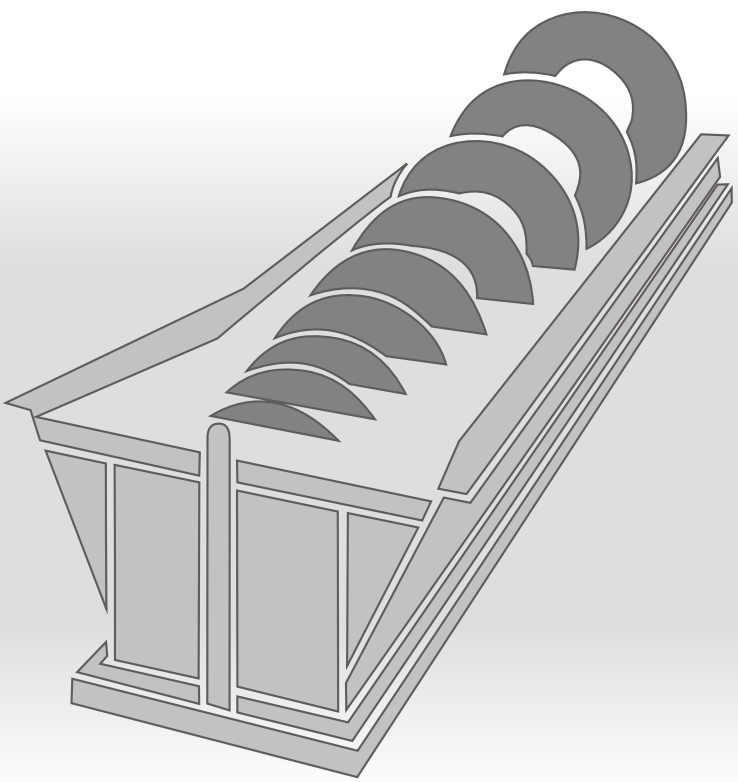
Triveni

Classification

Separation

Clarification/
Thickening

Mechanical
Dewatering



Spiral Classifiers

Classification

Triveni Spiral Classifier - Features

Triveni Spiral Classifiers are available in a comprehensive range, designed to fit a variety of classification applications in wide range of industries.

Triveni Spiral Classifiers are durable, and offer rugged construction, low maintenance and markedly lower energy consumption.

Triveni Spiral Classifier has several novel design features for improved performance, operational ease and long trouble free service.

Tank and Substructure

The tank is rigid and well-supported unit in welded construction. Two large main beams provide the substructure support for the tank and drive mechanism. A minimum of intermediate foundation supports are required

Tank Design Configurations

Triveni Spiral Classifier tanks are engineered to provide the most effective pool area and overflow velocity requirements. By combining the proper submergence of the Spiral with one of the tank designs, a wide range of combinations is possible. (Refer to table on the last page.) The proper combination of pool depth, area and Spiral construction results in controlled turbulence for accurate size separations, efficient washing and/or dewatering as required. Triveni Spiral Classifiers can be tailored to suit your needs..

Spiral Construction

Pre-formed sectionalized steel flights form a continuous Spiral helix. Triveni Spiral Classifiers utilize an increased lead or helix angle to form the continuous high pitch Spiral for greater raking capacity.

Open Spirals

Open space along shaft for slurry flow is provided. The flights and shoes form a ribbon allowing slurry to flow in the centre shaft area of the pool. This controls the settling rates and spreads the flow.

Spiral assemblies are ruggedly constructed and are capable of raking high solid loads under continuous operating conditions

Main Shaft

Large diameter steel tubuler shafts are designed for minimum shaft deflection under most severe operating conditions.

Wearing Shoes

Heavy duty abrasion resistant, replaceable wearing shoes protect the working face of the flight from wear. These wearing shoes can be provided in a variety of material of construction. The wearing shoes are fastened to the flights with counter sunk head bolts. The high pitch of the Spiral reduces sliding friction resulting in a less wear of the shoes.

Flight Arms

The flight arms are cast integrally with the shaft clamps. These clamps bolt tightly around the large diameter main shaft at spaced intervals.

Main Gear and Pinion

The main gear is directly mounted on the main Spiral shaft and is made of high quality iron castings. The machined teeth of the gear result in smooth engagement for maximum torque and quiet, trouble free performance.

The upper main bearing is over sized for normal Classifier service. Also this bearing and gear pivot is on the true centre of the pinion to ensure alignment while operating the Classifier during raising or lowering of the Spiral.

Triveni Spiral Classifier - Features

Reducer Drive

Adequately sized Reducer Drive is provided for heavy duty Classifier service. Further reduction is provided by a worm gear reducer, driven by a V-belt drive and a geared motor. The drive offers wide HP and speed selection.

Sealed, Submerged Bearing

The sealed and submerged bearing is simple in design and, for large size units, consists of two heavy duty roller bearings mounted in a special housing protected from foreign material by spring loaded grease seals plus a labyrinth seal. Submerged bearing assembly, bolted to the lower end of the Classifier shaft, is easily raised for periodic inspection or preventive maintenance by means of the Spiral lifting device.

Adjustable Weirs

The Adjustable Weir overflow, which varies the Spiral submergence and pool area, consists of removable steel weir bars and guide bars welded to the tank sides at the overflow end.

Manual and Hydraulic Spiral Lifting Devices

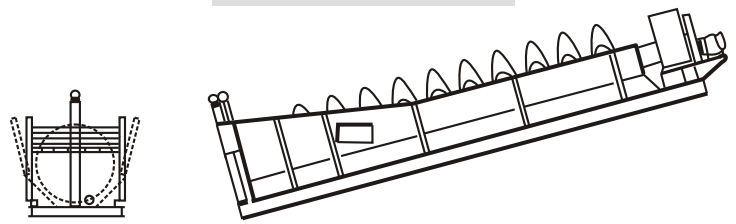
Two options are provided.

A manual handwheel for raising and lowering of Spiral assembly by a simple positive action, handwheel operated screw device.

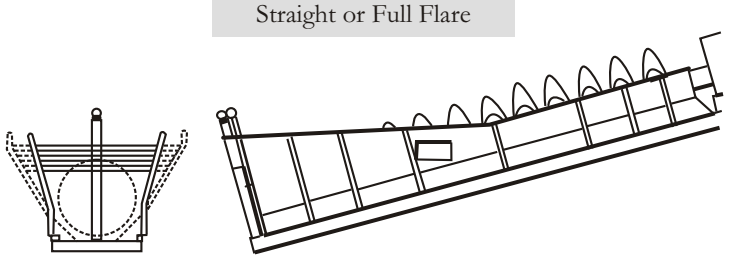
Manual lifting arrangement are usually provided with smaller size range.

Alternatively, spiral assembly can be raised and lowered by a Hydraulic system. Such an arrangement is common for 48" diameter and larger units. The assembly can be provided with a motorized pump as an option for greater operating convenience.

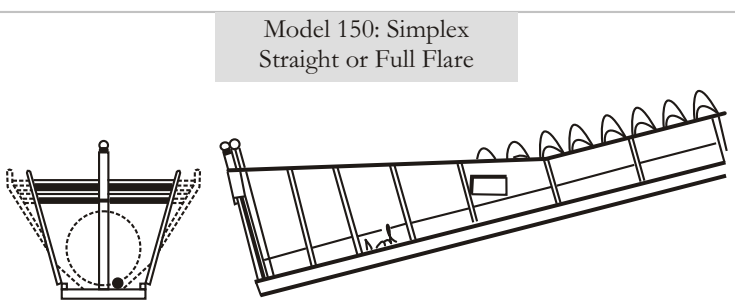
Model 100: Simplex
Straight or Modified Flare



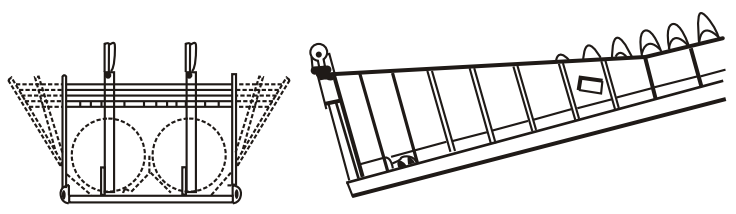
Model 125: Simplex
Straight or Full Flare



Model 150: Simplex
Straight or Full Flare



Model 100, 125, 150: Duplex
Straight, Modified, or Full Flare



Triveni Spiral Classifiers - Sizes, Configurations & Capacities

Spiral Classifier Size	Tank Configuration	Overlflow Pool Area - Square Feet			Spiral Pitch	Raking Capacity (TPH) Per Spiral Revolution	Spiral R.P.M.	Motor H.P.	Approximate Shipping Weights (Kgs)
		Model 100	Model 125	Model 150					
24" Simplex	Straight Modified Flare Full Flare	15.1 16.1 ---	---- 22.4 25.9	---- 28.4 34.3	Single Pitch Double Pitch	0.5-1.0 1.0-2.0	6-16	1.5-3	1900
30" Simplex	ST MF FF	22.8 22.5 ---	--- 34.5 40.0	--- --- ---	SP DP	0.8-1.7 1.7-3.4	5-13	1.5-3	2400
36" Simplex	ST MF FF	37.4 36.2 ---	--- 48.8 57.1	--- 62.5 76.0	SP DP	1.7-3.5 3.5-7.0	4-11	2-5	3500
42" Simplex	ST MF FF	44.3 49.6 ---	--- 66.4 78.0	--- --- ---	SP DP	2.4-4.8 4.8-9.6	3.5-9	2-3 2-7.5	4400
48" Simplex	ST MF FF	57.1 64.1 ---	--- 86.0 101.0	--- 110.0 134.0	SP DP	4.3-8.7 8.7-17.4	3.2-8	3-7.5 5-10	6500
60" Simplex	ST MF FF	88.6 99.6 ---	--- 134.0 158.0	--- 171.0 209.0	SP DP	8.6-17.3 17.3-34.6	2.6-6.5	7.5-15 15-20	12800
66" Simplex	ST MF FF	107.0 120.4 135.9	136.5 161.5 190.4	167.0 207.7 255.0	SP DP	10.2-20.4 20.4-40.8	2-6	10-15 15-20	16000
72" Simplex	ST MF FF	127.0 143.0 ---	161.0 191.0 225.0	195.0 243.0 299.0	SP DP	13.9-27.8 27.8-55.6	2-7	10-20 15-30	19000
78" Simplex	ST MF FF	148.0 167.0 ---	188.0 224.0 265.0	228.0 285.0 351.0	SP DP	15.6-31.5 31.5-63.0	2-6	10-20 15-30	21000
72" Duplex	ST MF FF	243.0 276.0 313.0	281.0 328.0 380.0	315.0 379.0 453.0	SP DP	13.9-27.8 27.8-55.6	2-7	25-40	36000
78" Duplex	ST MF FF	285.0 323.0 367.0	326.0 381.0 453.0	366.0 422.0 530.0	SP DP	15.6-31.5 31.5-63.0	2-6	30-50	40000

Higher sizes upto 96" Duplex design and smaller sizes upto 9" Simplex design are also available.
Company reserves the right to alter specifications without notice

* Weights indicated are for standard designs and with modified tank configuration.

Please address your enquiries to :

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