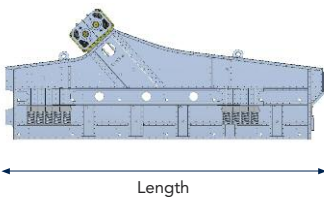
- Heavy construction
- Negative inclined design
- Use of polyurethane screen media or wedge wire
- Abrasion resistant

NIAGARA® X-CLASS MODELS

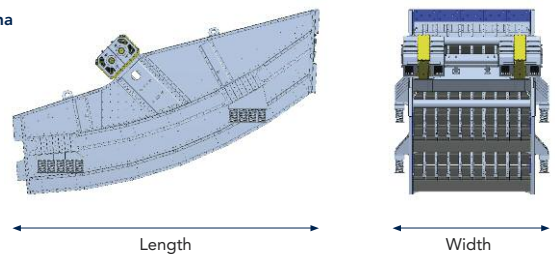
CLASS	SIZE (mm / ft.)		DECKS
	WIDTH	LENGTH	
XL-Class	2440 / 8	6100 / 20	1 2
	3050 / 10	6100 / 20	1 2
	3050 / 10	7320 / 24	1 2
	3660 / 10	7320 / 24	1 2
	3660 / 10	8540 / 28	1 2
	4270 / 14	7320 / 24	1 2
	4270 / 14	8540 / 28	1 2
XL-Class Banana	2440 / 8	6100 / 20	1 2
	3050 / 10	6100 / 20	1 2
	3050 / 10	7320 / 24	1 2
	3660 / 10	7320 / 24	1 2
	3660 / 10	8540 / 28	1 2
	4270 / 14	7320 / 24	1 2
	4270 / 14	8540 / 28	1 2
XL-Class Tandem	2440 / 8	7320 / 24	2
	3660 / 10	10980 / 36	1
	4000 / 13	11000 / 36	1
XL-Class Dewatering	1200 / 4	3000 / 10	1
	1400 / 4	3000 / 10	1
	1525 / 5	3660 / 12	1
	1800 / 6	3500 / 11	1
	1830 / 6	4880 / 16	1
	2440 / 8	6405 / 21	1

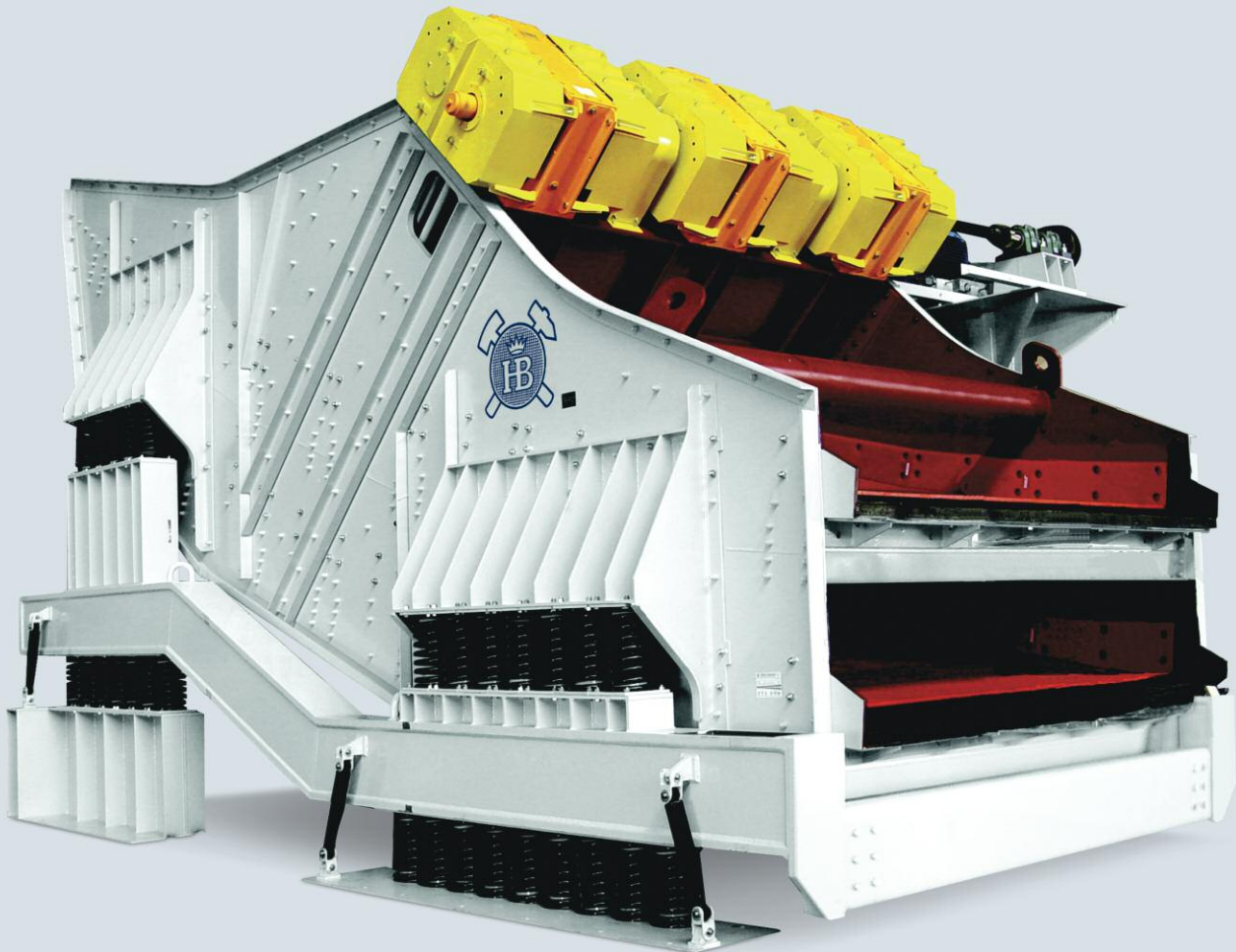
These are our standard screen sizes. If your screen size is not listed, please contact us and we will provide you a custom solution. HAVER & TYLER can also customise a machine with 3 decks.

XL-Class



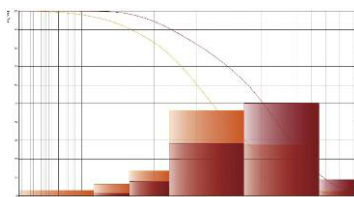
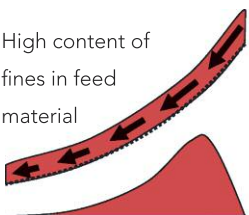
XL-Class Banana





NIAGARA® XL-CLASS BANANA

High content of
fines in feed
material



Due to the XL-Class Banana screen design, the feed material accelerates in the first third of the screen and enables a majority of the fine material to be screened immediately which leads to reduced bed depth. Towards the discharge end the inclination decreases and therefore leads to a sharp separation of the material.

XL-Class Banana

The XL-Class Banana screen features multiple inclinations to provide feed capacity and classification efficiency. A greater inclination in the feed area triggers an increase in flow speed resulting in high operational capacity. It ensures a decline on bed depth making fine material separation easy.

Successive reductions in inclination throughout the screen area ensure a decline in flow speed, creating favourable conditions for sharp screening in the final phase. Although traditionally developed for classification of iron and copper ores, the XL-Class Banana Screen is finding its way into almost every application in mining, such as gold, niobium and others, due to its high operation capacity and simple maintenance.

- Greater inclination at the feed end increases screening capacity by approximately 25%
- Declining the inclination during layered screening eases fines separation
- Sharp separation at discharge end Optimising your XL-Class

OPTIMISING YOUR XL-CLASS

Finite Element Analysis (FEA)

Structural calculation by means of FEA allows the simulation of the machine’s dynamic behaviour. Stress results, natural frequencies and more shapes are evaluated to assure a technically and economically optimized design. This analysis is also used to optimise the vibrating screen’s components in order to avoid high stress concentrations and early fatigue failure. The FEA also checks acceleration and displacement.

Stress Measurement

Based on the FEA results, the most critical points are determined and strain gauges are applied in factory testing to obtain the operational stresses on the machine. The strain gauge results are correlated with the FEA to validate the FE model.

Vibration Analysis

HAYER & BOECKER’s signature Vibration Analysis tool is employed to locate any dynamic irregularities in a vibrating screen. The Vibration Analysis system employs eight accelerometers to analyse the machine’s speed, stroke and overall performance. Once your machine is installed, Vibration Analysis can be performed on a regular basis to help you understand the interaction between feed material, screen media and the vibrating screen specific to your operation. A detailed report will contain suggested improvements and OEM recommendations to maximise your screening efficiency and minimise unscheduled downtime. Onsite training will give your maintenance department the skills and confidence to maintain a productive operation.

Pro-Deck

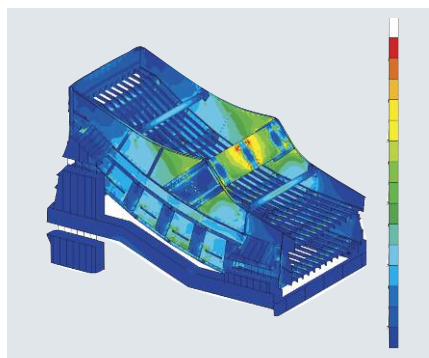
Pro-Deck is a consultative approach used to optimise the vibrating screen by applying the most effective screen media to each phase of screening.

Advantages

- Increases screening efficiency
- Reduces downtime
- Maximises profit



Vibration Analysis



Finite Element Analysis



Pro-Deck

HAYER & BOECKER OHG

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