DIXON AUTOMATIC TOOL, INC.

Products for Automated Assembly

FEED SYSTEMS

VIBRATORY FEEDER BOWLS, SUPPLY HOPPERS, SOUND ENCLOSURES, FEED TRACKS, FEEDER CONTROLS, MOUNTED ON BASEPLATE OR BASE

We offer a selection of Vibratory Feed Systems with bowl diameters from 6 in. to 36 in. in size. Our stainless steel or cascade bowls can be tooled for a wide range of pieceparts and or fasteners. Each tooled bowl is furnished with the necessary drive control. Custom feed tracks can be provided with vibratory inline tracks or gravity incline tracks depending on the application, along with inline vibratory track drives that move pieceparts effectively for horizontal feed track applications. Stainless steel Supply Hoppers are also available that can be furnished up to 5 cu-ft. capacities. These hoppers provide a smooth transition of parts to the feeder bowls that will be maintained to the proper level for maximum efficiency.

Feeder Specs

Inch Basic	Cubic Inches	Liters
6 S.S.	28.27	0.5
8 S.S.	50.26	0.8
9 cast	63.62	1.0
12 cast dual	113.09	1.8
12.5 cast	122.72	2.0
10 S.S.	78.54	1.3
12 S.S.	113.09	1.8
15 S.S.	176.71	2.9
18 S.S.	254.47	4.2
21 S.S	346.36	5.7
24 S.S.	452.39	7.4
30 S.S.	706.86	11.6
36 S.S.	1017.88	16.7
42 S.S.	1385.44	22.7

*Assuming 1” deep
1 liter ≈ 61 cu. in

The customized Feed System below is one of eight feed systems tooled to feed threaded fasteners, and convey them to an automatic end-of-arm Screwdriver mounted to a robot arm. The Feed System is complete with a vibratory feeder, inline feed track, parts escapement, convey delivery tube, sound enclosure, supply hopper and support table.

VIBRATORY BOWL FEEDERS

Vibratory Feeders with stainless bowls are available in a range of sizes and capacities as listed on the spec. chart. Three sizes of cast aluminum bowls are also available. Each feeder bowl can be tooled for a range of fasteners and pieceparts. Our aluminum feeder bowls have a Surlyn plastic coating to provide longer wear and softer cushion for the parts being fed. Vibratory feeder controls are listed under drive controls below.

SUPPLY HOPPERS

Vibratory Driven Supply Hoppers are standard and available in a range of liter sizes. Each hopper monitors the distribution of pieceparts into a vibratory feeder. A piecepart sensor attachment can be adjusted to assure the proper level of pieceparts are maintained in the vibratory feeder bowl. Vibratory controls are listed under Drive Controls below.

Cubic Ft.	.3(for 107)	0.25	0.5	0.8	1	2	3	4	5	6
Liters	8.5	7.1	14.2	22.6	28.3	56.6	85	113.3	141.6	169.9

1 cu ft ≈ 28.32 liters

SOUND ENCLOSURES

Sound Enclosures are custom made to encompass the vibratory feeder's size. The steel enclosures are fabricated from 18ga. stock and lined with a sound absorbent material to reduce decibel readings. Enclosures may also be modified to enclose a section or all of a vibratory feed track adjacent to the enclosure. Each enclosure has a polycarbonate plastic removable cover.

FEED TRACKS

Feed Tracks convey pieceparts from a parts feeder to a delivery point. Each track is fabricated to conform to the exact shape of the piecepart. All steel tracks are hardened to assure a longer wear life. Tracks mounted at an incline allows the pieceparts to be conveyed by gravity. Tracks may also convey the pieceparts horizontally by mounting the track to a vibratory inline track drive.

FEEDER CONTROLS

Featuring Rodix Controls:
1.Single digital control model; for Bowl
2.Dual digital controller model; for Bowl and Inline or Hopper
3.Triple digital controller model; for Bowl, Inline Track and Hopper

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