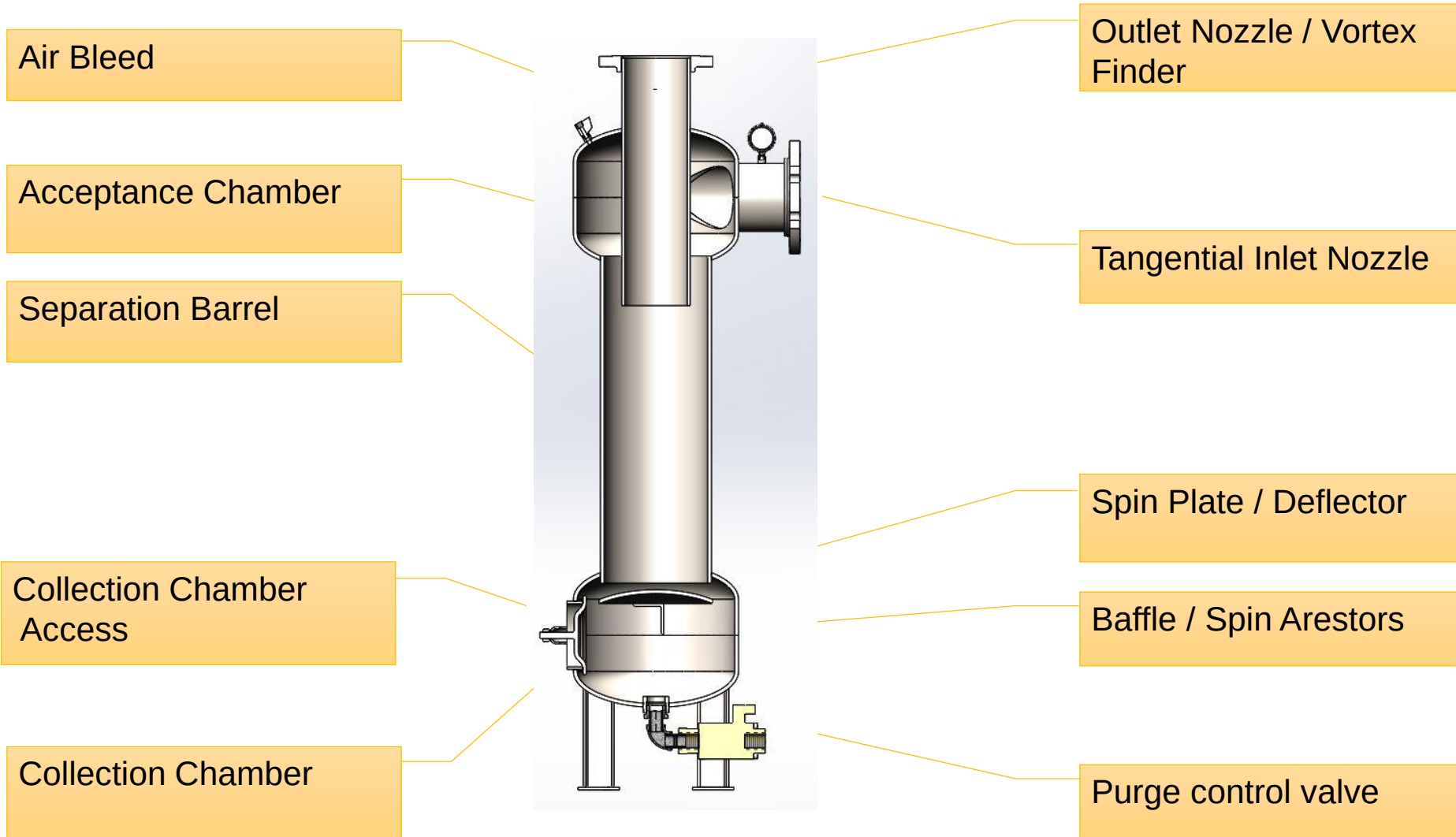




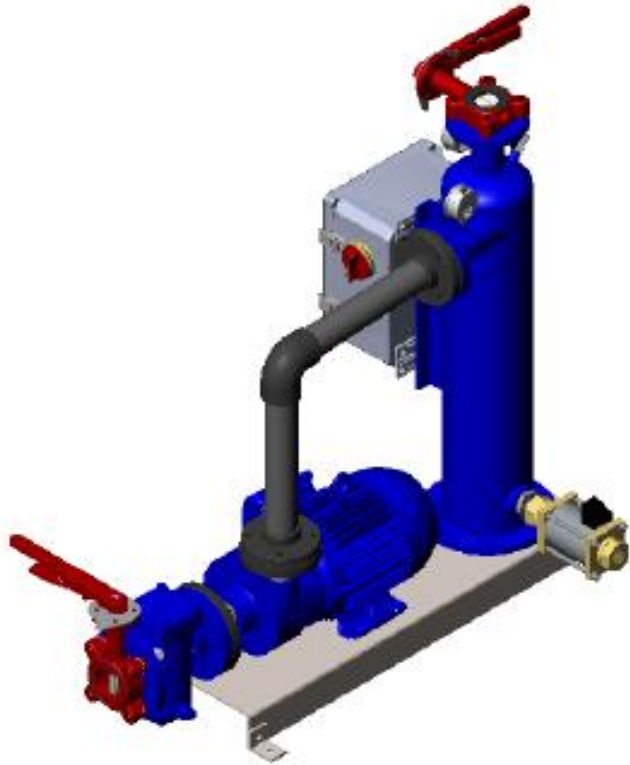
Amiad/PEP Separators USA

Engineered package components



Tower Clean Series Purge Option

Key standard features



- Flow rates: 50 – 1100 gpm
- CS Separator vessel, optional SS
- Operating pressure: 150 psi
- 1.5-6" connections
- Fail Safe Auto Purge

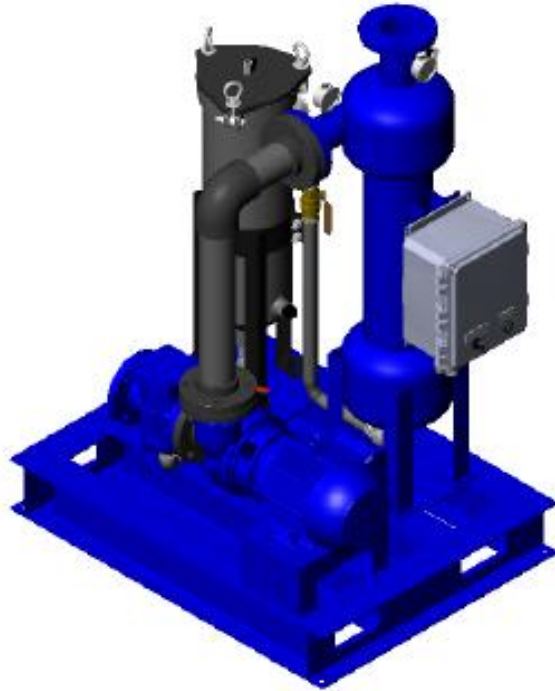
Tower Clean Series Purge Option specifications

Components	Engineered Design
Filter Vessel	Carbon Steel, non-ASME, 150 PSIG, Inlet/Outlet/Purge, Air Vent Port.
Internal Distribution	N/A
Filter Media	Centrifugal Action
Backwash Initiation	Automatic, backwash frequency and duration timers
Backwash Source	System water
Backwash Duration	4 times a day for 15 seconds standard
Face Piping	Schedule 80 PVC
Pump/Motor	System matched centrifugal pump with close-coupled TEFC motor, 35' head side stream, 70' head basin sweeping.
Flush Valves	Fail Safe Auto Purge - includes controller and 1" diameter coaxial solenoid valve
Valve Actuation	Hydraulic
Electrical Controls	NEMA 4X thermoplastic UL-labeled control panel with lockable UV-resistant access cover, main power disconnect switch, overload protection, pump motor starter and control voltage transformer
Supply Power	208/230/460V AC, 3-PH, 60 Hz
Base/Skid	Fully skid-mounted on 304 stainless steel or epoxy coated carbon steel
Warranty	1 year against defects in materials and workmanship

Tower Clean Series Purge Option System Info

Model	Separator	Flow Range (GPM)	Standard Low Head Pump/ Motor (35 ft. TDH)	High Head Pump/ Motor (required for use with sweeper jets) 70 ft. TDH	Approximate Shipping Weight
ICS2-TCP-50	F-ICS2-0150	50	1 HP	3 HP	500 lbs.
ICS2-TCP-75	F-ICS2-0150	75	1.5 HP	3 HP	550 lbs.
ICS2-TCP-100	F-ICS2-0200	100	2 HP	3 HP	600 lbs.
ICS2-TCP-150	F-ICS2-0300	150	3 HP	5 HP	700 lbs.
ICS2-TCP-200	F-ICS2-0300	200	3 HP	7.5 HP	800 lbs.
ICS2-TCP-280	F-ICS2-0300	280	5 HP	10 HP	900 lbs.
ICS2-TCP-400	F-ICS2-0500	400	5 HP	15 HP	1100 lbs.
ICS2-TCP-550	F-ICS2-0500	550	7.5 HP	20 HP	1500 lbs.
ICS2-TCP-850	F-ICS2-0600	850	10 HP	25 HP	2000 lbs.
ICS2-TCP-1100	F-ICS2-0600	1100	15 HP	30 HP	2900 lbs.
All Models Include Auto Purge with Controls					

Tower Clean Series Closed Recovery



Key standard features

- Flow rates: 50 – 1100 gpm
- CS Separator vessel, optional SS
- Operating pressure: 150 psi
- 1.5-6" connections
- Solids Recovery Vessel

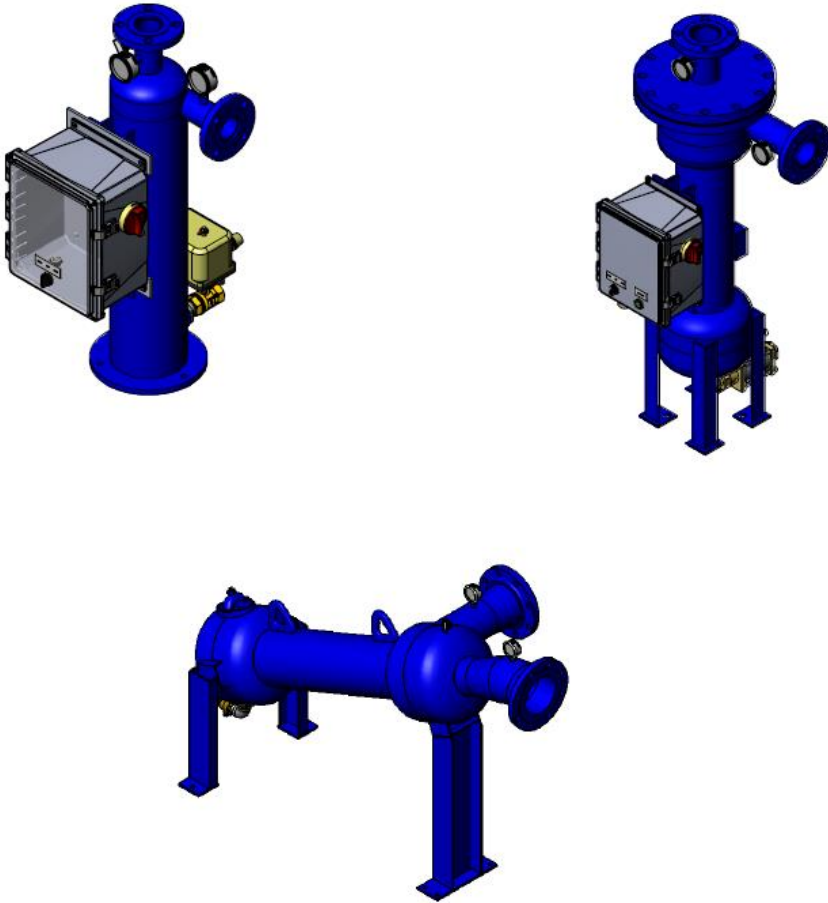
Tower Clean Series Closed Recovery Specifications

Components	Engineered Design
Filter Vessel	Carbon Steel, non-ASME, 150 PSIG, Inlet/Outlet/Purge, Air Vent Port.
Internal Distribution	N/A
Filter Media	Centrifugal Action
Backwash Initiation	Automatic, backwash frequency and duration timers
Backwash Source	System water
Backwash Duration	4 times a day for 15 seconds standard
Face Piping	Schedule 80 PVC
Pump/Motor	System matched centrifugal pump with close-coupled TEFC motor, 35' head side stream, 70' head basin sweeping.
Closed Recovery	Bag Filter, Carbon Steel, Manual Air Vent, Poly Bags
Valve Actuation	Hydraulic
Electrical Controls	NEMA 4X thermoplastic UL-labeled control panel with lockable UV-resistant access cover, main power disconnect switch, overload protection, pump motor starter and control voltage transformer
Supply Power	208/230/460V AC, 3-PH, 60 Hz
Base/Skid	Fully skid-mounted on 304 stainless steel or epoxy coated carbon steel
Warranty	1 year against defects in materials and workmanship

Tower Clean Series Closed Recovery System Info

Model	Separator	Flow Range (GPM)	Standard Low Head Pump/ Motor (35 ft. TDH)	High Head Pump/ Motor (required for use with sweeper jets) 70 ft. TDH	Approximate Shipping Weight
ICS2-TCP-50	F-ICS2-0150	50	1 HP	3 HP	500 lbs.
ICS2-TCP-75	F-ICS2-0150	75	1.5 HP	3 HP	550 lbs.
ICS2-TCP-100	F-ICS2-0200	100	2 HP	3 HP	600 lbs.
ICS2-TCP-150	F-ICS2-0300	150	3 HP	5 HP	700 lbs.
ICS2-TCP-200	F-ICS2-0300	200	3 HP	7.5 HP	800 lbs.
ICS2-TCP-280	F-ICS2-0300	280	5 HP	10 HP	900 lbs.
ICS2-TCP-400	F-ICS2-0500	400	5 HP	15 HP	1100 lbs.
ICS2-TCP-550	F-ICS2-0500	550	7.5 HP	20 HP	1500 lbs.
ICS2-TCP-850	F-ICS2-0600	850	10 HP	25 HP	2000 lbs.
ICS2-TCP-1100	F-ICS2-0600	1100	15 HP	30 HP	2900 lbs.
All Models Include Closed Recovery Vessel					

ICS Series Separators



Key features

- Flow rates: 4 – 4,500 gpm
- Carbon steel separators / ss optional
- Operating pressure: 150 psi
- 1/2" – 12" connections
- Coating: Epoxy Coated External
- Optional Removable Lid and Low Profile.

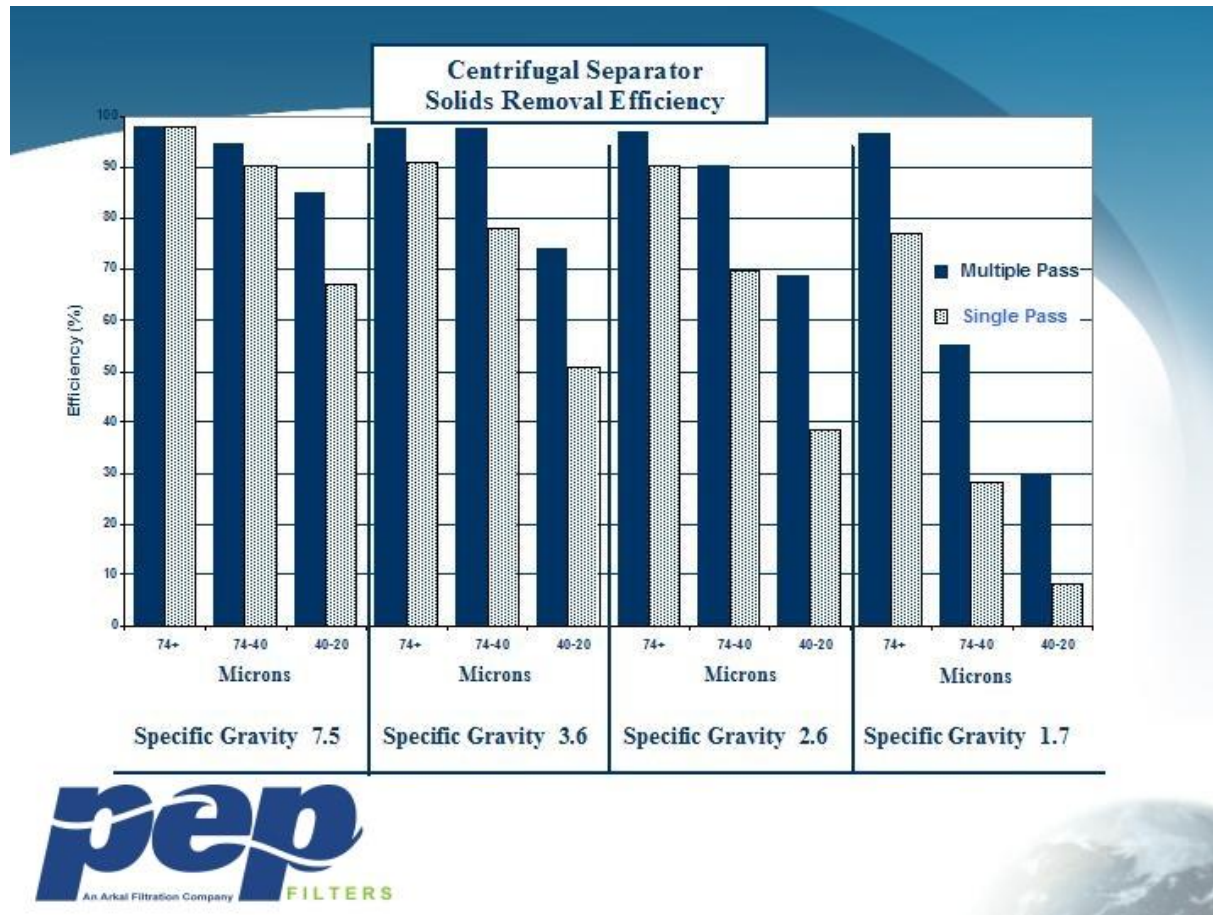
ICS Separator Specifications

Components	Engineered Design
Filter Vessel	Carbon Steel, non-ASME, 150 PSIG, Inlet/Outlet/Purge, Air Vent Port.
Inlet/Outlet	ANSI Flanged
FiltPurge Outlet	FNPT
Coating:	Epoxy Coating External
ASME	Optional
Removable Top	Optional
45/22.5 Deg	Optional
Warranty	1 year against defects in materials and workmanship

ICS Separator Information

Model	SAP Group Number	Purge Connection (NPT)	Inlet/ Outlet	Flow Range (GPM)
F-ICS2-0050	200101	1"	1/2"	4-12
F-ICS2-0075	200102	1"	3/4"	9-20
F-ICS2-0100	200103	1"	1"	15-35
F-ICS2-0125	200104	1"	1-1/4"	20-47
F-ICS2-0150	200105	1"	1-1/2"	35-78
F-ICS2-0200	200106	1"	2"	60-130
F-ICS2-0300	200107	1"	3"	130-280
F-ICS2-0400	200108	1"	4"	220-485
F-ICS2-0500	200109	1"	6"	340-775
F-ICS2-0600	200110	1"	6"	500-1100
F-ICS2-0800	200111	2"	8"	850-1900
F-ICS2-1000	200112	2"	10"	1350-3100
F-ICS2-1200	200113	2"	12"	2000-4500

ICS Separator Efficiency



The separator can remove particulates 75um and larger with a specific gravity of 2.6 and greater at a predicable 95%.

Separator Maximum Loading

AMIAD USA

GPM	Gallons of Solids Per Minute										
	0.25	0.5	1.25	2.5	5	7.5	10	12.5	15	20	25
5000	0.25	0.5	1.25	2.5	5	7.5	10	12.5	15	20	25
4000	0.2	0.4	1	2	4	6	8	10	12	16	20
3000	0.15	0.3	0.75	1.5	3	4.5	6	7.5	9	12	15
2000	0.1	0.2	0.5	1	2	3	4	5	6	8	10
1000	0.05	0.1	0.25	0.5	1	1.5	2	2.5	3	4	5
500	0.025	0.05	0.125	0.25	0.5	0.75	1	1.25	1.5	2	2.5
450	0.0225	0.045	0.1125	0.225	0.45	0.675	0.9	1.125	1.35	1.8	2.25
400	0.02	0.04	0.1	0.2	0.4	0.6	0.8	1	1.2	1.6	2
350	0.0175	0.035	0.0875	0.175	0.35	0.525	0.7	0.875	1.05	1.4	1.75
300	0.015	0.03	0.075	0.15	0.3	0.45	0.6	0.75	0.9	1.2	1.5
250	0.0125	0.025	0.0625	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25
200	0.01	0.02	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1
150	0.0075	0.015	0.0375	0.075	0.15	0.225	0.3	0.375	0.45	0.6	0.75
100	0.005	0.01	0.025	0.05	0.1	0.15	0.2	0.25	0.3	0.4	0.5
50	0.0025	0.005	0.0125	0.025	0.05	0.075	0.1	0.125	0.15	0.2	0.25
25	0.00125	0.0025	0.00625	0.0125	0.025	0.0375	0.05	0.0625	0.075	0.1	0.125
PPM	50	100	250	500	1000	1500	2000	2500	3000	4000	5000

NOTE: TSS = PPM = mg/l

Separators can handle solids loading of 10,000 PPM in special conditions with many design requirements. In general most applications are less than 2,000 PPM.

ICS Separator Purging Considerations

- Volume of Solids
- Flow Rate Required (Separator Cannot purge more than 10% of inlet flow)
- Recovery Method / Handling
- Type of Purge Valve
- Distance of Purging
- Purge Line Sizing

Sweeper Jet Systems

Sweeper jets

5 GPM



8 GPM



13 GPM

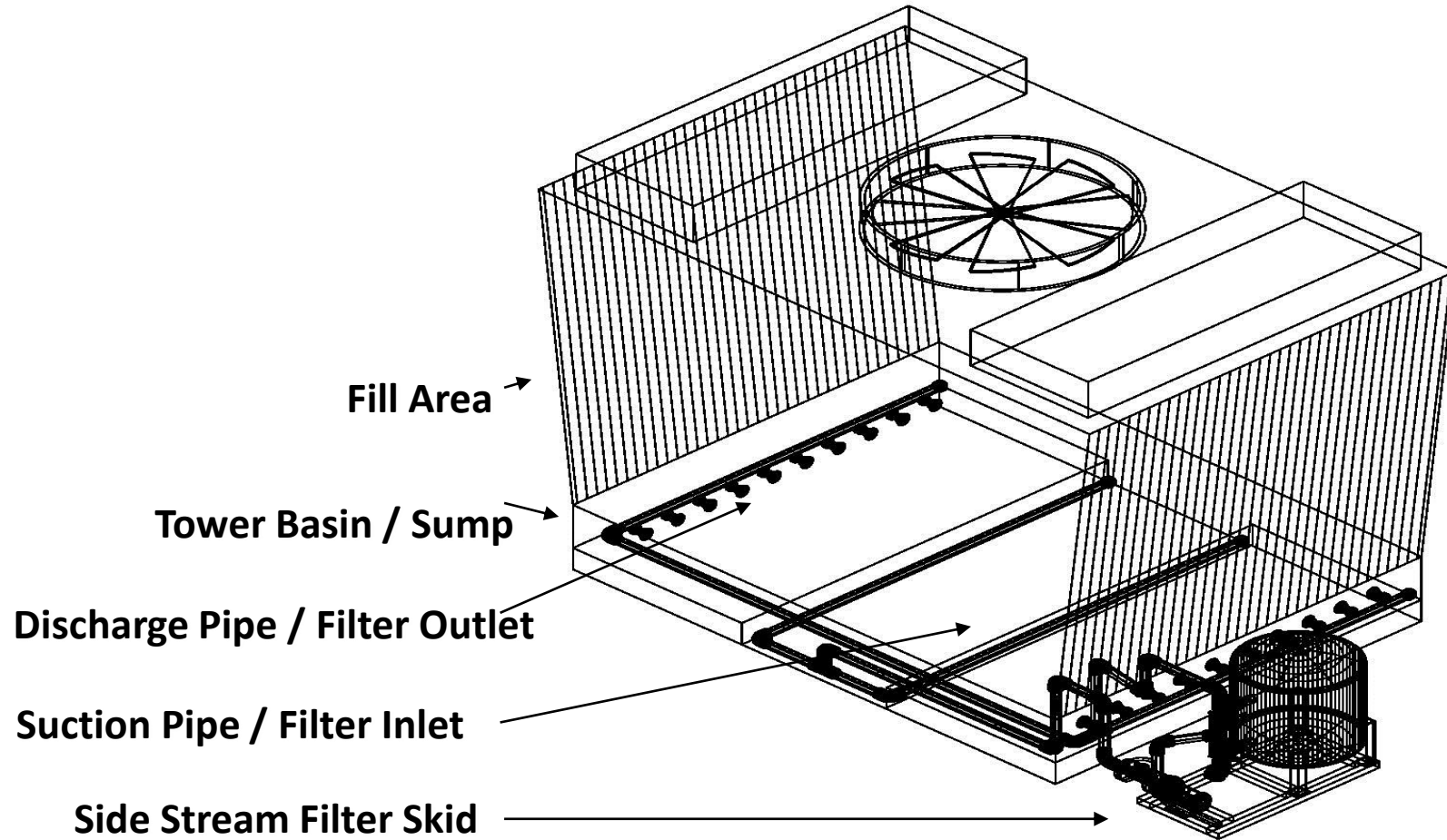


Sizing a sweeper jet system:

1 GPM Per ft² of basin area

Spacing between jets: ~ 10"

Typical sweeper jet installation



ICS Separator Applications

- Steel Mills
- Rolling Mills
- Water intake rivers and lakes (Sand Issues)
- Oil and Gas (Produced water up stream or down stream of FWKO tank)
- Water Wells producing sand
- Cutting equipment with coolant
- Cooling Towers

Note: Any application that has particulates the settle in 30sec to 1 min a separator can be applied.