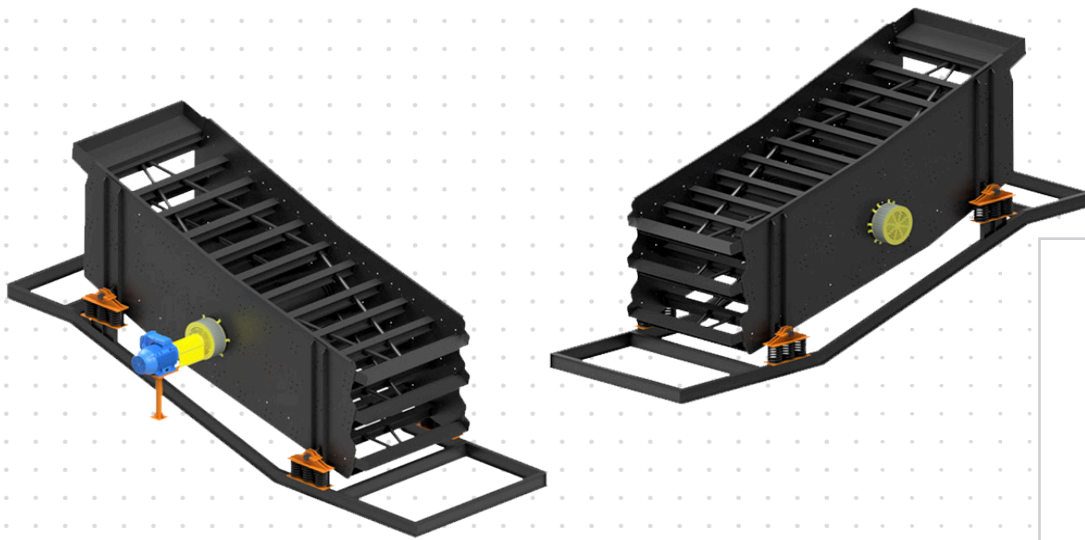




ATHOX

# VIBRATING SCREENS



AGGREGATE

## OVERVIEW

Athox vibrating screens are designed for both intermediate or final classification and can be equipped for washing process for materials such as stone, ores, sand, gravel and others. The use of Multislope screens often average, 20% better yield capacities compared to constant slope screens in the same size. Multi-slope screens can be manufactured in widths 4', 5', 6', 7', 8' and 10', with lengths ranging from 6' to 36' as well as 1, 2, 3 or 4 decks.

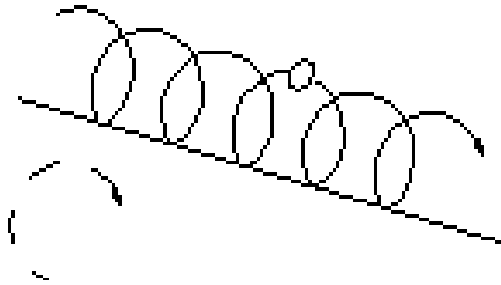
## BENEFITS

- High yield and quality in the classified product.
- Specially designed and manufactured to withstand the harshest working conditions.
- Their features offer maximum yield and an efficient classification, besides quality and simple installation, maintenance, and operation.
- Our equipment is specially designed to withstand the most demanding work regimes
- L&H/Athox offers a portfolio with different types and sizes of screens, including personalized solutions, in order to meet the needs of its customers.

# TECHNICAL SPECIFICATIONS

## TYPE OF VIBRATION

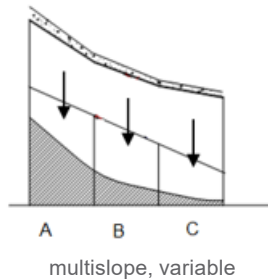
The circular motion sieves have only one vibrating element, composed of a main shaft and at their ends have adjustable counterweights, thus facilitating the adjustment of the equipment amplitude, this set of shaft and counterweights is supported on self-compensating roller bearings, lubricated by grease and protected by labyrinths and retainers in order to guarantee a smooth function and a long life to the equipment.



Screen drives are direct through drive shaft transmission, a system that allows smoother and quieter operational performance of the equipment.

The fixing of the screens on the vibrating frames can be done through tensioning side rulers or wooden wedge for steel screens depending on the opening and diameter of the wire and can also be fitted with required stitching to facilitate the installation of rubber and or polyurethane screens.

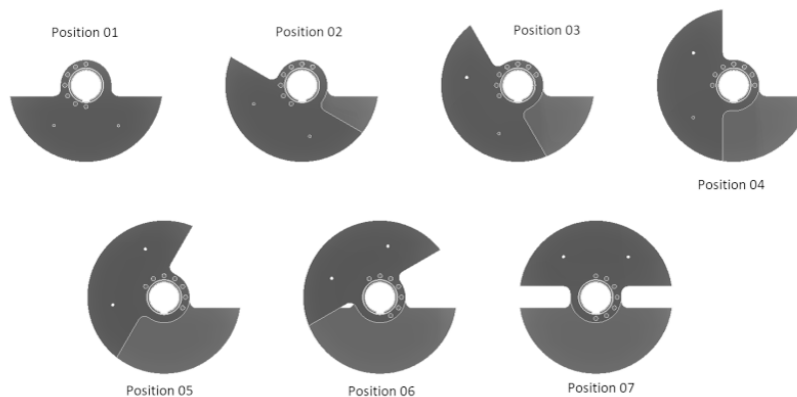
Vibrating screens with constant inclination (circular motion): In this type of constant inclination equipment the material speed above the deck is practically constant; therefore, the material layer is reduced according to the material with a smaller particle size than the opening of the screen passes through the screen. The screening takes place mainly in the “B” (central) section of the sieve, where the material has already stratified in the layer. In section “A” the layer is very high, so the material smaller than the opening of the screen has little chance of reaching the screen. In the “C” section, the material layer is relatively small, which makes it possible to sieve the final fraction of material.



Sector	Inclination	Material Flow Speed	Screening Capacity	Efficiency
A	High	High	High	Low
B	Medium	Medium	Medium	Medium
C	Low	Low	Low	High

## ADVANTAGES

- Increased acceleration enabling sorting of difficult materials.
- Transmission between the vibrator and motor made by drive shaft with reduced movement, have undeniable advantages over transmission by “V” belts, with drives vibrating together with the screen.
- All critical structural elements were calculated and verified by finite element analysis.
- In modular screens, it is possible to work with different amplitudes in each module, resulting in better use of the equipment’s efficiency.
- To guarantee the transverse rigidity of the screens, linear tubes are connected to the transverse beams the length of the screen.
- All rotating elements come with protection, meeting NR-12 safety standards.
- The vibrator has 7 eccentricity positions, allowing you to change the amplitude in a few minutes.



VIBRATOR SETTINGS							
WEIGHT POSITION	1	2	3	4	5	6	7
VIBRATION FORCE %	100%	97%	90%	80%	70%	63%	60%

## EASE OF ADJUSTMENT

An easily accessible system is located on the side of the machine and controls the vibratory motion. Vibrating element is accomplished by a concentric shaft with two adjustable counterweights for easy adjustment of the amplitude of the equipment. Shaft is supported on self-aligning roller bearings and protected by covers, labyrinths and retainers for protection from the work environment. Grease or oil lubrication ensures smooth operation and long-lasting durability.

## MANUFACTURING

Structure manufactured in carbon steel and mounted on special steel springs. The junction between body and frames-decks, are fixed by screws, thus avoiding weld in the side plates. Dimensioned to ensure optimal performance to the vibratory motion and are supported on a base built in metal profiles. Fixing the screens through steel rule, screwed on the side of the screen.

The vibrating set is supported by four spring supports at the ends of the structure to provide work stability to the equipment, mounted on a lateral reinforcement.

Transversal beams made of plates electrically welded by the MIG process with an extra reinforced structure and locking between the beams with reinforced tubes mounted in a diamond shape for greater rigidity of the decks.

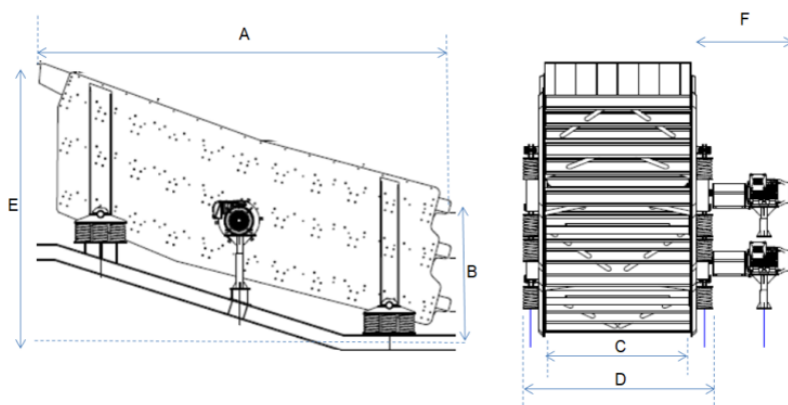
## MANUFACTURING DETAILS CONTINUED

The Eccentric Mechanism works with 01 set of eccentric mechanism for each module, with two self-aligning roller bearings mounted on the vibrating mechanism between the equipment decks. The mechanical mechanism is bolted to the side plates through the flanges of the protective tube and roller bearings. Main shaft with counterweights at the end allow adjustment of the amplitude (stroke) of the equipment.

The Equipment is supplied with Electric motor, height-adjustable motor support for assembly adjustment, Motor transmission to the equipment is through drive shaft and with safety guards over the weights and drive shaft.

## RUBBER COATED FEED TRAY AND DISCHARGE LIPS

Standardizes the distribution of the material and prevents it from being released directly over the railing or screen reducing premature wear and tear.



## PRODUCT ANALYSIS

Model	No. of Decks	Screen Dimension ft (mm)	Construction	Screening Area ft <sup>2</sup> (m <sup>2</sup> )	Motor Power 8 Poles kW (HP)	Vibration Element Athox Model	Rotation (rpm)	Weight Without skid kgs (lbs)	Dimensions (mm)					
									A	B	C	D	E	F
AIS 4' x 12'	2	4' x 12' (1.220 x 3.660)	Monoblock - Inclined	48 (4,5)	10	EVA-03	875	3.400 (7.496)	4.320	1625	1.220	1.940	2720	1525
	3				15	EVA-03	880	3.850 (8.488)	4.320	2185	1.220	1.940	3240	1585
	4				15	EVA-03	880	5.300 (11.684)	4.320	2250	1.220	1.970	3760	1585
AIS 5' x 14'	2	5' x 14' (1.525 x 4.270)	Monoblock - Inclined	70 (6,5)	20	EVA-04	870	3.900 (8.598)	5.000	1625	1.525	2.245	2880	1585
	3				25	EVA-04	880	4.150 (9.150)	5.000	2185	1.525	2.245	3400	1650
	4				30	EVA-05	880	6.430 (14.175)	5.000	2250	1.525	2.275	3900	1730
AIS 6' x 16'	2	6' x 16' (1.830 x 4.880)	Monoblock - multislope	96 (8,9)	25	EVA-04	880	5.900 (13.010)	5.500	1625	1.830	2.550	3000	1650
	3				30	EVA-05		6.900 (15.210)	5.500	2185	1.830	2.550	3500	1730
	4				40	EVA-05	885	8.350 (18.410)	5.500	2250	1.830	2.580	3710	1730
AIS 7' x 18'	2	7' x 18' (2.135 x 5.490)	Monoblock - multislope	126 (11,7)	40	EVA-05	885	8.100 (17.860)	6.000	1625	2.135	2.855	3.100	1730
	3				40	EVA-05		10.150 (22.375)	6.000	2185	2.135	2.855	3600	1730
	4				50	EVA-06		10.900 (24.030)	6.000	2250	2.135	2.885	4010	1730
AIS 7' x 20'	2	7' x 20' (2.135 x 6.100)	Monoblock - multislope	140 (13,0)	40	EVA-05	885	8.500 (18.740)	6.500	1625	2.135	2.855	4100	1730
	3				40	EVA-05		10.590 (23.350)	6.500	2185	2.135	2.855	1310	1730
	4				50	EVA-06		11.650 (25.685)	6.500	2250	2.135	2.855	4500	1805
AIS 8' x 20'	2	8' x 20' (2.440 x 6.100)	Monoblock - multislope	160 (14,9)	40	EVA-05	885	9.600 (21.165)	6.500		2.440	3.160	4100	1730
	3				40	EVA-05		11.300 (24.915)	6.500	2185	2.440	3.160	4310	1730
	4				50	EVA-06		13.400 (29.545)	6.500	2250	2.440	3.160	4500	1805