

Radiclone AM80

Separation of heavyweight contaminants



High production
Low power consumption
Reliable



Leader in Fiber Fractionation Processes

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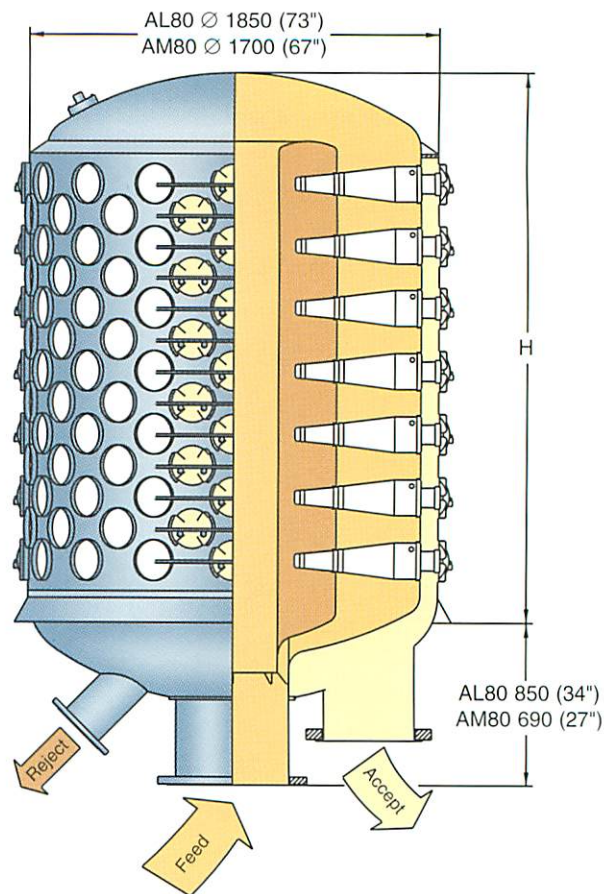
Radiclone AM80

The Radiclone AM80 is a pressurized canister manufactured of stainless steel SS142343 (superior to AISI 316) in which 80 mm (3") diameter hydrocyclones are installed. Maximum allowed inlet pressure for standard units is 300 kPa (43 psi). Higher pressure ratings are available on request.

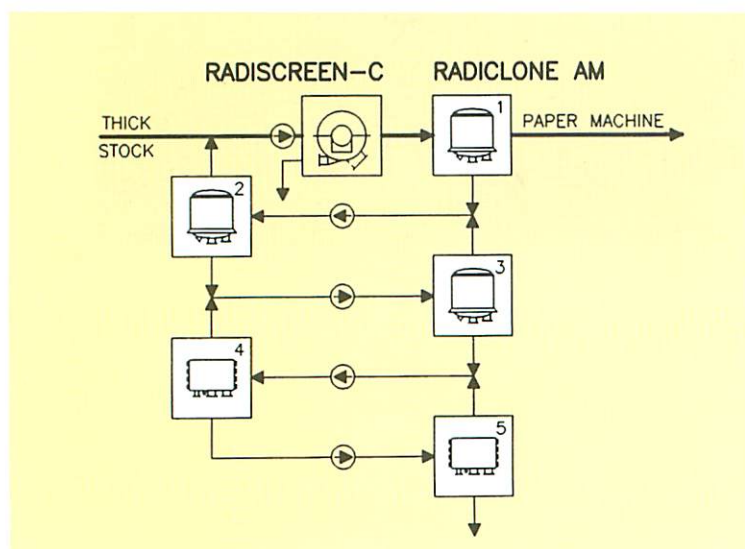
The AM80 hydrocyclones are manufactured by Noss in different elastic materials to resist heat, chemicals and wear depending on the application. Due to the construction features of the canisters, the hydrocyclone reject tip is as large as 18 mm (3/4") in diameter. With a pressure drop range of 100 to 150 kPa (14 - 22 psi), the Radiclone AM80 has a very low energy consumption per ton of manufactured pulp or paper (kWh/ton).

SIZE	Capacity with AM80-C hydrocyclones		Capacity with AM80-D hydrocyclones		H		Feed		Accept		Reject	
	l/min	USGPM	l/min	USGPM	mm	in	mm	in	mm	in	mm	in
AL80-600	60,000	15,850	78,000	20,600	3330	131	500	20	500	20	200	8
AL80-550	55,000	14,530	71,500	18,890	3100	122	500	20	500	20	200	8
AL80-500	50,000	13,210	65,000	17,170	2870	113	500	20	500	20	200	8
AL80-450	45,000	11,890	58,500	15,450	2640	104	500	20	500	20	200	8
AL80-400	40,000	10,570	52,000	13,740	2410	95	500	20	500	20	200	8
AL80-350	35,000	9,250	45,500	12,020	2180	86	500	20	500	20	200	8
AL80-300	30,000	7,930	39,000	10,300	1950	77	500	20	500	20	200	8
AM80-250	25,000	6,600	32,500	8,590	1700	67	350	14	350	14	150	6
AM80-200	20,000	5,280	26,000	6,870	1470	58	350	14	350	14	150	6
AM80-175	17,500	4,620	22,750	6,010	1360	53	350	14	350	14	150	6
AM80-150	15,000	3,960	19,500	5,150	1240	49	350	14	350	14	150	6
AM80-125	12,500	3,300	16,250	4,290	1130	44	350	14	350	14	150	6
AM80-100	10,000	2,640	13,000	3,430	1010	40	250	10	250	10	100	4
AM80-75	7,500	1,980	9,750	2,580	900	35	250	10	250	10	100	4
AM80-50	5,000	1,320	6,500	1,720	780	31	250	10	250	10	100	4

Radiclone AM80 is covered by several patents.



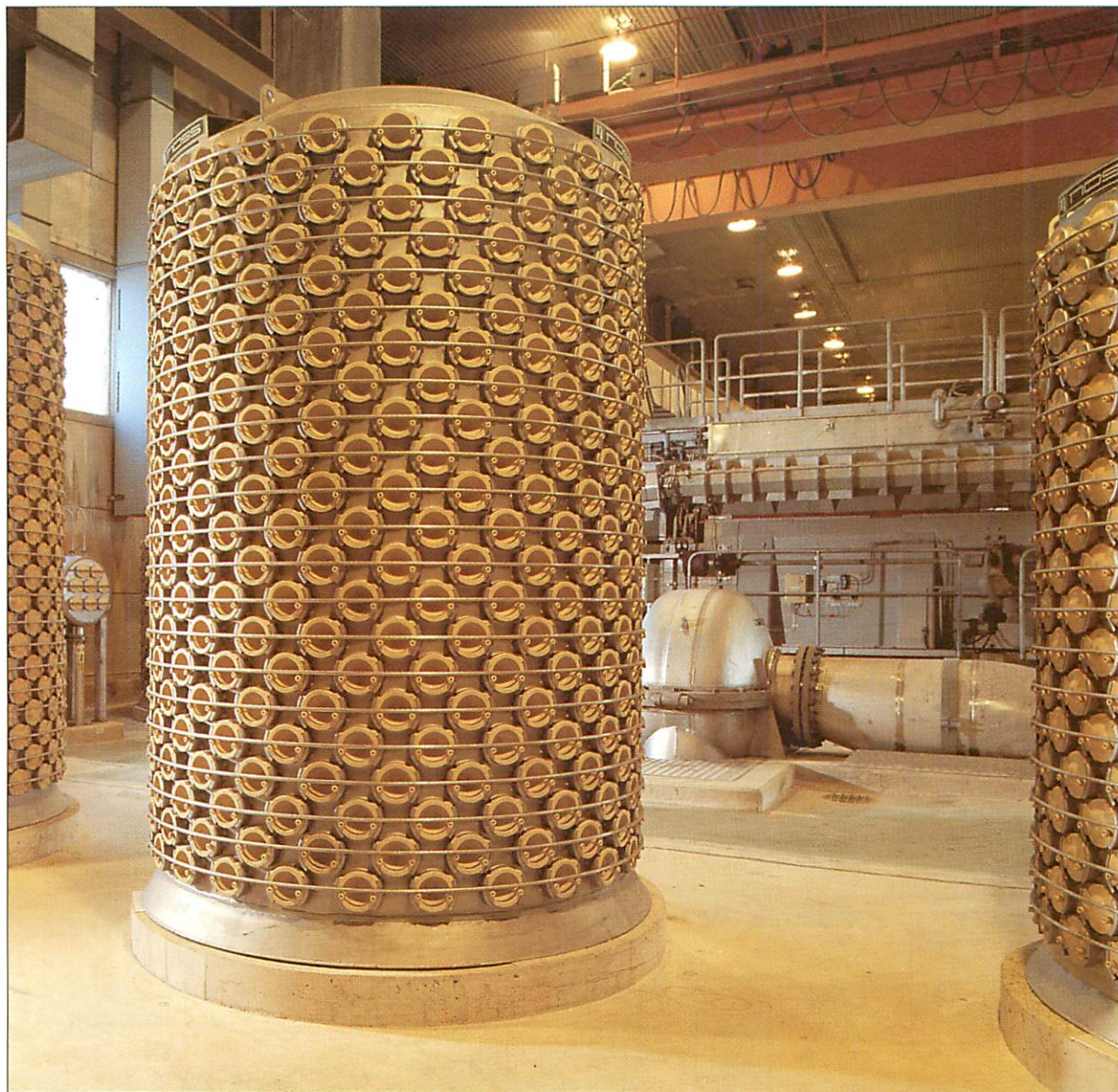
Radiclone AM80 system



The Radiclone AM80 system is installed where the highest demand on pulp and paper cleanliness is expected. Radiclone AM80 systems with innovative automation are extremely reliable and have low operating and maintenance costs.

Radiclone BM80

Separation of lightweight contaminants
and thickening



High production
Low power consumption
Reliable



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Radiclone BM80

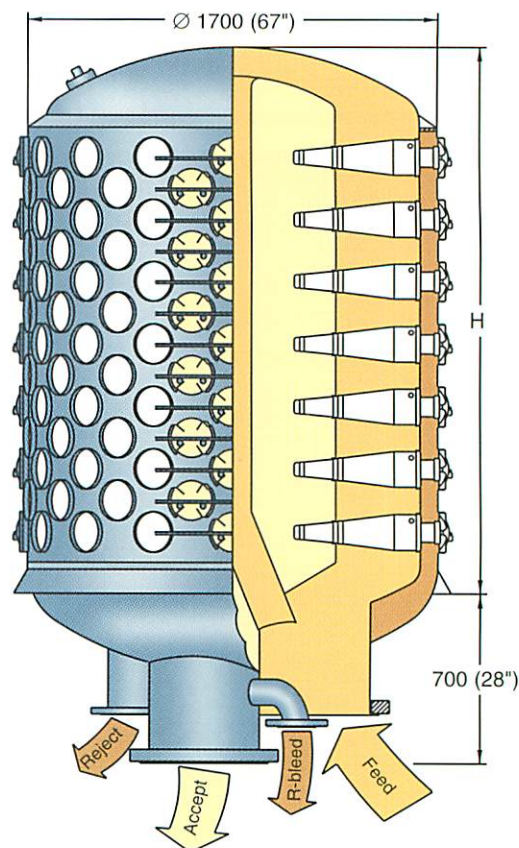
The Radiclone BM80 is a pressurized canister, manufactured of stainless steel SS142343 (superior to AISI 316) in which 80 mm (3") hydrocyclones are installed. Maximum allowed inlet pressure for standard units is 300 kPa (43 psi). Higher pressure ratings are available on request.

The BM80 hydrocyclones are manufactured by Noss in different elastic materials to resist heat, chemicals and wear depending on the application.

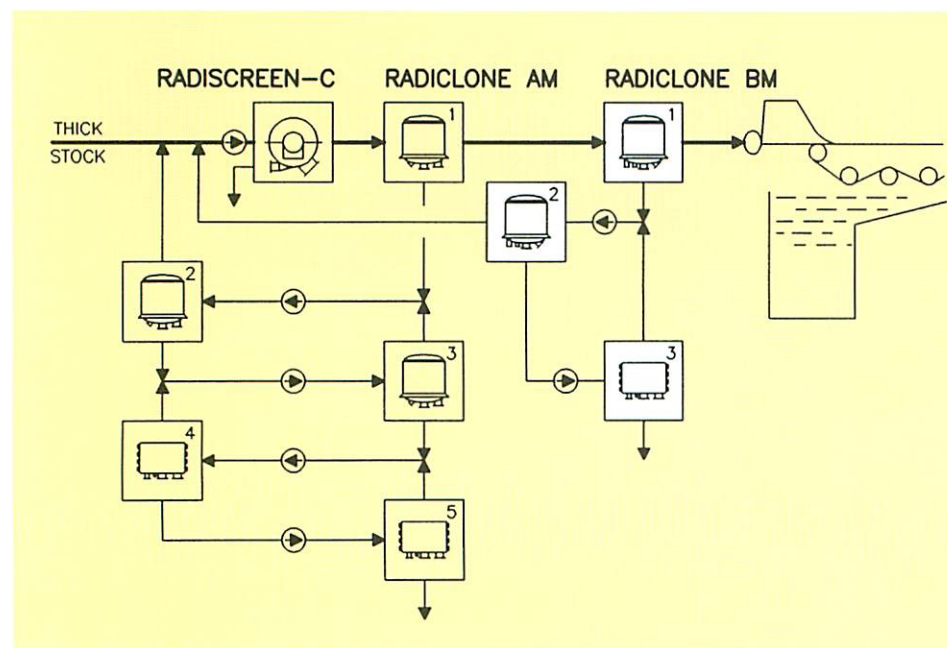
With a pressure drop range of 150 to 200 kPa (22 - 29 psi), the Radiclone BM80 has a very low energy consumption per ton of manufactured pulp or paper (kWh/ton).

SIZE	Capacity		H		Feed		Accept		Reject		R-bleed	
	l/min	USGPM	mm	in	mm	in	mm	in	mm	in	mm	in
BM80-600	48,000	12,680	3310	130	500	20	450	18	400/250	16/10	80	3
BM80-550	44,000	11,620	3080	121	500	20	450	18	400/250	16/10	80	3
BM80-500	40,000	10,570	2850	112	500	20	450	18	400/250	16/10	80	3
BM80-450	36,000	9,510	2620	103	500	20	450	18	400/250	16/10	80	3
BM80-400	32,000	8,460	2390	94	500	20	450	18	400/250	16/10	80	3
BM80-350	28,000	7,400	2160	85	500	20	450	18	400/250	16/10	80	3
BM80-300	24,000	6,340	1930	76	500	20	450	18	400/250	16/10	80	3
BM80-250	20,000	5,280	1700	67	500	20	450	18	400/250	16/10	80	3
BM80-200	16,000	4,220	1470	58	350	14	250	10	250	10	80	3
BM80-175	14,000	3,700	1360	53	350	14	250	10	250	10	80	3
BM80-150	12,000	3,170	1240	49	350	14	250	10	250	10	80	3
BM80-125	10,000	2,640	1130	44	250	10	200	8	200	8	80	3
BM80-100	8,000	2,120	1010	40	250	10	200	8	200	8	80	3
BM80-75	6,000	1,580	900	35	250	10	200	8	200	8	80	3
BM80-50	4,000	1,060	780	31	250	10	200	8	200	8	80	3

Radiclone BM80 is covered by several patents.



Radiclone BM80 system



The Radiclone BM80 system is installed for the efficient separation of lightweight contaminants such as plastics, styrofoams, hot melt, waxes and shives.

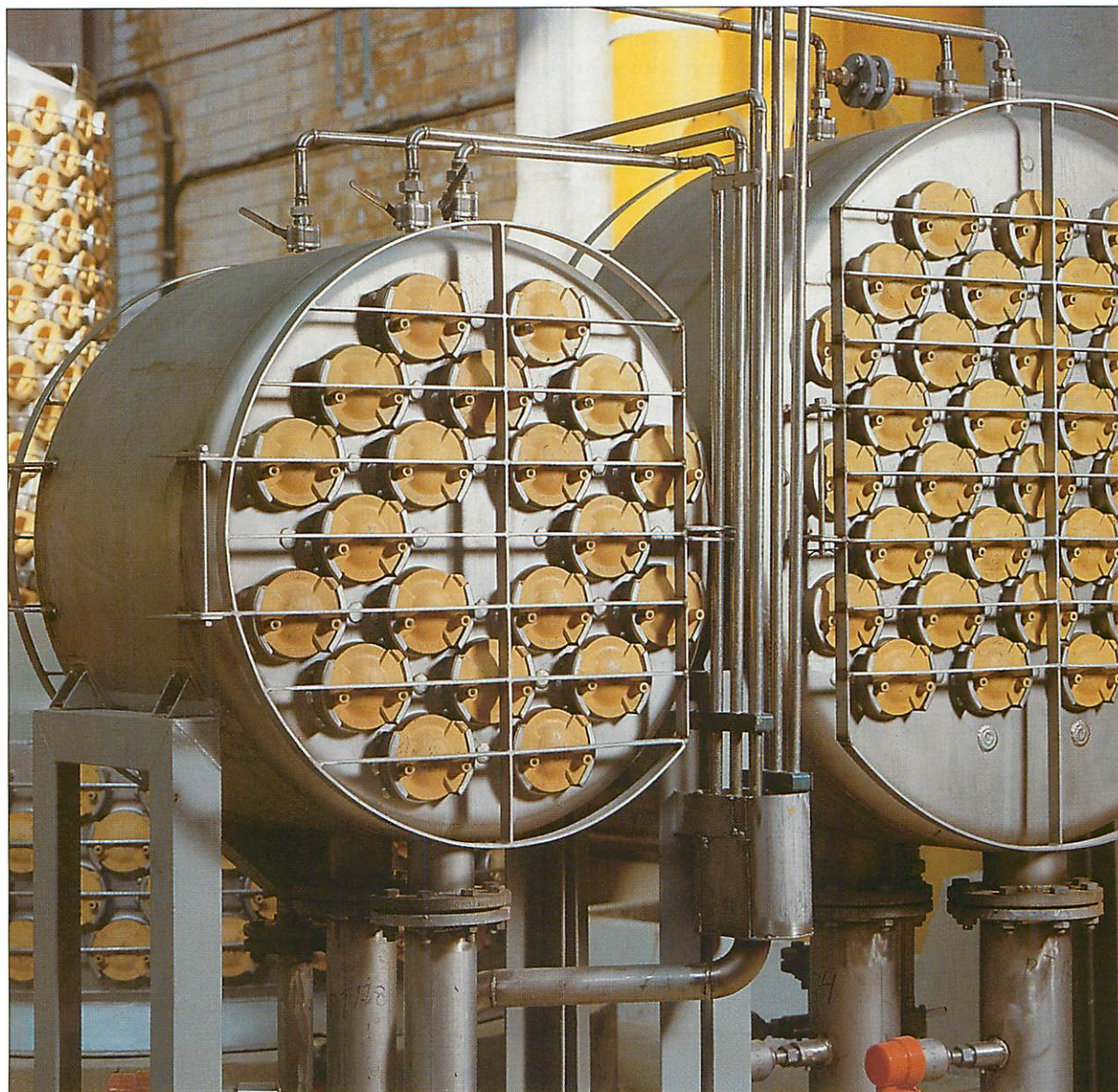
When integrated with a Radiclone AM80 system, the consistency of the accepts from the Radiclone AM80 system is increased in the primary Radiclone BM80 by 1.5 to 3 times. The thickened accept stock from the Radiclone BM80 is then sent directly to the machine headbox without further dewatering devices.

Radiclone BM80 systems with innovative automation are extremely reliable and have low operating and maintenance costs.

Radiclone

AM80A AMI25A BM80

Fiber recovery units



High production
Low power consumption
Reliable



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Radiclone AM80A AM125A BM80

Radiclone fiber recovery units consist of pressurized canisters manufactured of stainless steel SS142343 (superior to AISI 316), in which the hydrocyclones are installed. Maximum allowed inlet pressure for standard units is 300 kPa (43 psi).

All Radiclone AM80 and AM125 fiber recovery units are constructed to allow controlled introduction of either

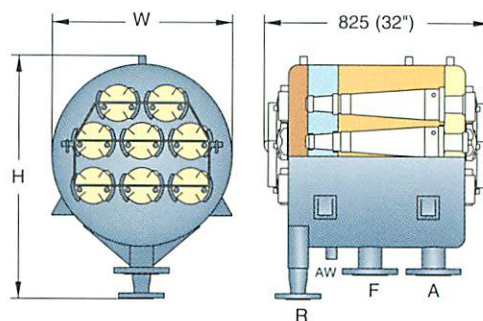
elutriation (action) water or reject dilution as needed depending on system design. Fiber recovery AM80A and AM125A hydrocyclones introduce action water at the apex of the hydrocyclones in the final stage to minimize fiber loss.

Radiclone BM80 recovery units and hydrocyclones are designed to minimize the final reject flow from the system.

AM80A

SIZE	Capacity with AM 80-C hydrocyclones		Capacity with AM 80-D hydrocyclones		H		W		F		A		R		AW (Pipe thread) in
	l/min	USGPM	l/min	USGPM											
AM80A-4	400	106	520	137	645	25	460	18	50	2	50	2	50	2	3/4
AM80A-8	800	211	1040	275	874	34	650	26	80	3	80	3	50	2	1
AM80A-12	1200	317	1560	412	990	39	750	30	100	4	100	4	50	2	1
AM80A-20	2000	528	2600	687	1220	48	950	37	100	4	100	4	50	2	1 1/2
AM80A-34	3400	898	4420	1168	1622	64	1300	51	150	6	150	6	50	2	1 1/2

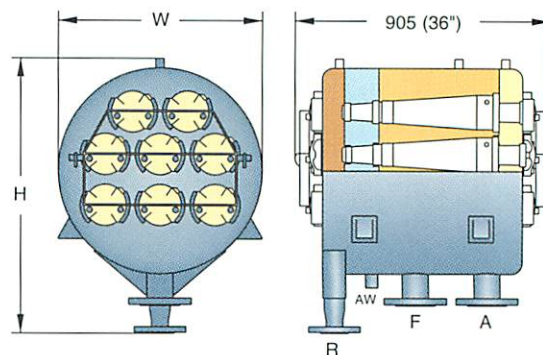
Radiclone AM80A is covered by several patents.



AM125A

SIZE	Capacity		H		W		F		A		R		AW (Pipe thread) in
	l/min	USGPM	mm	in	mm	in	mm	in	mm	in	mm	in	
AM125A-4	1000	264	862	34	600	24	80	3	80	3	50	2	1
AM125A-8	2000	528	1150	45	850	34	100	4	100	4	50	2	1 1/2
AM125A-12	3000	793	1439	57	1100	43	150	6	150	6	50	2	1 1/2
AM125A-20	5000	1321	1782	70	1400	55	200	8	200	8	50	2	2

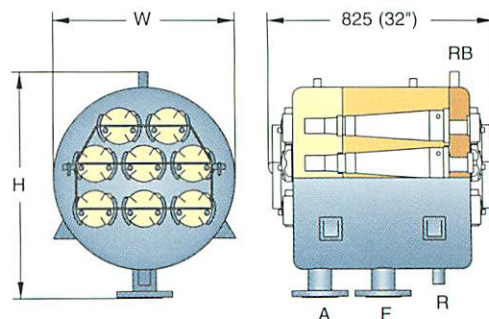
Radiclone AM125A is covered by several patents.



BM80

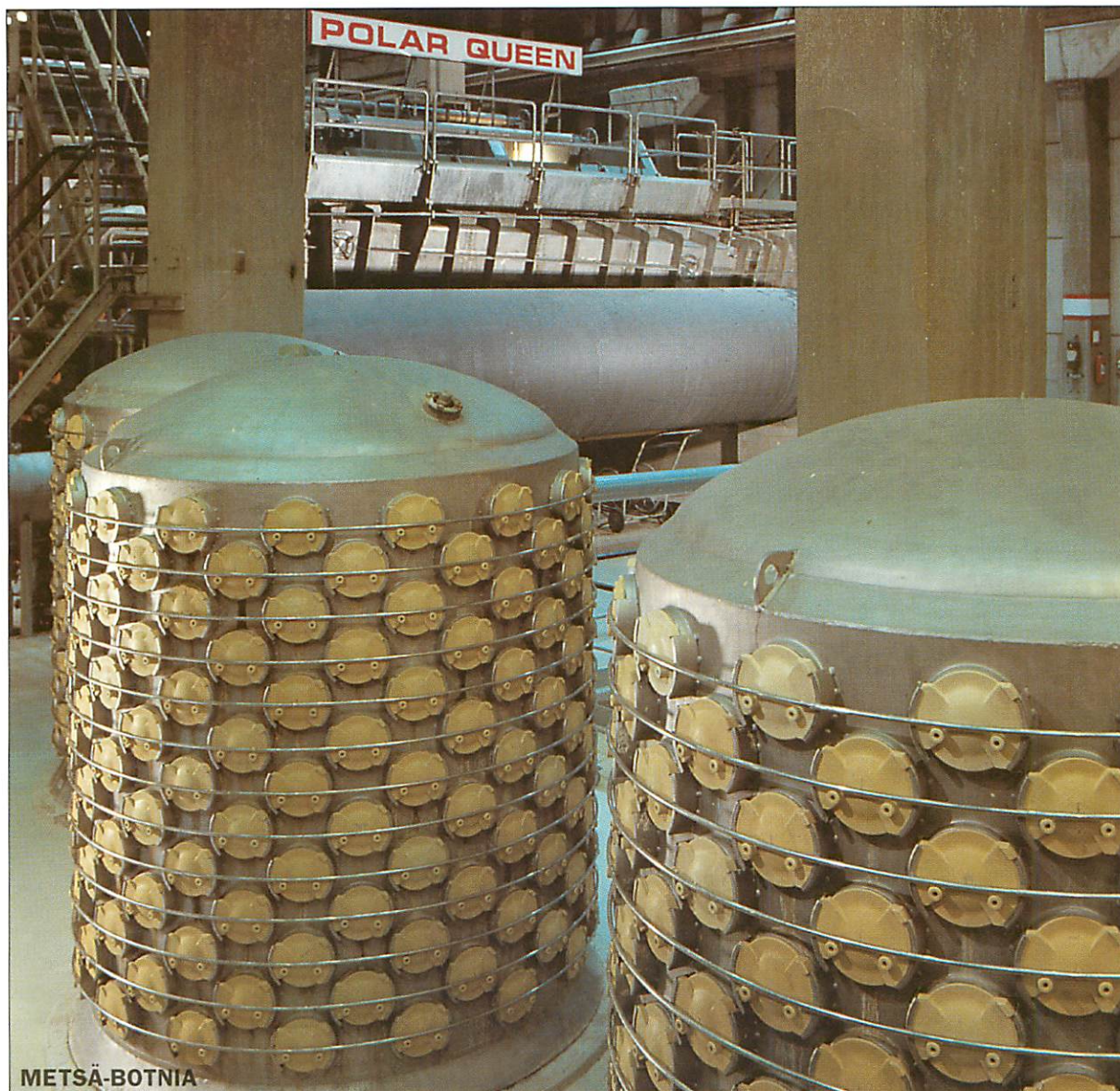
SIZE	Capacity		H	W		F		A		R		RB (Pipe thread) in
	l/min	USGPM		mm	in	mm	in	mm	in	mm	in	
BM80-4	368	97	590	23	460	18	50	2	50	2	1	1
BM80-8	736	194	790	31	650	26	80	3	80	3	1 1/4	1
BM80-12	1104	292	890	35	750	30	80	3	80	3	1 1/2	1
BM80-20	1840	486	1100	43	950	37	100	4	100	4	2	1 1/4
BM80-34	3128	826	1450	57	1300	51	150	6	150	6	3	1 1/4

Radiclone BM80 is covered by several patents.



Radiclone AMI25

Separation of heavyweight contaminants



High production
Low power consumption
Reliable



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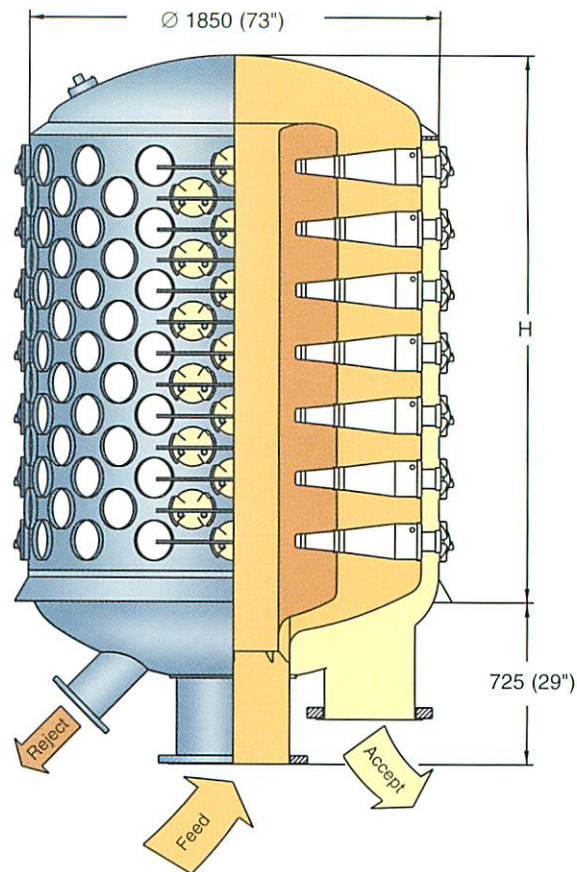
Radiclone AM125

The Radiclone AM125 is a pressurized canister manufactured of stainless steel SS142343 (superior to AISI 316) in which 125 mm (5") diameter hydrocyclones are installed. Maximum allowed inlet pressure for standard units is 300 kPa (43 psi). Higher pressure ratings are available on request.

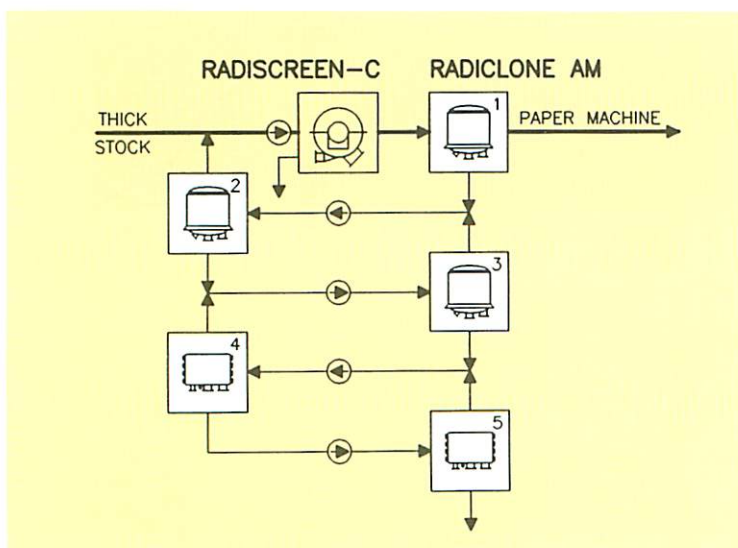
The AM125 hydrocyclones are manufactured by Noss in different elastic materials to resist heat, chemicals and wear depending on the application. Due to construction features of the canister, the hydrocyclone reject tip is as large as 30 mm (1 1/4") in diameter. With a pressure drop range of 100 to 150 kPa (14 - 22 psi), the Radiclone AM125 has a very low energy consumption per ton of manufactured pulp or paper (kWh/ton).

SIZE	Capacity		H		Feed		Accept		Reject	
	l/min	USGPM	mm	in	mm	in	mm	in	mm	in
AM125-288	72,000	19,020	3170	125	500	20	500	20	250	10
AM125-272	68,000	17,960	3030	119	500	20	500	20	250	10
AM125-256	64,000	16,910	2890	114	500	20	500	20	250	10
AM125-240	60,000	15,850	2750	108	500	20	500	20	250	10
AM125-224	56,000	14,790	2610	103	500	20	500	20	250	10
AM125-208	52,000	13,740	2470	97	500	20	500	20	250	10
AM125-192	48,000	12,680	2330	92	500	20	500	20	250	10
AM125-176	44,000	11,620	2190	86	500	20	500	20	250	10
AM125-160	40,000	10,570	2050	81	500	20	500	20	250	10
AM125-144	36,000	9,510	1910	75	400	16	400	16	200	8
AM125-128	32,000	8,450	1770	70	400	16	400	16	200	8
AM125-112	28,000	7,400	1630	64	400	16	400	16	200	8
AM125-96	24,000	6,340	1490	59	400	16	400	16	200	8
AM125-80	20,000	5,280	1350	53	300	12	300	12	150	6
AM125-64	16,000	4,230	1210	48	300	12	300	12	150	6
AM125-48	12,000	3,170	1070	42	300	12	300	12	150	6
AM125-32	8,000	2,110	930	37	300	12	300	12	150	6

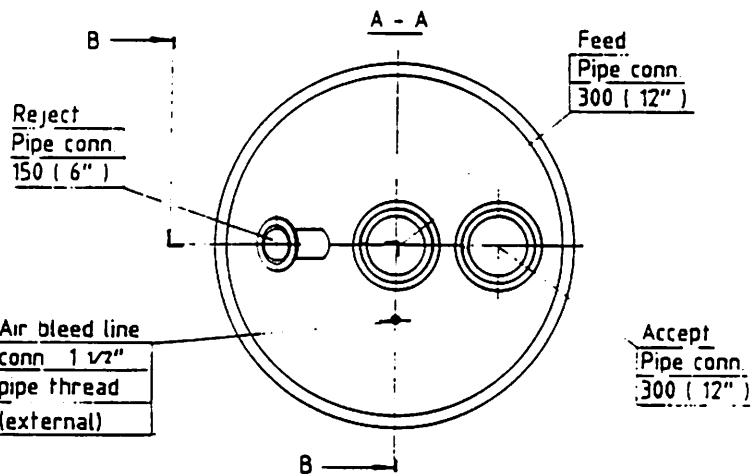
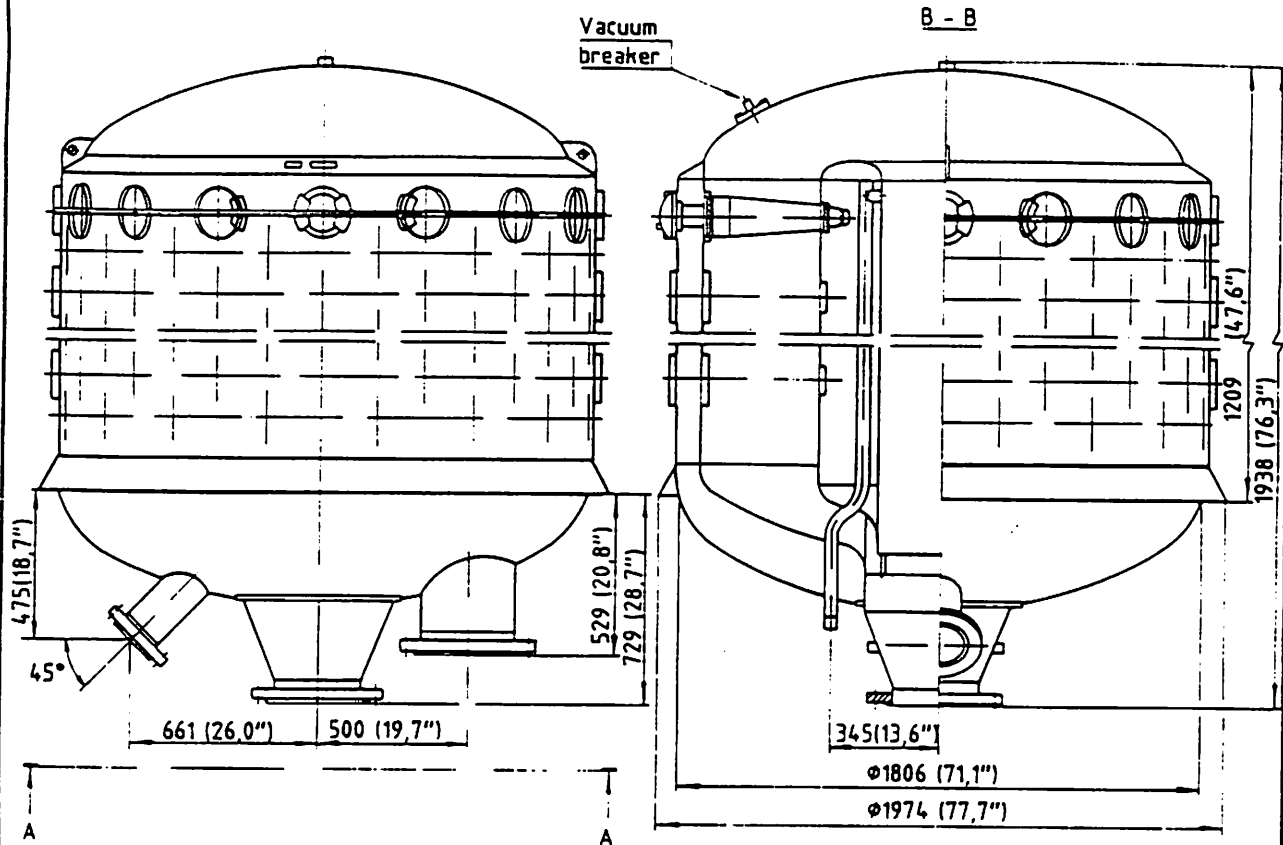
Radiclone AM125 is covered by several patents.



Radiclone AM125 system



The Radiclone AM125 system is normally installed ahead of kraft or newsprint paper machines, in unbleached pulp mills and recycle plants where the highest demand on pulp and paper cleanliness is expected. Radiclone AM125 systems with innovative automation are extremely reliable and have low operating and maintenance costs.



Net weight:
1239 kg (2732 lbs) $\pm$ 10%
Operating weight:
3989 kg (8795 lbs) $\pm$ 5%

This equipment is fabricated to high standards of precision

Please allow for field fitting of process piping for deviations from the shown dimensions and angles.

2-871-0145-00

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NOSS

DATE 1988-02-24	DESIGN BJ	DRAWN BJ
SCALE	CHECK PR	APPROVE

RADICLONE AM 125 - 48

688-010 SPRAGUE

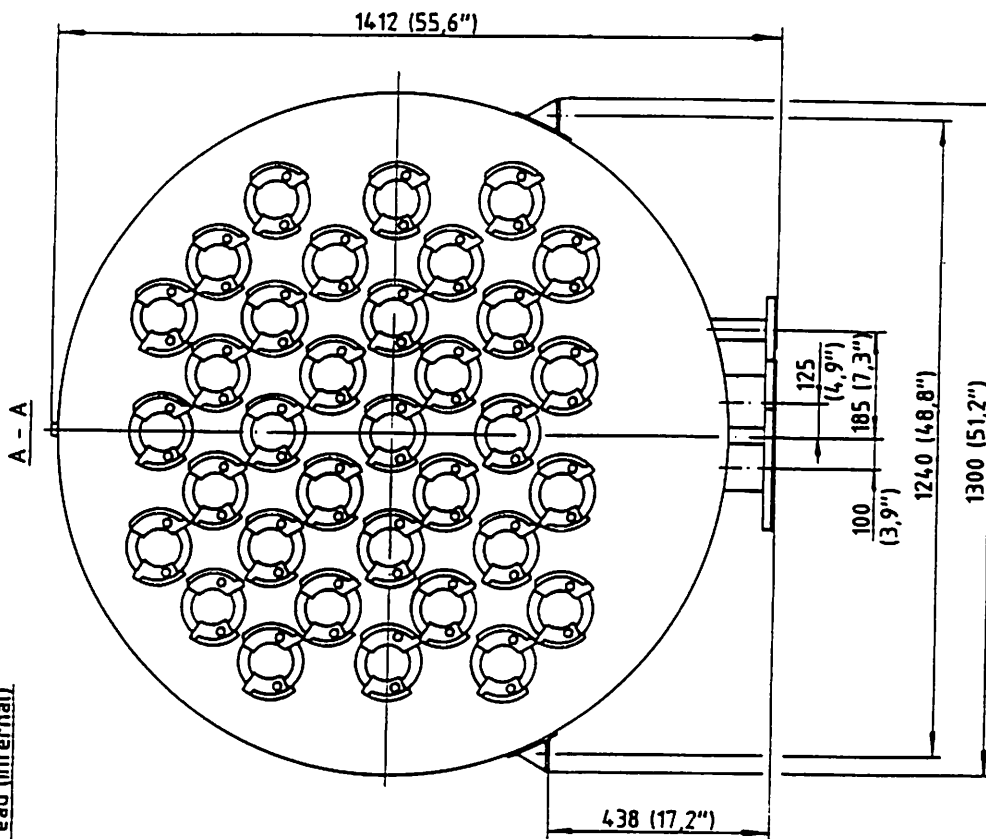
MFG. NO.

2868

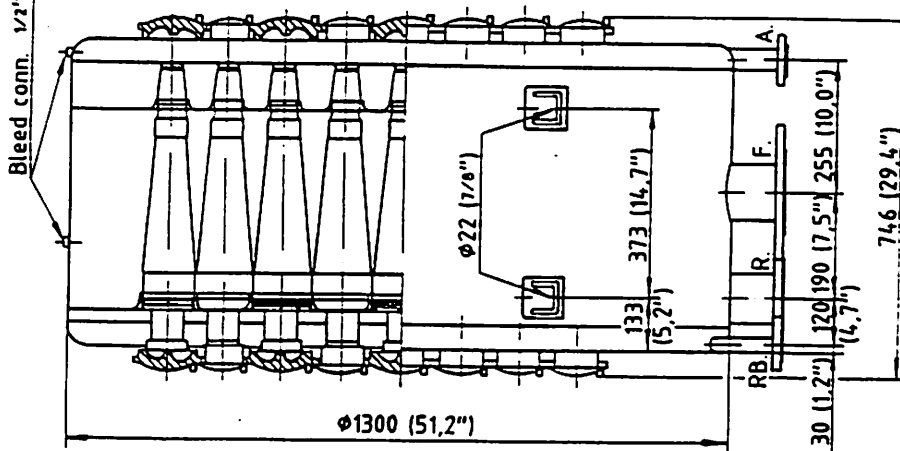
DRAWING NO.

2-884-0188

Bleed conn. 1/2" pipe thread (internal)



This equipment is fabricated to high standards of precision.
Please allow for field fitting of process piping for deviations from the shown dimensions and angles.



- A. Accept pipe conn. 80 (3")
- F. Feed pipe conn. 150 (6")
- R. Reject pipe conn. 100 (4")
- RB. Reject bleed pipe conn. 40 (1 1/2")

Net weight: 450 kg (992 lbs) ±10%
Operating weight: 1390 kg (3064 lbs) ± 5%

**CERTIFIED
NOSS AB**

83-03-29

2-821-0038-00

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1988-02-24		BJ
SCALE	CHECK	APPR
	PR	

RADICLONE BM 80 - 34

688-010 SPRAGUE

MFG. NO.

2873

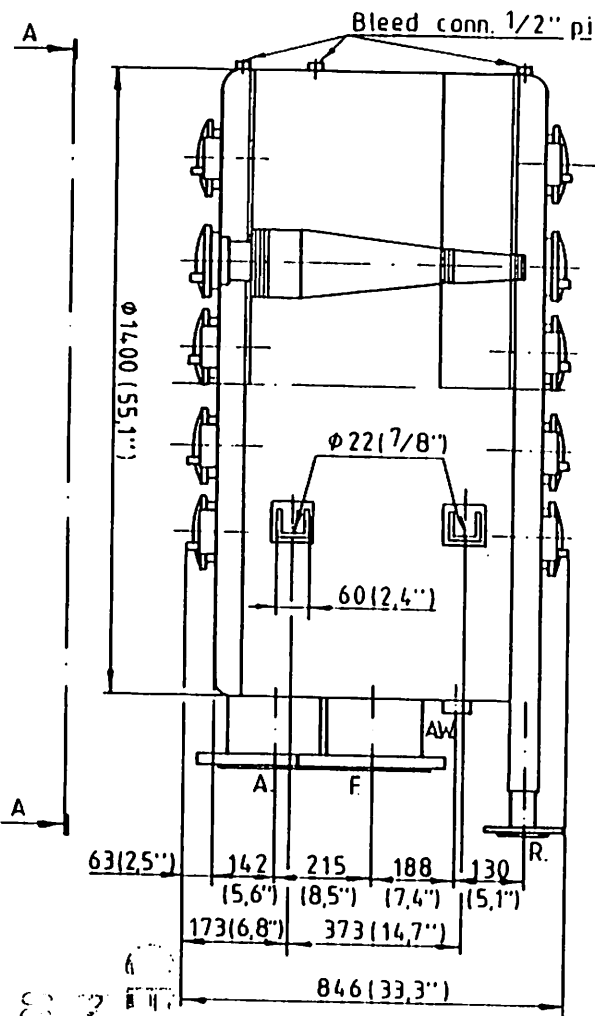
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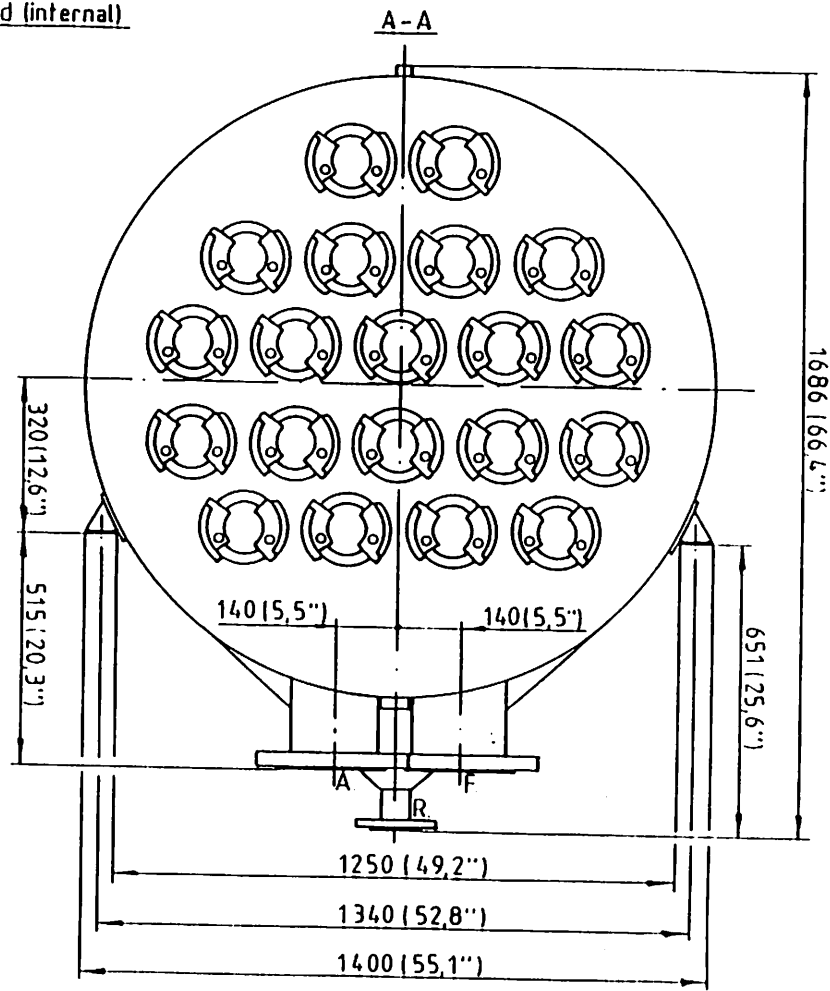
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29

2009-10-10

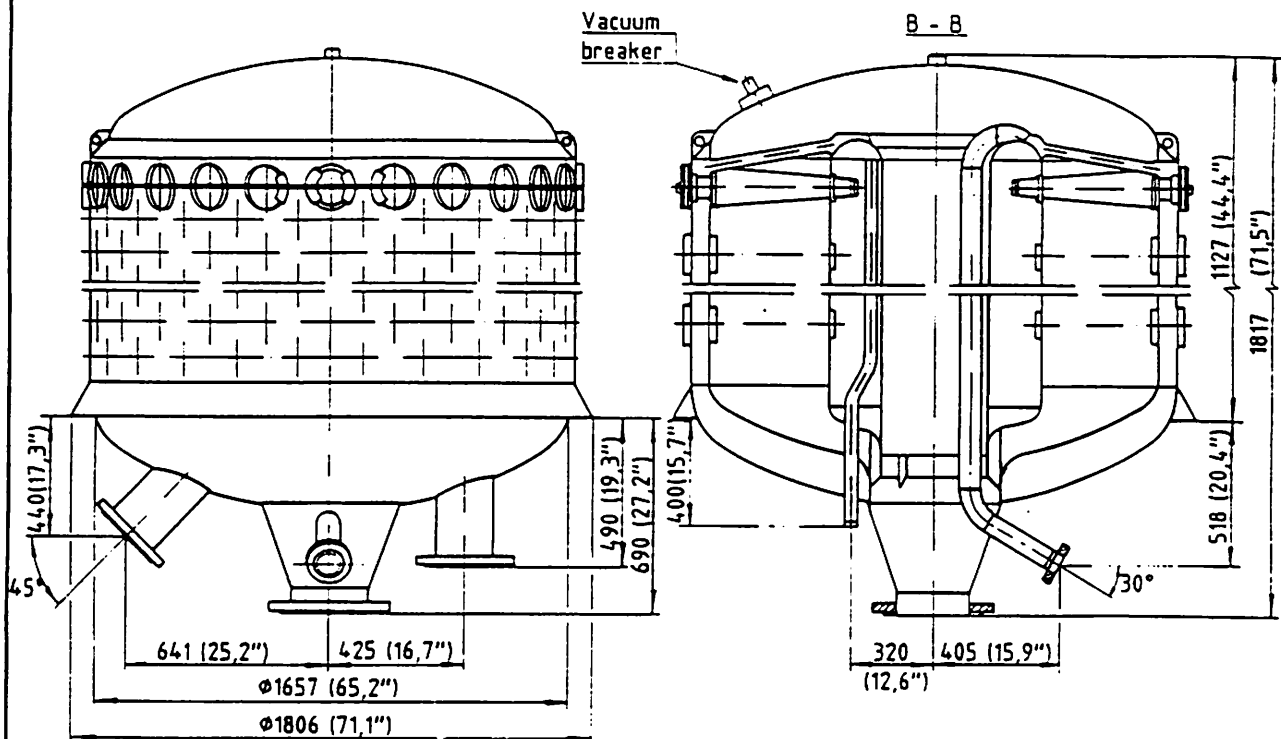


- A. Accept pipe conn. 200 (8")
F. Feed pipe conn. 200 (8")
R. Reject pipe conn. 80 (3")
AW. Action water conn. 2"
pipe thread (internal)



This equipment is fabricated to high standards of precision.
Please allow for field fitting of process piping for deviations from the shown dimensions and angles.

Net weight: 430 kg (948 lbs) $\pm$ 10%
Operating weight: 1040 kg (2290 lbs) $\pm$ 5%

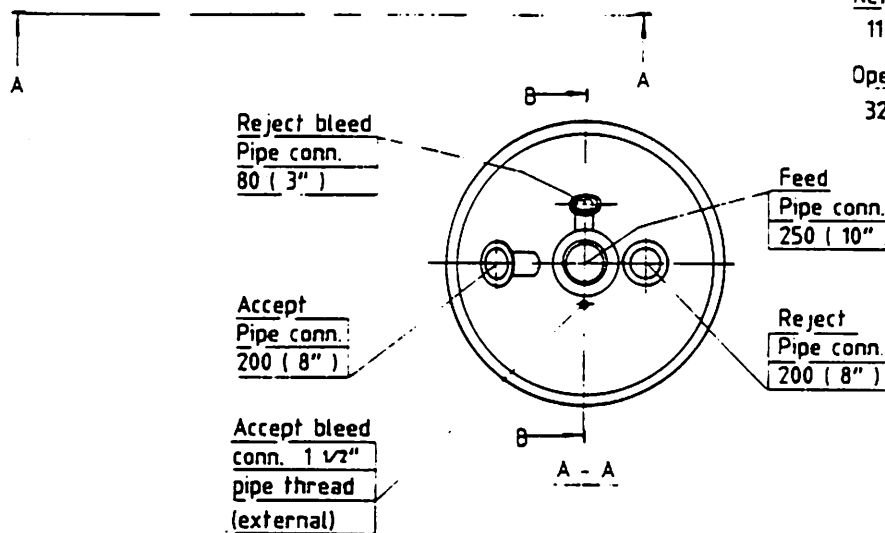


Net weight:

1110 kg (2448 lbs) $\pm 10\%$

Operating weight:

3295 kg (7265 lbs) $\pm 5\%$



This equipment is fabricated to high standards of precision.

Please allow for field fitting of process piping for deviations from the shown dimensions and angles.

2-871-0224-00

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DATE 1988-02-24	DESIGN BJ	DRAWN BJ
SCALE	CHECK PR	APPR

RADICLONE BM 80 - 125

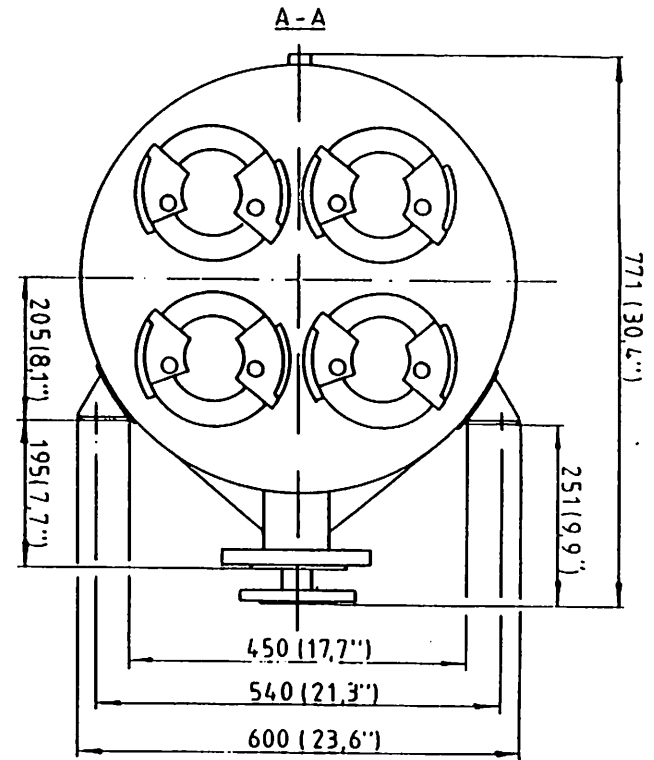
688-010 SPRAGUE

MFG. NO.

2871

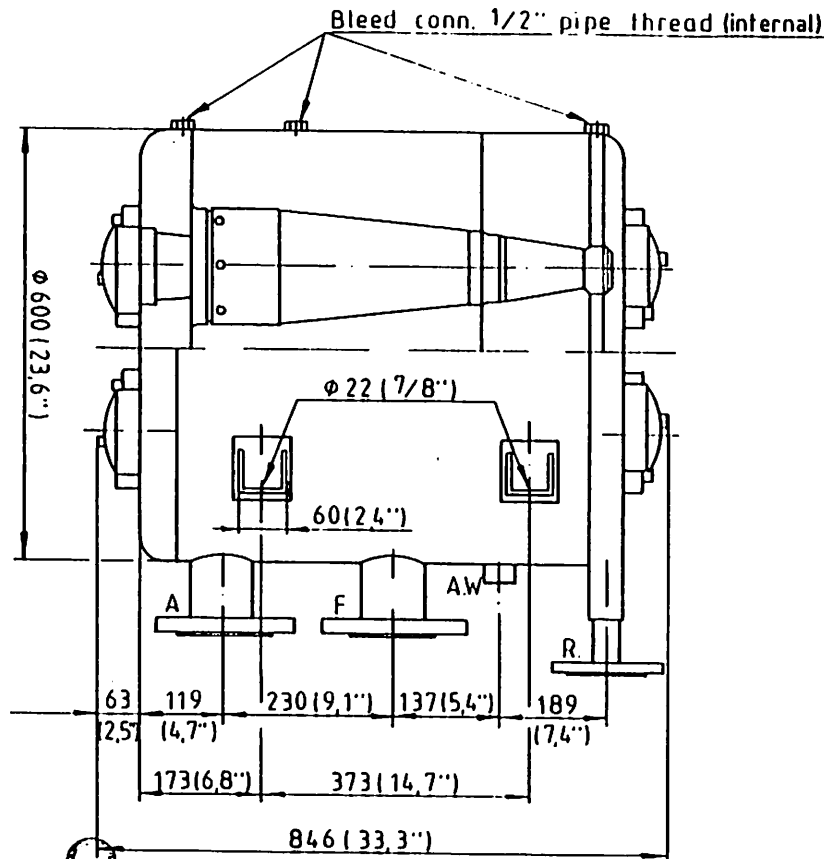
DRAWING NO

2-884-0191



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Please allow for field fitting of process piping for deviations from the shown dimensions and angles.



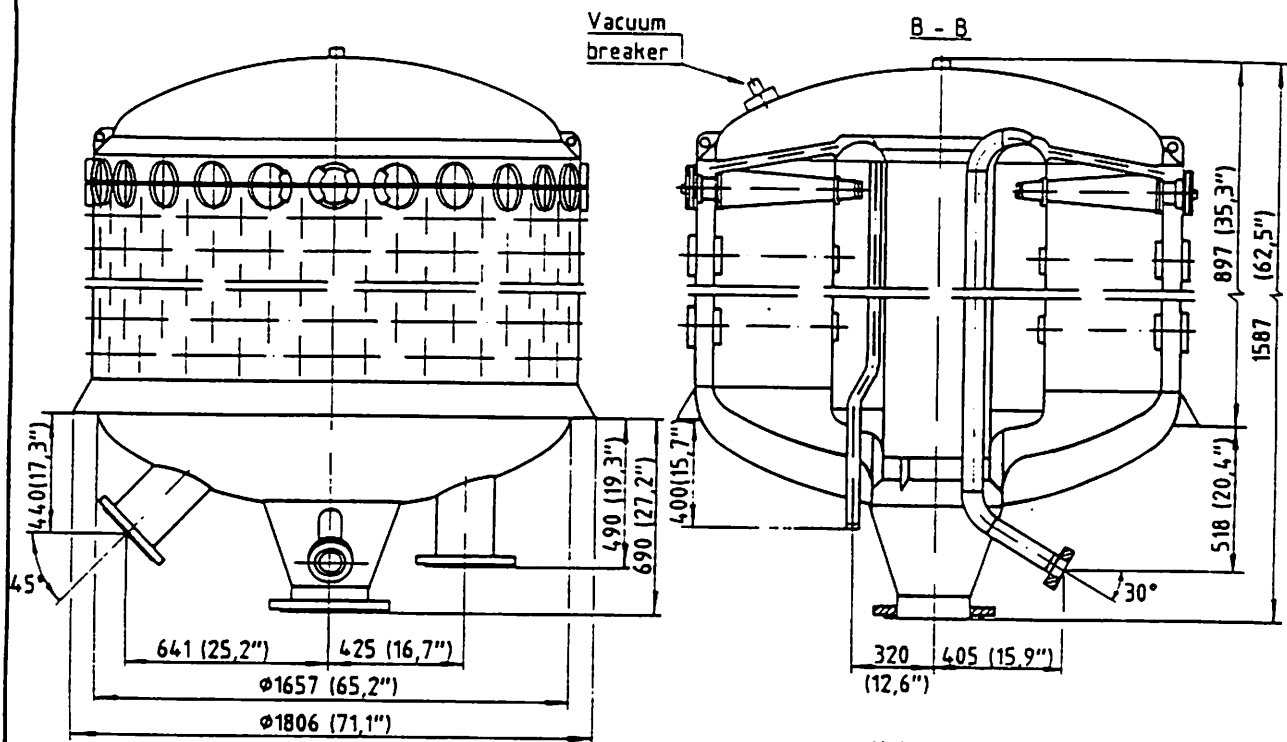
A Accept pipe conn 80 (3'')
 F Feed pipe conn. 80 (3'')
 R Reject pipe conn. 50 (2'')
 AW Action water conn. 1''
 pipe thread (internal)
 Net weight: 100 kg (220 lbs) $\pm$ 10%
 Operating weight: 303 kg (668 lbs) $\pm$ 5%

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2-831-0012-00

M	NOSS		RADICLONE AM125A-4		Mfg. No. 2870
DATE	1988-02-24	DESIGN	DRAWN	688-010 SPRAGUE	DRAWING NO. 2-884-0190
SCALE		CHECK	APPR.		
		PR			



Net weight:

870 kg (1918 lbs) $\pm 10\%$

Operating weight:

2660 kg (5865 lbs) $\pm 5\%$

Reject bleed
Pipe conn.
80 (3")

Accept
Pipe conn.
200 (8")

Accept bleed
conn. 1 1/2"
pipe thread
(external)

Feed
Pipe conn.
250 (10")

Reject
Pipe conn.
200 (8")

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This equipment is fabricated to high standards of precision.

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SCALE	CHECK PR	APPR

RADICLONE BM 80 - 75

688-010 SPRAGUE

FILE NO.

2872

DRAWING NO

2-884-0192

4.1 OPERATING DATA SHEET - RADICLONE AM

System Specification

	<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>
Type of equipment	RADICLONE AM125-48	RADICLONE AM125-20	RADICLONE AM125A-4
Number of units	1	1	1
Cyclone type (Tropic)	AM125-C	AM125-C	AM125A-C
Number of cyclones installed	36	14	4
Number of blind cyclones	12	6	0
Minimum RADICLONE feed pressure (psi)	52.8	22.5	22.5
Minimum RADICLONE accept pressure (psi)	38	7.3	7.3
Recommended RADICLONE unit pressure drop (psi)	14.8	15.2	15.2
Maximum RADICLONE unit feed pressure (psi)	65.0	44.0	44.0
Recommended reject rate (% by weight)	20	20	15
Action water flow (USGPM)			26

4.2 OPERATING DATA SHEET - RADICLONE BM

<u>System Specification</u>	<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>
Type of equipment	RADICLONE BM80-125	RADICLONE BM80-75	RADICLONE BM80-34
Number of units	1	1	1
Cyclone type (Tropic)	BM80-D	BM80-D	BM80-D
Number of cyclones installed	100	57	34
Number of blind cyclones	25	18	0
Minimum RADICLONE feed pressure (psi)	38.0	36.9	37.8
Minimum RADICLONE - accept pressure (psi)	16.2	15.6	16.2
- reject pressure (psi)	8.0	7.5	7.3
Recommended RADICLONE unit pressure drop feed-to-reject (psi)	30.0	29.4	30.5
Maximum RADICLONE unit feed pressure (psi)	44.0	44.0	44.0
Reject rate by volume (%)	0.5	0.5	0.5

3 INTRODUCTION AND GENERAL DESCRIPTION

This manual contains Service Instructions for the:

RADICLONE AM125/BM80 System

designed for a Primary BM80 accept flow to the thickener of 65.4 BDSTPD at a consistency of 1.0 % BD (1090 usgpm).

The system contains:

1	X	RADICLONE AM125-48
1	X	RADICLONE AM125-20
1	X	RADICLONE AM125A-4
1	X	RADICLONE BM80-125
1	X	RADICLONE BM80-75
1	X	RADICLONE BM80-34

Please contact **Noss Company** concerning any questions you may have about the system at:

Noss Company

2500 Park Central Boulevard

Decatur, GA 30035

Telephone: (770) 981-9550

Telefax: (770) 981-3572

7.1 RECOMMENDED SPARE PARTS LIST - RADICLONE AM125 / BM80

Corresponding Spare Parts Drawings: 2-884-0235, 2-884-0236, 2-884-0237, 2-884-0238, 2-884-0239, 2-884-0240

<u>Description</u>	<u>Qty.</u>	<u>Noss Part No.</u>
Hydrocyclone AM125-C (Tropic)	9	2-923-0137-00
Hydrocyclone AM125A-C (Tropic)	4	2-923-0137-01
Hydrocyclone BM80-D (Tropic)	25	2-884-0515-00
Blind Hydrocyclone AM80/BM80	4	2-914-0252-00
Blind Hydrocyclone AM125	4	2-914-0187-00
BM80 Lids	15	2-884-0142-00
BM80 O-rings	50	030001u
AM125 Lids	15	2-844-0302-00
AM125 O-rings	50	030002

Note: Some part numbers for items shown on the spare parts drawings listed above have been replaced with the part numbers given on this page.