MR Series Gyra-Vib® Separator

Vibratory Separators are used to separate particles by size or separate solids from liquids. Designed for maximum screening efficiency and easy handling, Midwestern's separation equipment can be constructed and finished to industrial, food, dairy and pharmaceutical standards.

The MR Series vibratory separator features a conventional design utilizing a center-mounted motor and unique weight system to control the vibratory screening motion during the screening process. Easily change the lead angle of the weights for optimal flow patterns and peak performance.

Sifting, scalping, classifying, and dewatering applications benefit from the versatility and range of screening products available to customize each vibratory separator for specific end results. Multiple screening decks are available for simultaneous separation.

Distinct design features such as bolting the lower frames to the table assembly and eccentric balance cages can extend screen life and ensure the longevity of each vibratory screener.

A Available with specially designed 1200 rpm motors. High-speed 1800 rpm motors are also available for applications that require screening solids from a large volume of heavy, high-viscosity liquids.

B Bolt-mounted lower frames will not turn and wear out the flanges on the table and lower frame. A conversion kit is available to modify the conventional clamp-mounted separator lower frames to the bolt mounted-style.

C Balance cages mounted directly on motor shaft and designed for quick weight adjustments.

D The reversible center locking devices allow positive screen tensioning up or down.

Midwestern's balance cage allows you to easily change weights to maximize your separator's efficiency.

Typical Flow Patterns
The flow pattern on a screen deck may be varied to retain material for desired intervals, or directly sweep to the discharge spout. Lift and throw factors determine particle motion.
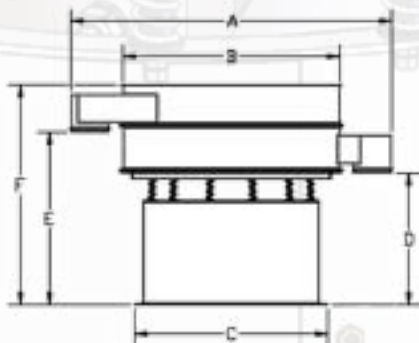
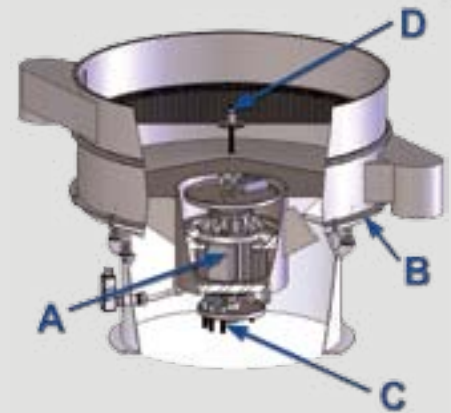0° Lead Angle   35° Lead Angle   60° Lead Angle   120° Lead Angle

MR Series Gyra-Vib® Dimensions - Single Deck

MODEL	A	B	C	D	E	F
MR24	38 1/4"	22 1/2"	22 7/8"	15 1/2"	19 3/4"	24 1/2"
MR30	46 1/2"	30 1/8"	27 3/4"	15"	21 3/8"	29 1/4"
MR36	56 3/8"	34 1/8"	31 3/4"	21 3/4"	30 1/2"	40 5/8"
MR40	60"	37 5/8"	31 3/4"	21 3/4"	30 1/2"	40 5/8"
MR48	68 1/4"	45 3/4"	36 3/4"	21 3/4"	30 1/2"	40 5/8"
MR60	79"	57 1/16"	42 3/4"	21 3/4"	30 1/2"	40 5/8"

The dimensions above reflect a basic, single-deck separator. Multiple decks and accessories will alter overall dimensions depending on your screening needs. A detailed drawing is provided to each customer for individual accuracy.

Frames

Midwestern services all your screening needs by manufacturing premium frames and accessories to fit most round vibratory separators. These items are designed to keep production levels high and downtime at a minimum. All of our frames are constructed to meet the demanding needs of the processing industry.

Replacement Screens & Parts

Midwestern recognizes your need for one supplier to offer a wide variety of screens and parts for all your round vibratory separators – regardless of make or model. We work with our customers to ensure Midwestern offers the type of screens you want in the sizes you need.

Kleener Tray System
The kleener tray clamps securely in place and does not interfere with screen changing. Its unique "Z" ring mounting provides unparalleled rigidity. The system can be used with or without a distribution pan and existing equipment can be easily converted to accept this system. The clip-in style operates more quietly than the perforated plate style.
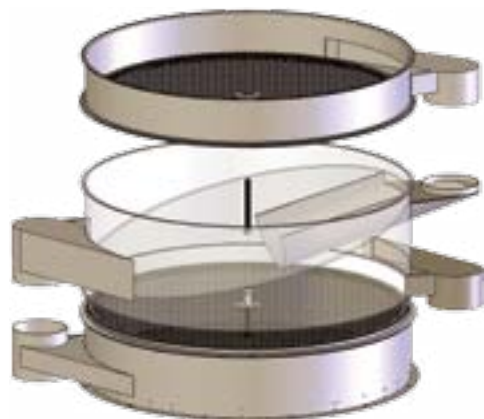
RAS System
Available in a low-profile, single or double-deck design, the RAS system allows for the fines to fall through the screen while the oversized material gently cascades over the screen's edge and into an inclined path to the discharge chute. Perfect for applications with a huge percentage of oversized material and slurries.
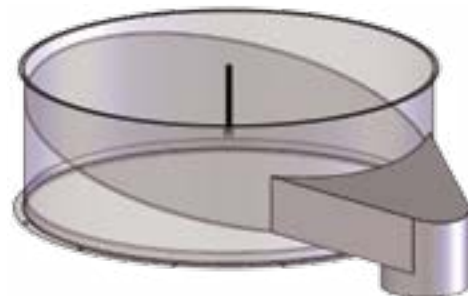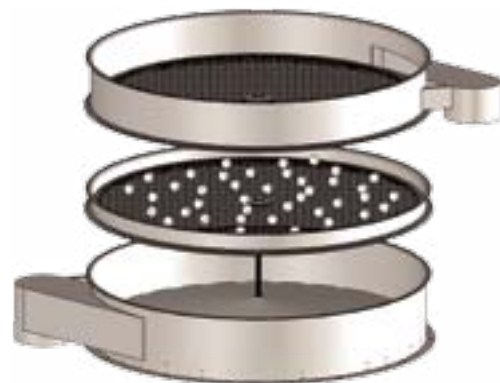
Diverter Frame
The diverter frame is useful when dealing with a high volume of undersize. After the material passes through the screen mesh, it is angled directly to the downspout for quick discharge. Can easily be implemented in both dry processing and liquid/solid applications.
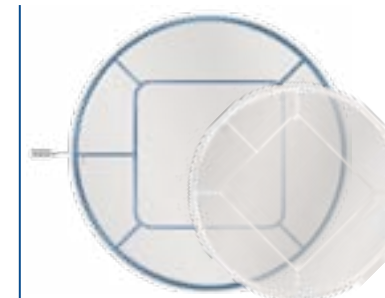
Round & Square Screens
Sizes range from 18 to 72 inches and can fit nearly every make and model of separators with various mounting methods – including strict food grade standards.

Clear Opening Screens
Midwestern offers clear opening screens and customer weaves not shown on our mesh chart. Speak to a sales professional for options and availability.

Ultrasonic Screens
In a constant effort to supply our customers with innovative screening options, we offer ultrasonic screens for various makes and models, rescreening is also available.
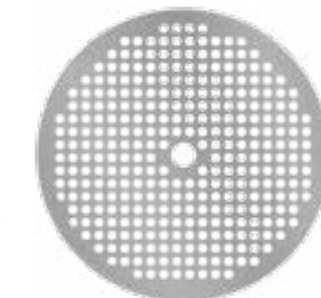
Perforated Screens
Customized to meet your screening needs, our perforated screens come in a wide range of sizes and are available with round and slotted openings.

Sandwich Screens
Plastic sliders or rubber balls are sandwiched between a sizing screen and the back-up mesh providing added vibration dislodging near size particles and allowing material to flow more efficiently.

Bulls-Eye Screens
Applying silicone beads in a bulls-eye pattern between the sizing screen and back-up mesh reduces friction while extending the life and performance of the screen.

Wagon Wheel Screens
Dense material on fine mesh screens and larger diameter screens can benefit from the added support provided by the wagon wheel design. Made to fit most makes and models of separators.

Custom Screen Options
As a manufacturer, not a reseller, Midwestern works with our customers to provide customized screening solutions. From nylon mesh to "white wall" screens, we supply unconventional screens for your application. Speak to a sales professional for options.

Series Feed Frame
Specifically manufactured for high capacity screening, the series feed frame gives the user the ability to screen the material twice with one machine.

Ball Tray System
The ball tray assembly will reduce blinding caused by damp material and near-size plugging of the sizing screen mesh. Also, the secondary vibration caused by the bouncing balls against the sizing mesh helps stratify the material for greater throughput. The standard 2" ball tray (as illustrated) or optional internal ball tray systems are available. The ball tray assembly can be installed on most makes of separators now in service.

Riser (Base)
In order to help our customers meet specific height requirements, Midwestern offers risers that can easily attach to the base of most separators. Available at the time of purchase or be retrofitted at a later time, the risers can be constructed to meet your industries' requirements.

- Select from 18 to 72-inch diameter round screens and square screens in 22 and 44-inches.
- Custom-woven screen meshes.
- All new round screens include free gaskets.
- Able to meet industry specifications.
- Competitive prices.
- On-time deliveries.
- Supplier for most makes and models!

Midwestern's Quality is Unmatched
We continually invest in the latest manufacturing processes to ensure our screening products exceed your expectations.

MIDWESTERN'S WIRE MESH COMPARISON CHART

Approx. Microns	MM	US Sieve	OPG.	Tyler Eqiv.	Tensil Bolting Cloth				Mill Grade				Market Grade			
					Mesh	OPG.	Wire	% OA	Mesh	OPG.	Wire	% OA	Mesh	OPG.	Wire	% OA
25000	25.0	1"	1.00													
19000	19.0	3/4"	.750													
16000	16.0	5/8"	.625													
14288	14.3	9/16"	.562													
12500	12.5	1/2"	.500													
11200	11.2	7/16"	.438						2	.446	.054	79.6	2	.437	.063	76.4
9500	9.5	3/8"	.375													
8000	8.0	5/16"	.312													
6300	6.3	1/4"	.250						3	.292	.041	76.7	3	.279	.054	70.1
5600	5.6	3.5	.223	3.5					4	.215	.035	74.0	4	.2023	.0475	65.9
4750	4.75	4	.187	4									4	.187	.063	56.0
4000	4.0	5	.157	5					5	.168	.032	70.6	5	.159	.041	63.2
3350	3.35	6	.132	6					6	.139	.028	69.6	6	.132	.0348	62.7
2800	2.80	7	.110	7					7	.115	.028	64.8	7	.108	.035	57.2
2360	2.36	8	.0937	8					8	.100	.025	64.0	8	.0964	.0286	60.2
2000	2.0	10	.0787	9					9	.088	.023	62.7	10	.0742	.0258	56.3
1854	1.85								10	.080	.020	64.0	11	.073	.018	64.5
1700	1.7	12	.0661	10	14	.062	.009	76.4	12	.065	.018	60.8	12	.0603	.023	51.8
1400	1.4	14	.0555	12	16	.0535	.009	73.3	14	.054	.017	57.2	14	.051	.0204	51.0
1180	1.18	16	.0469	14	18	.0466	.009	70.2	16	.0465	.016	55.4	16	.0445	.0181	50.7
1041	1.04				20	.0410	.009	67.2								
1000	1.0	18	.0394	16	22	.0380	.0075	69.7	18	.0406	.015	53.4	18	.0386	.0173	48.3
850	.85	20	.0331	20	24	.0342	.0075	69.2	20	.0360	.014	51.8	20	.034	.0162	46.2
787	.787				26	.0310	.0075	64.8	22	.0320	.0135	49.6				
710	.71	25	.0278	24	28	.0282	.0075	62.4	24	.0287	.013	47.4	24	.0277	.014	44.2
681	.681				30	.0268	.0065	64.8	26	.0275	.011	51.1				
630	.63				32	.0248	.0065	62.7	28	.0257	.010	51.8				
600	.60	30	.0234	28	34	.0229	.0065	60.7	30	.0238	.0095	51.0				
541	.541				36	.0213	.0065	58.7	32	.0223	.009	50.9				
500	.50	35	.0197	32	38	.0198	.0065	56.7	34	.0204	.009	48.1	30	.0203	.0128	37.1
470	.47				40	.0185	.0065	54.8	36	.0188	.009	45.8				
465	.465				42	.0183	.0055	59.1	38	.0178	.0085	45.8				
437	.437				44	.0172	.0055	57.4					35	.0176	.0118	37.9
425	.425	40	.0165	35	46	.0162	.0055	55.8	40	.0165	.0085	43.6				
389	.389				48	.0153	.0055	54.2					40	.0150	.0104	36.0
368	.368				50	.0145	.0055	52.6								
355	.355	45	.0139	42	52	.0137	.0055	51.0	45	.0142	.008	40.8				
330	.33				54	.0130	.0055	49.4								
323	.323				58	.0127	.0045	54.6								
310	.31				60	.0122	.0045	53.3	50	.0125	.0075	39.1				
300	.30	50	.0117	48	62	.0116	.0045	51.7	55	.0112	.007	37.9				
282	.282				64	.0111	.0045	50.7					50	.0110	.0090	30.3
270	.27				70	.0106	.0037	54.9								
260	.26				72	.0102	.0037	53.8								
250	.25	60	.0098	60	74	.0098	.0037	52.7	60	.0102	.0065	37.5				
241	.241				76	.0095	.0037	51.7								
231	.231				78	.0091	.0037	50.6					60	.0092	.0075	30.5
224	.224				80	.0088	.0037	49.6								
212	.212	70	.0083	65	84	.0084	.0035	49.8								
200	.20				88	.0079	.0035	47.9								
193	.193				90	.0076	.0035	47.8								
180	.18	80	.0070	80	94	.0071	.0035	45.0					80	.0070	.0055	31.4
165	.165				105	.0065	.0030	46.9								
150	.15	100	.0059	100	120	.0058	.0025	47.3					100	.0055	.0045	30.3
125	.125	120	.0049	115	145	.0047	.0022	46.4					120	.0046	.0037	30.5
106	.106	140	.0041	150	165	.0042	.0019	47.1					150	.0041	.0026	37.9
90	.090	170	.0035	170	200	.0034	.0016	46.2					180	.0033	.0023	34.7
75	.075	200	.0029	200	230	.0029	.0014	46.0					200	.0029	.0021	33.6
63	.063	230	.0025	250									250	.0024	.0016	36.0
53	.053	270	.0021	270	300	.0021	.0012	40.5					270	.0021	.0016	32.2
45	.045	325	.0017	325									325	.0017	.0014	30.5
38	.038	400	.0015	400									400	.0015	.0010	36.0
25	.025	500	.0010										500	.0010	.0010	25.0
20	.020	635	.0008										635	.0008	.0008	25.0