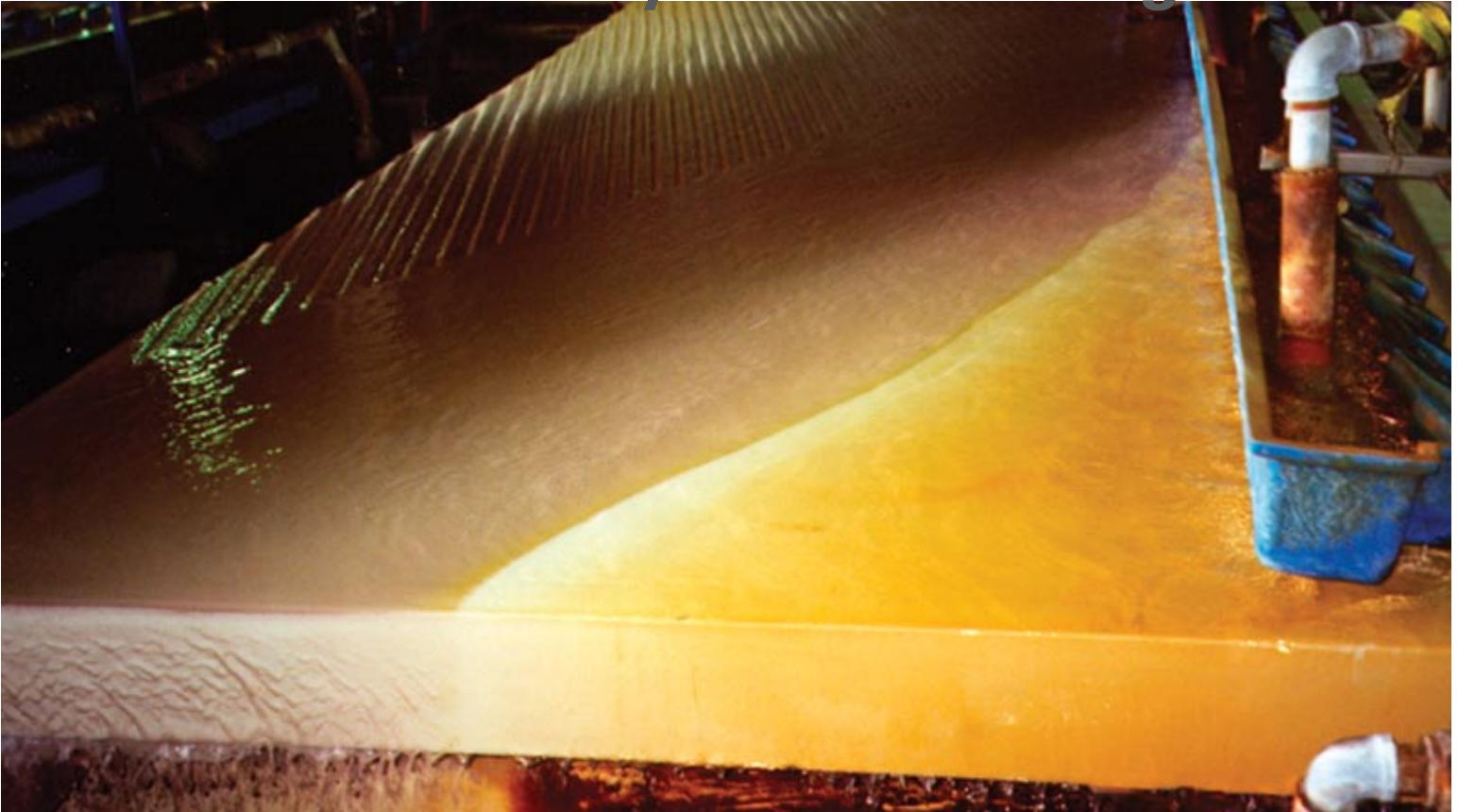


# Wilfley® Concentrating Tables



## Your Process Benefits

- Precise separation
- Ability to make a sharp cut
- High recovery
- Close control of product grade
- Riffles and deck form a common surface
- Adjustable stroke length and speed

## Gravity Separation Shaking Devices

The Wilfley Table method of gravity concentration was developed 70 years ago and has been an important factor in the success of many metallurgical processes. There are many applications where the Wilfley Table is of particular value and cannot be equaled for economical and efficient performance.

Wilfley Concentrating Tables are designed to wet gravity-based separation of minerals and other granular materials. The tried and true concentrators, now made with durable modern day materials, are an industry standard that provide for efficient beneficiation and cleaner-stage processing in many industries such as mineral sands, precious and base metals.

**Outotec**  
More out of ore

# Construction and mechanical features



13B table with sump pump system

## Head Motion

Wilfley Tables are furnished with a totally enclosed self-oiling head motion of heavy cast iron to contain an oil reservoir for perfect splash lubrication. This feature protects the anti-friction roller bearings, reducing operating and maintenance costs to a minimum. Within this housing is a pitman carried on a forged steel crankshaft and connected through toggles to a yoke. Connected to the yoke are two cold rolled steel bars carried through the housing on brass bushings. This arrangement imparts horizontal motion to the table deck. The entire mechanism is held together by a heavy coil spring under compression, adjustable to compensate for wear of the moving parts.

## Stroke adjustment

By raising or lowering one end of the toggle with an adjusting screw, a variance in stroke length from 3/4" to 1 1/4" can be obtained. Where a shorter stroke is required, a special offset crankshaft can be supplied.

Model	Table Description	Configurations Available		
		Single	Double	Triple
6A	Industrial (Standard)	X	X	x
6A	Industrial (Oversized)	X	X	X
12	Half Size	X		
13A	Laboratory	X		
13B	Pilot Plant		X	

Table 1. Model deck configurations

## Self-locking tilting mechanism

The deck is supported on four bearings carried in rocker pockets that are a part of the tilting beams. A rod with handwheel makes a screw connection with the lower part of the yoke. Through miter gears and shafts, the tilting motion is transmitted evenly through the entire length of the table. The inclination may be varied from zero to one inch per foot.

## Deck Surface Cover

- Option 1 & 2 above: Rubber
- Option 1 & 2 above: Linoleum
- Option 3 above: Fiberglass with gel-coat finish. (Lab units only)



Wilfley tables ready to ship

## Decks

Wilfley Table Decks can be supplied in the following composites:

1. Redwood laid diagonally on pine frame
2. Marine plywood (3/4") on pine frame Both 1 and 2 are supported by steel longitudinal stringers, structural steel braces and trusses. Flat steel braces distribute the drawbar pull equally to all parts of the deck minimizing the danger of warping or buckling.
3. Fiberglass decks with gel-coat finish are available for laboratory models.

## Riffles

Riffles are furnished either of selected mahogany or hardwood for wood decks. Many types of riffles have been developed to meet specific problems. Recommendations will be made for your concentration application. Riffles are built-in on fiberglass decks.

## Feed and Water Box

A wooden feed distributing box with hopper and a long water box are attached to the side of the deck giving a very even distribution of feed and water. Optional fiberglass units are available for the laboratory tables.

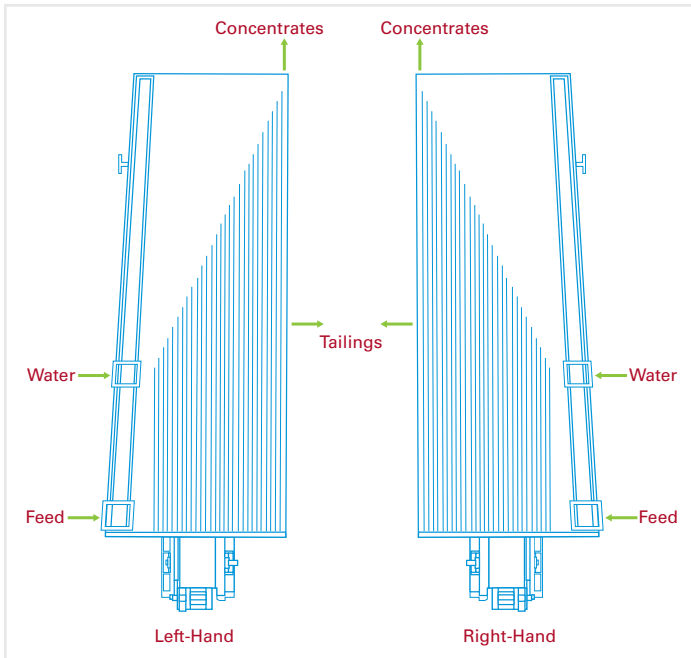
## Drives

Available constant speed V-belt motor drive or variable speed motor drive. Special gasoline engine drives can be furnished.

## Launders

Available in steel with rubber lining for 6A and 12 sizes. Fiberglass for lab units.

# Operating data



Tables are offered in left or right-hand.

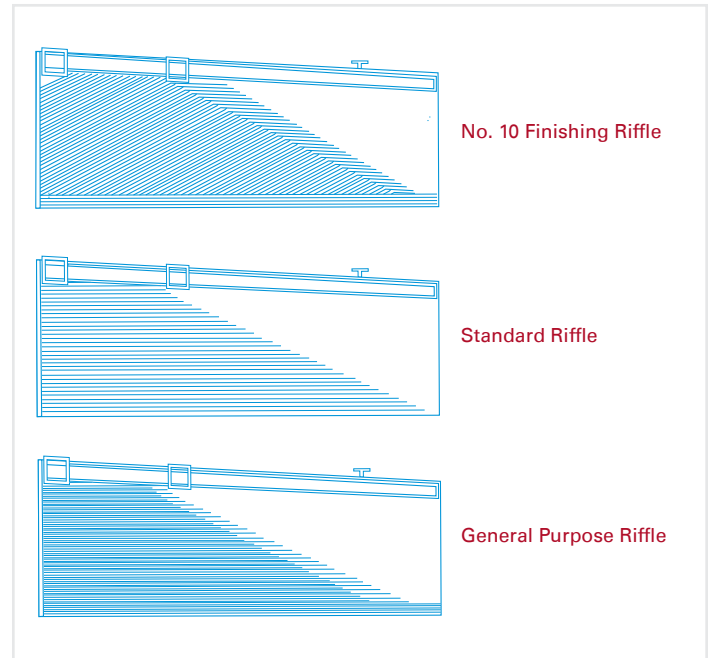


Table riffle configurations

Model	Coarse Feed			Fine Feed		
	Stroke Length Range Ins. (mm)	Stroke RPM	Max. Capacity Lbs/Hr (Kg/Hr)	Stroke Length Range Ins. (mm)	Stroke RPM	Max. Capacity Lbs/hr (Kg/Hr)
6A (STD)	3/4-1 (19-25)	260-280	4000 (1800)	1/2-3/4 (13-19)	300	1600 (750)
6A (Oversize)	3/4-1 (19-25)	260-280	4200 (1900)	1/2-3/4 (13-19)	300	1800 (800)
12 (1/2 Size)	3/8-5/8 (10-16)	260-300	1000 (450)	3/6-5/8 (10-16)	260-300	400 (180)
13A (Lab)	1/4-1/2 (6-13)	250-350	150 (70)	1/4-1/2 (6-13)	250-350	100 (45)
13B (Pilot Scale)	1/4-1/2 (6-13)	250-350	250 (115)	1/4-1/2 (6-13)	250-350	200 (90)

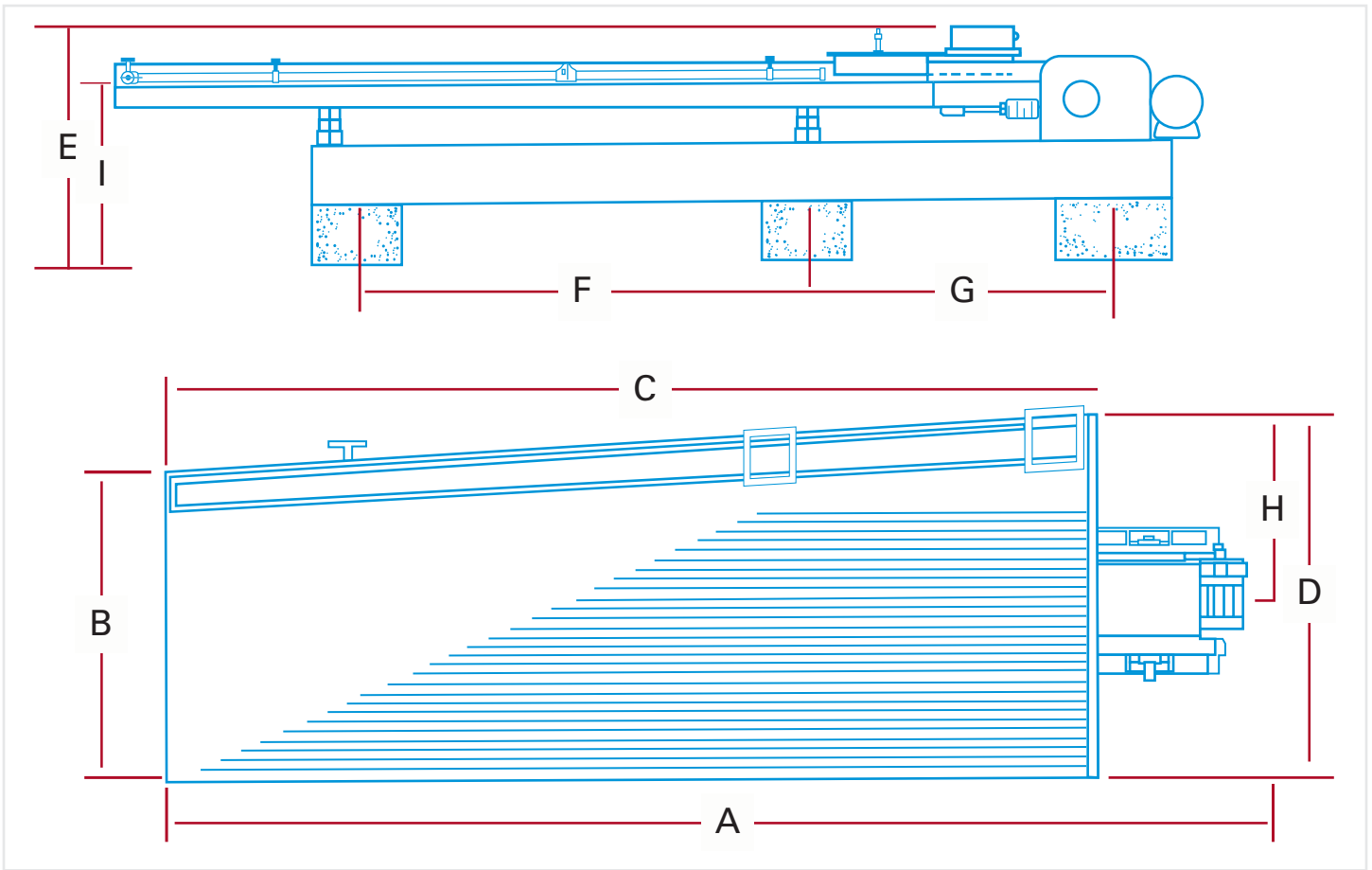
Note: Above capacities and operating data apply for most industrial minerals. The capacity of any Wilfley Table varies with the character of the ore, amount of mineral contained, dilution of the feed, and the fineness of the feed. Exclusions are coal and non-mineral reclamation applications such as chopped circuit boards.

Table 2. Capacity and operating data

Type of Material	Recommended Size of Feed	Suggested Feed % Solids	Maximum Capacity Tons/Hr
Recycled Metals/ Plastics	3/8"	20	7.0
Gold (Free or with Pyrite)	-35 mesh	30	1.25
Heavy Minerals (Zircon, Rutile, Monazite, etc.)	-20 mesh	25	1.25
Copper (Sulphides)	-28 mesh	30-40	2.0
Zinc (Sulphides)	-20 mesh	17	1.0
Lead (Sulphides)	-48 mesh	30	1.25
Tungsten	-20 mesh	22	1.0
Potash	-1/16"	Brine Solution	1.5
Talc	-200 mesh	20	0.5

Note: The table lists several types of ores and shows the approximate capacity under average operating conditions when making a final concentrate. For scalping work, the capacities would be considerable increased.

Table 3 Applications for single deck tables



Wilfley table aerial and side view

Model	Water Requirements GPM (Liters/Min)	HP (KW)	Shipping Weight Lbs. (Kgs.)	Shipping Volume Cu. Ft. (Cu. M)	Dimensional Information Ins. (mm)								
					A	B	C	D	E	F	G	H	I
6A (Standard)	5-20 (19-76)	2 (1.5)	3800 (1724)	156 (4.4)	144 (3658)	60 (1524)	177 (4496)	72 (1829)	38 (965)	108 (2743)	61 (1549)	35 (889)	29 (737)
6A (Oversize)	5-20 (19-76)	2 (1.5)	3980 (1805)	170 (4.8)	232 (5893)	72 (1829)	177 (4496)	84 (2134)	38 (965)	108 (2743)	61 (1549)	41 (1041)	29 (737)
12	3-15 (11-57)	2 (1.5)	2100 (953)	97 (2.8)	144 (3658)	40 (1016)	92 (2337)	46 (1168)	27 (686)	87 (2210)	-	22 (559)	27 (686)
13A	1-4 (4-15)	1/3 (0.25)	330 (150)	24 (0.7)	70 (1778)	14 (356)	40 (1016)	18 (457)	14 (356)	-	-	9 (229)	-
13B	1-6 (4-23)	1/3 (0.25)	350 (159)	25 (0.7)	81 (2057)	20 (508)	50 (1270)	24 (610)	14 (356)	-	-	11 (279)	-

Table 4. Wilfley table specifications and operating requirements

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