

Hopper Oil Water Separators

- Low maintenance costs
- Easy cleaning through removable vapor-tight covers
- No moving parts
- No power consumption
- No consumable wearing elements
- No chemicals or absorbent mesh packs to remove, replace, or dispose
- Compact size
- Solids and DNAPL storage capability
- Optional integral oil storage



Hydro Quip's Hopper Oil Water Separators are above-ground units designed for the separation of free and dispersed (non-emulsified) oil and settleable solids. Settleable solids and DNAPL are collected in the hopper chamber for removal. For pumping to downstream treatment, a model design with Effluent Pump Out Chamber is available.

FABRICATION

The oil water separator is a special purpose prefabricated parallel-corrugated plate, rectangular, gravity displacement, type oil water separator. The separator shall be comprised of a tank containing an inlet compartment, separation chamber, sludge chamber, and clean water outlet chamber.

TANK

The tank shall be a single-wall or double-wall construc-

tion, conforming to UL and API standards, manufactured of stainless steel or carbon steel. Welding will be in accordance with AWS D1.1 to provide a watertight tank that will not warp or deform under load. Pipe connections to the exterior shall be as follows:

PIPE CONNECTIONS

All connections 3" and smaller are FNPT couplings. All connections 4" and larger are raised face flanges with ANSI 150

pound standard bolt circle. Use flanged piping connections that conform to ANSI B16.5.

SEPARATOR CORROSION

PROTECTION (for carbon steel only)

After shop hydrostatic test has been successfully completed, a coating system will be applied to the interior and exterior surfaces of the separator. Interior and exterior shall be sand-blasted to SSPC-SP10 & SSPC-SP6; Interior lined with Tnemec Series 61 liner to 9 mils MDFT;

Exterior coated with polyamide epoxy to 6 mils MDFT.

LIFTING LUGS

The tank shall be provided with properly sized lifting lugs for handling and installation.

COVERS

The tank will be provided with vapor-tight covers for vapor control. Gas vents and suitable access openings to each compartment will be provided. The covers shall be constructed of marine grade aluminum and will be fastened in place. A gasket shall be provided for vapor tightness. $\frac{3}{8}$ " bolts and threaded knobs will be provided for cover attachment.

INLET COMPARTMENT

The inlet chamber shall be comprised of a non-clog diffuser to distribute the flow across the width of the separation chamber. The inlet compartment shall be of sufficient volume to effectively reduce influent suspended

solids, dissipate energy and begin separation. The media will sit above the sludge hopper.

SEPARATION CHAMBER

The oil separation chamber shall contain the appropriate coalescing media specific to your application. The media when installed in cross-flow OWS shall meet US EPA Method 1664 Rev. A and also European Standard 858-1 for oil water separators.

BAFFLES

An oil retention, underflow weir, and overflow weir will be provided. Underflow weir shall be positioned to prevent re-suspension of settled solids.

SLUDGE HOPPER

The sludge hopper shall be located prior to and under the coalescing compartment for the storage of settleable solids and DNAPL. It shall also prevent any solids and DNAPL from entering the clean water chamber.

OIL SKIMMER

The oil separation chamber will be provided with a rotating pipe skimmer for gravity decanting of the separated oil to an external product storage tank or an optional integral product storage tank. Other various types of skimmers can be provided as an additional option.

CLEAN WATER CHAMBER

The tank will be provided with a clean water chamber, which allows the water to leave the separator by gravity flow through the clean water outlet port.

For models using Effluent Pump Out Chamber, water will leave separator by pumped flow. The chamber will be of sufficient volume to turn pump on/off.

VENTS

Appropriately sized vents will be provided.

HOPPER SEPARATORS SIZES

Estimated sizes based on standard flow rates, which is dependent on the type of oil.

Configurations can be modified to satisfy your site-specific requirements.

Hopper OWS	Flow Rate	Size
AGS Series	up to 20 gpm	4' long
AGM Series	20–60gpm	5' long
AG Series	35–2000gpm	6'–20' long

HP MODEL

SPECIFICATIONS

*Dimensions are approximate and flow rates are dependent on the type of oil, media, and temperature in your application.

Model	Flow Rate (GPM)	Diameter	Width (IN)	Length (IN)	Height (IN)	Capacity (GAL)	Sludge Capacity (GAL)
AGS SERIES							
AGS-1SS-HP	2-6	2"	16"	48"	48"	75	7
AGS-2SS-HP	3-11	2"	28"	48"	48"	134	14
AGS-3SS-HP	5-17	2"	40"	48"	48"	200	21
AGM SERIES							
AGM-1SS-HP	3-11	2"	16"	60"	48"	89	14
AGM-2SS-HP	6-22	2"	28"	60"	48"	178	28
AGM-3SS-HP	9-33	2"	40"	60"	48"	267	42
AGM-1SS-HP-1H	6-20	2"	16"	60"	60"	96	14
AGM-2SS-HP-1H	12-40	2"	28"	60"	60"	194	28
AGM-3SS-HP-1H	18-60	2"	40"	60"	60"	290	42
AG SERIES							
AG-2-HP	50	3"	28"	72"	56"	314	45
AG-3-HP	75	3"	40"	72"	56"	471	68
AG-4-HP	100	4"	52"	72"	56"	809	91
AG-4-1H-HP	150	4"	52"	84"	72"	928	91
AG-5-HP	200	6"	64"	120"	82"	2062	192
AG-6-HP	300	8"	76"	120"	82"	2474	230
AG SERIES WITH DOUBLE HOPPER							
AG-7-DHP	400	8"	88"	144"	82"	3858	717
AG-7-1H-DHP	500	8"	88"	144"	94"	4487	717
AG-8-DHP	600	10"	100"	144"	108"	5128	820
AG-8-1H-DHP	700	10"	100"	144"	120"	5846	820
AG-9-DHP	800	10"	112"	144"	120"	6575	920
AG-9-1H-DHP	900-1000	12"	112"	168"	120"	7747	1150
AG-9-1H-2L-DHP	1200	14"	112"	192"	120"	9997	1380
AG-10-DHP	1500	16"	124"	192"	120"	11104	1530
AG-10-1H-DHP	2000	20"	124"	216"	132"	13647	1530

HP MODEL WITH EFFLUENT PUMP OUT CHAMBER

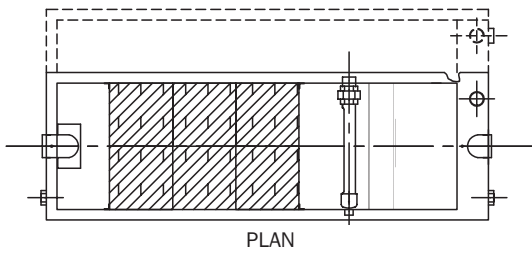
SPECIFICATIONS

*Dimensions are approximate and flow rates are dependent on the type of oil, media, and temperature in your application.

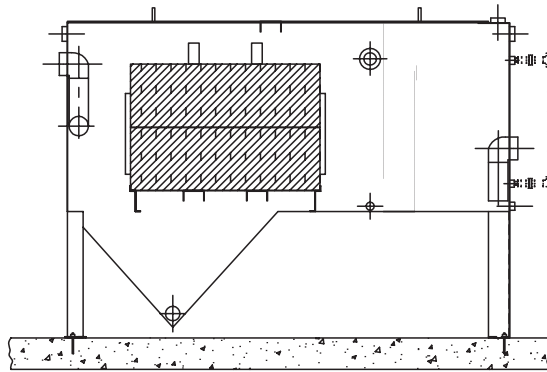
Model	Flow Rate (GPM)	Diameter	Width	Length	Height	Capacity (GAL)	Sludge Capacity (GAL)	Clean Water Chamber Capacity
AGS SERIES								
AGS-1SS-30VH	2-6	2"	16"	48"	48"	82	14	30
AGS-2SS-60VH	3-11	2"	28"	48"	48"	188	28	60
AGS-3SS-90VH	5-17	2"	40"	48"	48"	360	42	90
AGM SERIES								
AGM-1SS-30V-HP	3-11	2"	16"	60"	48"	105	14	30
AGM-2SS-60V-HP	6-22	2"	28"	60"	48"	210	28	60
AGM-3SS-90V-HP	9-33	2"	40"	60"	48"	279	42	90
AGM-1SS-36V-HP-1H	6-20	2"	16"	60"	60"	142	14	36
AGM-2SS-90V-HP-1H	12-40	2"	28"	60"	60"	217	28	90
AGM-3SS-150V-HP-1H	18-60	2"	40"	60"	60"	325	42	150
AG SERIES								
AG-2-HP	50	3"	28"	72"	56"	464	45	150
AG-3-HP	75	3"	40"	72"	56"	696	68	225
AG-4-HP	100	4"	52"	72"	56"	1109	91	300
AG-4-1H-HP	150	4"	52"	84"	72"	1378	91	450
AG-5-HP	200	6"	64"	144"	82"	2662	192	600
AG-6-HP	300	8"	76"	156"	82"	3374	230	900
AG SERIES WITH DOUBLE HOPPER								
AG-7-DHP	400	8"	88"	168"	82"	5058	717	1200
AG-7-1H-DHP	500	8"	88"	168"	94"	5987	717	1500
AG-8-DHP	600	10"	100"	180"	108"	6928	820	1800
AG-8-1H-DHP	700	10"	100"	192"	120"	7946	820	2100
AG-9-DHP	800	10"	112"	204"	120"	8975	920	2400
AG-9A-1H-DHP	900	12"	112"	204"	120"	10447	1150	2700
AG-9-1H-DHP	1000	12"	112"	210"	120"	10747	1150	3000
AG-9-1H-2L-DHP	1200	14"	112"	228"	120"	13597	1380	3600
AG-10-DHP	1500	16"	124"	246"	120"	15604	1530	4500
AG-10-1H-DHP	2000	20"	124"	264"	132"	19647	1530	6000

HP Model

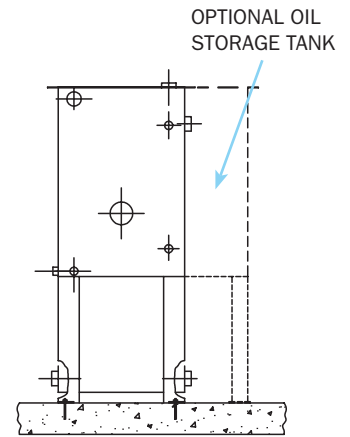
*AGS and AGM models may differ from below.



PLAN



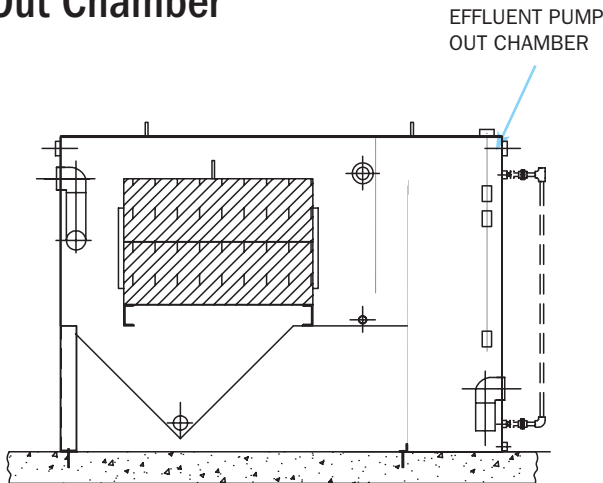
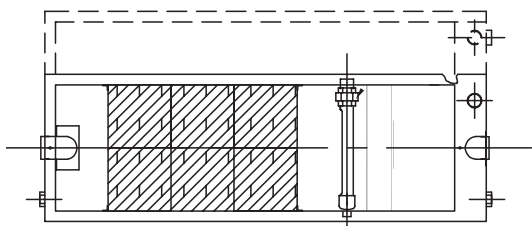
ELEVATION



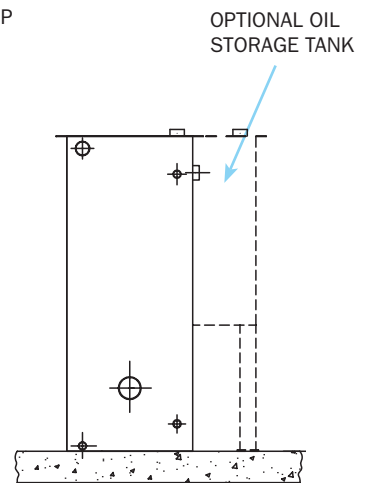
RIGHT SIDE VIEW

HP Model with Effluent Pump Out Chamber

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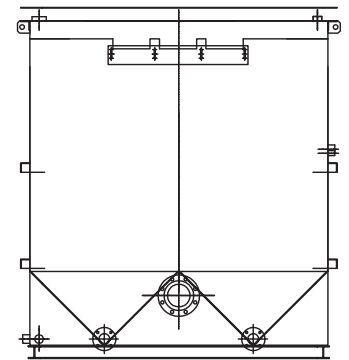
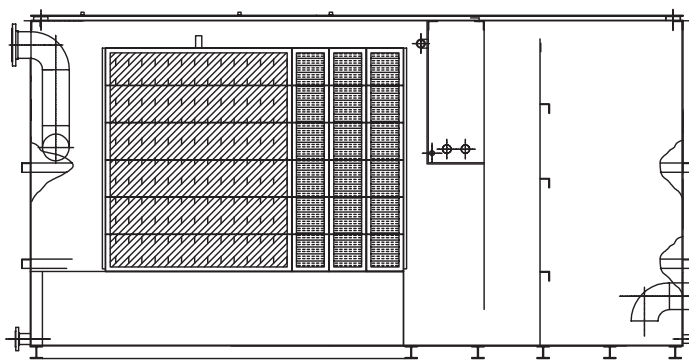
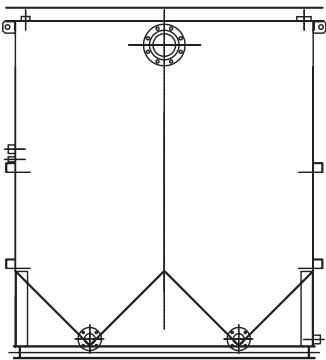


EFFLUENT PUMP
OUT CHAMBER



OPTIONAL OIL
STORAGE TANK

HP Model with Double Hopper



Whether an off-the-shelf unit or customized equipment, we'll help you determine the best solution for your application and site-specific needs.

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