

# MacDonald Steel Limited

## Environmental Systems Division

Dust Collector/Filtration Units – Fans – Ducting Systems – Shredders – Hogs – Balers

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### "Versatile" Shaker Type Square Units



**D1146G14 SHOWN**

*MacDonald Steel* Versatile Shaker Type Square Units offers the customer a cost effective solution for the flow rate of 4,000 to 15,000 CFM. Our Versatile units offer the following standard features

- Bolted Modular design offering quick and cost effective expansion for future needs
- 6'ft square foot print to save on space
- Fire Damper
- Pressure Relief Venting as per National Fire Protection Association
- 5" dia. 10.5oz seamless tube bean Bags offering 99.99% efficiency
- Tapered cone offered in 1 to 4 discharge styles to suit a 10 yard dump bin to 4, 55 gallon drums
- Temperature sensor to shut off fan in the event of a fire in the unit
- Exterior mount SEW Eurodrive shaker motor package for easy access maintenance
- Spark-free Rod-end bearings on all shaker hangers for safety and extended life
- Optional direct drive Fan for ease of Maintenance and space savings

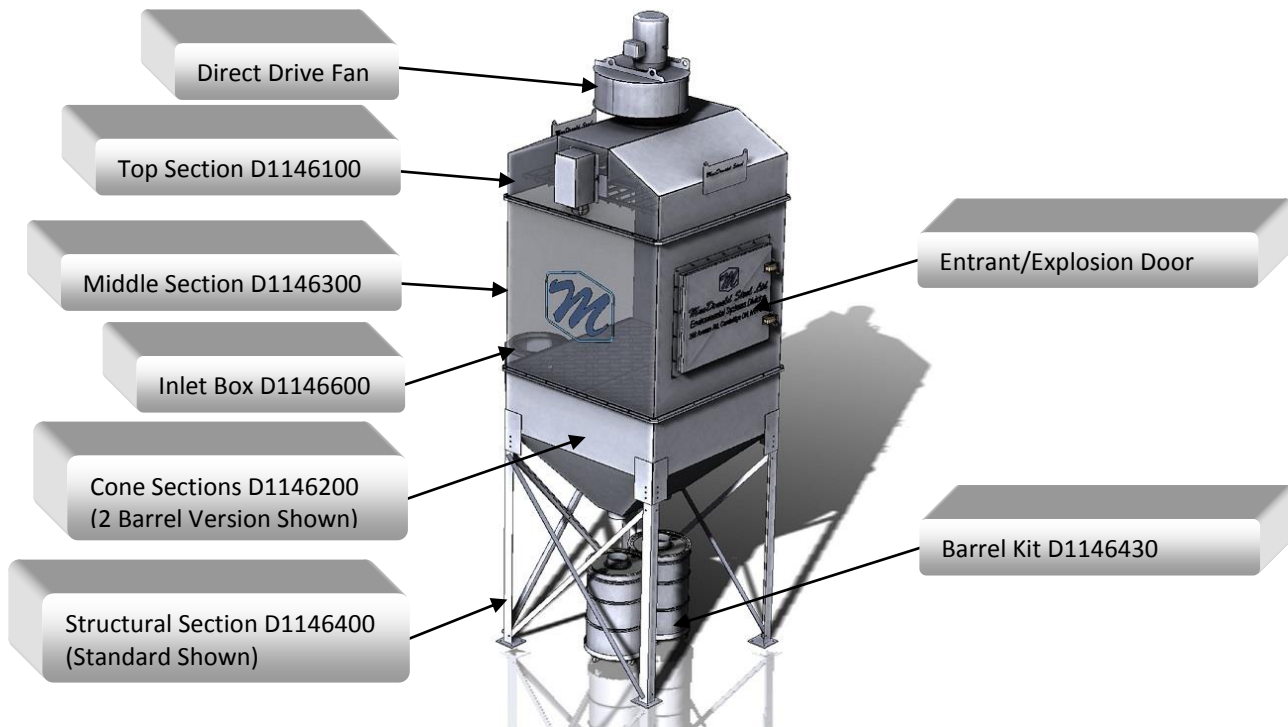
These units are designed to meet the small shop owner's needs

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DESIGN SELECTION CHART								
MOMENCLATURE	UNIT ORIENTATION	FILTER MEDIA AREA FT <sup>2</sup>	CFM @ 4:1 ATC	CFM @ 5:1 ATC	CFM @ 6:1 ATC	CFM @ 7:1 ATC	CFM @ 8:1 ATC	FILTER QUANTITY
D1146G01	UNIT,SHAKER SQUARE 6'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G02	UNIT,SHAKER SQUARE 7'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G03	UNIT,SHAKER SQUARE 8'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G04	UNIT,SHAKER SQUARE 9'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G05	UNIT,SHAKER SQUARE 10'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G06	UNIT,SHAKER SQUARE 11'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132
D1146G07	UNIT,SHAKER SQUARE 6'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G08	UNIT,SHAKER SQUARE 7'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G09	UNIT,SHAKER SQUARE 8'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G10	UNIT,SHAKER SQUARE 9'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G11	UNIT,SHAKER SQUARE 10'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G12	UNIT,SHAKER SQUARE 11'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH BARREL STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132
D1146G13	UNIT,SHAKER SQUARE 6'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G14	UNIT,SHAKER SQUARE 7'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G15	UNIT,SHAKER SQUARE 7'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G16	UNIT,SHAKER SQUARE 7'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G17	UNIT,SHAKER SQUARE 8'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G18	UNIT,SHAKER SQUARE 8'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G19	UNIT,SHAKER SQUARE 9'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G20	UNIT,SHAKER SQUARE 9'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G21	UNIT,SHAKER SQUARE 10'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G22	UNIT,SHAKER SQUARE 10'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G23	UNIT,SHAKER SQUARE 11'FT BAG. ROOF MOUNT FAN, FOUR BARREL CONE WITH BARREL STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132
D1146G24	UNIT,SHAKER SQUARE 11'FT BAG. ROOF MOUNT FAN, TWO BARREL CONE WITH BARREL STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132
D1146G25	UNIT,SHAKER SQUARE 6'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G26	UNIT,SHAKER SQUARE 7'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G27	UNIT,SHAKER SQUARE 8'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G28	UNIT,SHAKER SQUARE 9'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G29	UNIT,SHAKER SQUARE 10'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G30	UNIT,SHAKER SQUARE 11'FT BAG. GROUND MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132
D1146G31	UNIT,SHAKER SQUARE 6'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1036.01	4,144	5,180	6,216	7,252	8,288	132
D1146G32	UNIT,SHAKER SQUARE 7'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1209.5	4,838	6,047	7,257	8,466	9,676	132
D1146G33	UNIT,SHAKER SQUARE 8'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1382.29	5,529	6,911	8,293	9,676	11,058	132
D1146G34	UNIT,SHAKER SQUARE 9'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1555.08	6,220	7,775	9,330	10,885	12,440	132
D1146G35	UNIT,SHAKER SQUARE 10'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1727.87	6,911	8,639	10,367	12,095	13,822	132
D1146G36	UNIT,SHAKER SQUARE 11'FT BAG. ROOF MOUNT FAN, SINGLE CONE WITH 6 YARD BIN STRUCTURE	1900.66	7,602	9,503	11,403	13,304	15,205	132



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### Features

- Automatic cleaning of the filter media by electrically operated mechanical shaker when the flow of air through the system is stopped.
- Available in a wide range of sizes
- Fans are custom designed to suit the customers application
- Conserves energy: reclaims heated/conditioned air.
- Heavy duty construction 12ga. Material throughout the system.
- Rod End Bearings on the shaker frame.
- 5" diameter bags for easy material release.

### Standard Equipment

- Bearing mounted Shaker Frames for long life
- Prewired Automatic Shaker Control Panel to effect the automatic cleaning of the filters whenever the air flow to the unit is stopped.
- Aquastat Thermal Control to allow for automatic shutdown in case of fire and lockout shaker panel.
- Easy Access to filter bags for cleaning or replacing.
- Electronically operated mechanical shaker for periodic cleaning of the filter media
- Heavy Gauge Steel construction through out

### Optional Equipment

- A Variety Of Filter Media To Suit The Application
- Silencer For Return Airline
- Pressure Differential Gauge
- Electrical Or Manual Diverter
- Spark Detection And Extinguishing
- Deluge System
- High speed abortgate
- Direct drive airlock
- Ladder and Platform for 6 yard bin application

### Operation

- Waste particles are drawn pneumatically from production machinery via ducting, entering the primary separation area where the heavier particles slow down and fall to the bottom of the air stream. The conveying air and fine dust moves upward to the filter section where the dust is filtered from the conveying air by the bags and clean air is returned to the plant or atmosphere. Material can then be collected in the bottom of the unit in the barrels.
- Filter media is cleaned periodically by an automatic electrically operated mechanical shaker. Dust captured in the filter media would be periodically shaken from the filter media by means of an electrically operated mechanical shaker equipped with its own electrical drive motor, gear reducer and eccentric arm which is bearing mounted to assure ease of operation and proper alignment. It is recommended that the air system should be shut down when the filter media is being cleaned. The filter tubes are physically shaken to dislodge the dust and allow the dust to fall into the cone below.
- Filter bags are complete with reinforced cuff and snap-in ring; no tools required for easy servicing.

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### Optional Unit Equipment:



2 BARREL CONE



4 BARREL CONE



1 BARREL CONE



GROUND MOUNT FAN



ROOF MOUNT FAN



6 YARD BIN STRUCTURE