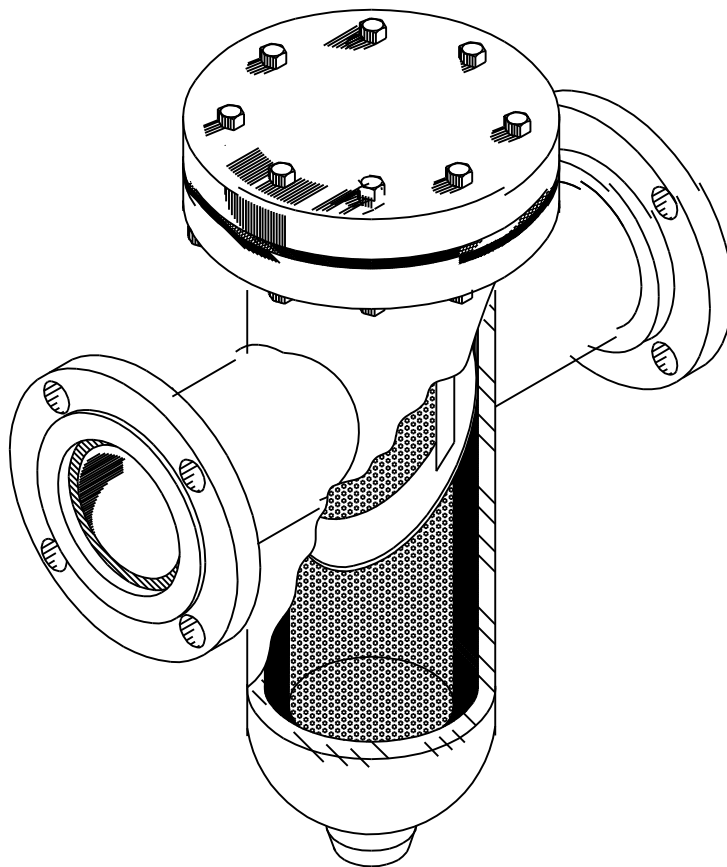


FABRICATED VERTICAL BASKET STRAINERS



**Standard and Super Design
Slant Top Basket
Flat Top Basket**

RADAFAB BASKET STRAINERS

THE PROBLEM WITH UNWANTED MATERIAL IN PIPELINES IS A NEVER ENDING ONE. WHETHER THE FLOWING MATERIAL IS WATER, OIL, GAS, PAINT OR A VARIETY OF FOOD OR CHEMICAL PRODUCTS, THERE IS OFTEN PRESENT UNWANTED MATTER THAT CAN CAUSE SERIOUS PROBLEMS. DIRT, FOREIGN MATTER OR EVEN CLUMPS OF THE PRODUCT ITSELF, CAN CLOG OR DAMAGE SPRAY NOZZLES, PUMPS, TURBINE METERS, OR SIMILAR EQUIPMENT.

STRAINERS ARE A SOLUTION TO THESE PROBLEMS. THEY PREVENT THE PASSAGE OF UNWANTED MATTER IN THE LINE THAT COULD CAUSE DAMAGE OR EVEN RUIN THE PRODUCT ITSELF.

WHEN COMPARED TO THE COST OF REPLACING DAMAGED PUMPS, METERS, ETC., STRAINERS ARE AN INEXPENSIVE INSURANCE POLICY.

STRAINERS ARE WIDELY USED IN THE FOLLOWING INDUSTRIES:

TANK CARS AND TRUCKS

PAINT, INK, & LATEX

CERAMICS

PULP & PAPER

CHEMICALS

PETROLEUM REFINING

ELECTRIC POWER

PHARMACEUTICAL

FOOD PROCESSING

PROCESS EQUIPMENT

MARINE

WASTE & WATER TREATMENT

TURBINE METER SERVICE

COMPRESSOR STATIONS

PIPE LINE

CO-GENERATION

RADAFAB VERTICAL BASKET STRAINER

MODEL: RAD-VBS

STANDARD STRAINER:

THE STRAINER MOST WIDELY ACCEPTED BY ALL TYPE OF INDUSTRY. THE STANDARD STRAINER DESIGN MAKES IT THE MOST ECONOMICAL STYLE STRAINER. MINIMUM OPEN AREA RATIO IS 3:1.

SUPER STRAINER:

THE SUPER STRAINER'S LARGER BODY AND BASKET DESIGN ALLOWS FOR MORE REMOVABLE CAPACITY AND LESS FREQUENT CLEAN OUT INTERVALS. MINIMUM OPEN AREA RATIO IS 4:1.

MATERIAL SPECIFICATIONS:

STANDARD MATERIAL OF CONSTRUCTION IS CARBON STEEL. BASKET MATERIAL IS SPECIFIED BY THE CUSTOMER.

OTHER MATERIALS AVAILABLE IN:

1 1/4 CR - 1/2 MO
5 CR - 1/2 MO
9 CR - 1 MO
304/304L SS
316/316L SS
MONEL

OTHER ALLOYS-REVIEWED ON AN INDIVIDUAL BASIS.

DIMENSIONAL DATA:

SEE FOLLOWING PAGES.

PRESSURE DROP INFORMATION

SEE PRESSURE DROP CHARTS.

RECOMMENDED SPARE PARTS:

- 1.) BASKET
- 2.) GASKETS FOR ACCESS OPENING
- 3.) O-RINGS FOR QUICK OPENING ACCESS CLOSURES

OPTIONS:

- 1.) QUICK OPENING CLOSURES.
- 2.) PRESSURE TAP CONNECTIONS
- 3.) VENTS
- 4.) CONTINUOUS SLOT-OPENING WEDGE WIRE BASKET
- 5.) DAVIT FOR ACCESS BLIND FLANGE
- 6.) FLAT TOP BASKET FOR OFFSET NOZZLES
- 7.) SELF FLUSHING BLOWDOWN BASKET
- 8.) TURBINE METER STRAINER
- 9.) LEGS / SKIRT

DESIGN CODE(s) / STANDARDS:

STANDARD DESIGN AND FABRICATION PER ASME B31.3

OTHER CODES AVAILABLE ARE:

A.S.M.E. **B31.3**

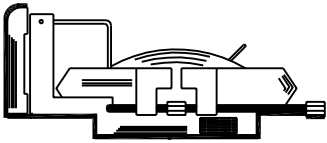
A.S.M.E. PRESSURE VESSEL AND BOILER CODE, SECTION VIII, DIV. 1.

PAINT/COATINGS:

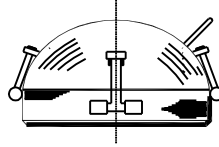
Available

NDE PER APPLICABLE CODE AND / OR CUSTOMER SPECIFICATIONS.

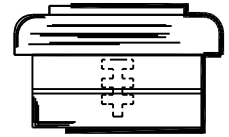
STRAINER OPTIONS



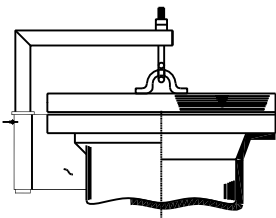
DOUBLE - BOLT CLOSURE



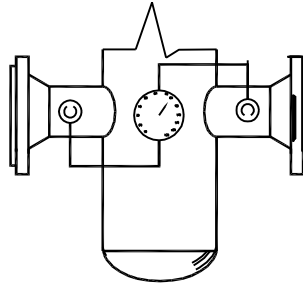
T - BOLT CLOSURE



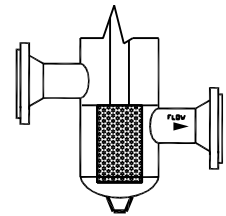
THREADED CLOSURE



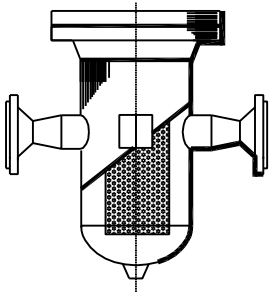
DAVIT FOR BLIND FLANGE



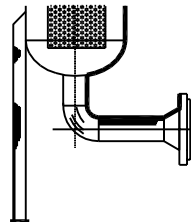
DIFFERENTIAL PRESSURE CONNECTIONS



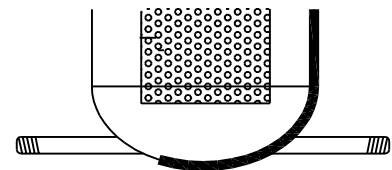
OFFSET NOZZLES



TURBINE METER STRAINER



LEG OR SKIRT W/ BOTTOM DRAIN



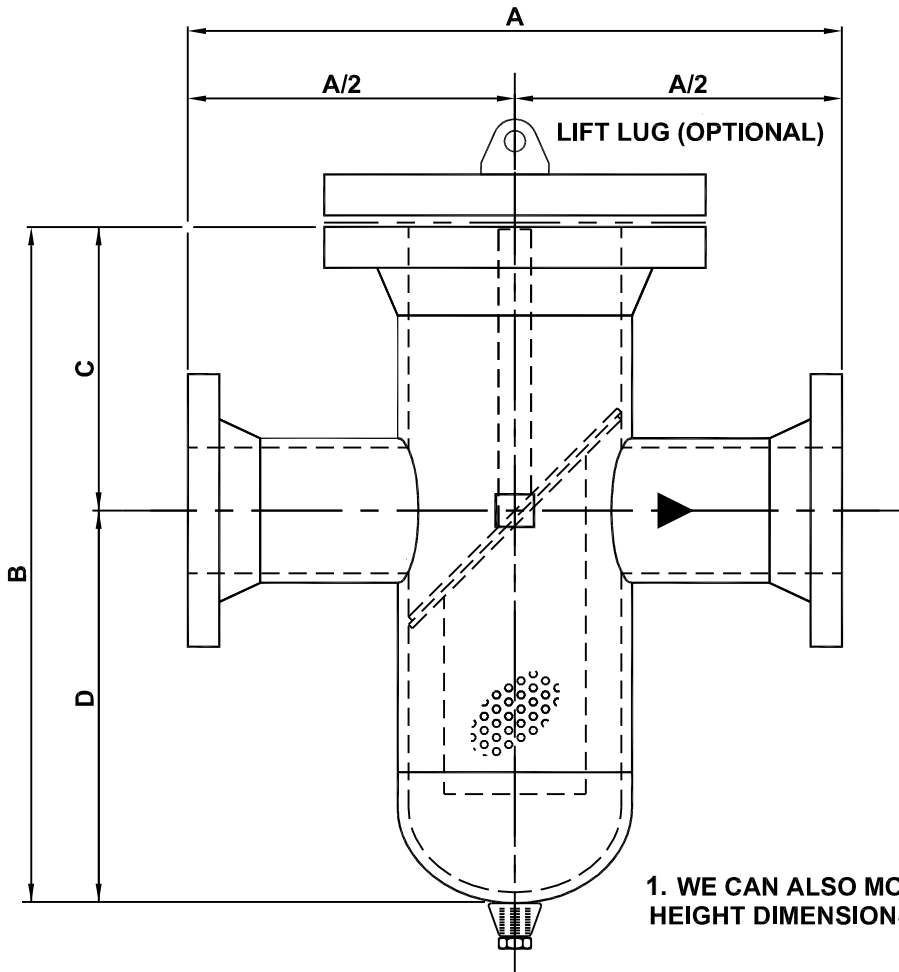
SIDE DRAIN

NOTE:

1. MODIFICATION OF BASKETS FOR BI-DIRECTIONAL FLOW AVAILABLE.
2. CUSTOM OPTIONS AVAILABLE UPON REQUEST.

RADAFAB VERTICAL BASKET STRAINER

MODEL: RAD-VBS



DIMENSIONAL DATA

NOZZLE SIZE (NPS)	VESSEL SIZE (NPS)	A	* B	C	D	** OPEN AREA	DRAIN SIZE	WEIGHTS (LBS)		
								CLASS 150	CLASS 300	CLASS 600
2"	4"	19"	17"	9"	8"	589%	0.75"	70	100	135
2"	6"	22"	21"	9"	12"	1288%	0.75"	120	180	245
3"	6"	22"	21"	9"	12"	584%	0.75"	130	205	270
4"	8"	26"	25"	11"	14"	537%	0.75"	190	310	520
6"	10"	30"	31"	13"	18"	427%	0.75"	290	450	830
8"	12"	36"	36"	15"	21"	393%	1"	480	700	1105
10"	16"	40"	42"	18"	24"	364%	1"	750	1095	2085
12"	18"	43"	49"	20"	29"	350%	1"	940	1380	2825
14"	20"	48"	51"	22"	29"	339%	2"	1140	2155	3550
16"	20"	50"	51"	22"	29"	320%	2"	1235	2275	3985
18"	24"	58"	67"	24"	43"	420%	2"	1534	3345	5450
20"	24"	60"	67"	24"	43"	337%	2"	1860	3615	6645
24"	30"	70"	83"	32"	51"	334%	2"	3465	6093	10115

DIMENSIONS FOR REFERENCE ONLY. CERTIFIED DRAWINGS ARE AVAILABLE WITH ORDER.

*ALSO THE RECOMMENDED CLEARANCE FOR BASKET REMOVAL.

**RATIO OF THE INLET I.D. AREA TO BASKET OPEN AREA.

(OPEN AREA BASED ON CLASS 150 WITH STD PIPE SCHEDULES)

STANDARD DESIGN AND FABRICATION: ASME B31.3. (OTHER CODES AVAILABLE)

LARGER SIZES AND HIGHER ANSI RATINGS ARE ALSO AVAILABLE.

Closure Design Options

To accommodate most applications Yale® closures are available for HORIZONTAL, VERTICAL or ANGLE installations.

Horizontal closures are equipped with side arm hinges or jib arm hinges depending on closure size and pressure rating.

Side arm hinges are hinged on the left side (facing the closure) unless ordered otherwise.

Jib arm hinges will permit the cap to swing to either side after opening, thus providing greater installation and operational flexibility.

Six inch and larger closure caps for vertical installations are suspended from a davit hinge by a threaded center pin having the same thread pitch as the closure.

Angled closure hinges are custom designed to match the specified incline or decline angle.

All closure hinges are adjusted at the factory to support the entire weight of the closure cap. This prevents the cap from resting on the threads of the mating hub and allows even the heaviest of caps to be easily rotated off and on the threaded hub. If field adjustment is necessary, the horizontal jib and the 26" and larger vertical davit have adjustment in two planes permitting fast, positive positioning of the cap relative to the hub. Twenty-four inch and smaller vertical davits have adjustments in the vertical plane only.



Vertical Closure

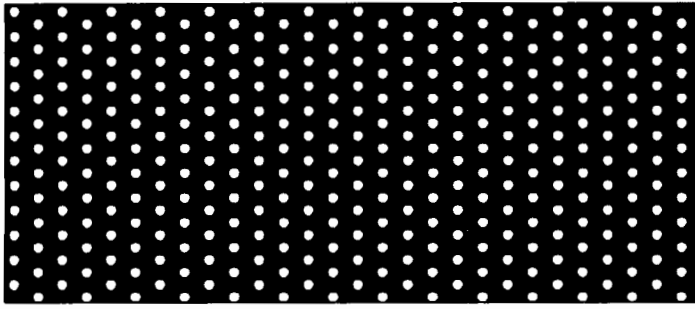
Twelve inch and smaller closures can be ordered with any of the following options or combinations.

- Cap and hub only
- Cap and hub with chain and swivel
- Cap and hub with Figure 500 bleeder plug
- Cap and hub with PAV
- Cap and hub with hinge (excluding 2")
- Closure caps 12" and smaller can be center drilled and tapped $\frac{1}{4}$ ", $\frac{1}{2}$ " or $\frac{3}{4}$ " NPT.
- Cap pins on vertically hinged closures can be drilled and tapped as follows: Sizes 8" to 14" drilled $\frac{1}{4}$ " thru and tapped $\frac{3}{8}$ " NPT; sizes 16" and larger, drilled $\frac{1}{2}$ " thru and tapped $\frac{1}{2}$ " NPT. Larger NPT couplings available upon request.

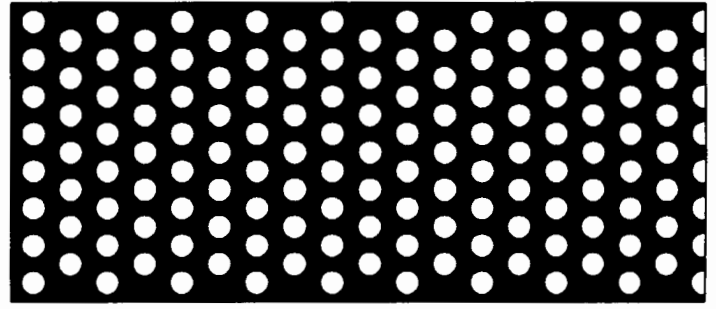


Horizontal Closure

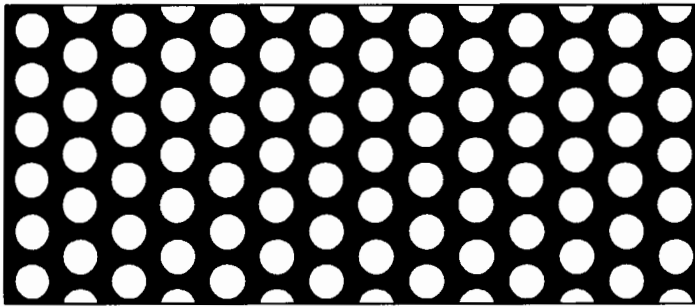
BASE MATERIALS FOR STRAINERS



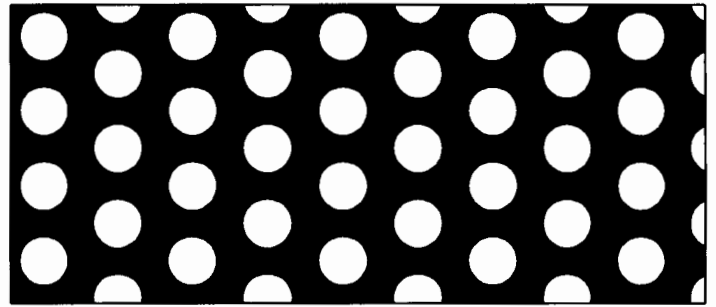
1/16"∅ on 1/8" ctrs.



1/8"∅ on 3/16" ctrs.



3/16"∅ on 1/4" ctrs.



1/4"∅ on 3/8" ctrs.

PERFORATED MATERIALS

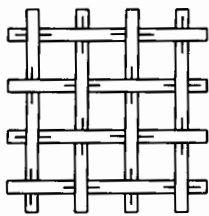
Gage	Perforation	Holes/sq. in.	% of Open Area	Material Range
20	1/16"∅ on 1/8" ctrs.	74.0	22.7%	Carbon Steel, 304SS, 316SS
16	1/8"∅ on 3/16" ctrs.	33.0	40.3%	Carbon Steel, 304SS, 316SS 304L, 316L, Monel
16	3/16"∅ on 1/4" ctrs.	18.5	51.0%	Carbon Steel, 304SS, 316SS
16	1/4"∅ on 3/8" ctrs.	8.0	40.3%	Carbon Steel, 304SS, 316SS
14	1/8"∅ on 3/16" ctrs.	33.0	40.3%	Carbon Steel, 304SS, 316SS
14	3/16"∅ on 1/4" ctrs.	18.5	51.0%	Carbon Steel, 304SS, 316SS
14	1/4"∅ on 3/8" ctrs.	8.0	40.3%	Carbon Steel, 304SS, 316SS
12	1/8"∅ on 3/16" ctrs.	33.0	40.3%	Carbon Steel
11	1/8"∅ on 3/16" ctrs.	33.0	40.3%	304SS, 316SS
11	1/4"∅ on 3/8" ctrs.	8.0	40.3%	Carbon Steel, 304SS, 316SS

OTHER PERFORATIONS AVAILABLE UPON REQUEST.

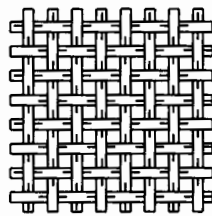
WIRE MESH TYPE BASE MATERIAL (Available From Stock)

Mesh	Wire Diameters		Width of Opening		% of Opening	Material Range
	in.	mm.	in.	mm.		
2	.063	1.6	.437	11.10	76.4%	Carbon Steel, 304SS, 316SS
3	.063	1.6	.270	6.86	65.5%	Carbon Steel, 304SS, 316SS
4	.063	1.6	.187	4.75	56.0%	Carbon Steel, 304SS, 316SS
5	.063"	1.6	.137	3.48	46.9%	Carbon Steel, 304SS, 316SS
6	.047	1.19	.120	3.50	51.8%	Carbon Steel, 304SS, 316SS
8	.047	1.19	.078	1.98	38.9%	Carbon Steel, 304SS, 316SS

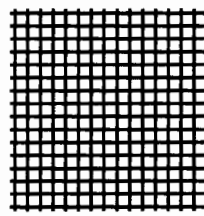
OTHER SIZES AND MATERIALS AVAILABLE UPON APPLICATION.



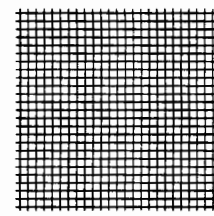
4 Mesh
.072



8 Mesh
.047



10 Mesh
.025



20 Mesh
.016

WIRE MESH LINER MATERIAL (Available From Stock)

Mesh	Wire Diameters		Width of Opening		% of Opening	Material Range
	in.	mm.	in.	mm.		
10	.025	.640	.075	1.91	56.3%	304SS, 316SS
20	.016	.406	.034	.86	46.2%	304SS, 316SS
30	.013	.330	.020	.52	37.1%	304SS, 316SS
40	.010	.254	.015	.38	36.0%	304SS, 316SS
50	.009	.229	.011	.28	30.3%	304SS, 316SS
60	.0075	.191	.009	.23	30.5%	304SS, 316SS
80	.0055	.140	.007	.19	31.4%	304SS, 316SS
100	.0045	.114	.006	.14	30.3%	304SS, 316SS

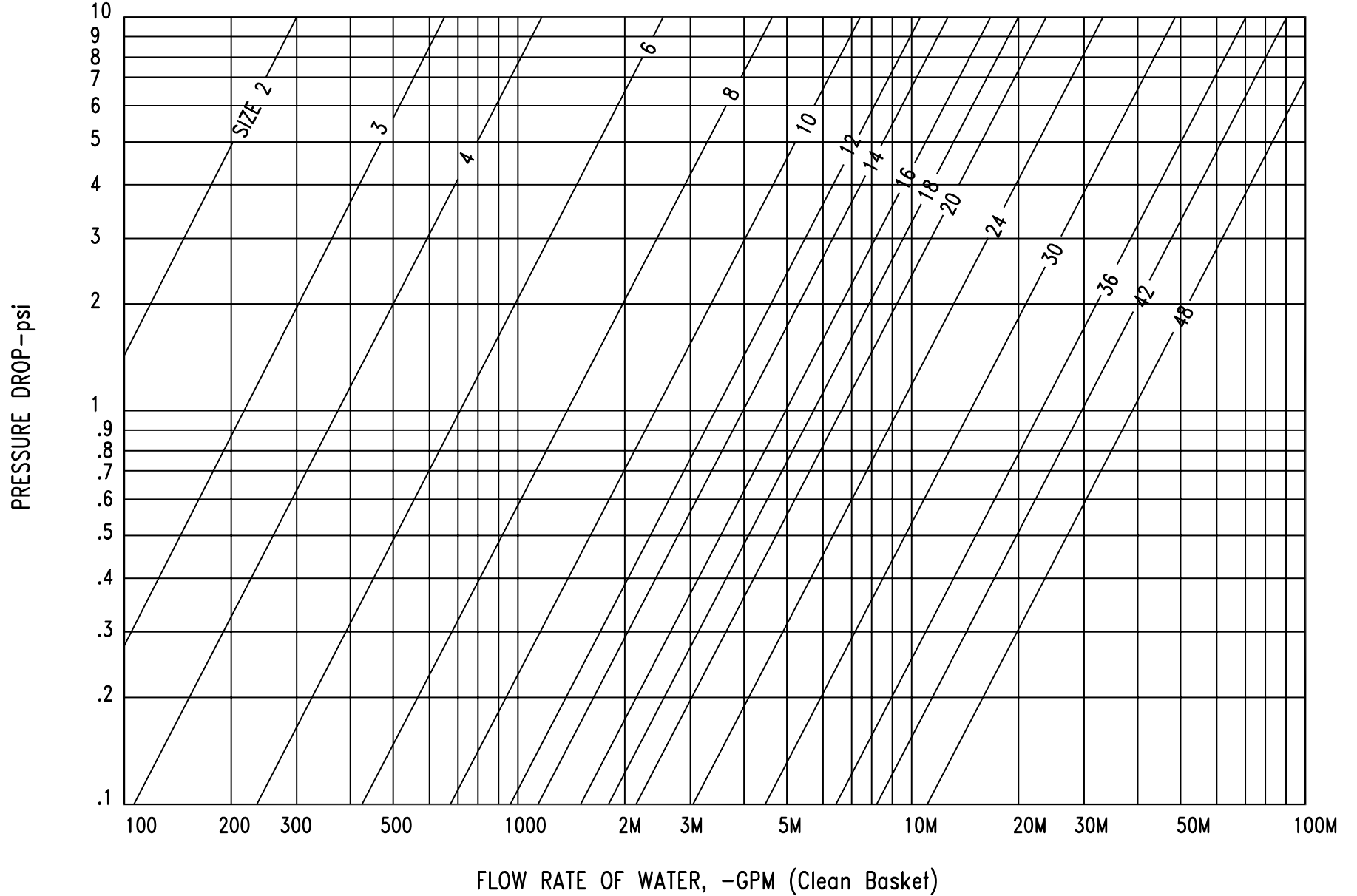
OTHER SIZES AND MATERIALS AVAILABLE UPON APPLICATION.

CORRECTION FACTOR:
 FOR LIQUIDS MORE VISCOUS THAN WATER
 OR WHERE WIRE CLOTH LINER IS ADDED
 MULTIPLY PRESSURE IN CHARTS BY:

VISCOSITY (SSU)	PERFORATED (1/8" HOLES)	PERFORATED W/ WIRE CLOTH		
		40 MESH	60 MESH	80 MESH
30	1.00	1.32	1.53	1.62
270	1.30	1.61	1.83	2.00
385	1.44	1.76	2.00	2.20
500	1.58	1.92	2.13	2.41
1000	1.66	2.22	2.41	2.63
2000	1.86	2.41	2.72	2.91

VERTICAL BASKET STRAINERS
 PRESSURE DROP FOR LIQUIDS

(Perforated basket 1/8" dia. holes on 3/16" centers)



Certificate of Authorization Permit

Quality Management System

Expiry Date: **November 4, 2026**

Reg. No.: **AQP-1181**

RADAFAB OILFIELD & INDUSTRIAL SUPPLY INC.

7652 - 40 STREET S.E.
CALGARY, ALBERTA

having complied with the provisions of the SAFETY CODES ACT, is hereby authorized to perform the activities identified in the following table:

	<u>Construction</u>	<u>Repair</u>	<u>Alter</u>
Pressure Vessels			
ASME Section VIII-1 Pressure Vessels	Shop	Shop	Shop
Miniature Vessels in accordance with CSA B51	Shop	---	---
Pressure Piping			
ASME B31.3 Process Piping	Shop	Shop	Shop
Fittings			
Category A,E,H	Shop	Shop	Shop

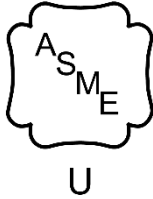


As a condition of this permit, the holder is required to participate in interim audits by a safety codes officer to verify that the quality management system is being maintained in a manner acceptable to a safety codes officer.

Dated at Edmonton, this 13th day of July, 2023

Chief Inspector and Administrator

Certificate No.: 15962



CERTIFICATE OF AUTHORIZATION

The named company is authorized by The American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the ASME Single Certification Mark and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with the ASME Single Certification Mark shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

Radafab Oilfield & Industrial Supply Inc.
7652-40 Street SE
Calgary, Alberta T2C 2V4
Canada

SCOPE:

Manufacture of pressure vessels at the above location only

AUTHORIZED: **November 04, 2023**

EXPIRES: **November 04, 2026**

CERTIFICATE NUMBER: **38003**

Handwritten signature of Richard D. Caplan in black ink.

Board Chair, Conformity Assessment

Handwritten signature of L.M. Eisenberg in black ink.

Managing Director, Standards & Engineering Services



SPECIFICATION SHEET
VERTICAL BASKET STRAINER

MANUFACTURING AND DESIGN CODE

DESIGN CODE: _____ ASME B31.3 _____ ASME SECTION VII, DIV.1

CRN REQUIRED WHICH PROVINCE _____ "U" STAMP REQUIRED __ YES __ NO

DESIGN TEMP. _____ °C DESIGN PRESSURE _____ PSIG

MDMT - _____ °C

CORROSION ALLOWANCE _____ STRESS RELIEVE __ YES __ NO

RADIOGRAPHY _____ OTHER NDE _____

COVER ASSEMBLY _____ BLIND FLANGE _____ BLIND FLANGE W/DAVIT

_____ THREADED QUICK OPENING

INLET/ OUTLET CONNECTION. SIZE & RATING _____

PAINT: _____ SHOP PRIMER OTHER _____

BI-DIRECTIONAL FLOW __ YES __ NO DUPLEX ASSEMBLY __ YES __ NO

SPECIFICATION DATA

QUANTITY REQUIRED _____ FLOW RATE _____ GPM OPERATING TEMP _____ °C

SPECIFIC GRAVITY _____ @ OPERATING MAXIMUM ΔP CLEAN _____ PSIG

OPERATING PRESSURE _____ PSIG FLUID _____ VISCOSITY _____ cP OPERATING

MATERIAL SPECIFICATION

STRAINER BODY: _____ CARBON STEEL _____ LOW TEMP CARBON STEEL _____ 316 SS

STRAINER BASKET: PERFORATED METAL _____ GAUGE OR _____ " THICK

HOLE SIZE DIAMETER _____ " ON _____ CENTERS

MESH #: _____ 316 SS MATERIAL IS STANDARD FOR MESH