

MULTI-PORT GRAVITY BLENDER

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**ADVANCED
TECHNOLOGY
PROVEN DESIGN**



Young Industries Multi-Port Gravity Blender provides superior blending of dry bulk materials in the chemical, food, and plastics industries. The Gravity Blender mixes ingredients of different weights, sizes, and shapes to eliminate variations in weight or volume as well as segregation. The Blender is easy to install and use. It has low operating cost and there is virtually no maintenance.

HOW IT WORKS!

The Blender consists of a main cylindrical vessel with conical hopper. Blending tubes extend from selected levels around the circumference of the vessel to a small conical blending chamber positioned below the vessel discharge. When the blending cycle starts, material is simultaneously removed from all levels of the bin through the blending tubes and gently moved to the blending chamber. With this technology, dead spots are eliminated, and internal flow is consistent. The blended product can be discharged from the blending chamber to the process, or can be recirculated to the top of the blender for further blending.

SIZES AVAILABLE

Sizes are available from lab scale 5 cu. ft. working volume to 5000 cu. ft. working volume. Young Industries engineers evaluate the Blender size with the product characteristics to establish the correct number, and location of the blending tubes. No matter what size blender is used the operation and efficiencies are consistent.

CONSTRUCTION

Gravity Blenders are constructed of carbon steel, or 304S/S with special materials and coatings available as required by the application. The Blenders can be designed for indoor or outdoor use. Support structures are designed based on process at the blender discharge.

MULTI-PORT GRAVITY BLENDER

MODELS

MP-1 Young Industries has two standard Models of Gravity Blender. The MP-1 is a standard Blender designed for handling free-flowing chips, cubes, flakes, and pellets. It has no interior moving parts and can be used for either batch or continuous blending.

MP-2 The Model MP-2 Blender is a version of the standard blender designed for handling chips, cubes, flakes, pellets, and powders. This model uses a pneumatically operated blending cone valve to vibrate and control flow of powders that do not flow freely. With this design there is no start-up heel. The MP-2 Blender can also be used for batch or continuous blending applications.



Model MP-1 Gravity Blender



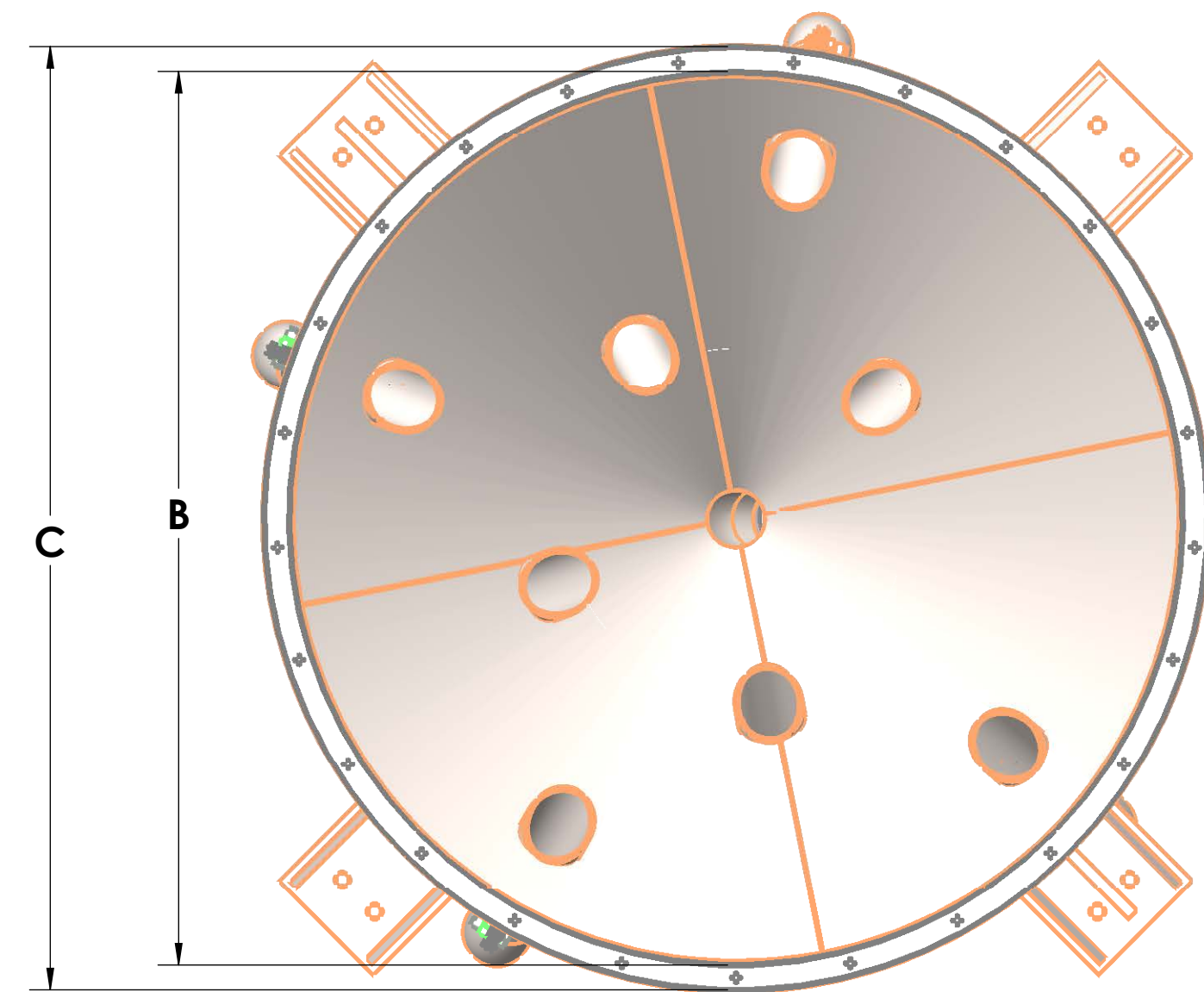
Model MP-2 Gravity Blender

BLENDER CONVERSION KITS

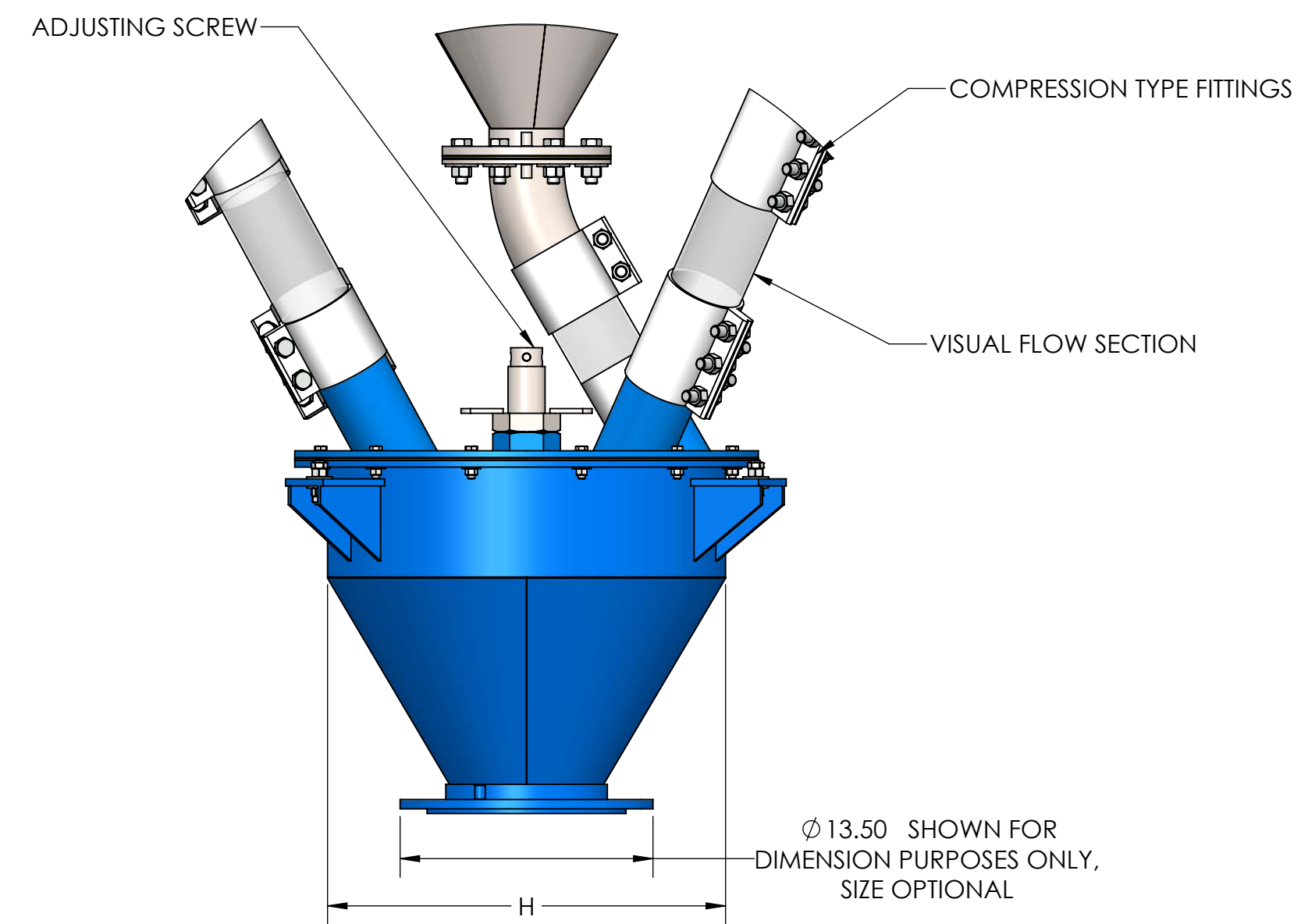
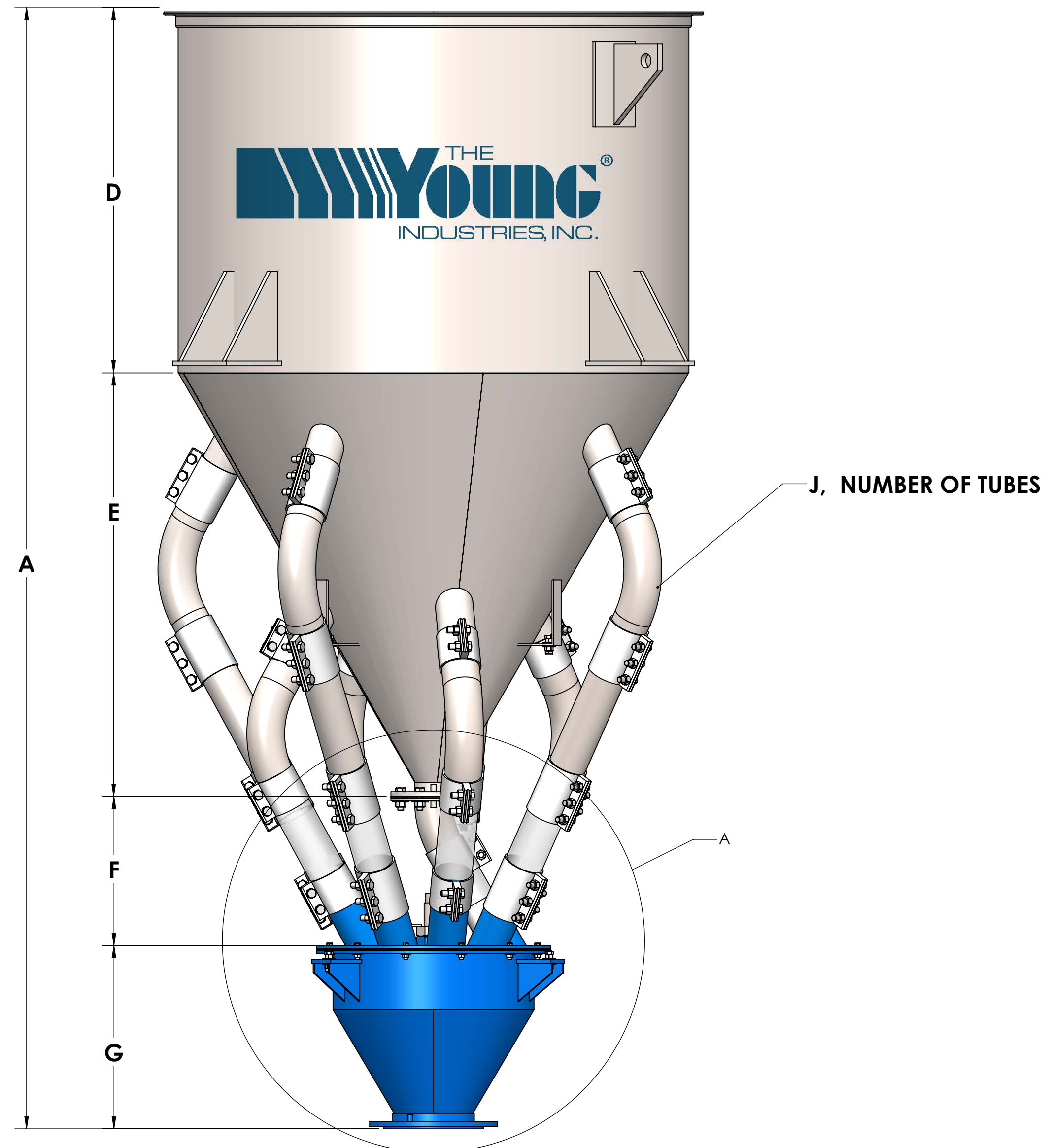
Existing hoppers in most cases can be converted to economical Gravity Blenders. Young Industries engineers design the size and location of blending tubes to meet the blending requirement. The manufactured pieces are easily assembled to the hoppers for quick conversion of bin to blender.

APPLICATION ASSISTANCE

Young Industries Multi-Port Gravity Blenders offer the user an economical and efficient way to blend dry bulk materials. Our application engineers are available to review your requirements and testing is available at our test facility in Muncy PA.



SIZE WORKING CAPACITY(CU.FT.)	A	B	C	D	E	F	G	H	J
15	6'-9 1/4"	4'-0"	4'-2"	0'-6"	3'-4"	1'-3 3/4"	1'-7 1/2"	1'-9 1/4"	9
35	8'-3 1/4"	4'-0"	4'-2"	2'-0"	3'-4"	1'-3 3/4"	1'-7 1/2"	1'-9 1/4"	9
55	9'-10"	4'-6"	4'-9"	3'-2"	3'-8 3/4"	1'-3 3/4"	1'-7 1/2"	1'-9 1/4"	9
75	11'-0"	4'-6"	4'-9"	4'-4"	3'-8 3/4"	1'-3 3/4"	1'-7 1/2"	1'-9 1/4"	9
100	11'-2 1/4"	6'-0"	6'-3"	3'-3"	5'-0"	1'-3 3/4"	1'-7 1/2"	1'-9 1/4"	9
150	13'-8 3/4"	6'-0"	6'-3"	4'-9"	5'-0"	2'-0 3/4"	1'-11"	2'-2 1/4"	12
200	15'-8 3/4"	6'-0"	6'-3"	6'-9"	5'-0"	2'-0 3/4"	1'-11"	2'-2 1/4"	12
300	19'-2 3/4"	6'-0"	6'-3"	10'-3"	5'-0"	2'-0 3/4"	1'-11"	2'-2 1/4"	12



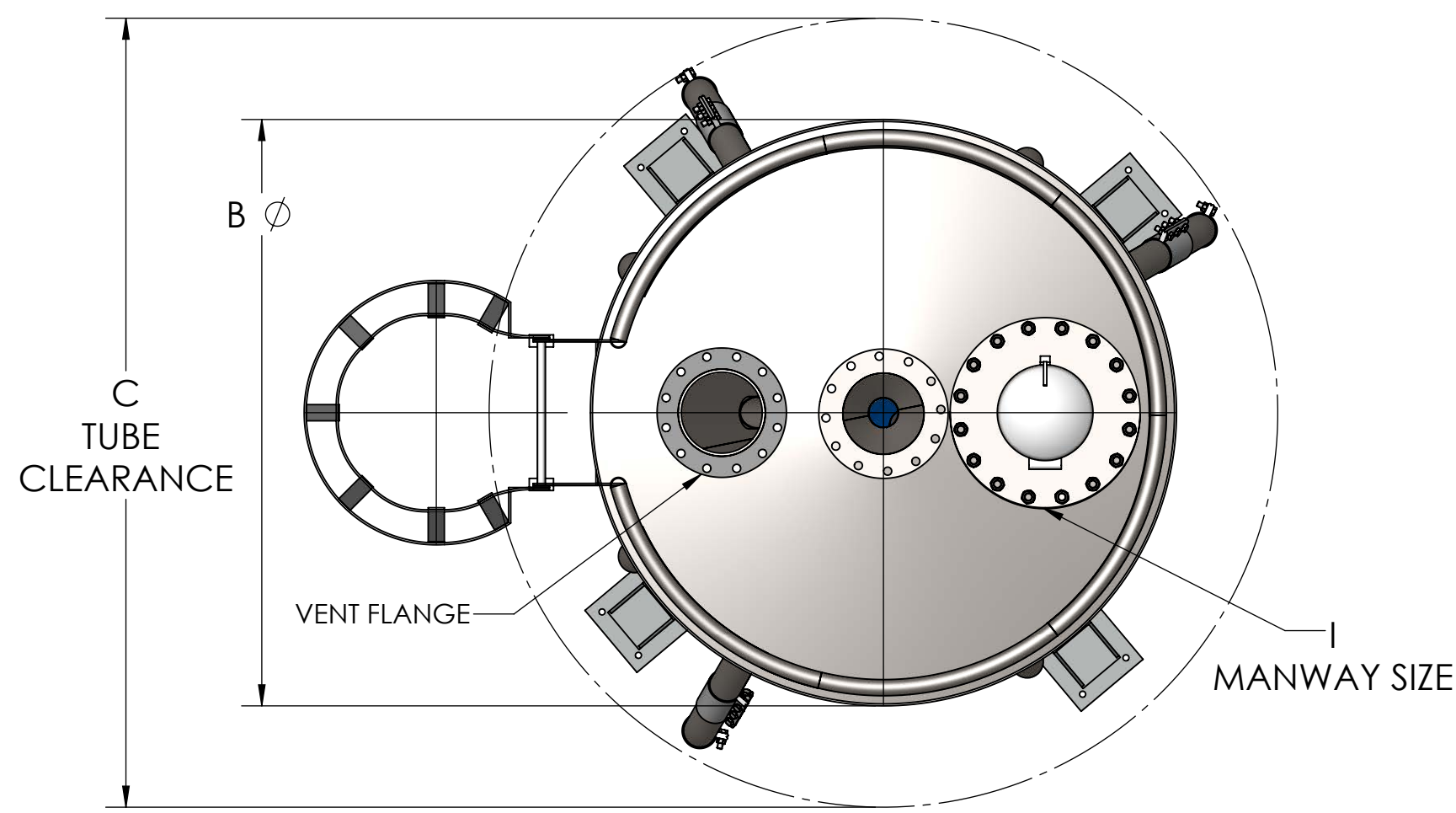
DETAIL A
SCALE 1 : 8

NOTES:

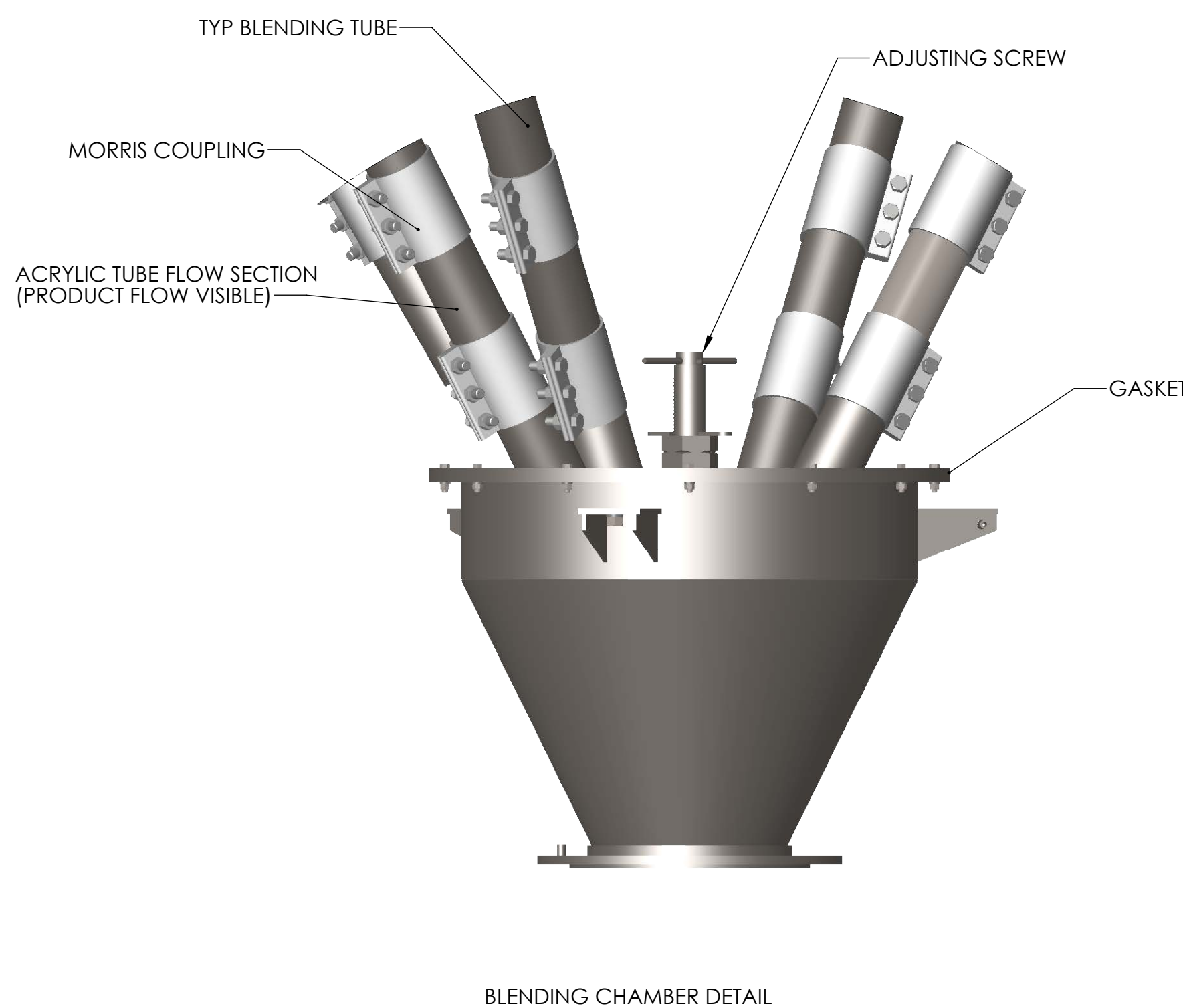
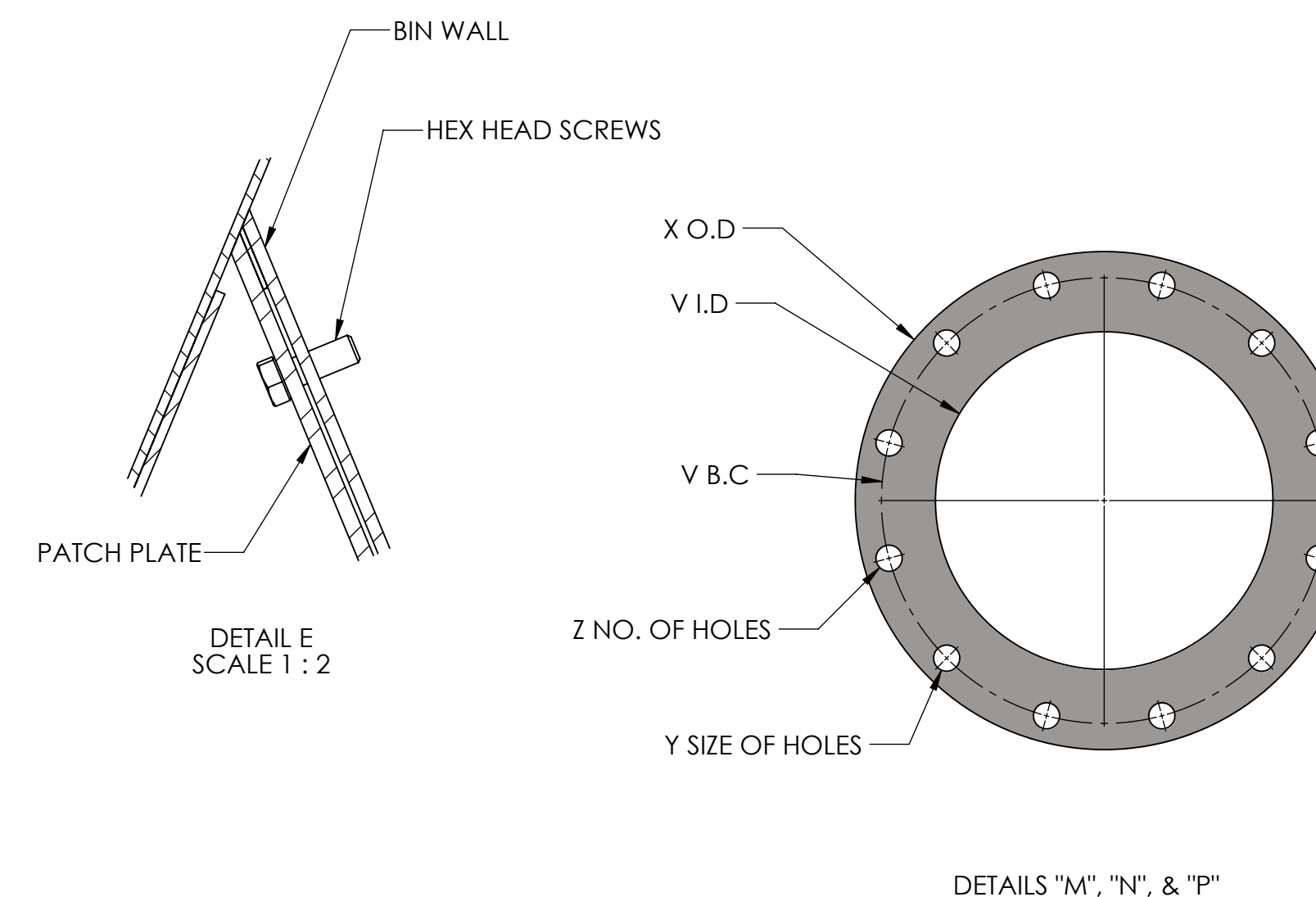
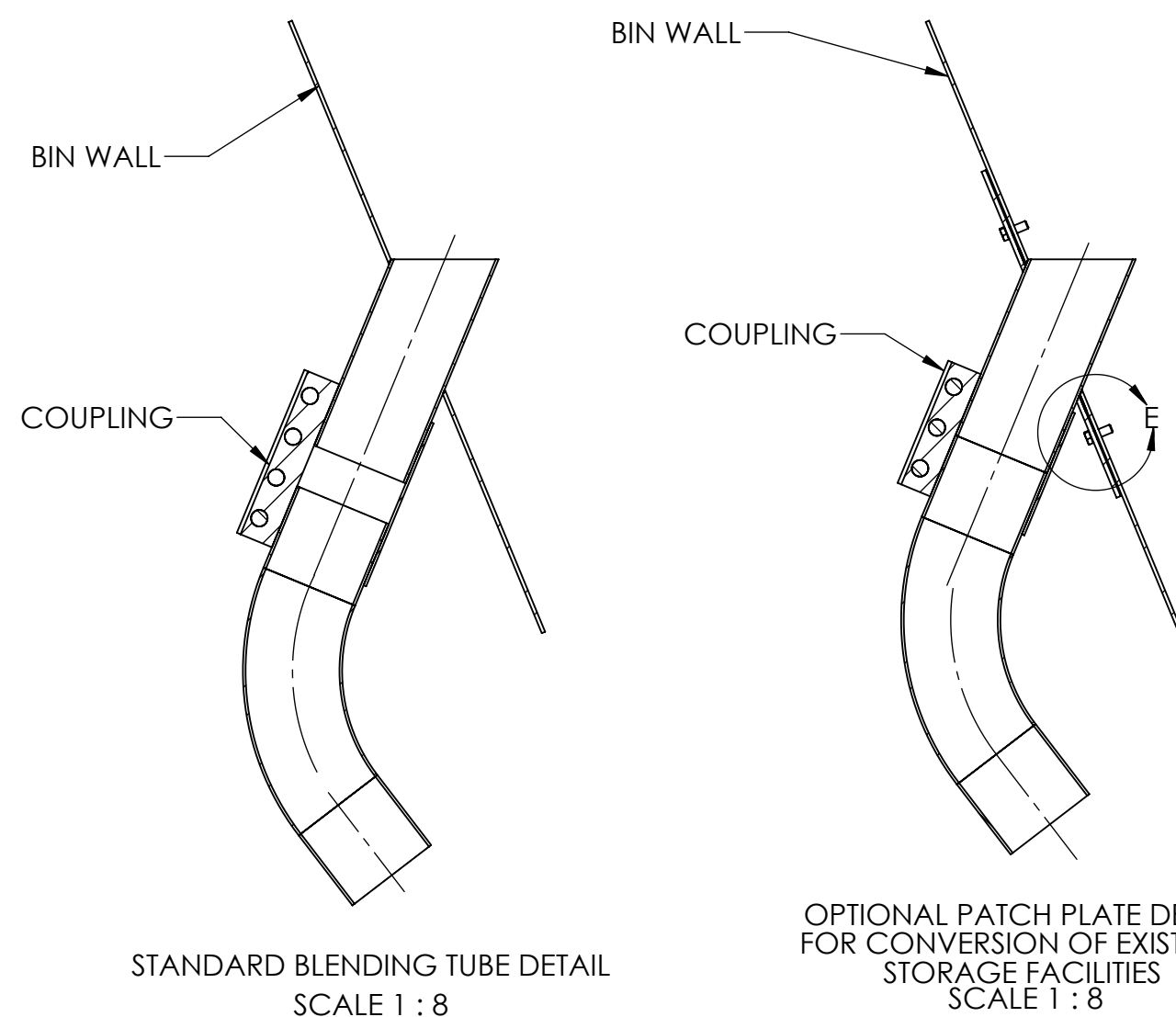
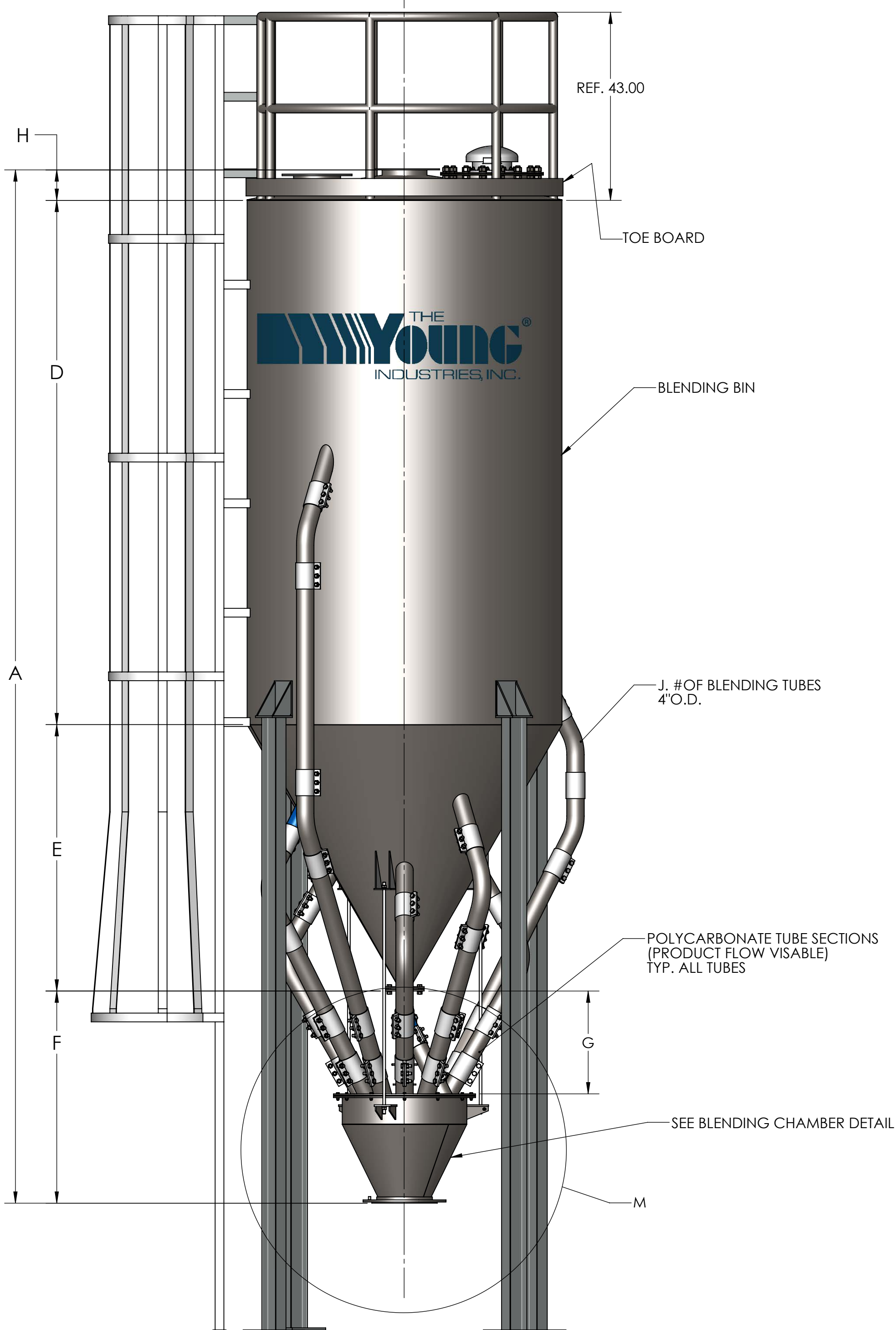
- LUCITE TUBE SECTIONS FINISHED WITH ALL UNITS.
- FOUR(4) SUPPORT LUGS FURNISHED STANDARD ON ALL BLENDERS
OTHER BIN SUPPORTS CAN BE FURNISHED ON REQUEST.
- UNITS SUPPLIED WITH OPEN TOP OR COVER AS REQUIRED.
- WHEN ORDERING, SPECIFY:
 - BLENDER SIZE (CU. FT. WORKING CAPACITY)
 - MATERIALS OF CONSTRUCTION(ALUM,S/S,C/S WITH EPOXY.)
 - BLENDING CHAMBER DISCHARGE SIZE.
 - TYPE OF TOP(OPEN OR COVER.)

REV. NO.	DESCRIPTION	DATE	BY
REVISIONS			
CUSTOMER:			
CUSTOMER PO NUMBER:			
YOUNG JOB NUMBER:			
TITLE			
HOPPER TYPE, MULTI-PORT, GRAVITY BLENDER MP-1			
 THE Young INDUSTRIES, INC. MUNCY, PENNSYLVANIA 17756 TELEPHONE: 570-546-3165			
DRAWN BY: SLB		DATE: 12/18/20	
CHECKED BY:		SCALE=1:6	
DRAWING NUMBER MP-1 S-4-3787-1		SHEET 1 OF 1	REV: 00

GENERAL TOLERANCES			
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY			
MACHINING - .XX=	.02	.XXX=	.005
ANGLE= .50°			
SURFACE ROUGHNESS HEIGHT 63 MICRONS OR LESS			
FABRICATION - UNDER 6	6 TO 24	24 TO 60	OVER 60
± .06	± .12	± .19	± .25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			



SIZE CU. FT. WORKING CAPACITY	DETAIL "M"										DETAIL "N"					DETAIL "P"									
	A	B	C	D	E	F	G	H	I	J	U	V	X	Y	Z	U	V	X	Y	Z	U	V	X	Y	Z
100	15'-10"	4'-0"	5'-10"	8'-0"	3'-4"	3'-9"	2'-0"	9"	16"	9	6"	9 1/2"	11"	13/16"	8	12"	15 1/2"	18"	11/16"	12	16"	19 1/2"	22"	11/16"	15
200	17'-10"	6'-0"	7'-10"	8'-0"	5'-0"	4'-1"	2'-0"	9"	16"	12	6"	9 1/2"	11"	13/16"	8	18"	21 1/2"	24"	11/16"	15	18"	21 1/2"	24"	11/16"	15
300	19'-10"	6'-0"	7'-10"	10'-0"	5'-0"	4'-1"	2'-0"	9"	16"	12	6"	9 1/2"	11"	13/16"	8	18"	21 1/2"	24"	11/16"	15	18"	21 1/2"	24"	11/16"	15
400	23'-10"	6'-0"	7'-10"	14'-0"	5'-0"	4'-1"	2'-0"	9"	16"	12	6"	9 1/2"	11"	13/16"	8	18"	21 1/2"	24"	11/16"	15	18"	21 1/2"	24"	11/16"	15
500	21'-11"	8'-0"	9'-10"	10'-0"	6'-10"	4'-1"	2'-0"	12"	16"	12	6"	9 1/2"	11"	13/16"	8	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
750	26'-11"	8'-0"	9'-10"	15'-0"	6'-10"	4'-1"	2'-0"	12"	16"	12	6"	9 1/2"	11"	13/16"	8	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
1000	26'-4"	11'-0"	13'-0"	12'-0"	9'-4"	4'-0"	2'-0"	12"	16"	12	8"	11 3/4"	13 1/2"	13/16"	8	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
1500	30'-4"	11'-0"	13'-0"	16'-0"	9'-4"	4'-0"	2'-0"	12"	16"	12	8"	11 3/4"	13 1/2"	13/16"	8	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
2000	34'-2"	11'-0"	13'-0"	20'-0"	9'-4"	3'-10"	2'-0"	12"	20"	12	10"	14 1/4"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
2500	41'-2"	11'-0"	13'-0"	26'-0"	9'-4"	4'-9"	2'-3"	12"	20"	13	10"	14 1/4"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
3000	47'-3"	11'-0"	13'-0"	32'-0"	9'-4"	4'-11"	2'-5"	12"	20"	16	10"	14 1/4"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
3500	53'-3"	11'-0"	13'-0"	38'-0"	9'-4"	4'-11"	2'-5"	12"	20"	16	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
4000	57'-4"	11'-0"	13'-0"	42'-0"	9'-4"	5'-0"	2'-6"	12"	20"	17	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
4500	63'-4"	11'-0"	13'-0"	48'-0"	9'-4"	5'-0"	2'-6"	12"	20"	17	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
5000	67'-4"	11'-0"	13'-0"	52'-0"	9'-4"	5'-0"	2'-6"	12"	20"	17	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
5500	74'-4"	11'-0"	13'-0"	58'-0"	9'-4"	6'-0"	3'-0"	12"	20"	18	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
6000	67'-3"	12'-0"	14'-0"	50'-0"	10'-3"	6'-0"	3'-0"	12"	20"	18	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
6500	73'-3"	12'-0"	14'-0"	56'-0"	10'-3"	6'-0"	2'-10"	12"	20"	20	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
7000	79'-3"	12'-0"	14'-0"	62'-0"	10'-3"	6'-0"	2'-10"	12"	20"	20	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28
7500	65'-0"	14'-0"	16'-0"	46'-0"	12'-0"	6'-0"	2'-10"	12"	20"	20	12"	17"	16"	15/16"	12	24"	27 1/2"	30"	11/16"	20	20"	22"	23 3/4"	9/16"	28



- NOTES:
1. ACRYLIC TUBE SECTIONS FURNISHED WITH ALL BLENDERS.
 2. FOUR (4) SUPPORT LUGS FURNISHED STANDARD ON ALL BLENDERS.
 3. BLENDING BIN FURNISHED WITH CENTER ROOF OPENING (DETAIL "N"). OTHER BIN OPENINGS CAN BE FURNISHED ON REQUEST.
 4. WHEN ORDERING, SPECIFY:
 - A. BLENDER SIZE (CU. FT. WORKING CAPACITY).
 - B. MATERIAL OF CONSTRUCTION.
 - C. BLENDING CHAMBER DISCHARGE SIZE.
 5. OPTIONS:
 - A. SUPPORT LEGS.
 - B. EXTERNAL LADDER AND SAFETY CAGE (OSHA STANDARD)

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
MACHINING - .XX= .02 .XXX= .005 ANGLE= .50°	
SURFACE ROUGHNESS HEIGHT 63 MICRONS INCHES OR LESS	
FABRICATION - UNDER 6 6 TO 24 24 TO 60 OVER 60	
± .06 ± .12 ± .19 ± .25	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	

REV. NO.	DESCRIPTION	DATE	BY
REVISIONS			
CUSTOMER:			
CUSTOMER PO NUMBER:			
YOUNG JOB NUMBER:			
TITLE			
BIN STYLE GRAVITY BLENDER			
MP-1			
INDUSTRIES, INC. MUNCY, PENNSYLVANIA 17756 TELEPHONE: 570-546-3165			
DRAWN BY: SLB		DATE: 12/24/20	
CHECKED BY:		SCALE=1:32	
DRAWING NUMBER		SHEET 1 OF 1	REV: 00
S-4-3787-2			