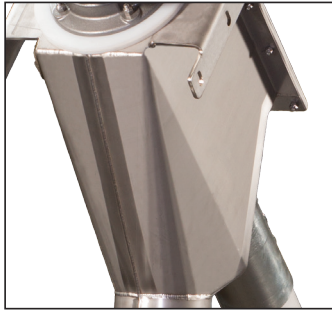


Flexible Screw Conveyors

Formed and Welded Discharge Head: No Bolts, Joints, Gaps, or Material Buildup.



Continuous-weld seams, ground to a No. 4 finish, are hand-burnished to ensure the 12 gauge, 304 stainless steel discharge head has no gaps, joints, bolts, or resulting material buildup common with bolt-together, sheet metal construction of commodity discharge head designs.

Gear Drives and Motors Specified for Power, Performance, and Longevity

Optimal output torque and motor horsepower combine to bring maximum power and efficiency to the most challenging flexible screw conveying operations. NBE motor and gear drive specifications turn difficult material types, capacity requirements, and conveying distances from problems to production.

Power and Control: Combining the Art & Science of Flexible Screw Conveying

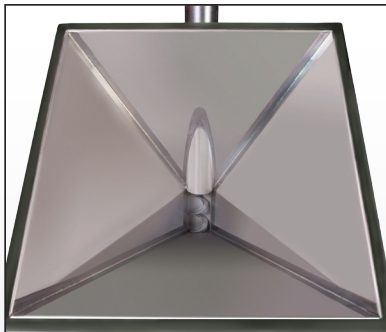


The principle of helicoid motion as a conveying method is widely applied; yet, NBE has advanced this science with performance-proven flexible screw materials of construction and process-specific flight designs. 3/8-inch thick, wide-face flat or beveled screw flights, 3/4-inch diameter round bar flights, or 1/2-inch square bar flights; all available in multiple O.D., I.D., and pitch combinations, ensure sustained conveying, at designed capacities, of even the most demanding materials and bulk densities. NBE flexible screws are expertly specified as process-critical components, not consumable commodities.

Tough Materials, Tough Duty Cycles, or Both: Thick-gauge Casings Protect Your Productivity

Double the thickness of typical casings, NBE 1/4-inch thick UHMW or polypropylene casings protect crucial process operations from the early wear and worry of thin-wall casings. For harsh requirements or harsh environments, NBE 11 gauge stainless steel or carbon steel casings ensure confident operation whether conveying pharmaceuticals or mined minerals.

Optimal Material Infeed: The Converging of Process-specific Hopper Design and Construction



Accurate, repeatable, and reliable downstream material supply begins at the hopper. NBE hopper designs have steep-slope sidewalls, sheer-drop material feed guides, and a flangeless conveyor intake that draws in material and eliminates the bridging, ratholing, and cleaning access problems associated with typical flange-style designs.

12, 10, and 7 gauge 304 Stainless Steel Construction: Build Specs That Deliver Performance, Not Doubt.



12 gauge, 304 stainless steel walls; 10 gauge, 304 stainless steel legs; 7 gauge, 304 stainless component stand-offs; continuous-weld seams, ground to a No. 4 finish then hand-burnished to improve material release. NBE hoppers are built to specs that will keep your process running; without a doubt. Also available are controls and integration, various material flow devices, and multiple gear drive and motor packages.



Forward Thinking. Real Results

NATIONAL BULK EQUIPMENT

Component Specifications

NBE flexible screw conveyor systems are highly configurable; enabling the design of a hopper, conveyor, or combination system that is specific to the particular requirements of each application. Specifications for many common flexible screw types and sizes, casing materials and sizes, and inner core sizes are provided here. For applications requiring material testing, engineering and controls assistance, hopper designs or components not listed, or for integration of flexible screw conveyor systems to the full line of NBE bulk material handling systems, contact the NBE flexible screw conveyor application engineering team, at: 616.399.2220, or sales@nbe-inc.com

Flexible Screw Specifications:

Flat Wire Type (Regular & Wide-face)	Serial No.	Diameter & Pitch (in.)	Flight Dimensions (in.)
Recommended for use with lightweight material types, including those that are highly aerated, powdered, or fluidizing; material is typically free- to semi-free flowing.	250-FW	1.75 OD x 1.00 ID x 1.75 pitch	.1875 x .375
	350-FW	2.375 OD x 1.50 ID x 2.00 pitch	.1875 x .4375
	350-HDFW	2.375 OD x 1.50 ID x 2.00 pitch	.250 x .4375
	450-FW	3.50 OD x 2.00 ID x 3.50 pitch	.250 x .750
	450-HDFW	3.50 OD x 2.00 ID x 3.50 pitch	.375 x .750
	450-WFFW	3.625 OD x 1.375 ID x 3.25 pitch	.1875 x 1.125
	500-FW	4.00 OD x 2.00 ID x 4.00 pitch	.250 x 1.00
	650-FW	5.50 OD x 2.50 ID x 5.50 pitch	.375 x 1.50
	850-FW	7.50 OD x 2.50 ID x 7.50 pitch	.375 x 2.50
Beveled Wire Type (Regular & Wide-face)	Serial No.	Diameter & Pitch (in.)	Flight Dimensions (in.)
Recommended for use with flow-resistant material types, including those that are sticky, tend to pack, smear, cake, or crumble; material is typically semi-free to sluggish flowing.	350-KE	2.375 OD x 1.50 ID x 2.00 pitch	.250 x .4375
	450-KE	3.50 OD x 2.00 ID x 3.50 pitch	.250 x .750
	450-HDKE	3.50 OD x 2.00 ID x 3.50 pitch	.375 x .750
	450-WFKE	3.625 OD x 1.375 ID x 3.50 pitch	.1875 x 1.125
	500-KE	4.00 OD x 2.00 ID x 4.00 pitch	.250 x 1.00
	500-HDKE	4.00 OD x 2.00 ID x 4.00 pitch	.375 x 1.00
	650-KE	5.50 OD x 2.50 ID x 5.50 pitch	.375 x 1.50
	850-FW	7.50 OD x 2.50 ID x 7.50 pitch	.375 x 2.50
	Round Bar Wire Type	Serial No.	Diameter & Pitch (in.)
Recommended for use with highly abrasive material types, including those that are granular, irregular shaped, or flakes or pellets; material is typically semi-free to sluggish flowing.	250-RW	1.50 OD x 1.00 ID x 1.75 pitch	0.250
	350-RW	2.25 OD x 1.50 ID x 2.00 pitch	0.375
	350-HDRW	2.375 OD x 1.50 ID x 2.00 pitch	0.438
	450-RW	3.00 OD x 2.00 ID x 2.50 pitch	0.500
	450-HDRW	3.50 OD x 2.00 ID x 3.25 pitch	0.750
	500-RW	4.00 OD x 2.875 ID x 4.00 pitch	0.563
	650-RW	5.125 OD x 3.625 ID x 4.875 pitch	0.750
Square Bar Wire Type	Serial No.	Diameter & Pitch (in.)	Flight Dimensions (in.)
Recommended for use with high-bulk density material types, including those that are highly abrasive; material can be free-, semi-free, to sluggish flowing.	350-SB	2.375 OD x 1.50 ID x 2.00 pitch	0.375
	450-SB	3.00 OD x 2.00 ID x 2.50 pitch	0.500

Casing Specifications:

UHMW-Polyethylene	Serial No.	Diameter (in.)	Bend Radius (ft.)
Provides the highest impact strength and tensile strength of any thermoplastic; is non-corrosive, temperature resistant, FDA and USDA approved, and aids material flow.	250	2.50 OD x 2.00 ID	6
	350	3.50 OD x 3.00 ID	12
	450	4.50 OD x 4.00 ID	20
	500	5.00 OD x 4.50 ID	—
Polypropylene	Serial No.	Diameter (in.)	
Provides an alternative to UHMW-PE for applications with large-diameter casing requirements.	650	6.625 OD x 6.00 ID	
	850	8.625 OD x 8.00 ID	
Type 304 Stainless Steel	Serial No.	Outside Diameter (in.) x Gauge	
Provides excellent corrosion and contamination resistance relative to carbon steel; is FDA and USDA approved; rigidity enables longer runs between supports than UHMW.	250	2.50 OD x 16	
	350	3.50 OD x 12	
	450	4.50 OD x 12	
	500	5.00 OD x 11	
	650	6.625 OD x 11	
	850	8.625 OD x 11	
Carbon Steel	Serial No.	Outside Diameter (in.) x Gauge	
Provides high-strength performance where corrosion resistance is not required; an economical alternative when FDA or USDA compliance is not necessary.	250	2.50 OD x 16	
	350	3.50 OD x 12	
	450	4.50 OD x 12	
	500	5.00 OD x 11	
	650	6.625 OD x 11	
	850	8.625 OD x 11	

Inner Core Specifications:

UHMW-Polyethylene	Serial No.	Outside Diameter (in.)
For improving material flow efficiency; the inner core, placed through the length of the screw axis, prevents reverse flow or flooding of highly aerated material, easily fluidized material, or material being conveyed up extreme inclines.	250	.6875 OD, inner core
	400	1.875 OD, inner core
	500	1.875 OD, inner core
	650	2.32 OD, inner core, flat wire only
	650	2.96 OD, inner core, round wire only
	850	2.96 OD, inner core, flat wire only
	850	2.96 OD, inner core, round wire only



Bulk Bag Fillers



Bulk Bag Dischargers



Drum & Container Fillers



Drum & Container Dischargers



Agitator Hoppers



Bag Dump Stations



Bulk Material Mixers



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