

Innovative System Solutions



Pneumatic Blending

Quick, Clean, Efficient Blending

Pneumatic (air) blending is one of the quickest, cleanest, and most efficient methods of achieving homogeneous batches of powdered, granular, and/or abrasive materials. Unlike conventional blenders, a pneumatic blender puts the user in control, providing the ability to customize a blending cycle that will best fit the application.

Simplified, Low-Maintenance Design

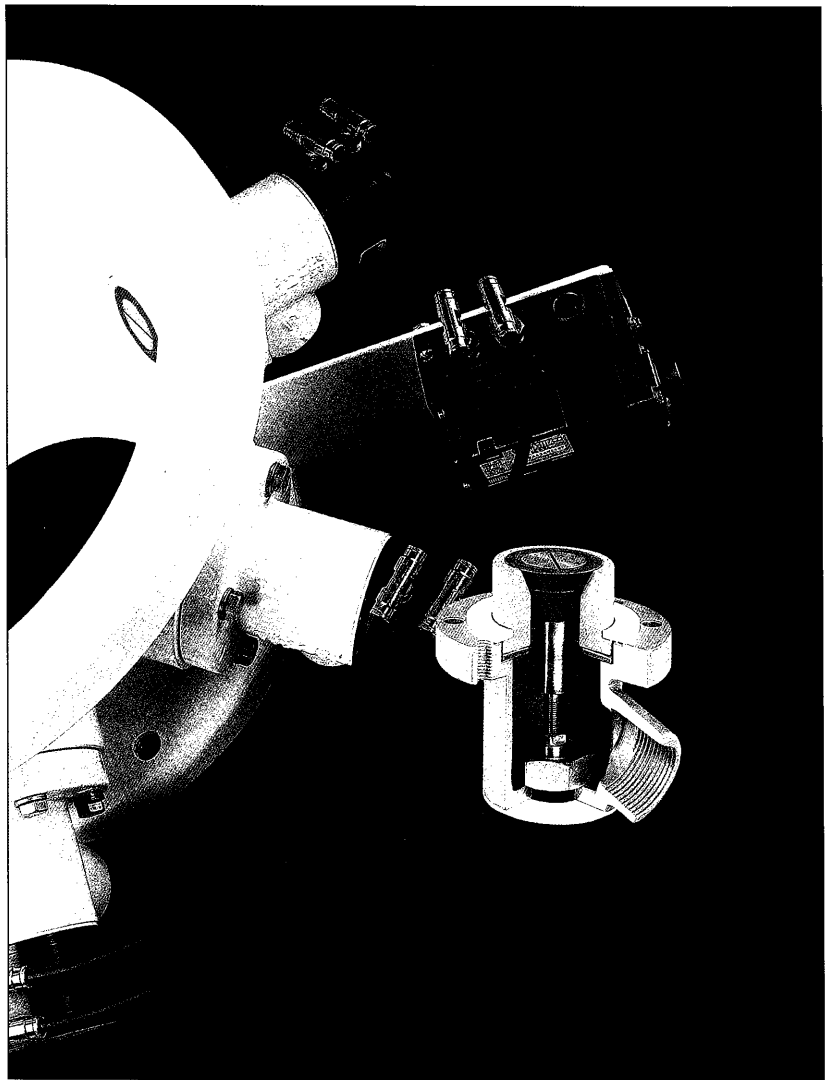
NOL-TEC has further refined the concept of air blending with the design of a reliable, low-maintenance pneumatic blender. This simplified blender is comprised of a casting and six removable air injection valve assemblies which are mounted in a circular pattern on the casting. Because there are virtually no moving parts, maintenance is minimal. All six valve assemblies are externally accessible and can be quickly and easily replaced or repaired on-site.

Gentle Pulses of Air With Easy Adjustment

When the valve assemblies are "pulsed," a piston is forced up, injecting a gentle blast of compressed air into the center of the material at various angles. The material is lifted upward and outward in a continuous circular motion. Blending action is optimized by adjusting the pressure, the "on" and "off" duration, and the frequency of the air pulses.

Silo Blender Available

NOL-TEC also offers a 32" diameter silo blender. This unit features twelve removable air injection valve assemblies and is ideal for the homogeneous blending of large batches of powdered, granular, and/or abrasive materials in storage silos.



Call today! We are equipped to offer complete testing of your pneumatic blending application.

Key Benefits:

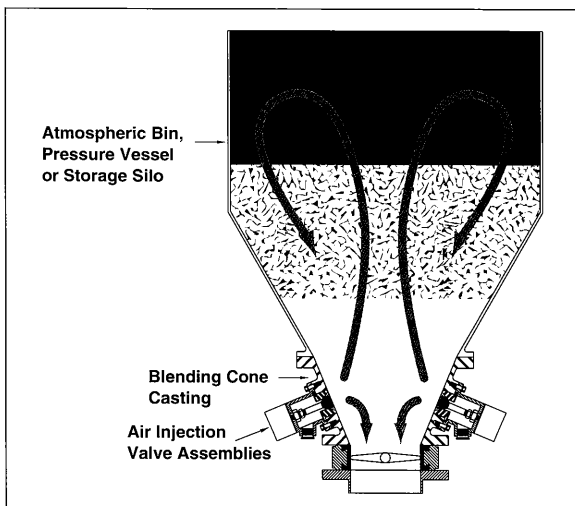
- Quick, gentle blending
- Ultimate control of blend cycle
- Clean operation
- Low maintenance
- Uses standard plant compressed air
- Stainless steel construction
- Explosion proof electrical

Standard Specifications:

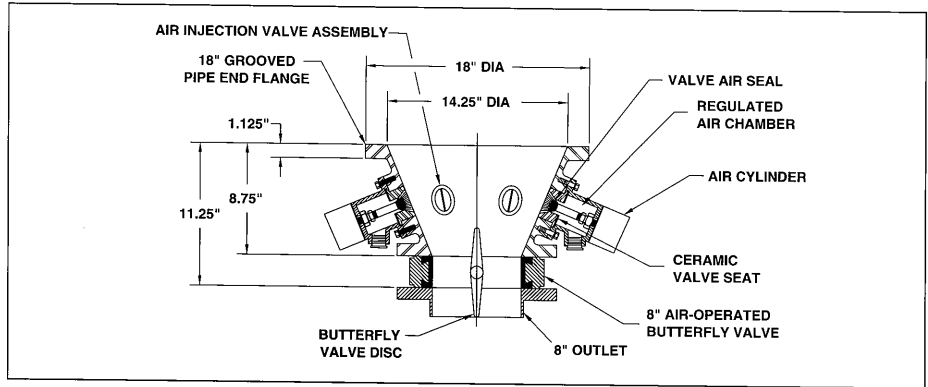
- Clean and dry air at min. 80 PSIG/max. 100 PSIG and correct pressure dew point
- 110-120V, 50/60HZ power required
- 200°F maximum material temperature

Optional Features:

- Custom mounting flanges
- Sanitary or high temperature design
- Interior coatings



Pneumatic Blending (continued)



Air Mizer™ — Air Consumption Data

System ran for 1.0 minute with no product in the system
 With Standard Air Assist — 72 SCFM • With Air Mizer — 2 SCFM

Then ran several 5,238 pound batches through a 4" Convey line

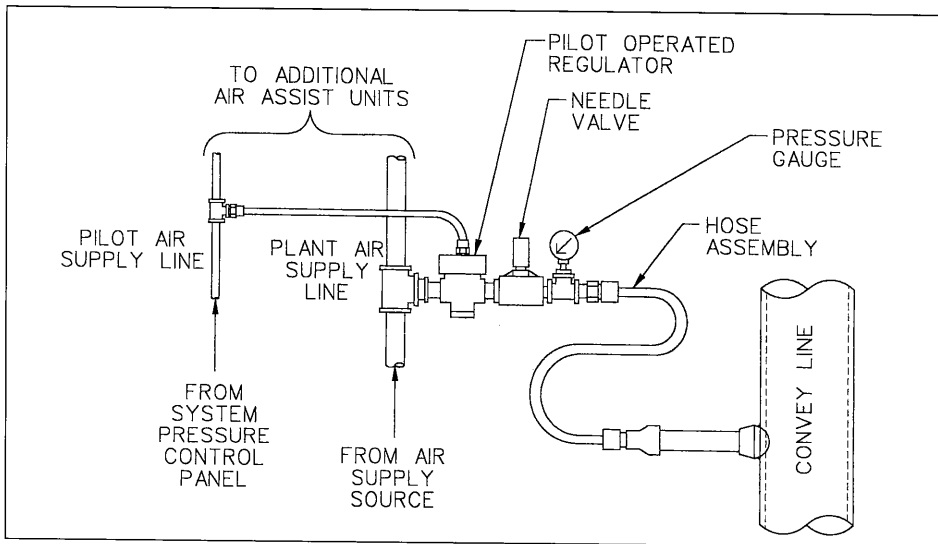
With Std. Air Assist

Average Convey Time:	8.5 Minutes	8.71 Minutes
Average Air Consumed:	673 Ft. ³	462 Ft. ³
Average SCFM:	79	53

Savings on Air Consumption with Air Mizer:

211 Cubic Feet of air for 5,238 pound batch equals 80 cubic feet of air per ton of batch delivered.

Air Assist



The Importance of Using "Air Assists/Boosters"

Before discussing the technical characteristics and differences between "air assist/booster" high and low pressure supply manifold technologies, let's take a look at why "air assists/boosters" are so very critical to the overall success of a dense phase pneumatic conveying system.

In a dense phase system without any type of "air assist/booster" technology, all of the air required to move the material down the convey line is introduced at the beginning of the system via the "transporter/pressure" vessel. This causes the conveying line to fill with one large slug of material which extends the entire length of the system.

The amount of pressure required to overcome the resistance of that large slug of material is high. In a longer system, should the resistance exceed the available pressure the system will plug.

Injecting air into the conveying line via "air assists/boosters" at strategic points causes the material being conveyed to form shorter "slugs". This essentially breaks the system down into several "mini-systems" thereby reducing the overall resistance and lowering air supply pressure required to move the material through the convey line. This results in the ability to reliably convey longer distances at lower velocities with minimal component wear and reduced product degradation and/or segregation. "Air assists/boosters" are especially critical in "non-purging/full line" systems where conveying is stopped with material in the conveying line. The "air assists/boosters" provide the means to readily resume conveying due to the shorter "slugs" of material.

Blenders

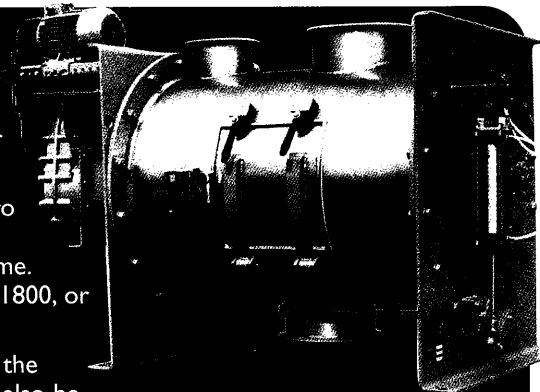
Batch Plow Blender

Thorough and Fast

These vigorous blenders mechanically fluidize solid particles using multiple, triangular shaped blending elements. As these precisely designed plows rotate, tri-axial forces cause the material to move to the left and right while also imparting an angular momentum creating a flurry of "colliding whirlpools" inside the shell.

Running at faster speeds than most solids mixers, plows can quickly blend micro ingredients (1% or less) as well as materials with widely varying bulk densities and particle sizes. Homogeneous blends are achieved in the shortest possible time. Additional shear can be added with high intensity choppers running at 900, 1200, 1800, or 3500 rpm.

Each NBE Blender is application specific, being configured especially to provide the results you need. Available in mild steel, 304 and 316 Stainless, plow blenders can also be equipped with liquid injectors, pressurized shaft seals, #2, #4 and #7 finishes, variable speed drives, heating/cooling jackets and a wide variety of inlet and discharge valves, including 30 and 60 degree total discharge doors.



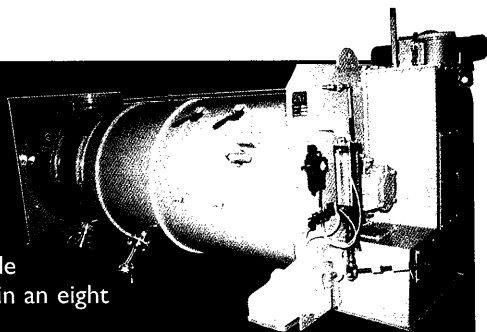
Continuous Blender

Maximum Throughput

Similar in mixing action to the Batch Plow Blender, this continuous version with its specially skewed plows, takes in multiple materials at one end and discharges a uniform stream of blended product from the opposite end.

Because short residence time results in high throughput a small mixer can produce the same product per day as other larger mixers. In fact, NBE's standard size mixers are capable of blending from a few hundred pounds to more than five million pounds of material in an eight hour shift.

Fill level and residence can be manually set, controlled with valve actuators or automatically controlled. Eleven different drive designs in horsepowers from .33 to 200 cover every processing challenge in today's industrial environment.

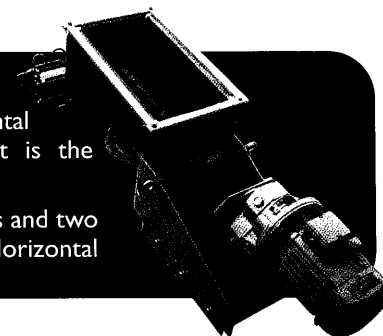


Horizontal Ribbon Blender

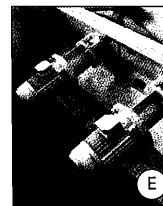
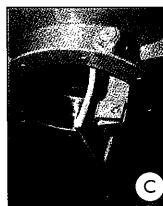
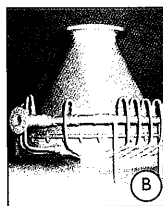
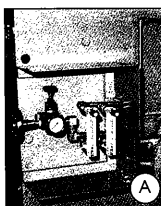
Reliable Solids Mixing

The workhorse of solids blending throughout the history of the processing industries, the Horizontal Ribbon Blender is now available with the heavy duty design and equipment quality that is the NBE standard.

Our double helix is actually four mixing ribbon elements on one shaft. Two opposing inner helixes and two counter-opposing outer ribbons provide a thorough but more gentle mixing action than plows. Horizontal ribbons are available with a variety of drive options and in carbon steel or stainless steel.



Accessories

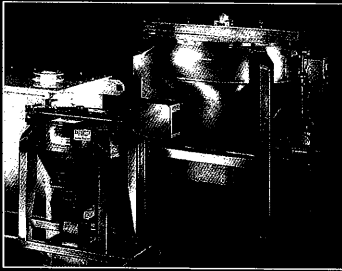


- A** Gas pressurized seals provide maximum protection of the equipment, the environment and your product.
- B** Liquid injection ports, pneumatic samplers and temperature sensors offer added convenience.
- C** Standard flap door valves eliminate dead spots around discharge.

- D** Pneumatic outlet controls regulate residence time and throughput.
- E** High intensity choppers are specifically configured for your application.

Vertical Ribbon Blender

Specifically Designed and Built For Fast Mixing and Cleaning



Few mixers on the market today can compare to the speed, efficiency and reliability of NBE's newest design in dry material mixers.

The unique construction of its one piece, conically shaped spiral blending paddle makes the Vertical Ribbon Blender one of the most versatile mixing units available.

Carefully designed, solidly built, the Vertical Ribbon Blender will handle most any material mixing need with day to day reliability. Mixing times will vary according to material characteristics. In most cases however, a full batch can be thoroughly mixed in 10 minutes or less.

Easy Cleaning

One of the most unique features of NBE's Vertical Ribbon Blender is this easy no tools required cleanability.

Each Mixer is equipped with lifting lugs on the

top cover beam. Simply lift the one piece top cover and mixing paddle assembly out of the Mixer body in one easy step. After cleaning, lower the cover and paddle assembly back into place. No tools required!

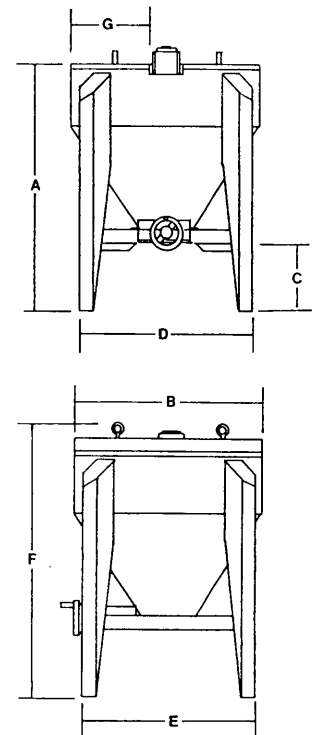
Specifications

Operational Specifications

Model No.	Batch Capacity Cu. Ft.	Discharge Opening	Electrical
45-550	20	4" x 8"	7.5HP, 3 Phase 230-460V
45-750	30	4" x 8"	10HP, 3 Phase 230-460V
45-1000	40	4" x 8"	15HP, 3 Phase 230-460V
45-1500	60	4" x 8"	20HP, 3 Phase 230-460V

Dimensional Specifications

Model	A	B	C	D	E	F	G
45-550	57"	52.5"	20"	44"	44"	65"	21"
45-750	67"	52.5"	20"	44"	44"	74"	21"
45-1000	76"	52.5"	20"	44"	44"	84"	21"
45-1500	95"	52.5"	20"	44"	44"	103"	21"

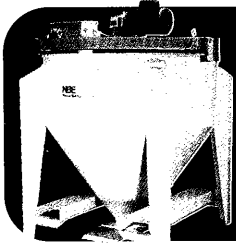


Features

- | | | |
|--|---|--|
| <p>Body Construction 14 ga. mild steel or stainless steel body; steep sloped hopper.</p> | <p>Loading Top load. Two piece cover, each hinged to top center beam.</p> | <p>Controls Manual push button on/off control with digital batch timer; emergency stop.</p> |
| <p>Mixing Paddle Conically shaped spiral; mild steel or stainless steel construction.</p> | <p>Discharge Bottom, off center gravity discharge. Complete material cleanout air operated slide gate closure.</p> | <p>Portable Heavy duty fork lift channels provided.</p> |
| <p>Drive Bottom drive; TEFC motor and reducer. Direct shaft drive.</p> | | <p>Finish Exterior surfaces painted light gray.</p> |

Quik Mix

Fast, Portable, Versatile Material Mixing



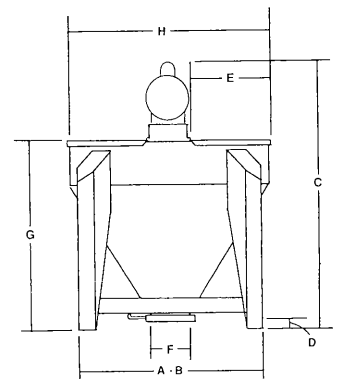
The NBE Quik Mix is a proven performer for dry material mixing and color blending. The direct drive vertical auger creates a unique blending action to ensure a complete, uniform mix every time. In most cases, pelletized and granular material batches can be mixed in five minutes or less.

Available in several different sizes from 350 lbs. to 3400 lbs. The NBE Quik Mix will handle most dry material mixing needs with day to day reliability.

Specifications

Operational Specifications

Model No.	Batch Capacity		Electrical	Auger RPM
	Lbs.	Cu. Ft.		
26-051	350	10.0	1HP/115V/Single ph.	226
26-101	850	24.3		
26-201	1100	31.5		
26-301	1540	44.0		
26-401	2835	81.0	2HP/115V/Single ph.	230
26-501	3423	97.8		



Quik Mix Options

- Vacuum Takeaway Boxes
- Vacuum Probes
- Quik Mix Stands
- Personnel Platform
- Material Platform
- Auger Discharge Stand
- Vacuum Discharge Stand
- Bag Opening Grate
- Stainless Steel Construction

Dimensional Specifications (inches)

Model	A	B	C	D	E	F	G
26-051	44	44	52	1.5	20.6	8	48
26-101	44	44	64	1.5	20.6	8	48
26-201	44	44	71	1.5	20.6	8	48
26-301	44	44	82	1.5	20.6	8	48
26-401	54	54	100	2	24.3	10	60
26-501	54	54	110	2	24.3	10	60

Whirlwind Mixers

Unequaled Production Reliability For Over 50 Years

The Whirlwind Mixer set the standard over 50 years ago when it was introduced as a reliable dry material Mixer. Today, the Whirlwind vertical mixer continues to be one of the most reliable quick Mixers available to the industrial market. Whether mixing at full capacity or partial batches you are assured of a complete, thorough mix in just minutes thanks to the unique "whirlwind" mixing system.

Whirlwind Mixers are widely used with pelleted and powdered plastics, chemicals and food ingredient materials where their rugged construction enables them to meet the demands of continuous production line operation.

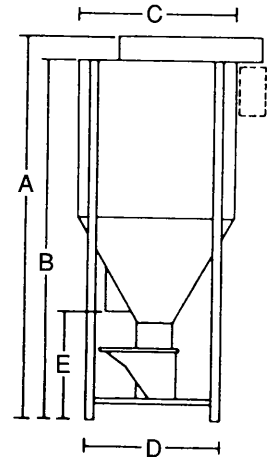


Whirlwind Mixers *(continued)*

Specifications

Available in several sizes with or without motor and controls for a wide range of applications . . .

	Model Numbers				
	100	200	300	400	500
Description	1700V	1234V	2934V	3834V	4934V
Mixer Capacity (cu. ft.)	30.2	51.6	70.8	108.8	132.0
A Overall Height	96.5"	95.0"	108.7"	131.7"	132.5"
B Height, Floor to Drum Top	90.5"	87.0"	100.7"	124.5"	124.5"
C Drum Diameter	40.0"	52.5"	61.0"	61.0"	68.7"
D Floor Space Required	36.0"	46.0"	44"	44.0"	51.0"
	Tri	Tri.	Sq.	Sq.	Sq.
E Discharge Height	31"	31"	31/41"	31/41"	81/41"
Auger Diameter	7"	10"	12"	12"	12"
Auger Length	87.0"	83.5"	96.0"	119.5"	119.5"
Shipping Weight (lbs.)	482	658	1017	1294	1549
Finish	Sandblasted and painted desert sand beige				



Options/Accessories

Model No.	Description
40-550	Access Door (for Models 1700V & 1234V)
40-2000	Extra unloading spouts (specify location)
40-2500	Extra View Window, 3" x 6"
40-3000	Leg Extensions: 6" to 12" 15" to 24"
40-9000	Enlarged Infeed Hopper for box or drum loading.

With Motors and Controls	Without Motors:
Models: 40-100	Models: 40-1700V
40-200	40-1234V
40-300	40-2934V
40-400	40-3834V
40-500	40-4934V

Replacement Parts

- Paddles
- Seals
- Injection Parts
- Valves

Call today for information on Mixing and Blending parts.