

Storm Trooper[®] AQ

Stormwater Treatment System Patent No: 7,470,361

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

GENERAL INFORMATION
 THE STORMTROOPER[®] AQ STORMWATER INTERCEPTOR IS DESIGNED TO RECEIVE & TREAT STORMWATER RUNOFF ON A GRAVITY-FLOW AND ONCE-THROUGH

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.

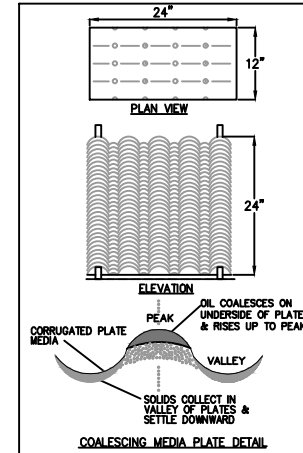
APPLICATIONS
 THE PARKUSA STORMTROOPER INTERCEPTOR IS DESIGNED FOR STORMWATER RUNOFF FROM COMMERCIAL & INDUSTRIAL APPLICATIONS WHERE EXCESSIVE POLLUTANTS MAY HARM THE ENVIRONMENT OR DAMAGE SEWER SYSTEMS.

BY-PASS DESIGN
 A BY-PASS MANHOLE DIVERTS STORMWATER DURING HEAVY PEAK STORM PERIODS. THIS ALLOWS FOR OPTIMAL INTERCEPTOR SIZING.

MAINTENANCE
 THE PARK STORMTROOPER INTERCEPTOR REQUIRES MINIMAL MAINTENANCE. HYDROCARBONS AND SOLIDS ARE REMOVED FROM THE STORMWATER VIA BAFFLES AND COALESCING MEDIA.

THESE POLLUTANTS ARE REMOVED FROM THE SEPARATOR WHEN SERVICED BY A LICENSED VACUUM TRUCK OPERATOR.

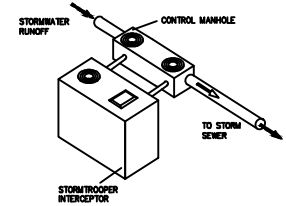
USE SWAQ-BYPASS IF DESIGN FLOW EXCEEDS FLOW RATE SHOWN IN SCHEDULE



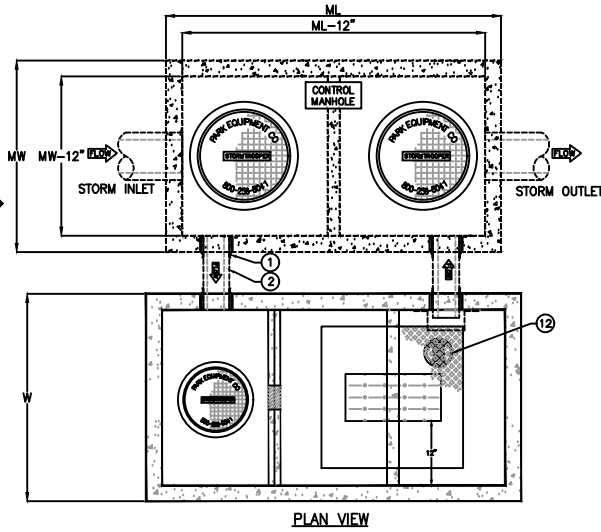
COALESCING PLATE OPERATION

THE COALESCING MEDIA PACK ITM 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	4	BOOTS
2	2	PVC
3	1	GALV. STEEL FRAME & COVER, RATED FOR TRAFFIC LOADING (CAST IN OR LOOSE) W/ SAFETY NET
4	1	20" CAST IRON RING AND COVER
5	1	GALV. STEEL TRASH SCREEN
6	1	WATER QUALITY ORIFICE
7	1	BITUMASTIC EXTERIOR COATING
8	1	CONTROL BAFFLE
9	1	MONOLITHIC BAFFLE
10	1	COALESCING MEDIA PACK
11	1	EFFLUENT BAFFLE W/ ANTI-SIPHON
12	1	NAMEPLATE MFG. PARKUSA 888-611-PARK WWW.PARKUSA.COM MODEL: SWAQ-BP-XX DATE MANUFACTURED



APPLICATION



PLAN VIEW

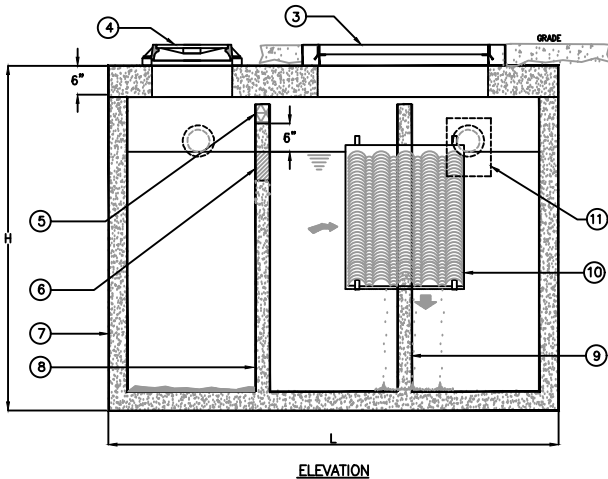
MODEL NO.	FLOW RATE (gpm)	TOTAL SURFACE AREA (SQ FT)	MAX. EFFECTIVE DRAINAGE (ACRES)	DIMENSIONS					
				LENGTH L	WIDTH W	HEIGHT H	MINIMUM SETTLING DEPTH	CONTROL MANHOLE LENGTH (ML)	CONTROL MANHOLE WIDTH (MW)
SWAQ-BP-05	420	100	0.13	7'-10"	4'-4"	7'-0"	4'-0"	7'-0"	4'-0"
SWAQ-BP-10	600	149	0.20	8'-8"	5'-0"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

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 REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
- ACCESS:** MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30. MANHOLE SHALL HAVE 30 INCH INSIDE 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 REGULATORY STANDARDS. NOMINAL CAPACITY AS INDICATED.
 FIELD EXCAVATION AND PREPARATION SHALL BE COMPLETED PRIOR TO DELIVERY OF INTERCEPTOR. USE DIMENSIONAL DATA AS SHOWN.



ELEVATION

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STORMWATER INTERCEPTOR
 MODEL SWAQ 05 THRU 110 WITH BYPASS

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