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**EQUIPMENT FOR QUARRIES AND MINES**

- CRUSHING
- CLASSIFICATION
- WASHING AND TRANSPORT
- COMPLETE PLANTS



The permanent update of our technology and the constant contact with our customers are the base of our long path of 40 years in this field.

## 40 YEARS of experience

That's the way our machines prove it, by working uninterruptedly since the beginning of our activities, and for sure they will go on for many years, thanks to the improvements made on them, and to the permanent assistance to our clients.

One of the features that distinguish ROVER / ASTECA of the others is the ability to design and build complete equipments and systems for quarries.

## COMPLETE PROJECTS

We project and make, in accordance with our customers, every necessary element for the installation of a complete plant.

- FEEDERS: Primary, secondary, tertiary.
- CRUSHERS: Primary, secondary, tertiary.
- SCREENING: Primary, secondary, tertiary.
- METALLIC ELEMENTS like: Hoppers, frames, chutes, etc.
- CONVEYOR BELTS.



# CRUSHING



ROVER / ASTECA manufactures primary crushers from 100 tn/h to 1000 tn/h in jaw or impact mode.

Secondary crushers from 50 tn/h to 800 tn/h, with a great reduction rate.

Tertiary crushers and sand makers.

ROVER / ASTECA has suitable solutions to any problem the customers may pose, and always gives the best solution.



## JAW CRUSHERS

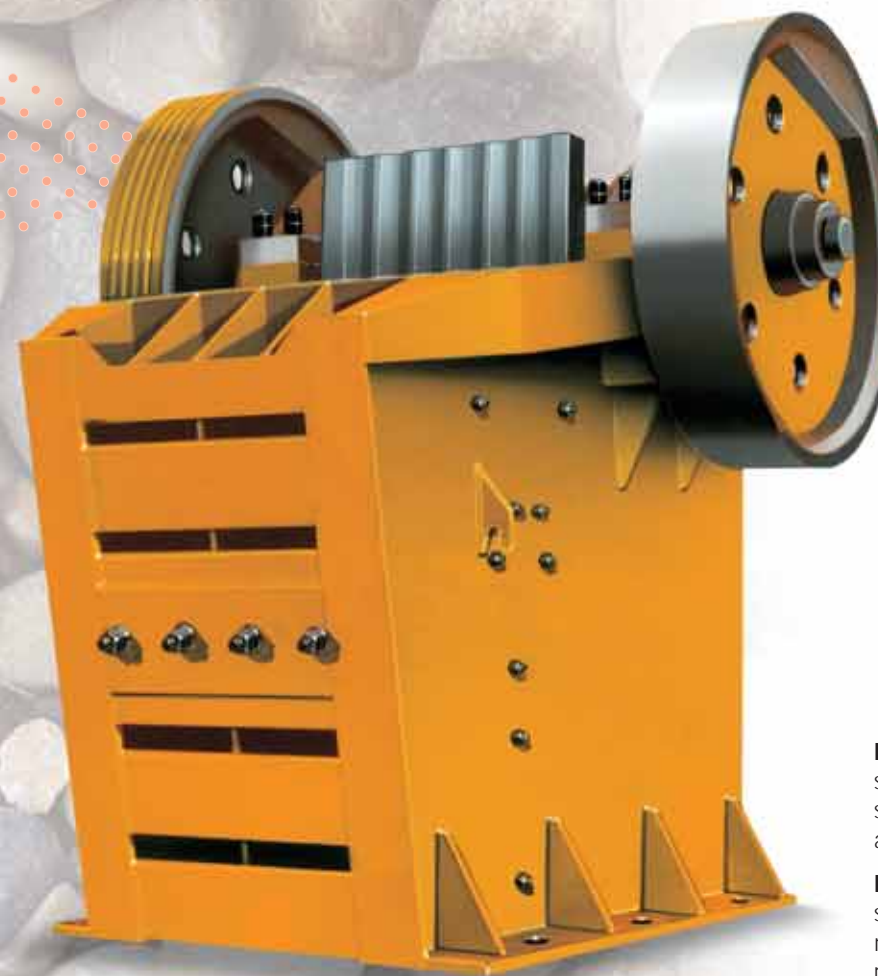
# TR

### FEATURES

MODEL	TR 92	TR 67	TR 85	TR 95	TR 110	TR 130	TR 160
LOAD MOUTH (mm.)	920x250	670x410	850x530	950x620	1.100x880	1.300x1.040	1.600x1.280
INPUT MAX. SIZE (mm.)	200	350	450	550	800	1.000	1.200
DRIVING PULLEY (mm.)	240	265	270	224	250	396	420
WEIGHT (Kg.)	7.600	8.350	14.950	21.750	32.500	50.500	95.000

### PRODUCTIONS (Tn/h)

ADJUSTMENT (mm.)	TR 92	TR 67	TR 85	TR 95	TR 110	TR 130	TR 160
30	18/22						
40	22/30						
50	30/38	30/38					
60	38/45	38/45					
70	45/52	45/52	60/68				
80	52/60	52/60	68/75				
90	60/68	60/68	75/82	90/98			
100	68/75	68/75	82/98	98/112	120/128		
120		75/90	98/112	112/135	180/225	270/300	
150			112/135	150/180	210/270	300/375	375/495
200					300/375	405/480	525/675
250						450/645	675/975
<b>POWER (H.P.)</b>	<b>50-60</b>	<b>50-60</b>	<b>60-75</b>	<b>75-100</b>	<b>100-130</b>	<b>170-220</b>	<b>240-320</b>



**FRAME:** Monoblock made out of special steel, totally welded and stabilized. Strongly ribbed to avoid all types of warpage.

**LINE OF SHAFTING:** Eccentric shaft made of forged chrome-nickel steel, mounted on double-row bearings with a high carrying load.

**JAW HOLDER CONNECTING-ROD:** Made out of molded steel, designed to support reiterated stresses. Ribbed front to protect the bearing chamber. Labyrinthic covers with independent lubrication.

Replaceable manganese steel grinding wheels with two positions with a mechanized base.

**FULCRUM PLATE:** Treated by means of induction, as well as support pillow blocks. Lubrication along its entire length.

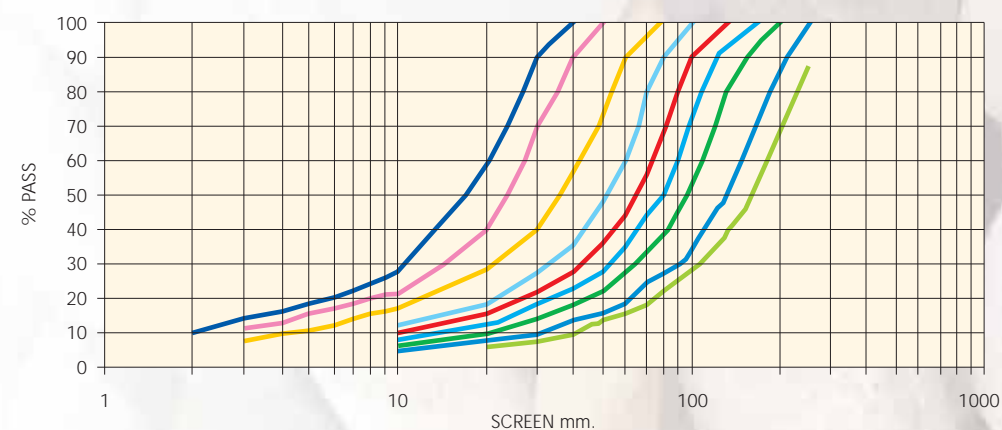
Hydraulic or manual adjustment, depending on the size of the crusher with separating chocks of different thicknesses.

The TR jaw crushers are crushers for very tough rocks that have the following features:

- High production with a low energy drain.
- Non-warping construction.
- Deep crushing chamber.
- High speed.
- Proportioning of the line of shafting with high capacity bearings.
- Very easy to adjust setting.

The main parts that make up the same are:

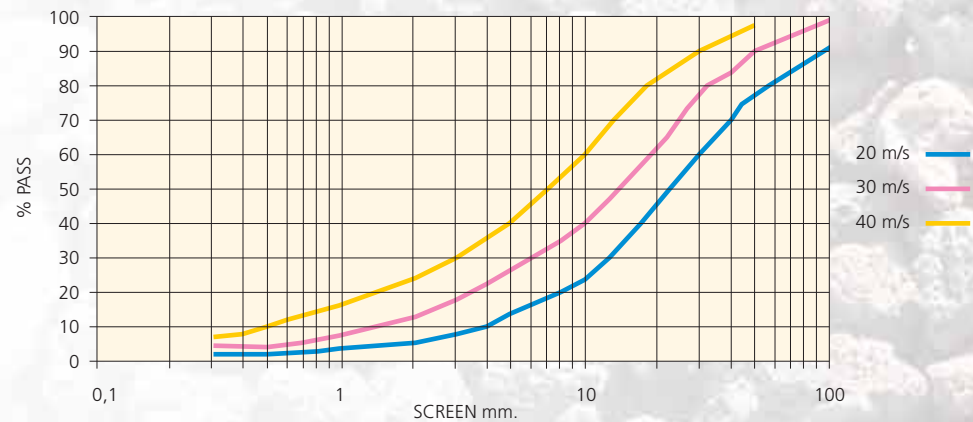
GRANULOMETRIC CURVE



**FEATURES**

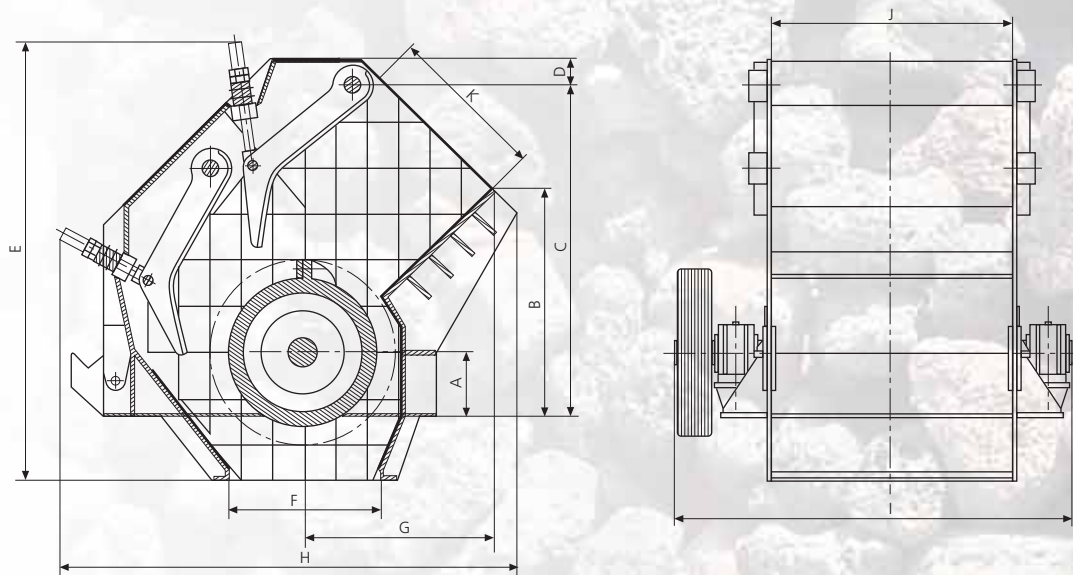
MODEL	MLA-5	MLA-6	MLA-7	MLA-8	MLA-9	MLA-10	MLA-11
LOAD MOUTH (mm.)	810x870	1.100x1.020	1.160x1.260	1.310x1.550	1.500x1.850	1.650x2.300	1.800x2.760
MAX. INPUT SIZE (mm.)	650	800	900	1.000	1.200	1.300	1.400
PRODUCTION (Tn/h)	60/80	80/120	150/200	250/350	400/500	600/800	1.000/1.300
POWER (H.P.)	75/100	100/150	175/225	300/350	450/550	800/900	1.300/1.500
WEIGHT (Kg.)	10.000	16.000	24.000	38.000	52.000	78.000	105.000

**GRANULOMETRIC CURVE**



**IMPACT CRUSHER**

**MLA**



**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J	K
MLA-5	360	1.240	1.820	160	2.440	780	990	2.454	1.930	914	1004
MLA-6	440	1.525	2.260	180	3.020	980	1.270	2.877	2.311	1.072	1.222
MLA-7	490	1.710	2.540	200	3.450	1.100	1.410	3.500	2.640	1.300	1.400
MLA-8	560	1.960	2.880	230	3.900	1.250	1.580	3.945	2.965	1.616	1.577
MLA-9	630	2.230	3.245	305	4.200	1.460	1.795	4.400	3.468	1.900	1.500
MLA-10	700	2.462	3.625	280	4.950	1.560	1.950	4.912	4.020	2.350	1.700
MLA-11	770	2.730	3.960	411	5.200	1.780	2.200	5.350	4.651	2.800	1.850

The MLA impact crushers for the primary crushing of non-abrasive, semi-abrasive and other soft materials, of large dimensions, have the following features:

- High production with a low energy drain.
- Impact on the buffer plates.
- Manganese steel beater bars that are easy to replace.
- High coefficient of reduction.
- Optimal cubicity.

The main parts that make up the same are:

**FRAME:** Built out of ribbed, welded and rolled steel forming a solid and rugged unit. It is provided with control doors and ones providing access to the inside in order to ensure easy and rapid maintenance. The inside is covered with replaceable shielding that is easy to put in place.

**ROTOR:** Made of electric steel casting, with lodgings for the beater bars. The unit (shaft-beater bars) is properly balanced in order to prevent vibrations.

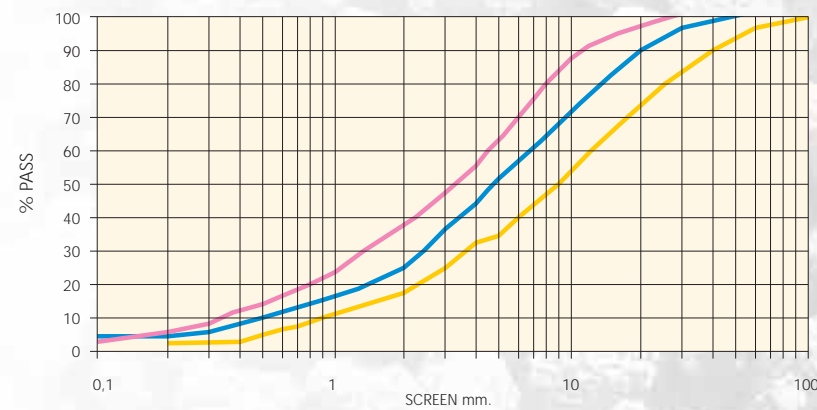
**BUFFER PLATES:** Made out of manganese steel. Adjustable from the outside with spindles. Fluted in order to obtain a better yield and greater cubicity.



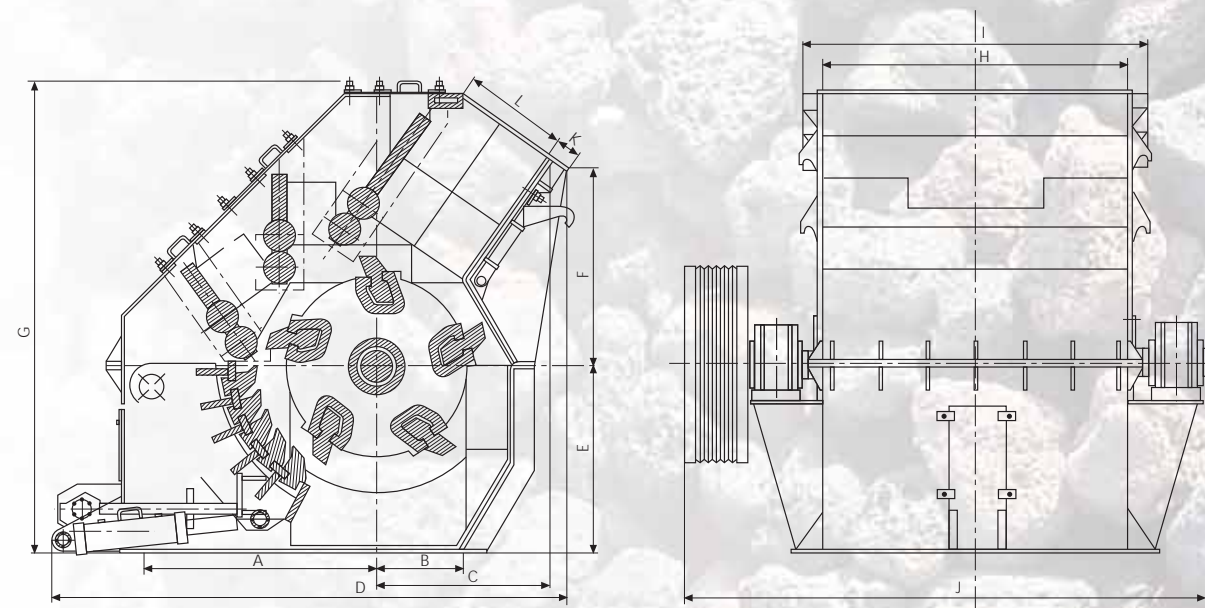
**FEATURES**

MODEL	MLS-5	MLS-6	MLS-7	MLS-8	MLS-6D
LOAD MOUTH (mm.)	370x1.240	490x1.540	560x1.860	650x2.170	490x2.026
MAX. INPUT SIZE (mm.)	150/200	200/300	300/500	300/500	200/300
PRODUCTION (Tn/h)	120/170	200/300	300/500	500/700	400
POWER (H.P.)	150/220	250/400	375/700	600/900	500
WEIGHT (Kg.)	13.000	22.000	28.000	43.000	26.000

**GRANULOMETRIC CURVE**



**IMPACT CRUSHER**



The MLS impact crushers for the secondary crushing of abrasive rocks and other soft materials, are designed to obtain, from one pass a large amount of fines and artificial ballasts and have following features:

- High production of fines.
- Impact on multiple chambers.
- Special steel beater bars that are very hard and easy to replace.
- High coefficient of reduction.
- Optimal cubicity.
- Hydraulic opening of the inspection doors.

The main parts that make up the same are:

**Frame:** A ribbed, welded and rolled steel structure forming a solid and rugged unit. Lined with replaceable antiwear shielding in all of the impact areas, easy to put in place.

**ROTOR:** Manufactured out of black sheet steel, electro-welded, the discs and the rulers forming a very rugged unit with lodgings for the beater bars. The entire unit is mounted on a solid special steel shaft, that rests on double-row bearings.

**BUFFER PLATES:** Cast out of manganese steel, they are made up of parts that can be replaced independently.

**GRATING:** With bars fastened on T-shaped guides. Transversal disassembly and assembly with hydraulic adjustment.

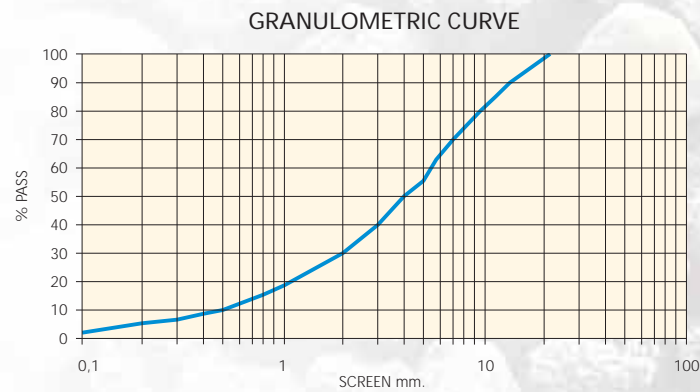
**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J	K	L
MLS-5	940	400	854	2.464	1.000	860	2.320	1.290	1.540	2.670	120	560
MLS-6	1.420	620	1.060	3.090	1.100	1.095	2.730	1.526	1.800	3.160	132	660
MLS-6D	1.420	620	1.060	3.090	1.100	1.095	2.730	2.026	2.350	3.700	132	660
MLS-7	1.600	700	1.190	3.590	1.200	1.240	2.970	1.860	2.160	3.250	145	661
MLS-8	1.680	720	1.275	3.635	1.300	1.286	3.230	2.292	2.620	3.700	158	825



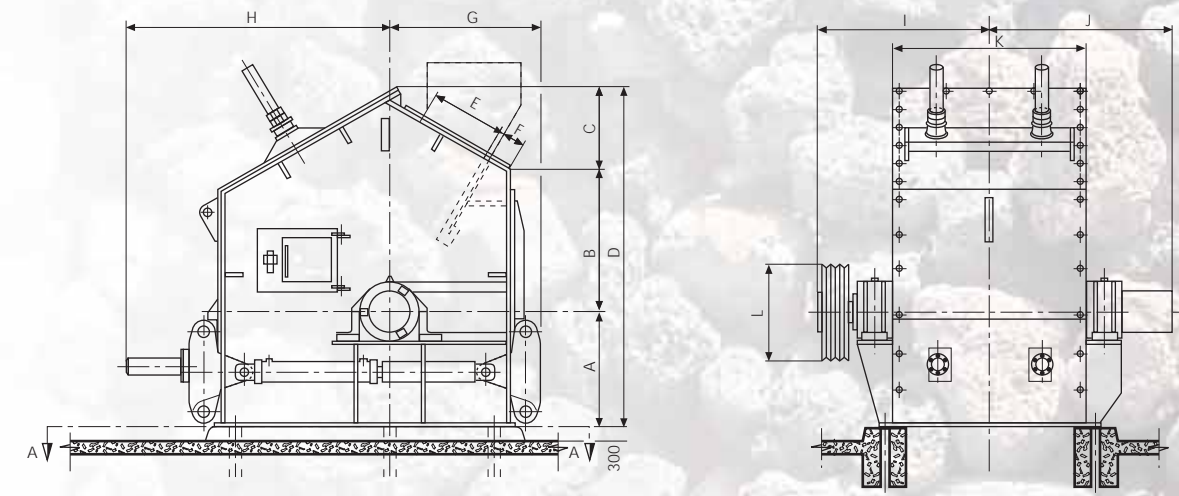
**FEATURES**

MODEL	MLCX-3	MLCX-4	MLCX-5	MLCX-6
LOAD MOUTH (mm.)	300x600	340x720	375x870	460x1.020
MAX. INPUT SIZE (mm.)	75	100	140	200
PRODUCTION (Tn/h)	30/50	40/70	70/110	120/170
POWER (H.P.)	50/75	70/100	125/175	180/250
WEIGHT (Kg.)	3.000	4.200	7.000	12.500



**IMPACT CRUSHER**

**MLCX**



The MLCX impact crushers for crushing abrasive and tough rocks, with high silica contents, have the following features:

- High peripheral speed in the large bar point.
- Optimal cubicity.
- Hydraulic opening of the inspection doors.
- Easy maintenance.
- High coefficient of reduction.
- Special steel beater bars highly resistant to wear and tear and easy to replace.

The main parts that make up the same are:

**FRAME:** Built out of ribbed, welded rolled steel forming a solid and rugged unit. Provided with control doors and ones providing access to the inside, operated hydraulically, ensuring easy and rapid maintenance. Covered with replaceable manganese shielding, easy to put in place with the use of wedges.

**ROTOR:** Made out of electro-welded black sheet steel, the discs and the rulers forming a very rugged unit, with lodgings for the beater bars. The entire unit is mounted on a special steel shaft, that rests on double-row bearings with special knock-proof supports.

**BUFFER PLATES:** Covered with manganese steel casting shielding that can be replaced independently from the plate.

**GENERAL MEASUREMENTS**

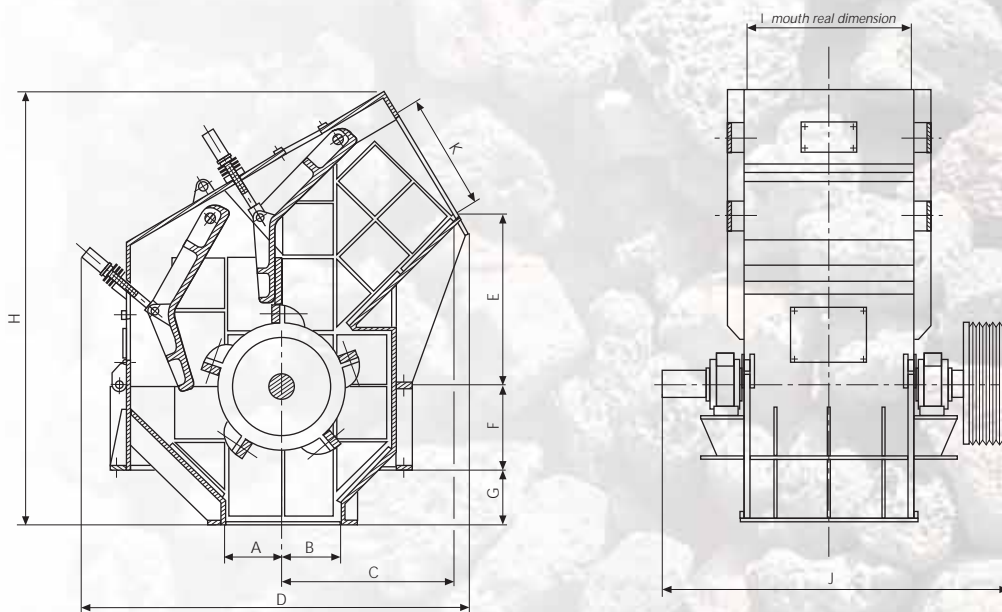
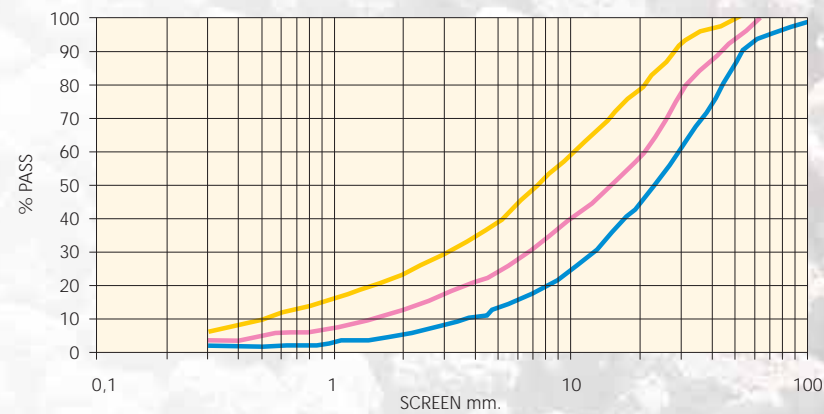
MODEL	A	B	C	D	E	F	G	H	I	J	K	L
MLCX-3	510	605	375	1.490	300	180	685	1.000	730	780	820	400
MLCX-4	560	710	410	1.680	350	180	770	1.200	840	840	940	450
MLCX-5	630	940	450	2.020	380	180	840	1.450	970	950	1.090	500
MLCX-6	840	1.050	520	2.410	470	180	1.005	1.750	1.130	1.130	1.240	630



**FEATURES**

MODEL	ML-3	ML-4	ML-5	ML-6	ML-7
LOAD MOUTH (mm.)	415x590	555x720	620x870	816x1.020	960x1.260
MAX. INPUT SIZE (mm.)	300	450	500	650	750
PRODUCTION (Tn/h)	40	60	100	150	250
POWER (H.P.)	40	60	100	150	250
WEIGHT (Kg.)	2.200	4.100	6.700	10.700	16.450

**GRANULOMETRIC CURVE**



**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J	K
ML-3	225	225	670	1.768	670	320	210	1.550	600	1.385	415
ML-4	280	280	800	1.840	790	350	290	1.997	720	1.618	555
ML-5	396	396	1.000	2.150	964	450	420	2.534	870	1.980	740
ML-6	500	500	1.320	3.331	1.277	550	500	3.157	1.020	2.580	856
ML-7	600	600	1.720	3.730	1.970	592	565	3.585	1.260	2.979	1.118



**IMPACT CRUSHER**

**ML**

**WITHOUT GRATING**

**FRAME:** Built out of ribbed welded and rolled steel forming a solid and rugged unit. Provided with control doors and ones providing access to the inside, ensuring easy and rapid maintenance. Covered with replaceable manganese steel shielding, easy to put in place.

**ROTOR:** Made of electric steel casting, with lodgings for the beater bars. The shaft-beater bar unit is properly balanced in order to prevent vibrations.

**BUFFER PLATES:** Of a single piece, cast out of manganese steel. Adjustable from the outside with spindles.

Fluted in order to obtain a better yield and greater cubicity.

The ML impact crushers without grating for secondary crushing of non-abrasive rocks and other soft materials, are designed to obtain materials with a great cubicity and have the following features:

- High production with a low energy drain.
- Impact on the buffer plates.
- Manganese steel beater bars that are easy to replace.
- High coefficient of reduction.
- Optimal cubicity.

The main parts that make up the same are:

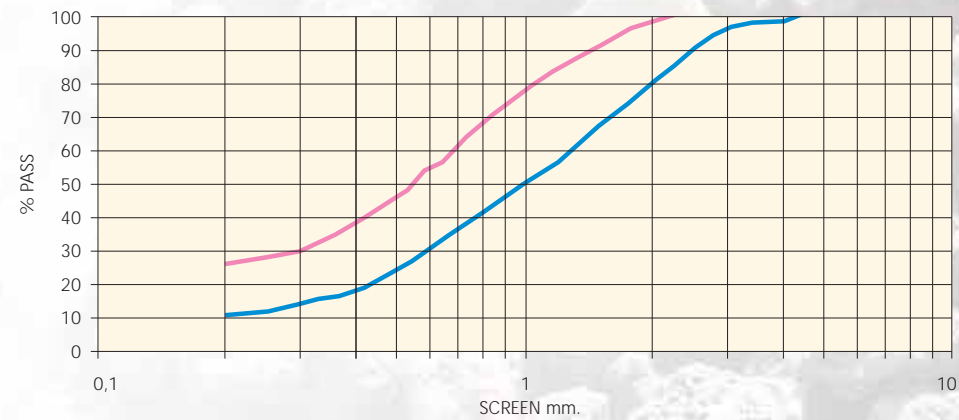




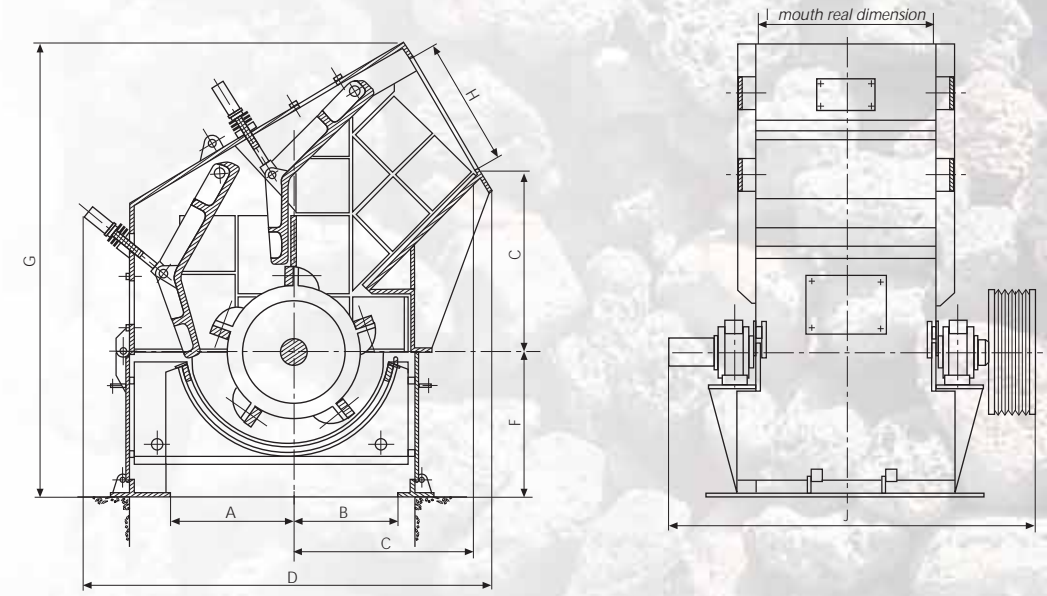
**FEATURES**

MODEL	ML-3	ML-4	ML-5	ML-6	ML-7
LOAD MOUTH (mm.)	415x590	555x720	620x870	816x1.020	960x1.260
MAX. INPUT SIZE (mm.)	300	450	500	650	750
PRODUCTION (Tn/h) <b>5</b>	10/13	14/20	20/28	30/40	45/60
PRODUCTION (Tn/h) <b>8</b>	18/25	25/35	40/50	60/75	80/100
POWER (H.P.) <b>5</b>	70	100	150	250	300
POWER (H.P.) <b>8</b>	50	70	125	180	250
WEIGHT (Tm)	2.5	4.4	7	11	17

**GRANULOMETRIC CURVE**



**IMPACT CRUSHER**



**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J
ML-3	475	358	670	1.768	670	530	1.550	415	600	1.385
ML-4	550	450	800	1.840	790	640	1.997	555	720	1.618
ML-5	625	490	962	2.114	940	870	2.508	740	870	2.040
ML-6	768	630	1.320	2.760	1.310	1.050	3.156	856	1.020	2.475
ML-7	1.000	788	1.490	3.730	1.480	1.165	3.755	1.118	1.260	3.023

The ML impact crushers with grating, for the secondary crushing of non-abrasive rocks and other soft materials, with constant size in the outlet in accordance with the grating opening, have the following features:

- High production with a low energy drain.
- Impact on the buffer plates.
- Manganese steel beater bars that are easy to replace.
- High coefficient of reduction.
- Optimal cubicity.
- Grating in the discharge opening.

The main parts that make up the same are:

**FRAME:** Built out of ribbed, welded and rolled steel forming a solid and rugged unit. Provided with control doors and ones providing access to the inside, ensuring easy and rapid maintenance. Covered with replaceable manganese steel shielding, easy to put in place.

**ROTOR:** Made of electric steel casting, with lodgings for the beater bars. The shaft-beater bar units is properly balanced in order to prevent vibrations.

**BUFFER PLATES:** Of a single piece, cast out of manganese steel. Adjustable from the outside with spindles. Fluted in order to obtain a better yield and greater cubicity.

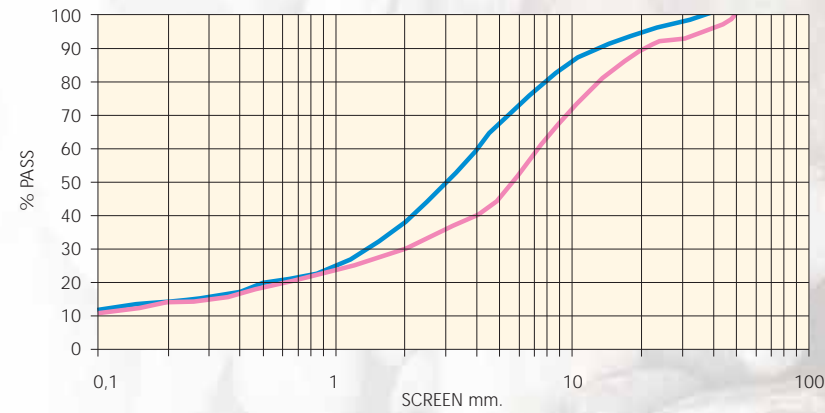
**GRATING:** Placed on a frame, easily replaceable through the two side doors without the need of disassembling the machine.



**FEATURES**

MODEL	MLC-7	MLC-9	MLC-11	MLC-15
MAX. INPUT SIZE (mm.)	70	80	100	100
PRODUCTION (Tn/h)	50/70	80/100	140/160	150/180
POWER (H.P.)	125	125/150	220/270	340
WEIGHT (Kg.)	4.000	4.200	5.500	10.000

GRANULOMETRIC CURVE



**CENTRIFUGAL  
MILL**  
**MLC**

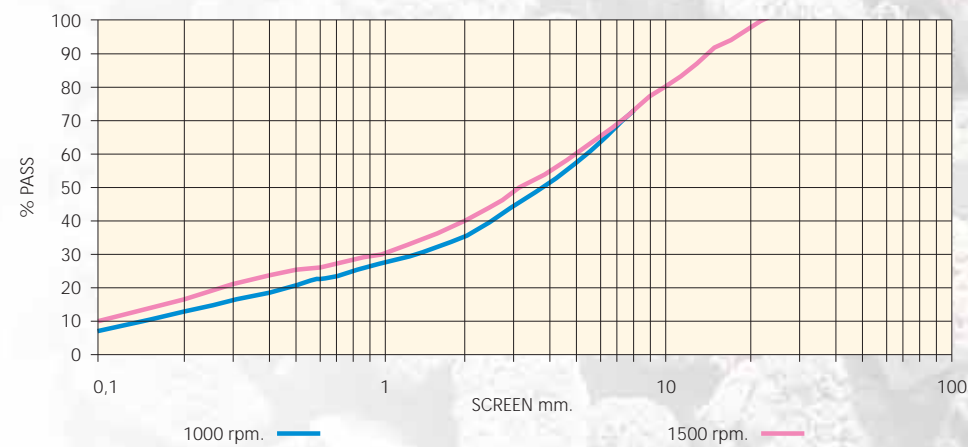
The centrifugal mills suitable for non-abrasive and semi-abrasive materials have the following features:

- High percentage of sand making.
- Optimal cubicity.
- Easy maintenance.
- Maximal exploitation of the wear elements.

**FEATURES**

MODEL	MLR-5	MLR-10
MAX. INPUT SIZE (mm.)	340x630	340x1.260
PRODUCTION (Tn/h)	50/60	100/125
POWER (H.P.)	180	220/270
WEIGHT (Kg.)	6.000	12.000

GRANULOMETRIC CURVE



**IMPACT  
MILLS**  
**MLR**

The MLR impact mills (SAND MAKERS) for crushing abrasive rocks and other soft materials, are designed to produce sand. The direction of rotation of the rotor may be changed and there are two grinding chambers which increase their yield. They have the following features:

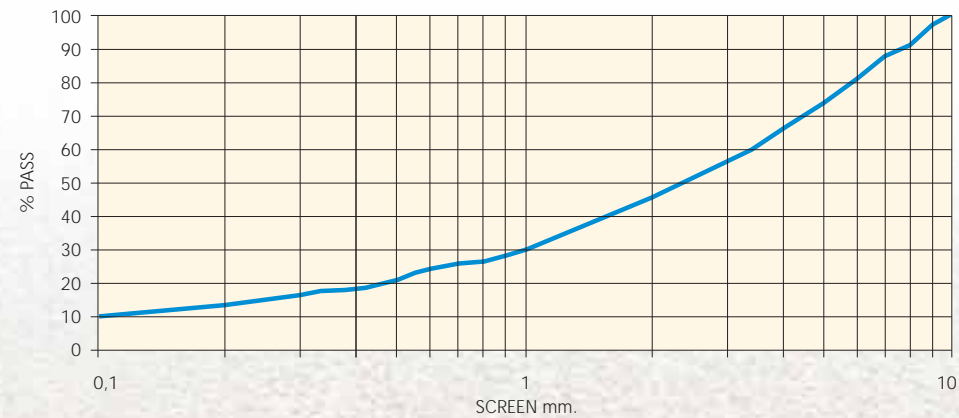
- Special steel beater bars highly resistant to wear and tear and easy to replace.
- High peripheral speed.
- Optimal cubicity.
- Hydraulic opening of the inspection doors.
- Easy maintenance.
- High coefficient of reduction.
- Feeding size: 5 to 200 mm.



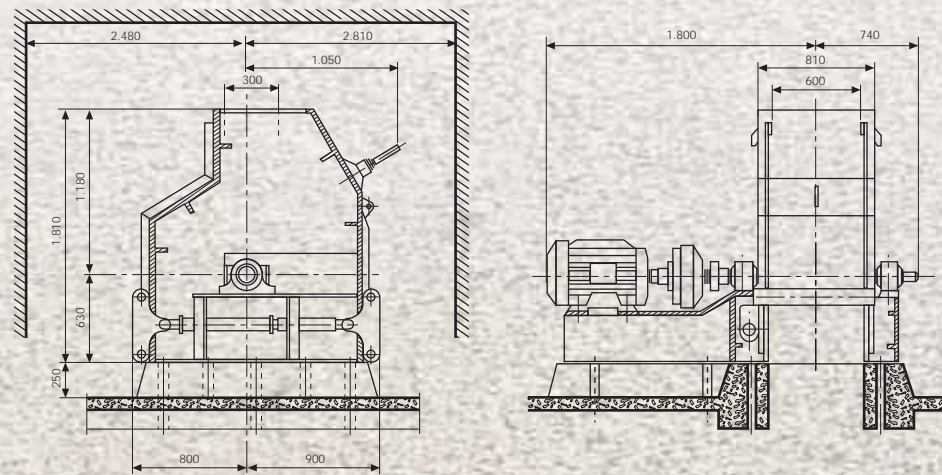
**FEATURES**

MODEL	MLGV-5
MAX. INPUT SIZE (mm.)	300x600
PRODUCTION (Tn/h)	40/60
POWER (H.P.)	100/175
WEIGHT (Kg.)	4.000

**GRANULOMETRIC CURVE**



**GENERAL MEASUREMENTS**



**IMPACT MILLS**

**MLGV**

**FRAME:** Built out of welded rolled steel forming a solid and rugged unit. Lined with shielding highly resistant to wear and tear and easy to put in place with the use of wedges.

Hydraulic opening to ensure easy access and maintenance.

**ROTOR:** Manufactured out of electro-welded black sheet steel, the discs and rulers forming a very rugged unit, with lodgings for the beater bars. The entire unit is mounted on a special steel shaft that rests on double-row bearings.

Direct drive operation in order to obtain the maximum peripheral speed. Optional pulley operation in order to reduce the speed.

**BUFFER PLATES:** Covered with manganese steel casting shielding. Replaceable independent of the plate.

The MLGV impact mills (SAND MAKERS) for crushing abrasive rocks and other soft minerals, are designed to produce sand. They have the following features:

- Special steel beater bars highly resistant to wear and tear and easy to replace.
- High peripheral speed.
- Optimal cubicity.
- Hydraulic opening of the inspection doors.
- Easy maintenance.
- High coefficient of reduction.

The main parts that make up the same are:



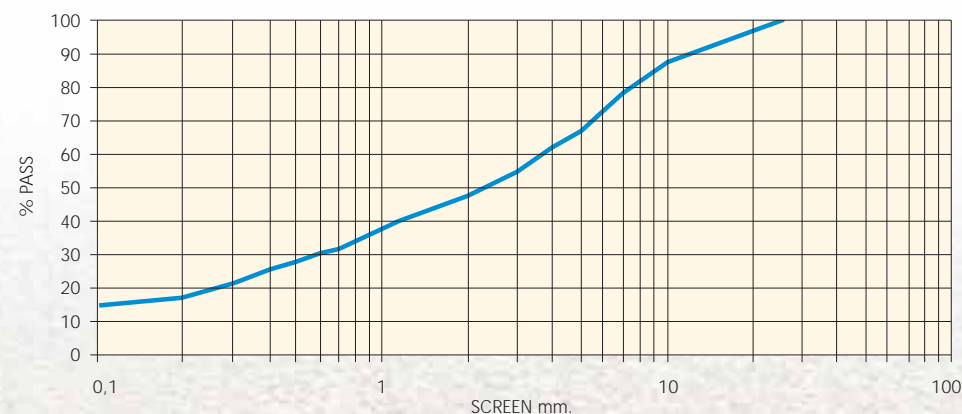
## IMPACT MILLS

# MLGVR

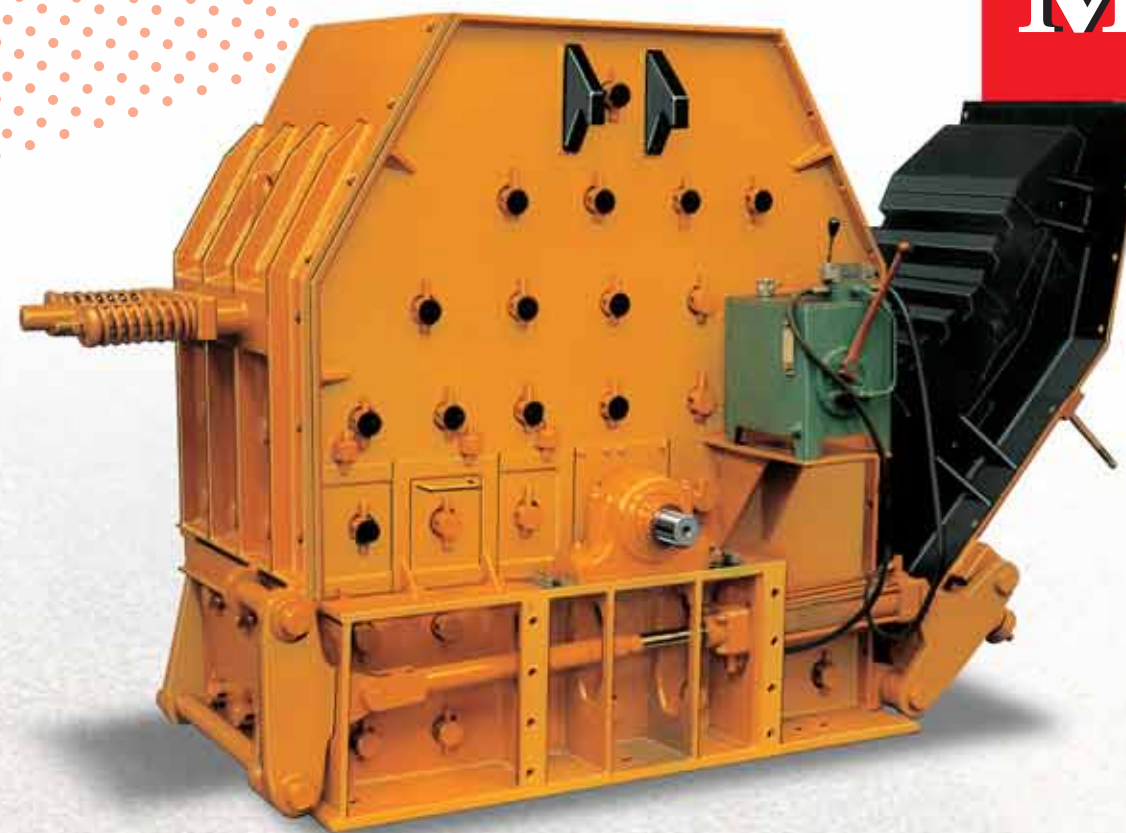
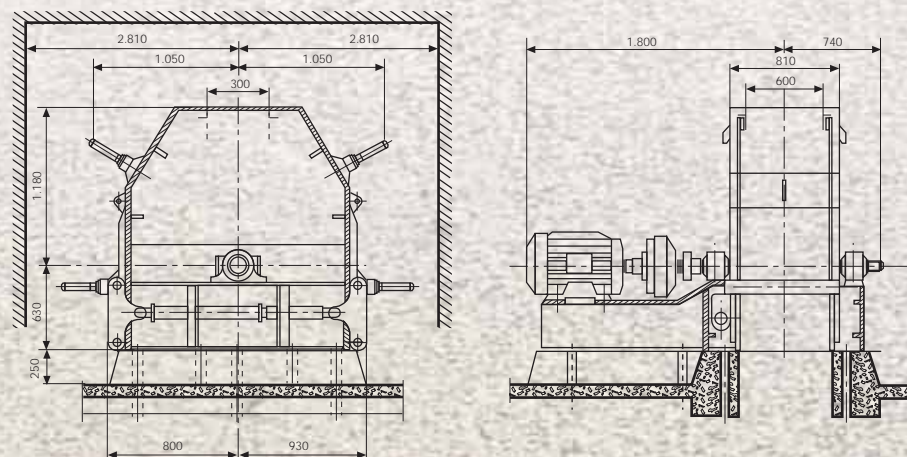
### FEATURES

MODEL	MLGVR-5
MAX. INPUT SIZE (mm.)	300x600
PRODUCTION (Tn/h)	40/60
POWER (H.P.)	100/175
WEIGHT (Kg.)	4.200

### GRANULOMETRIC CURVE



### GENERAL MEASUREMENTS



**FRAME:** Built out of welded rolled steel forming a solid and rugged unit. Lined with shielding highly resistant to wear and tear and easy to put in place with the use of wedges.

Hydraulic opening to ensure easy access and maintenance.

**ROTOR:** Manufactured out of electro-welded black sheet steel, the discs and rulers forming a very rugged unit, with lodgings for the beater bars. The entire unit is mounted on a special steel shaft that rests on double-row bearings.

Direct drive operation in order to obtain the maximum peripheral speed. Optional pulley operation in order to reduce the speed.

**BUFFER PLATES:** Covered with manganese steel casting shielding. Replaceable independent of the plate.

The MLGVR impact mills (SAND MAKERS) for crushing abrasive rocks and other soft minerals, are designed to produce sand. The direction of rotation of the (REVERSIBLE) rotor may be changed and there are two grinding chambers which increase their yield. They have the following features:

- Special steel beater bars highly resistant to wear and tear and easy to replace.
- High peripheral speed.
- Optimal cubicity.
- Hydraulic opening of the inspection doors.
- Easy maintenance.
- High coefficient of reduction.

The main parts that make up the same are:





ROVER / ASTECA manufactures three different primary feeders:

- Crawler metallic plate feeders, ATM type.
- Vibrating feeders with soils withdrawal, ALIPREC type.
- Swinging feeders, AV type.

Each type of feeder is more suitable to a specific kind of work.

ROVER / ASTECA apart from serial feeders, manufactures under order feeders with special measurements.

# FEEDING

FEEDING

The A.T.M. metallic board feeders are the surest and most universal solution for the difficult problems of handling materials and minerals with a high clay content, especially when run-of-quarry coming from very heterogeneous deposits that frequently vary in their physical features is being dealt with.

The machines are basically made up of the following parts:

- Material receiving hopper.
- Hinge type blades made out of mechanowelded sheeting.
- Semi-hard steel fulcrum pin.
- Side rolling and sheave wheels.
- Upper and lower rolling guides that ensure rigidity of the metallic board.
- Drive mechanism and control gear.

**STANDARD MACHINES**

MODEL	ATM-925	ATM-829	ATM-940	ATM-1.045	ATM-1.245	ATM-1.257	ATM-1.457	ATM-24.110
WIDTH (mm.)	900	800	900	1.000	1.200	1.200	1.400	2.400
LENGTH (mm.)	2.500	2.900	4.000	4.500	4.500	5.700	5.700	11.000
POWER (H.P.)	7.5	7.5	7.5	10	15	20	25	60
WEIGHT (Kg.)	8.000	8.200	10.300	11.300	11.800	13.800	17.500	55.000



FEEDER

**ATM**

The A.P.C. prescreener feeders are some apparatus that essentially due to the built-in screening capacity have numerous uses in areas where the aggregates are accompanied by soil.

The machines are basically made up of:

- A stationary frame made out of rolled sections and sheeting.
- A vibratin box resting on the frame by means of damper springs.
- Bars made out of piece of sheeting with ribs and fastened to the vibrating box by screws.
- The vibrating mechanism is made up of two shafts synchronized by gears, with decompensated masses that produce the effect of unidirectional vibration.

**STANDARD MACHINES**

MODEL	APC-840	APC-940	APC-1.040	APC-1.140	APC-1.050	APC-1.150	APC-1.250	APC-1.350
WORKING SURFACE (mm. <sup>2</sup> )	4.000x800	4.000x900	4.000x1.000	4.000x1.100	5.000x1.000	5.000x1.100	5.000x1.200	5.000x1.300
POWER (H.P.)	20	20	20	20	25	25	25	25
WEIGHT (Kg.)	5.500	6.000	6.500	7.000	8.000	8.500	9.000	9.500



FEEDER

**ALIPREC**

The A.V. swinging feeders are some very simple and common apparatus that to a large degree solve the problems of feeding of primary and secondary machines.

The machines are basically made up of the following parts:

- A stationary frame made out of rolled sections and sheeting.
- A swinging box resting on four or six wheels (depending on the type) and in turn the wheels rest on the frame bearings.
- The feeder is driven by a reduction geared engine.
- The swinging mechanism is made up of two connecting-rods with a variable eccentric flange in order to adjust the feeder stroke.

**STANDARD MACHINES**

MODEL	AV-516	AV-625	AV-830	AV-930	AV-1.040	AV-1.240
WORKING SURFACE (mm. <sup>2</sup> )	1.600x500	2.500x600	3.000x800	3.000x900	4.000x1.000	4.000x1.200
POWER (H.P.)	2	4	7	10	15	20
WEIGHT (Kg.)	2.000	2.500	6.500	6.500	8.000	8.500



FEEDER

**VAIVEN**

Feeders with different measurements are designed on demand.





# S C R E E N I N G



ROVER / ASTECA produces a wide range of screening:

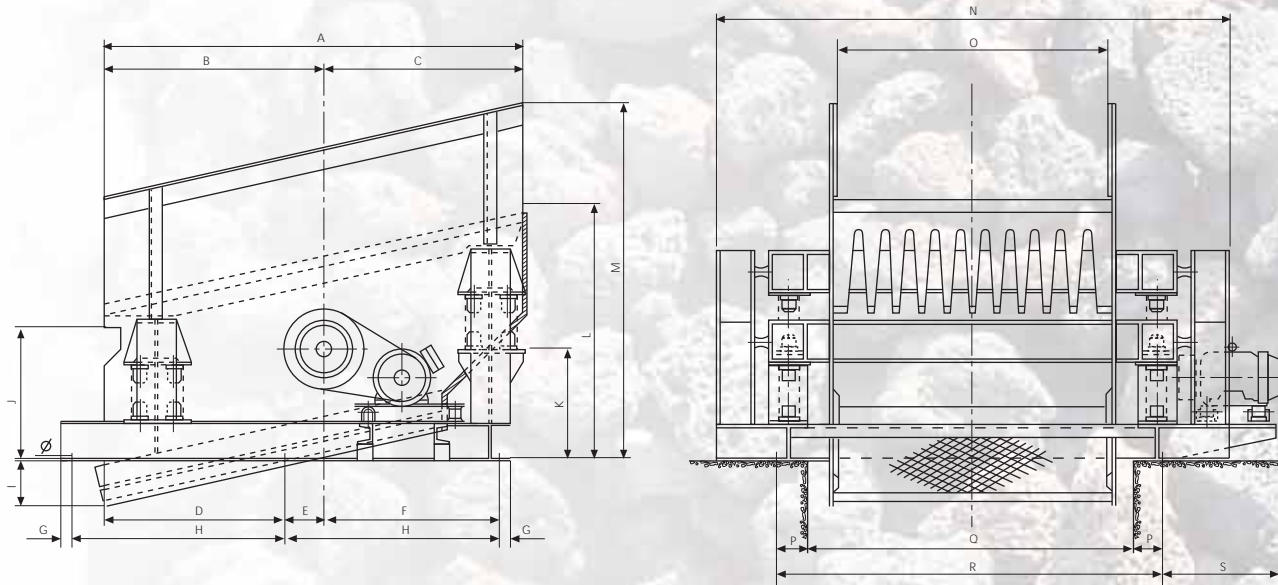
- Solids withdrawal before crushing with bar separators SB type and discs separators SD type.
- Vibrating screens for the classification of aggregates with a wide range of models, from 3 m<sup>2</sup> to 15 m<sup>2</sup> of useful surface, from one deck to four decks.
- Under order, we manufacture screens for the soils elimination after the primary crushing, reinforced screens for high production and charging.

**FEATURES**

MODEL	ENGINE		PRIMARY DRIVING SHEAVE	BELTS		MAX. VIBRATION AMPLITUDE	PER HOLE Kg.
	H.P.	r.p.m.		TYPE	NUMBER		
SB1-820	10	1.500	224	C-70	2	9	1.000
SB1-920	10	1.500	224	C-70	2	9	1.250
SB1-1020	15	1.500	224	C-71	2	9	1.250
SB1-1120	15	1.500	224	C-71	2	9	1.250
SB1-1220	20	1.500	224	C-71	2	9	1.500
SB1-1320	20	1.500	224	C-71	2	9	1.500

**BARS SEPARATORS**

**SB 1/20**



**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J
SB1-820	2.000	1.050	950	865	185	840	50	1.025	233	627
SB1-920	2.000	1.050	950	865	185	840	50	1.025	233	627
SB1-1020	2.000	1.050	950	865	185	840	50	1.025	233	627
SB1-1120	2.000	1.050	950	865	185	840	50	1.025	233	627
SB1-1220	2.000	1.050	950	865	185	840	50	1.025	233	627
SB1-1320	2.000	1.050	950	865	185	840	50	1.025	233	627

MODEL	K	L	M	N	O	P	Q	R	S
SB1-820	517	1.238	1.690	1.930	800	135	1.070	1.340	555
SB1-920	517	1.238	1.690	2.030	900	135	1.170	1.440	555
SB1-1020	517	1.238	1.690	2.130	1.000	135	1.270	1.540	625
SB1-1120	517	1.238	1.690	2.230	1.100	135	1.370	1.640	625
SB1-1220	517	1.238	1.690	2.330	1.200	135	1.470	1.740	665
SB1-1320	517	1.238	1.690	2.430	1.300	135	1.570	1.840	665

The SB1-20 bars separators are machines designed to eliminate the inflow of the clay soil that generally accompanies aggregates at the beginning of the preparing process. It is a question of preventing the clay from causing problems in the efficient operation of the installation.

They act on the surface of the aggregates, separating the slack coal that is stuck to the clay.

It is installed at the beginning of the plant, in other words, between the run-of-quarry hopper feeder and the crusher.

The main parts that make up the same are:

- Stationary frame made out of rolled sections and sheeting.
- Vibrating box, resting on the frame by means of eight large sized springs. The bottom is made up of welded trapezoidal sections, with a larger opening towards the outlet in order to avoid clogging.
- Replaceable screening frame, in accordance with your needs.
- Vibrating counterweight type mechanism in order to eliminat abnormal swinging in the starting up and stopping.
- V-belt and electric engine drive.



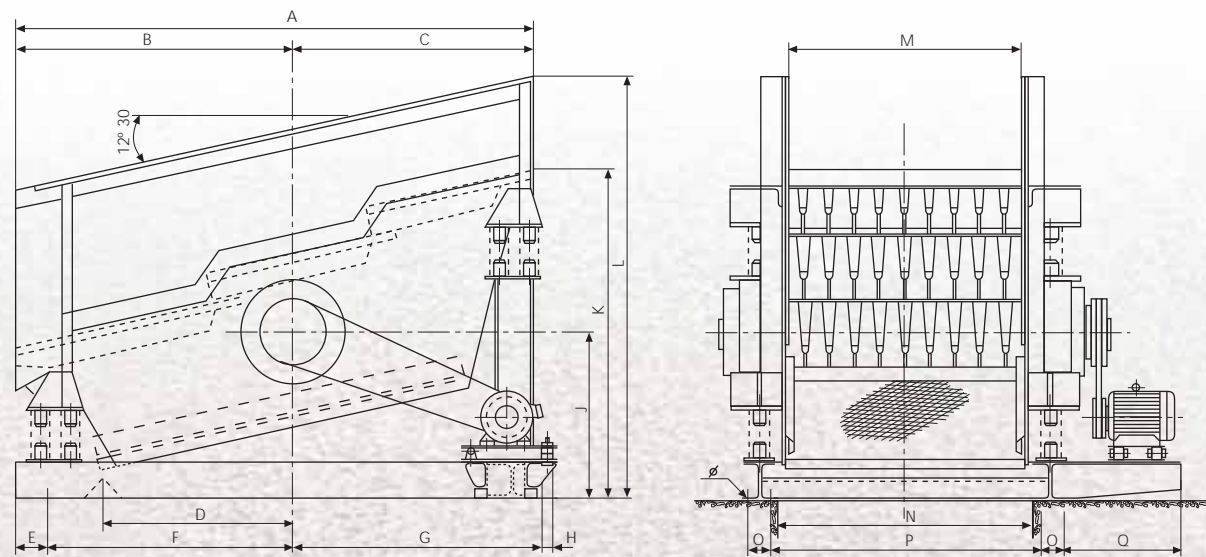


**CARACTERISTICAS**

MODEL	ENGINE		PRIMARY DRIVING SHEAVE	BELTS		MAX. VIBRATION AMPLITUDE	PER HOLE Kg.
	HP	r.p.m.		TYPE	NUMBER		
SB3-1328	25	1.500	224	C-134	2	9	3.250
SB3-1428	25	1.500	224	C-134	2	9	3.250

**BARS SEPARATORS**

**SB 3 / 28**



**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H
SB3-1328	2.800	1.500	1.300	965	160	1.325	1.335	50
SB3-1428	2.800	1.500	1.300	965	160	1.325	1.335	50

MODEL	J	K	L	M	N	O	P	Q
SB3-1328	910	1.798	2.310	1.300	1.450	100	1.550	630
SB3-1428	910	1.798	2.310	1.400	1.550	100	1.650	630

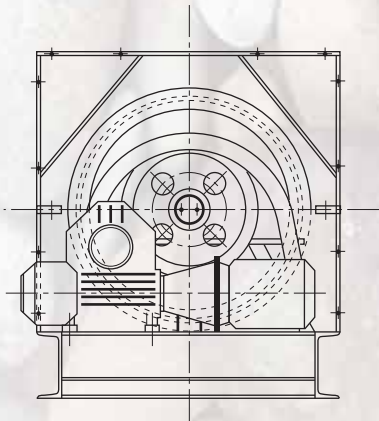
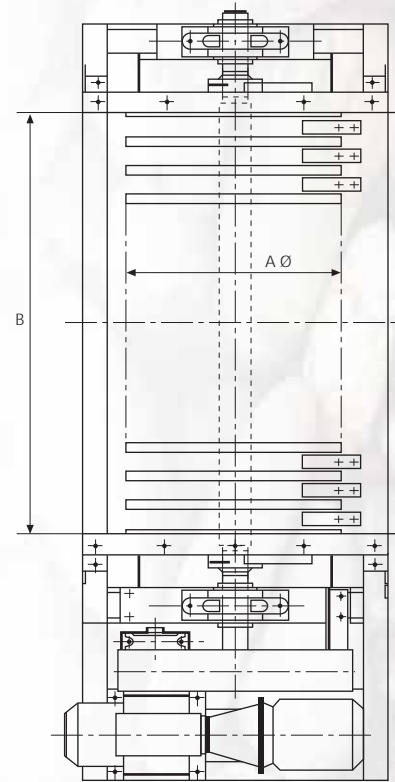
The SB3-28 bars separators are machines designed to eliminate the inflow of the clay soil that generally accompanies aggregates at the beginning of the preparing process. It is a question of preventing the clay from causing problems in the efficient operation of the installation.

They act on the surface or the aggregates, separating the slack coal that is stuck to the clay.

It is installed at the beginning of the plant, in other words, between the run-of-quarry and the crusher.

The main parts that make up the same are:

- Stationary frame made out of rolled sections and sheeting.
- Vibrating box, resting on the frame by means of eight large sized springs. The bottom is made up of welded trapezoidal sections, with a larger opening towards the outlet in order to avoid clogging.
- Replaceable screening frame, in accordance with your needs.
- Vibrating counterweight type mechanism in order to eliminate abnormal swinging in the starting up and stopping.
- V-belt and electric engine drive.



**GENERAL MEASUREMENTS**

MODEL	A	B
SD-57	500	700
SD-78	700	800
SD-810	800	1.000
SD-1013	1.000	1.300
SD-1216	1.200	1.600

Orientating widths, the rest of the measurements are to be determined.



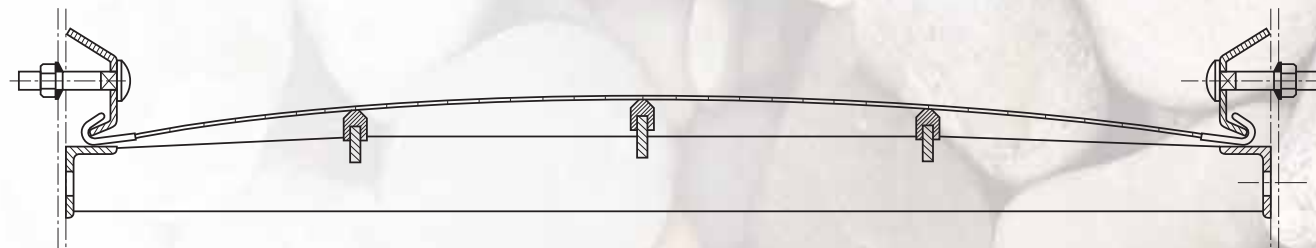
**DISCS SEPARATORS**

**SD**

The very efficient and highly productive SD discs separators have the task of separating the soils that accompany aggregates in the quarrying work, which in a small proportion may cause serious problems in the installation.

The machines are basically made up of the following parts:

- A stationary frame made out of rolled sections and sheeting.
- A special steel shaft, resting on the frame by means of bearings.
- Carbon steel discs mechanized and adjusted to the main shaft.
- Reduction geared engine drive.



**FEATURES**

TYPE OF SCREEN	N.º OF STORIES	AVAILABLE SCREENING SURFACE (m.²)	ENGINE (H.P.)
CVR-1030	I - II - III - IV	3,00	10
CVR-1230	I - II - III - IV	3,75	15
CVR-1045	I - II - III - IV	4,5	15
CVR-1245	I - II - III - IV	5,62	20
CVR-1545	I - II - III - IV	6,75	20
CVR-1560	I - II - III - IV	9	25
CVR-2045	I - II - III	9	25
CVR-2255	I - II - III	12,10	25
CVR-2560	I - II - III	15	30
CVR-2270	I - II - III	15,4	30
CVR-3090	II - III	27	50

The CVR counterweight vibrating screens, in comparison with fixed eccentric vibrating screens, imply a great step forward as far as the system for producing vibration is concerned, since the vibration is produced by means of counterweights that make it possible to increase or decrease the vibration amplitude, simply by increasing or decreasing the counterweights, which increases the yield considerably.

They have the following features:

- Double counterweight vibration.
- Only two oversized bearings.
- Low-powered engine, direct drive.
- Adjustable inertia weight (adjustable vibration amplitude).
- Adjustable tilt of the screen.
- Transversal tightening of the mesh which is easy to replace.
- The nominal surface is a totally useful screening surface.
- Gentle operation.
- Ease for the design of ducting.
- All the screens may be mounted on mobile or semi-mobile units.



**VIBRATING SCREENS**

**CVR**





## OTHER EQUIPMENTS

ROVER / ASTECA designs, manufactures and installs turn-key plants after previous preliminary design without any production limit, covering primary, secondary and tertiary crushing, classification, conveyor belts, material hoppers, etc...

It also manufactures other equipment like:

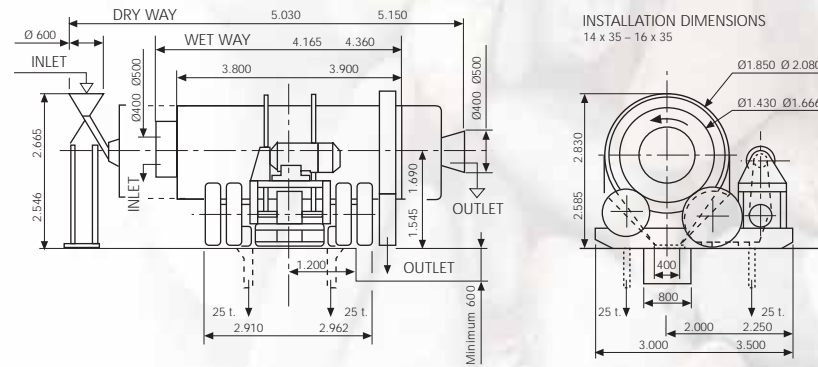
- Washing drums.
- Bucket settling tanks.
- Bars mills.
- Mobile units.
- Semi-mobile units.

ROVER / ASTECA carries out the recuperation of the quarry SOILS transforming them into SAND.

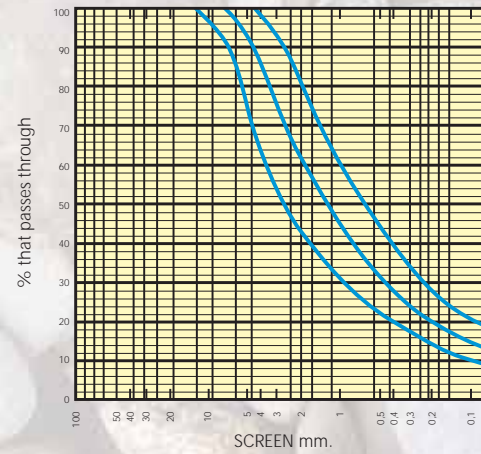
**FEATURES**

MODEL	MILL SIZE	SPEED OF ROTATION	ENGINE POWER H.P.	SHIELDED COLLAR		CRANKCASE AND INLET AND OULET		COMPLETE MILL WITHOUT BARS		MAX. LOAD OF BARS
				VS	VH	VS	VH	VS	VH	
MB-1435	1.400x3.500	29 r.p.m.	100	9.200 Kg.	9.200 Kg.	250 Kg.	95 Kg.	15.100 Kg.	15.000 Kg.	8.940 Kg.
MB-1635	1.630x3.500	23 r.p.m.	125	12.150 Kg.	12.100 Kg.	280 Kg.	95 Kg.	19.000 Kg.	18.700 Kg.	12.600 Kg.

**DYNAMIC LOADS**



**GRANULOMETRIC CURVE** % Passes through the screens



**PRODUCTIONS**

	1435	1635
0/3 5% rejects with 3 mm. screen.....	6 a 9 t/h	8 a 12 t/h
0/5 5% rejects with 5 mm. screen.....	10 a 15 t/h	13 a 20 t/h
0/12,5 practically without rejects and approximately 5% with 8 mm. screen....	15 a 20 t/h	20 a 27 t/h



**BARS MILLS**

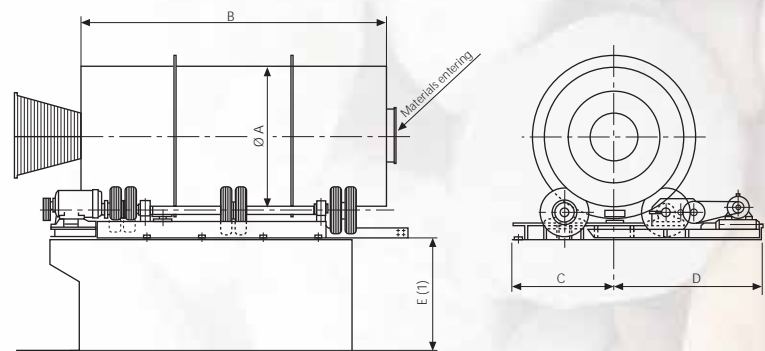
**MB**

The MB bars mills are specifically designed to obtain very fine materials and sand, even when the feeding of the same is of hard materials. They have the following features:

- Great ruggedness.
- Manganese steel internal shielding.
- Capacity to handle all types of materials even the most abrasive ones.
- Perfectly stable operation with stady product feed.

The main parts that make up the same are:

- Welded steel sheetin collar.
- Feed canal.
- Train of driving wheels provided with 4 1200 – 20 X tires.
- Train of carrying wheels provided with 4 1200 – 20 X tires.
- Wheels driven by a reduction geared engine.



1) HEIGHT WITH MAXIMUM SLANT

**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E
CL-1635	1.600	3.500	1.250	1.650	1.200
CL-1840	1.800	4.000	1.400	1.800	1.350
CL-2045	2.000	4.500	1.400	1.900	1.475
CL-2250	2.250	5.000	1.650	2.200	1.600
CL-2555	2.500	5.500	1.800	2.500	1.725

**FEATURES**

	1635	1840	2046	2250	2555	
Yield .....	T/h	52	75	105	150	202
Engine power .....	C.V.	15	20	30	40	50
Pneumatic wheels .....	m.	8	8	8	8	12
Dimensions of pneumatic wheels		600x9"	700x12"	700x12"	825x15"	825x15"
Weight without friction plates ...	Kg.	4.450	7.200	8.000	11.100	14.700
Weight with friction plates .....	Kg.	6.650	10.400	11.800	16.400	22.000
Weight of the load .....	Kg.	1.520	2.090	3.070	4.380	5.900
Maximum slant .....	%	7,30	7,30	7,30	7,30	7,30

The CL washing drums are machines designed to condition the rocks and minerals that bring with themselves a high content of soil and clay. This conditioning is done by means of the dumping and attrition to which the materials are subjected.

They have the following features:

- Very easy to install and to use.
- Countercurrent washing.
- Economy of maintenance.

The main parts that make up the same are:



**WASHING DRUMS**

**CL**

**FRAME:** Built out of rolled steel sections. It has bearing, drive, outlet and inlet channel parts, etc. The entire unit is very accessible and easy to maintain.

**WASHING DRUM:** Built out of rolled steel and reinforced by two rings in order to support axial loads, which rest on the guide roller of the frame. Lined inside with manganese steel sheeting or abrasion resistant rubber.

**ROLLING PARTS:** This consists of two shafts, one on each side, with 4 or 6 pneumatic wheels, depending on the dimensions. The driving shaft has the driving means coupled to it. The other one a windmilling type.

**OPERATION:** By means of a top quality standard manufactured reduction gear.

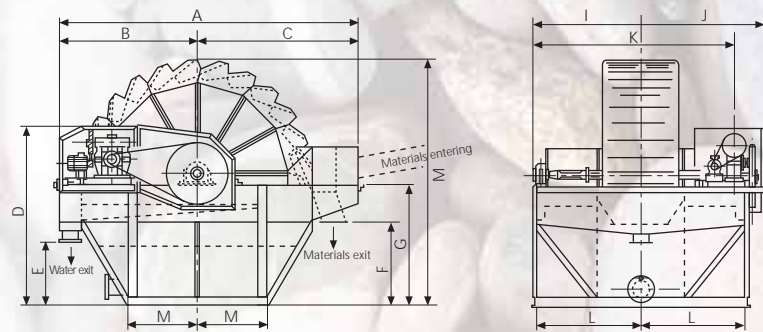


**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M
DEA-520	2.750	1.250	1.500	1.730	574	730	1.080	2.204	904	1.125	1.500	854	600
DEA-730	3.900	1.800	2.100	2.350	849	1.080	1.580	3.232	1.159	1.340	2.000	1.104	900
DEA-1030	3.900	1.800	2.100	2.350	849	1.080	1.580	3.232	1.410	1.605	2.500	1.355	900

**FEATURES**

	520	730	1030
Diameter of the wheel (in 2 parts).....mm.	2.000	3.000	3.000
Width of the wheel.....mm.	500	700	1.000
Decanting surface.....m. <sup>2</sup>	2.400	4.900	6.100
Spilling area.....m.	3.850	5.700	5.900
Weight of the empty device.....Kg.	1.700	2.920	3.840
Supplementary weight due to the variator.Vel.	30	30	30
Water volume of the box.....m. <sup>3</sup>	1.660	4.980	6.330
Engine power.....C.V.	2	2	3



**BLADE  
SETTLING TANK**

**DEA**

**SIMPLE BUCKET**

The DEA double bucket blade settling tanks are machines that are used to recover the sand contained in the wash water or to wash fine materials and grits. With a high production, it has the following features:

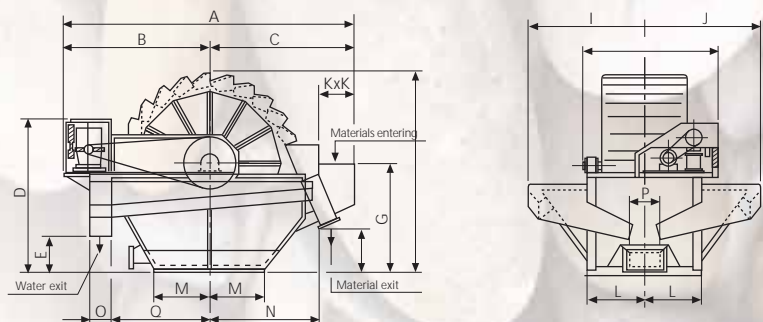
- It allows for rapid and efficient static settling.
- High production of washed materials. The necessary power ratio – amount of material washed – is very low.
- The removal is done by gravity.
- Rugged and simple construction for an intense and continuous service.

**GENERAL MEASUREMENTS**

MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
DEA-1430	4.770	2.400	2.370	2.500	577	818	1.782	3.277	1.900	2.210	600	940	900	1.827	350	500	1.600
DEA-1540	6.046	5.020	3.026	3.110	655	1.148	2.302	4.302	2.200	2.395	700	1.010	1.200	2.418	400	600	2.150

**FEATURES**

	1430	1540
Wheel diameter (2 parts).....mm.	3.000	4.000
Wheel width.....mm.	1.400	1.500
Decantation surface.....m. <sup>2</sup>	10.600	16.600
Overflow area.....m.	9.200	12.200
Weight.....Kg.	4.700	8.950
Extra weight, speed variator.....Vel.	46	46
Box water volume.....m. <sup>3</sup>	8.500	18.000
Engine power.....C.V.	4	5,5



**DOUBLE BUCKET**

The main parts that make up the same are:

- FRAME:** Welded steel sections. Very rugged.
- DECANTING VESSEL:** Totally leakproof, made out of ribbed welded sheeting with a large spilling surface. Water with the materials filler hole. Washed and drained materials outlet. Impure water outlet piping. Drain plug and hole.
- WHEEL:** Shaft made of semi-hard steel, mounted on ball bearings.
  - Simple bucket: made of two pieces of welded plate.
  - Double bucket: two intercalated, made of two pieces of welded plate.
- OPERATION:** By means of toothed gear and wheel with a roller chain. Electric engine and worm gear reduction.



## MOBILE AND SEMI-MOBILE UNITS

# GMR



The range of mobile and semi-mobile units presented by our company is so wide that it covers any of our customers needs.

For this purpose we only need to point out some of the existing variations:

- Mobile primary crushing unit with ATM and TR.
- Mobile primary crushing unit with ATM and MLA.
- Mobile screening unit.
- Mobile secondary crushing unit, with feeder and ML, etc.

We reserve the right to modify the features of this catalogue without any previous notice.

## CONVEYOR BELTS

# CTR

PRODUCTOS ASTECA S.A. manufactures reinforced conveyor belts for quarries. These conveyor belts have to bear great working efforts considering the maximal charges produced, specially in the primary crushing.

### CONVEYOR BELTS FEATURES:

- Lacing made or rolled steel profiles.
- Wide surveying walkways.
- Open or dust-tight (depending on feeding machine) back reception guide.
- Motor-reducer driver direct to drums, designed to absorb the maximal efforts that may be produced.
- Anti-return device included.
- Vulcanized drums.
- Perpetual greased rollers.
- First quality belts.

### FEATURES

BELT	Ø ROLLER
500 mm.	Ø 60
650 mm.	Ø 89
800 mm.	Ø 89
1.000 mm.	Ø 108
1.200 mm.	Ø 133

