FLOTATION MACHINE

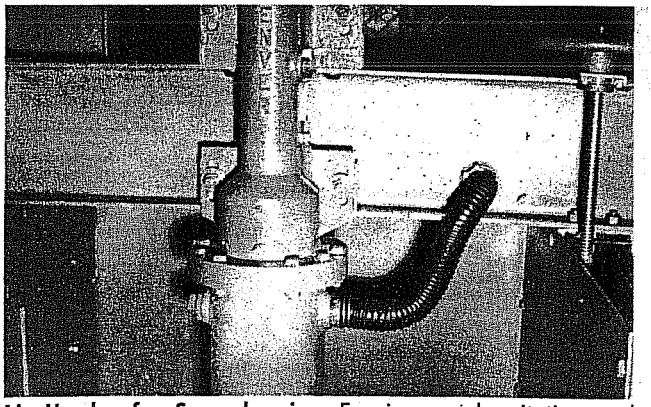
★ Low Tailings

★ High Grade Concentrates

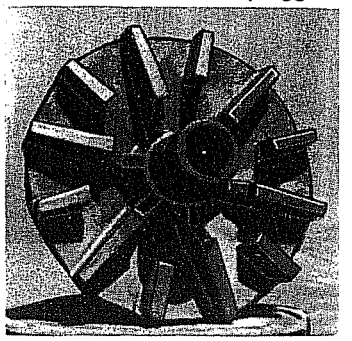
The Denver "Sub-A" Standard Flotation Machine allows greatest capacity per unit of cell volume. Sand relief openings are provided to allow free passage of coarse solids, and replaceable rubber bushings allow use of proper size openings.

Froth overflow is adjustable. Return feed pipes can be used to return middlings to feed cell. Mechanical simplicity permits modification of cell flow for utmost flexibility.

We would like to tell you more about how the Denver "Sub-A" can give you those operating features so important to profitable production. Write for Bulletin No. F10-B81, which fully describes the Denver "Sub-A" Flotation Machines.

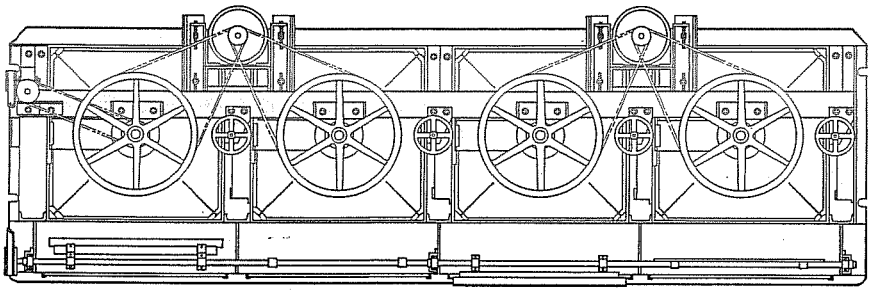


Air Header for Supercharging—For increased agitation and aeration, an air header—integral with the superstructure—can provide the correct amount of air under low pressure. As shown in the photo above, the opposite inlet may be plugged.



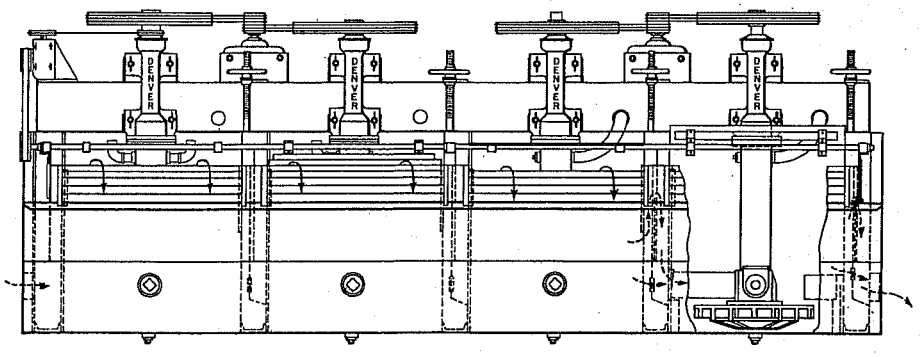
Long Wearing Life — This Denver Flotation Impeller had treated 325,000 tons of coarse, abrasive flotation feed when this photo was taken. It is still in service after treating 1,330,000 tons of ore, without loss in efficiency. Such long service means lower costs in your flotation circuit.

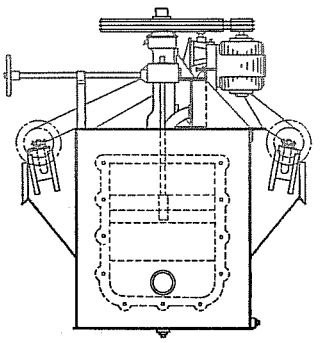
DIMENSIONS AND SPECIFICATIONS



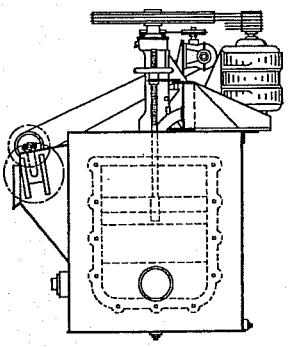
Machine Size No.	Vol. per Cell Cu. Ft.	MOTOR		APPROXIMATE DIMENSIONS							Appr.Ship.Wt.Lbs. Per 2-Cell Machine With Motors	
				Width	Height	LENGTH OF MACHINE						
		RPM	HP*			2-Cell	4-Cell	6-Cell	8-Cell	10-Cell	Domestic	Export
8	2.75		1.5	16"	2'-11⅝"	3'-8"	6'-11"	10'-2"	13'-5"	16'-8"	1,065	1,180
12	10.	1800	2.0	21¾"	4'-6 13/16"	5'-4"	9'-10"	14'-4"	18'-10"	23'-4"	1,860	2,060
15	12.	1800	3.0	2'-0¾"	4'-7 1/16"	5'-10"	10'-10"	15'-10"	20'-10"	25'-10"	2,270	2,470
18	18.	1800	5.0	2'-3⅜"	5'-2 5/16"	6'-4"	11'-10"	17'-4"	22'-10"	28'-4"	2,915	3,215
18 Sp.	24.	1800	5.0	2'-7½"	5'-3 11/16"	7'-1¾"	13'-4½"	19'-7¼"	25'-10"	32'-0¾"	3,615	4,015
21	40.	1800	7.5	3'-2"	6'-5 13/16"	8'-4¾"	15'-9½"	23'-2¼"	30'-7"	37'-11¾'	4,820	5,320
24	50.	1800	10.0	3'-7"	6'-5 13/16"	9'-4"	17'-8"	26'-0"	34'-4"	42'-8"	6,145	6,745
30	100.	1200	20.0	4'-8"	8'-2"	11'-11½"	22'-9"	33'-6½"	44'-4"	55'-1½"	14,200	15,600

*Per two-cells. Single cell motor drives can be provided on No. 18 special and larger machines if desired.

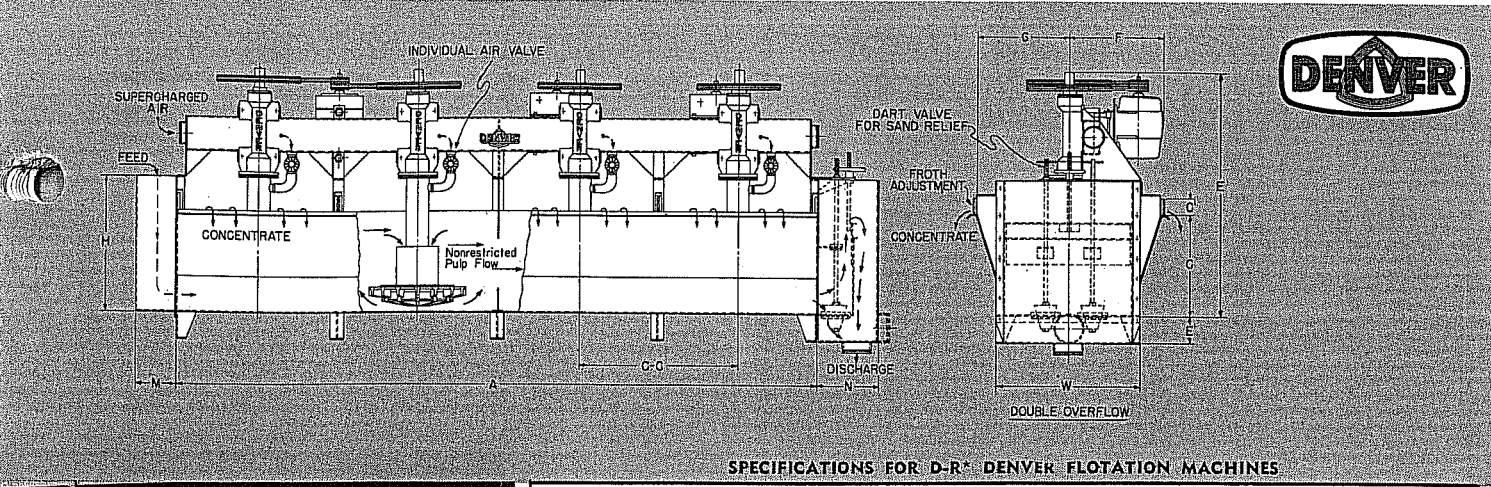




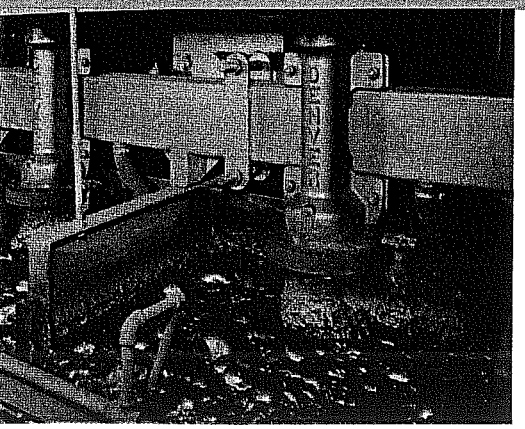
Double Overflow Spitzkasten



Single Overflow Spitzkasten



SPECIFICATIONS FOR D-R* DENVER FLOTATION MACHINES



Vol. Per Cell Cu. Ft.	Machine Designation No.	Motor H.P. Per 2 Cells	APPROXIMATE DIMENSIONS											
			A (4 cells)	C	C'	C-C'	E	E'	F	G	H	M	N	W
STANDARD DEPTH CELLS														
3	8	1½	6'-4"	17"	2"	19"	3'-1"	3"	17"	15"	22"	6"	6"	16"
10	12	3	8'-8"	30"	5"	26"	4'-9"	6"	22"	20"	3'-0"	8"	12"	22"
12	15	3	9'-4"	30"	5"	28"	4'-10"	6"	22"	21"	3'-0"	8"	15"	24"
18	18	5	10'-8"	36"	5"	32"	5'-4"	6"	2'-2"	23"	3'-6"	8"	15"	28"
25	18-Sp.	7½	12'-0"	36"	5"	36"	5'-6"	8"	2'-3"	2'-2"	3'-6"	12"	18"	32"
40	21	10	14'-4"	40"	5"	43"	6'-8"	8"	2'-6"	2'-5"	4'-0"	12"	18"	38"
50	24	15	16'-0"	40"	5"	48"	6'-8"	8"	2'-6"	2'-8"	4'-0"	12"	18"	43"
100	30	25	20'-8"	48"	5"	62"	8'-2"	8"	3'-5"	3'-2"	5'-0"	18"	18"	56"
200	200	50	22'-0"	78"	6"	66"	10'-9"	12"	3'-9"	4'-2"	7'-6"	24"	24"	66"
SHALLOW DEPTH CELLS														
20	18 Sp.—20	5	12'-0"	30"	5"	36"	5'-6"	8"	2'-3"	22"	3'-6"	12"	18"	32"
30	21-30	7½	14'-4"	30"	5"	43"	6'-1"	8"	2'-6"	2'-1"	3'-4"	12"	18"	38"
40	24-40	10	16'-0"	30"	5"	48"	6'-1"	8"	2'-6"	2'-4"	3'-4"	12"	18"	43"
60	30-60	15	20'-8"	30"	5"	62"	6'-2"	8"	3'-0"	2'-10"	3'-6"	18"	18"	56"

Above specifications may vary depending upon specific applications. * Patented and patents pending.

CELL-TO-CELL DENVER FLOTATION MACHINES

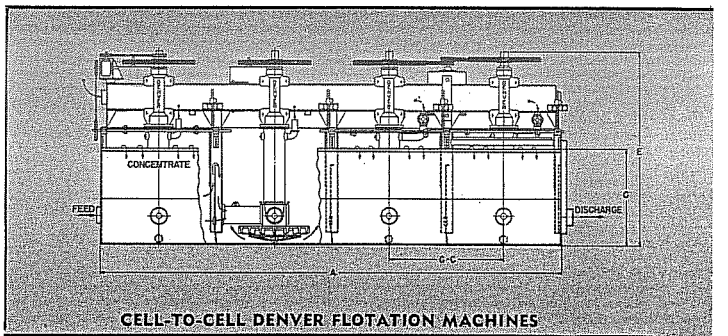
APPLICATION:

For roughing, cleaning, re-cleaning circuits when flexibility of cell arrangement or high degree of selectivity is required.

ADVANTAGES:

- Sizes: No. 8 through No. 30 with volume of 2.75 to 100 cu. ft. per cell.
- Provides complete circuit flexibility. Any cell can be rougher, cleaner or re-cleaner cell.
- No pumps required to return froth for cleaning or re-cleaning.
- No short-circuiting of pulp.
- Allows individual cell control.
- Can be modified to open or free-flow operation.
- Composed of: Tank, Weir gates, and suspended impeller mechanism.
- Suspended impeller assembly easily removable to simplify, speed maintenance.
- Air header permits use of supercharged air.
- Sand relief openings allow free passage of coarse solids.
- Replaceable rubber bushings allow use of proper sized openings for pulp recirculation.
- Available with special alloys or coverings for corrosive applications.

☐ Write for Bulletin No. F10-B86.



CELL-TO-CELL DENVER FLOTATION MACHINES

Vol. Per Cell Cu. Ft.	Mach. Designation No.	Motor H.P. Per Cell	STANDARD DEPTH CELLS — APPROXIMATE DIMENSIONS							
			A (4 cells)	C	C'	C-C'	E	F	G	H	W
3	8	1	6'-4"	17"	2"	19"	3'-1"	17"	15"	22"	16"
10	12	1½	8'-8"	30"	5"	2'-2"	4'-9"	22"	20"	36"	22"
12	15	2	9'-4"	30"	5"	2'-4"	4'-10"	22"	21"	36"	24"
18	18	3	10'-8"	36"	5"	2'-8"	5'-4"	2'-2"	23"	42"	28"
25	18 sp	3	12'-0"	36"	5"	3'-0"	5'-6"	2'-3"	2'-2"	42"	32"
40	21	5	14'-4"	40"	5"	3'-7"	6'-8"	2'-6"	2'-5"	48"	38"
50	24	7½	16'-0"	40"	5"	4'-0"	6'-8"	2'-6"	2'-8"	48"	43"
100	30	10-15	20'-8"	48"	5"	5'-2"	8'-2"	3'-5"	3'-2"	60"	44"

UNIT-CELL DENVER FLOTATION MACHINES

APPLICATION:

Recovers mineral as soon as freed in grinding circuit.

ADVANTAGES:

- Sizes: Models No. 25 to 1500 with capacities of 5 to 1200 tons per 24 hours.
- Design for "in-line" flotation in almost any grinding circuit with pulp densities to 50-55% solids.
- Can be used as emulsifier or conditioner, recleaner after regular flotation; scavenger, or batch flotation unit in test work or cleaning concentrates.
- Construction essentially same as "cell-to-cell" or "D-R*" DENVER units.

☐ Write for Bulletin No. F12-B9.

LABORATORY DENVER FLOTATION MACHINES

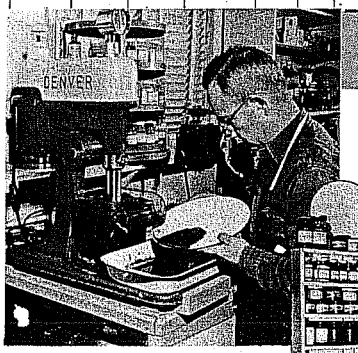
APPLICATION:

Batch flotation test units. Continuous pilot plant units also available.

ADVANTAGES:

- Sizes: Models D, D-1, D-2 with glass and stainless steel tanks, volumes of 50 to 2000-grams at a 4-to-1 dilution.
- Results obtained from DENVER Laboratory Flotation Machines can be duplicated in commercial plant operation.
- Constructed with a cast-steel base, supporting column and aluminum arm, drive guard and a rubber base mat. Impeller assembly of stainless steel.
- Also adapted for attrition scrubbing and agitation attachments.
- Variable-speed drive standard and tachometer available.
- Free set sample reagents, vanning plaque, Alkylacid Tester furnished with unit.

☐ Bulletin No. LF10-B6 gives full details.



DENVER FLOTATION TESTING

DENVER D-1 LAB FLOTATION KIT