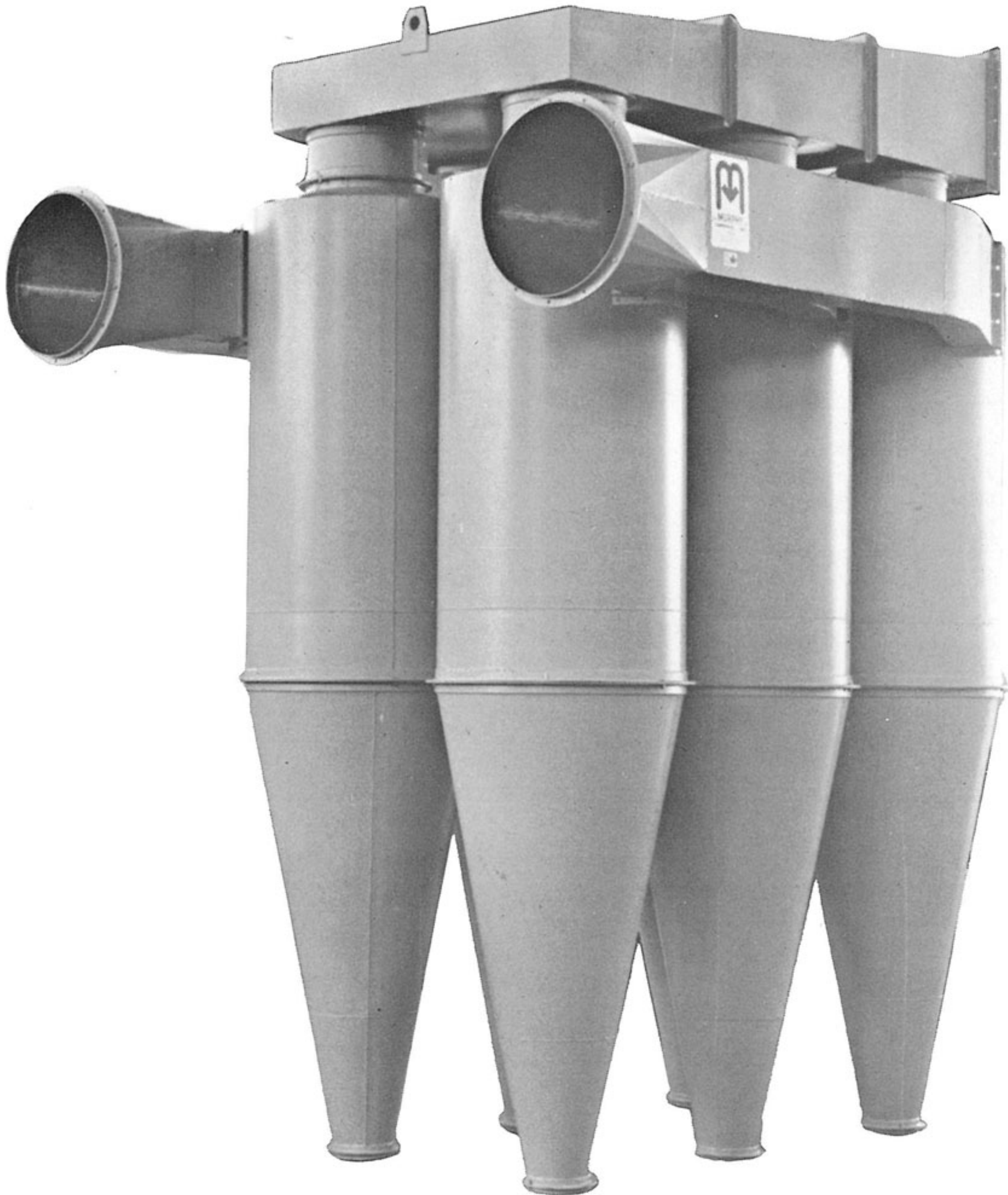


Cyclone Dust Collectors



MURPHY
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N. R. MURPHY LTD. CYCLONE DUST COLLECTORS

The **cyclone dust collector** provides a simple and economical means to most medium to coarse dust collection applications. The centrifugal action along with gravitational forces have been a method of dust collection and separation for many years.

N. R. Murphy Limited's continuing effort to improve dust collection equipment has kept the cyclone separator in pace with modern requirements. We design and manufacture highly efficient cyclones that are capable of much higher efficiencies on smaller particle sizes, than the standard design cyclones.

The operation is simple and effective (no moving parts to maintain). The dust laden air enters the collector through a high velocity inlet forcing the dust particles to the collector wall in a spiraling motion. This, along with gravitational pull, forces the concentrated dust downward and out the dust outlet, while the cleaned air travels upward via the inner vortex and out the air outlet on the top side of the dust collector.

For **applications** that are unusual such as severe abrasion, corrosion, etc., N. R. Murphy technical representatives can help you select the proper design, along with the best construction materials such as heavy gauge carbon steel, abrasive resistant steel, special alloys, rubber linings, etc., all to suit a specific application.

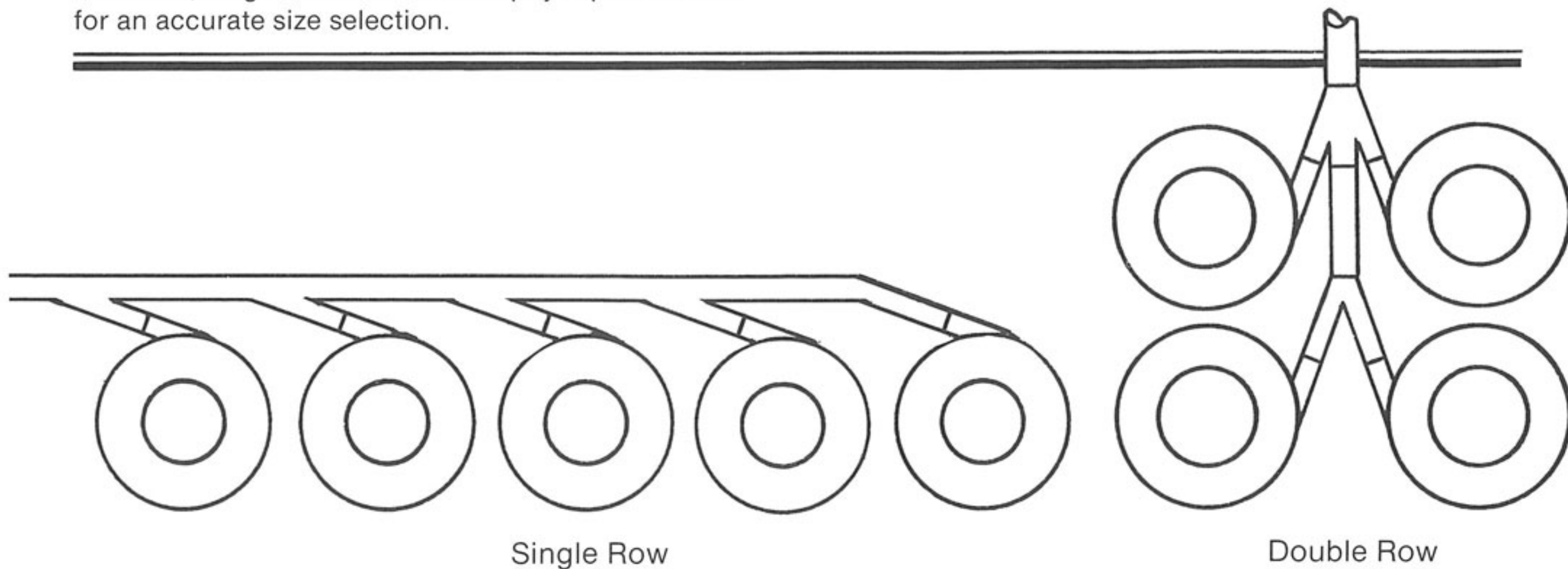
Because of the many variables that affect any dust **collector performance** such as cu. ft. of air per minute, dust concentration, specific gravity of dust, velocities, cyclone diameter, etc., it is suggested that all available information (or sample) of the dust to be collected, be given to an N. R. Murphy representative for an accurate size selection.

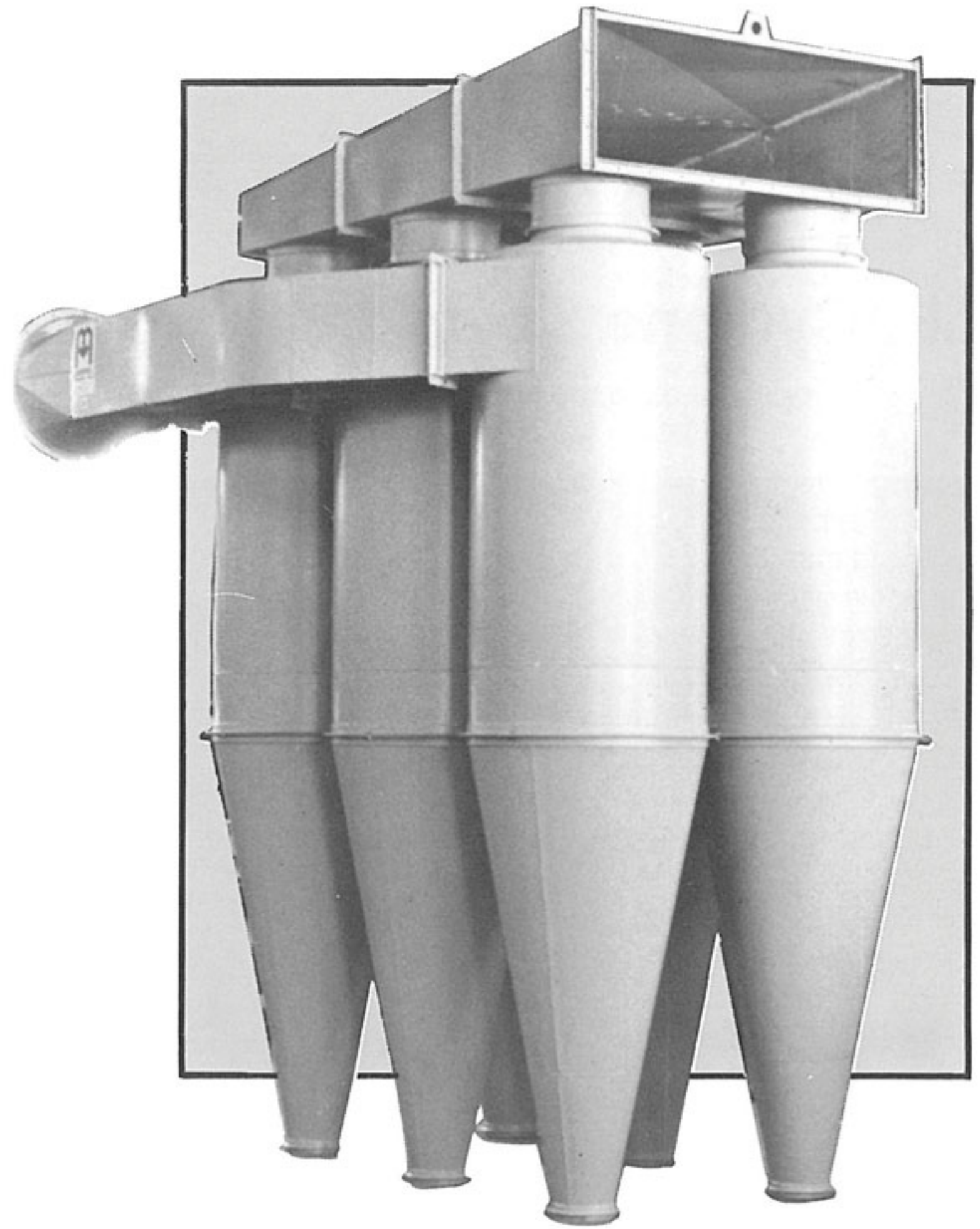
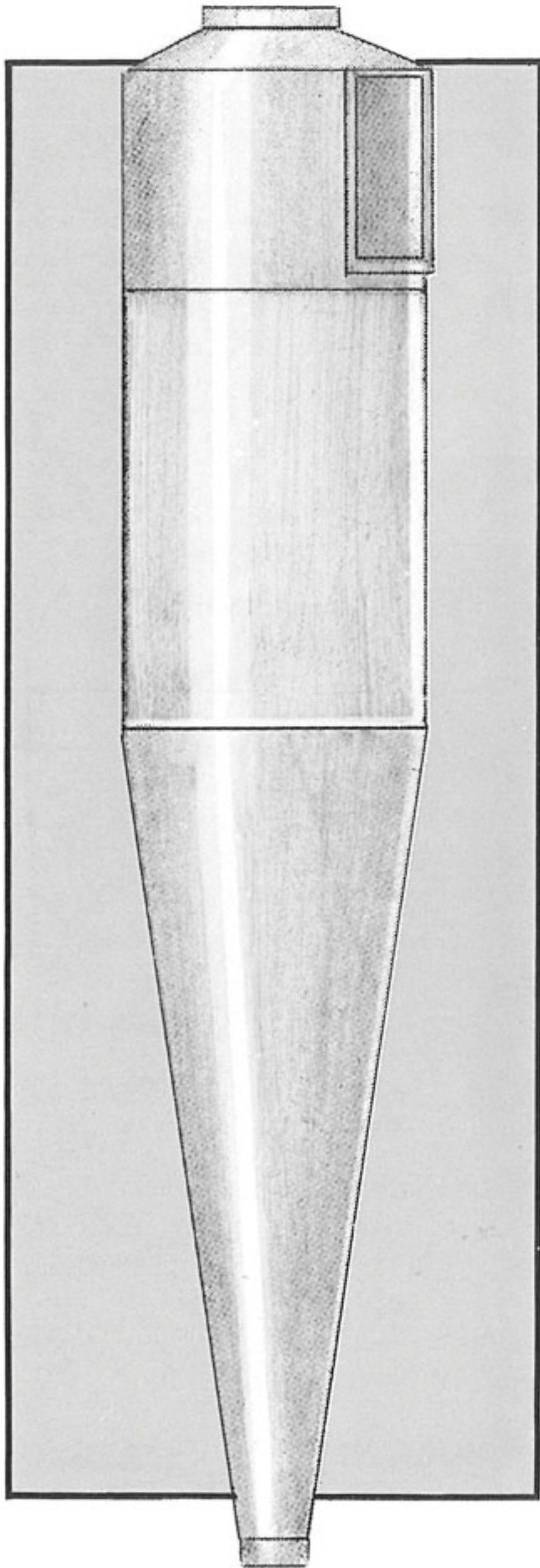
The **construction** design of N. R. Murphy's cyclone dust collectors is very rugged. Standard designs feature heavy gauge wiped galvanized (satin coat) all welded construction, painted a standard colour (other colours available on request). Most cyclone collectors are completely assembled at the factory to enable quick on-site assembly by others (optional knock down designs available on large sizes; please check with factory).

Many **sizes and arrangements** of cyclone dust collectors are available to meet specific capacities and space allotments. If more than one collector is required, due to large capacity requirements, they can be installed in single or double rows as illustrated.

The Manufacturer reserves the right to make product changes and correct typographical errors without notice.

Murphy technical representatives are located throughout Canada and the United States. They are available to assist you in selecting the proper dust collector to solve your dust problem with no obligation.





This photo shows six cyclones assembled in a double row. The cyclones were pre-assembled at the factory, complete with two air inlet and one air outlet manifolds. The pre-assembly assures proper alignment for reassembly at the jobsite by others. This series of cyclones was installed in a project plant producing fuel pellets from wood flour which will be a replaceable fuel for the future.

HIGH EFFICIENCY DESIGN

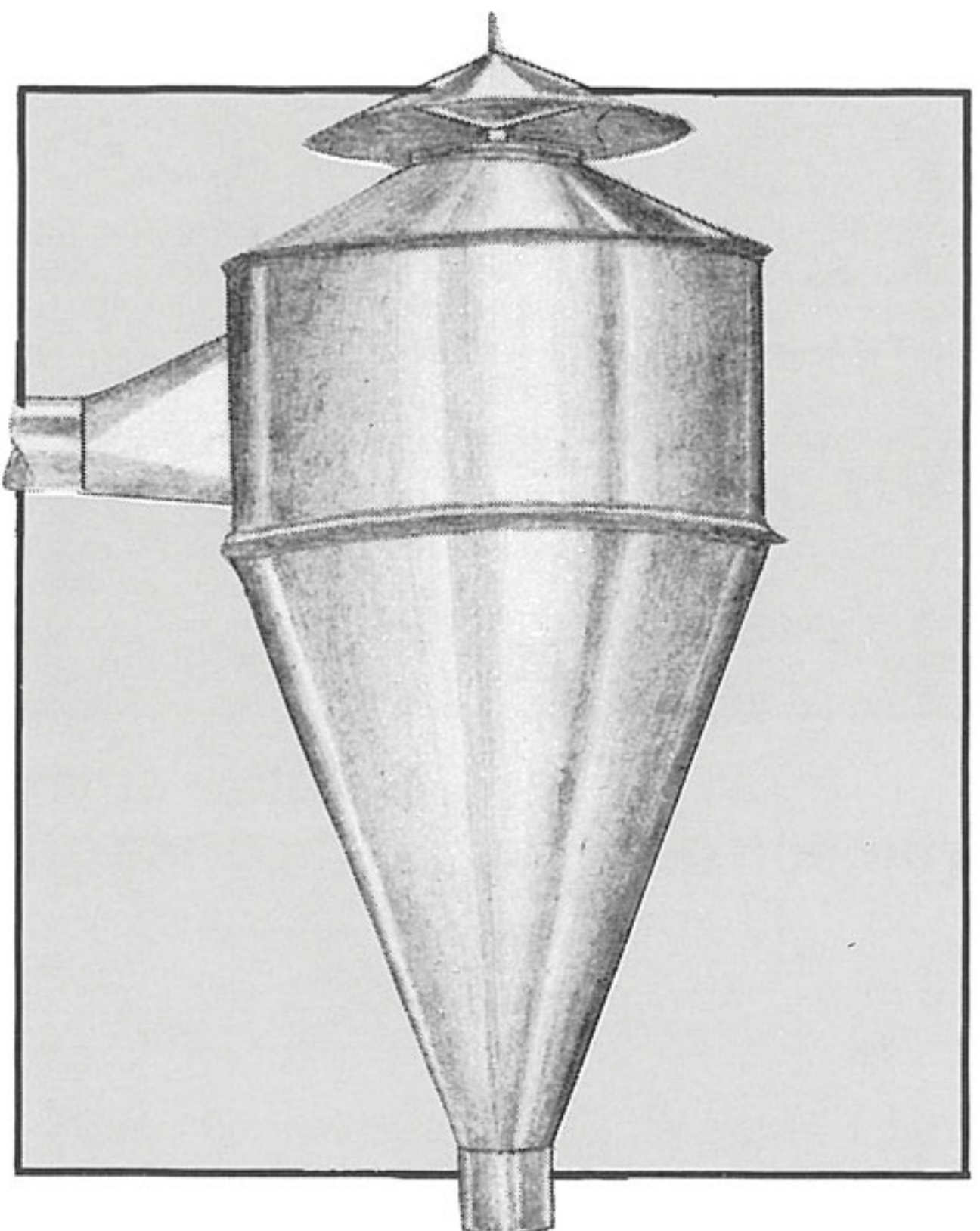
This design is available in several sizes, it can be manufactured in small diameter units and clustered to give the capacity desired, or one larger size can be selected to give equal capacity, depending on site location.

STANDARD DESIGN

Used mostly for coarse sawdust and shavings or material that contains very few extreme fines. This is the most common style of cyclonic dust collector. For a slightly higher efficiency a long cone spiral and skimmer can be added. This collector is available in various materials or comes with various linings for corrosive or abrasive applications. This design is available in many sizes to fit all applications.

CHIP DESIGN

Very similar to a standard design except for a shorter cone section. Used primarily for heavy wood chips where minimum of fines are involved. It is constructed of heavier gauge material for the additional abuse it is designed for. As the standard design it comes in a wide range of sizes.

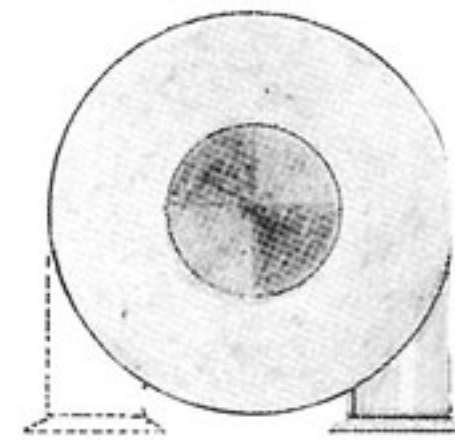


H.E. Cyclone Specification Chart Design "A"

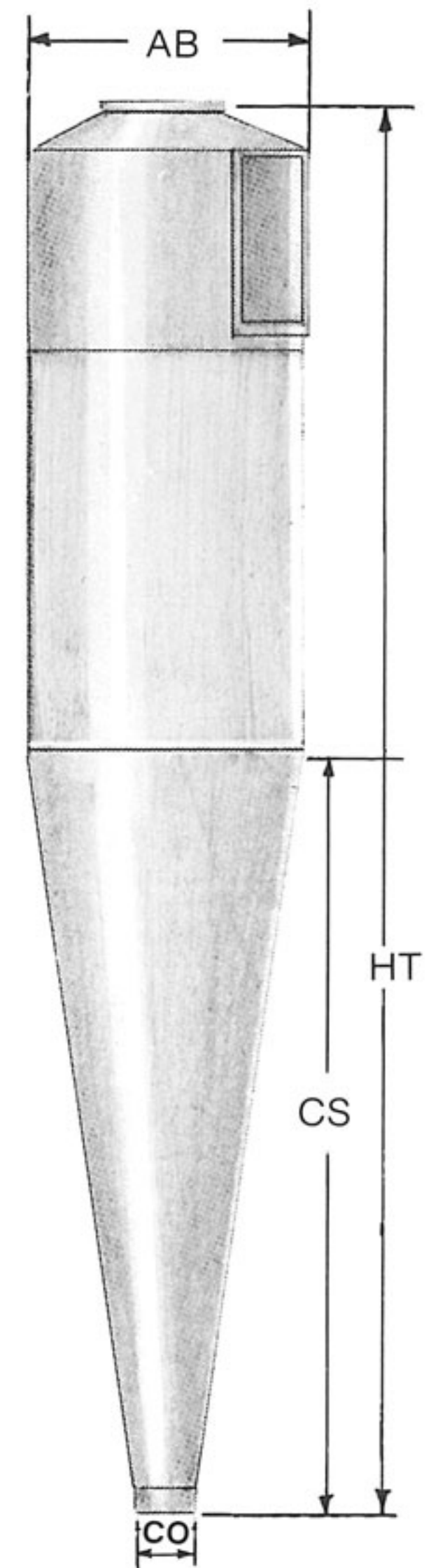
Any changes to these specifications such as reduced height (HT) the design would be referred to as "B" for clarification.

| Size | Dimensions | | | Standard Air Volumes (cu. ft./min.) at Various Pressure Drops* | | | | |
|------|------------|-----|----------|--|-------|-------|-------|-------|
| | AB | CS | CO | HT | 2" sp | 3" sp | 4" sp | 5" sp |
| 12" | 24" | 4" | 50 1/4" | | 253 | 310 | 358 | 400 |
| 16" | 32" | 4" | 66 1/4" | | 474 | 581 | 670 | 750 |
| 18" | 36" | 5" | 75" | | 572 | 701 | 809 | 905 |
| 20" | 40" | 5" | 83" | | 708 | 868 | 1002 | 1120 |
| 24" | 48" | 6" | 99" | | 1025 | 1255 | 1449 | 1620 |
| 26" | 52" | 7" | 107 1/2" | | 1217 | 1491 | 1722 | 1925 |
| 28" | 56" | 7" | 115 1/2" | | 1423 | 1743 | 2012 | 2250 |
| 30" | 60" | 8" | 123 1/2" | | 1644 | 2014 | 2326 | 2600 |
| 32" | 64" | 8" | 132" | | 1897 | 2324 | 2683 | 3000 |
| 34" | 68" | 9" | 140" | | 2087 | 2556 | 2952 | 3300 |
| 36" | 72" | 10" | 148" | | 2340 | 2866 | 3309 | 3700 |
| 40" | 80" | 10" | 164 1/2" | | 2878 | 3524 | 4070 | 4550 |
| 42" | 84" | 10" | 172 1/2" | | 3162 | 3873 | 4472 | 5000 |
| 44" | 88" | 12" | 180 1/2" | | 3479 | 4260 | 4919 | 5500 |
| 48" | 96" | 12" | 197" | | 4174 | 5112 | 5903 | 6600 |
| 50" | 100" | 12" | 205" | | 4547 | 5569 | 6431 | 7190 |
| 54" | 108" | 14" | 221" | | 5303 | 6495 | 7500 | 8385 |
| 56" | 112" | 14" | 229 1/2" | | 5692 | 6971 | 8050 | 9000 |
| 60" | 120" | 16" | 245 1/2" | | 6388 | 7823 | 9034 | 10100 |
| 62" | 124" | 16" | 253 1/2" | | 6894 | 8443 | 9749 | 10900 |
| 64" | 128" | 16" | 262" | | 7463 | 9140 | 10554 | 11800 |
| 68" | 136" | 16" | 278" | | 8475 | 10380 | 11985 | 13400 |
| 72" | 144" | 18" | 294 1/2" | | 9487 | 11619 | 13416 | 15000 |
| 74" | 148" | 18" | 302 1/2" | | 9866 | 12084 | 13953 | 15600 |
| 82" | 164" | 20" | 335" | | 12333 | 15105 | 17441 | 19500 |
| 84" | 168" | 20" | 343" | | 12965 | 15880 | 18336 | 20500 |

*When making an air volume selection on a given size cyclone, the greater the pressure drop the higher the efficiency and the more horsepower required. Other factors that must be considered are the type, specific gravity and particle sizes of the dust being collected.



R.H. or C.W. L.H. or C.C.W.
(optional)



HIGH EFFICIENCY DESIGN "A"

Standard Sizes

(Other sizes available upon request, such as reduced heights and other diameters not listed.)