

Storm Trooper AQ

Stormwater Treatment System Patent No: 7,470,361

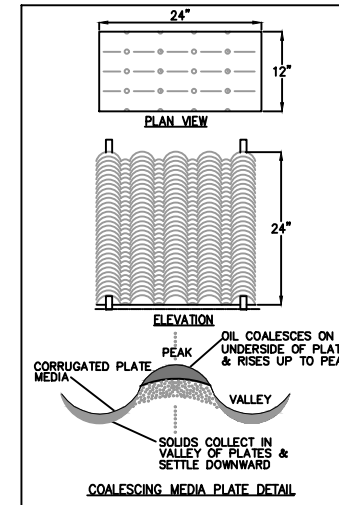
STORMTROOPER, U.S. PATENT 7,470,361

GENERAL INFORMATION
STORMWATER INTERCEPTORS ARE UTILIZED TO REDUCE NON-POINT SOURCE POLLUTION ASSOCIATED WITH OIL AND SEDIMENT. THE INTERCEPTOR IS DESIGNED TO ALLOW FOR THE DETAINMENT OF SETTLEABLE & FLOATABLE SOLIDS & LIQUIDS.

GUARANTEED PERFORMANCE
PRE-ENGINEERED COALESCING MEDIA PACKS ARE UTILIZED FOR ENHANCED SEPARATION WHICH PROVIDE SUPERIOR PERFORMANCE COMPARED TO OTHER SEPARATORS WHICH UTILIZE BAFFLES OR DIVERTERS.

MAINTENANCE
THE INTERCEPTOR SHOULD BE INSPECTED ON A REGULAR BASIS TO DETERMINE PROPER OPERATION AND CLEANING. THE STORMTROOPER HAS BECOME KNOWN IN THE INDUSTRY AS THE "EASIEST TO MAINTAIN." HATCHWAY DESIGN MAKES INSPECTION AND VAULT ENTRY ACCESSIBLE FOR MAINTENANCE.

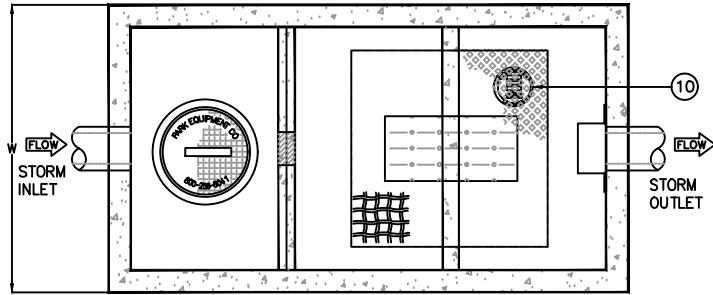
ALL COMPARTMENTS ALLOW FOR THE LARGER HOSE ASSOCIATED WITH VACTOR TRUCK PUMP OUT. MAINTENANCE INSTRUCTIONS AND LOGS ARE AVAILABLE FROM PARK ENGINEERING.



COALESCING PLATE OPERATION

THE COALESCING MEDIA PACKTM CONSISTS OF CLOSELY SPACED CORRUGATED PLATES MANUFACTURED WITH AN OLEOPHILIC (OIL ATTRACTING) MATERIAL. THE PATENTED PLATES ARE AN ENHANCED VERSION OF THE PLATES UTILIZING THE ROYAL DUTCH SHELL PRINCIPLE. THE CORRUGATED PATTERN INDUCES A SINUSOIDAL LAMINAR FLOW OF THE OILY WATER MIXTURE. UNDER LAMINAR FLOW CONDITIONS, BUOYANCY FORCES CAUSE OIL DROPLETS TO RISE UNTIL THEY ADHERE THEMSELVES TO THE OLEOPHILIC PLATES. SMALL OIL DROPLETS TEND TO COALESCE INTO SHEETS OF OIL ON THE UNDERSIDE SURFACES OF THE CORRUGATED PLATES. THE SINUSOIDAL FLOW PATH ALSO PROMOTES A HIGH INCIDENCE OF DROPLET COLLISION AS THE FLUID FLOW CONSTANTLY CHANGES DIRECTION FROM A DOWNWARD PATH TO A VERTICAL PATH. THE COALESCING OIL RISES TO THE SURFACE IN LARGE GLOBULES THROUGH WEEP HOLES OR GUTTERS IN THE COALESCING PLATE PACK.

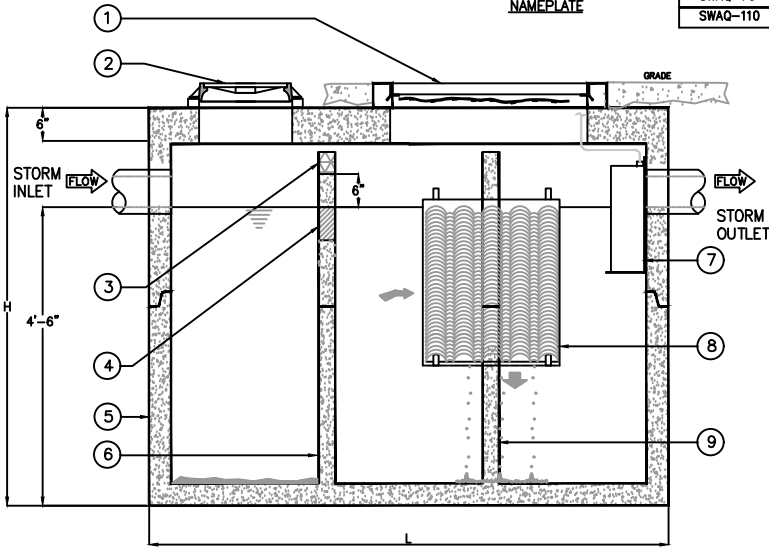
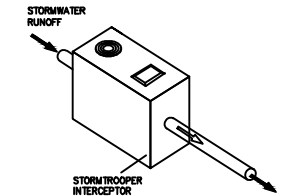
KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	36" X 36" GALV. STEEL FRAME & COVER, RATED FOR H20 TRAFFIC LOADING W/ SAFETY NET (CAST IN OR LOOSE)
2	1	DUCTILE IRON RING/COVER
3	1	GALV. STEEL TRASH SCREEN
4	1	WATER QUALITY ORIFICE
5	-	BITUMASTIC EXTERIOR COATING
6	1	CONTROL BAFFLE
7	1	EFFLUENT BAFFLE W/ ANTI-SIPHON
8	1	COALESCING MEDIA PACK (SEE DETAIL)
9	1	MONOLITHIC BAFFLE
10	-	NAMEPLATE: MFG: PARKUSA 888-611-PARK WWW.PARKUSA.COM MODEL: SWAQ-XX DATE MANUFACTURED



PLAN VIEW



MODEL NO.	FLOW RATE (gpm)	TOTAL SURFACE AREA (SQ FT)	MAX EFFECTIVE DRAINAGE (ACRES)	DIMENSIONS			
				LENGTH L	WIDTH W	HEIGHT H	MINIMUM SETTLING DEPTH
SWAQ-05	420	100	0.13	7'-10"	4'-4"	7'-0"	4'-0"
SWAQ-10	600	149	0.20	8'-8"	5'-0"	7'-0"	4'-0"
SWAQ-20	1000	248	0.33	11'-0"	6'-0"	7'-6"	4'-0"
SWAQ-25	1440	369	0.50	13'-0"	7'-0"	8'-0"	4'-0"
SWAQ-40	2250	588	0.79	16'-0"	8'-6"	8'-0"	4'-0"
SWAQ-70	2720	730	0.98	18'-0"	9'-0"	8'-10"	4'-0"
SWAQ-110	4000	913	1.23	21'-2"	11'-2"	6'-10"	4'-0"



ELEVATION

SPECIFICATIONS

- CONCRETE:** DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.
- REINFORCEMENT:** GRADE 60 REINFORCED WITH STEEL #4 REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
- D.I. CASTINGS:** MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF DUCTILE IRON CONFORMING TO ASTM A536, AASHTO M306, & AASHTO M105 STANDARDS. MANHOLE SHALL BE NOMINAL 24" DIAMETER AND BE TRAFFIC DUTY.
- HATCHWAYS:** GALVANIZED STEEL SKID-RESISTANT DOUBLE LEAF H-20 RATED.

ENGINEERING DATA

INTERCEPTOR IS STRUCTURALLY AND HYDRAULICALLY ENGINEERED CONFORMING TO UNIFORM PLUMBING CODE. NOMINAL CAPACITY AS INDICATED. FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF INTERCEPTOR. USE DIMENSIONAL DATA AS SHOWN.



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STORMWATER INTERCEPTOR
MODEL SWAQ 05 THRU 110

PM	PC	DRN	ENG	DWG. NO.	REV.
DATE	2023			SWAQ-1	A