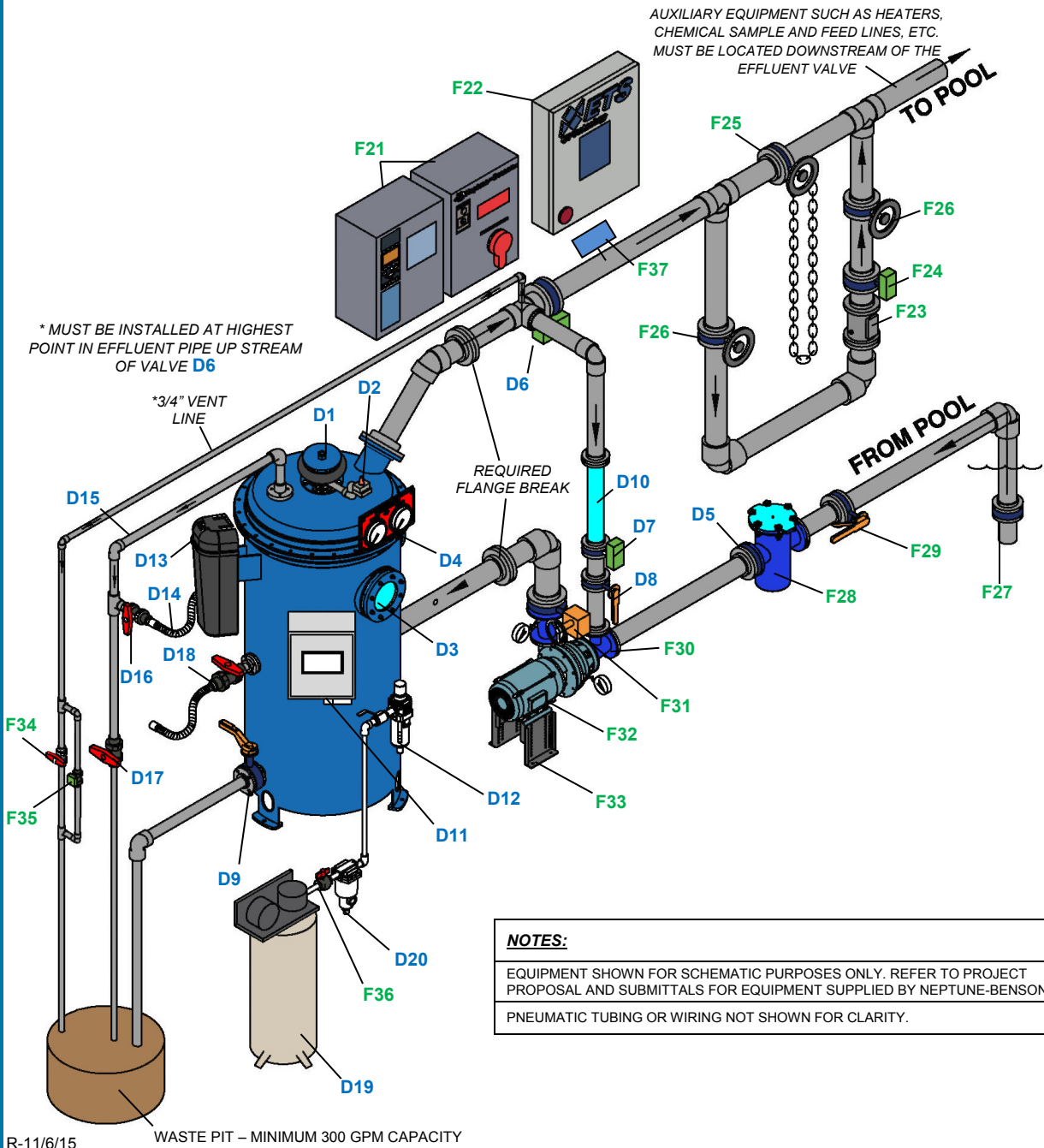


FILTERS

Defender® Filter Schematic - Automatic



NOTES:
 EQUIPMENT SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO PROJECT PROPOSAL AND SUBMITTALS FOR EQUIPMENT SUPPLIED BY NEPTUNE-BENSON.
 PNEUMATIC TUBING OR WIRING NOT SHOWN FOR CLARITY.

DEFENDER FILTER COMPONENTS - INCLUDED IN DEFENDER PACKAGE		
MARK	REFERENCE	NOTES
D1	PNEUMATIC BUMPING ASSEMBLY	NONE
D2	QUICK EXHAUST VALVE	
D3	VIEWING WINDOW	
D4	GAUGE PANEL	
D5	INFLUENT CHECK VALVE	
D6	EFFLUENT VALVE	AIR OPERATED BUTTERFLY VALVE, NORMALLY OPEN. INSTALL EFFLUENT VALVE DIRECTLY ON PRECOAT TEE. LOCATE ACTUATOR WHERE VALVE POSITION CAN BE VIEWED FROM FLOOR.
D7	PRECOAT VALVE	AIR OPERATED BUTTERFLY VALVE, NORMALLY CLOSED. INSTALL PRECOAT VALVE AS CLOSE AS POSSIBLE TO THE PUMP SUCTION PIPING. PRECOAT LINE 2 PIPE DIAMETERS SMALLER THAN EFFLUENT PIPE DIAMETER. (NO LESS THAN 2")
D8	SYSTEM FILL	MANUALLY OPERATED BUTTERFLY VALVE, NORMALLY OPEN.
D9	DRAIN VALVE	MANUALLY OPERATED BUTTERFLY VALVE, NORMALLY CLOSED. (MEDIA DUMP / RINSE) DRAIN LINE MUST BE PLUMBED INDEPENDENTLY TO WASTE. (AUTOMATED OPTION AVAILABLE)
D10	IN-LINE SIGHT GLASS	INSTALL IN-LINE SIGHT GLASS ON THE PRECOAT LINE SO THAT IT CAN BE VIEWED WHILE STANDING AT THE FILTER CONTROL PANEL.
D11	RMF CONTROL PANEL	NONE
D12	FILTER REGULATOR	
D13	VACUUM TRANSFER UNIT	
D14	VACUUM TRANSFER HOSE	
D15	VACUUM TRANSFER PIPING & FITTINGS	SCH80 PVC FITTINGS & PIPE 1.5"
D16	VACUUM TRANSFER VALVE	BALL VALVE 1.5" TRUE UNION, NORMALLY CLOSED.
D17	VACUUM VENT VALVE	BALL VALVE 1.5" TRUE UNION, NORMALLY CLOSED. VACUUM DRAIN LINE MUST BE PLUMBED INDEPENDENTLY TO WASTE.
D18	VACUUM HOSE VALVE WITH HOSE	BALL VALVE 1.5" TRUE UNION, NORMALLY CLOSED.
D19	AIR COMPRESSOR	OPTIONAL
D20	WATER SEPARATOR	

FILTER ACCESSORY COMPONENTS - AVAILABLE UPON REQUEST		
MARK	REFERENCE	NOTES
F21	GREEN DRIVE VFD	WITH BY-PASS
F22	ETS UV TREATMENT SYSTEM CONTROLLER	THIS IS A PACKAGE
F23	ETS UV TREATMENT SYSTEM	
F24	ETS UV EZ STRAINER	SHOWN WITH AUTOMATED OPTION
F25	ETS UV BYPASS	GEAR OPERATED BUTTERFLY VALVE, NORMALLY CLOSED.
F26	ETS UV ISOLATION	GEAR OR LEVER OPERATED BUTTERFLY VALVE, NORMALLY OPEN. (2) REQUIRED
F27	CHECK VALVE	FOR SELF PRIMING PUMPS, CHECK VALVE MUST BE INSTALLED ON SUCTION PIPE BELOW WATER LEVEL.
F28	GUARDIAN™ STRAINER	HAIR & LINT STRAINER
F29	STRAINER ISOLATION	LEVER OR GEAR OPERATED BUTTERFLY VALVE, NORMALLY OPEN.
F30	PRECOAT REDUCING TEE	NONE
F31	PUMP THROTTLE VALVE	GEAR OPERATED BUTTERFLY VALVE, NORMALLY OPEN.
F32	RECIRCULATING PUMP	NONE
F33	PUMP BASE	
F34	3/4" PRECOAT LINE VENT VALVE	NORMALLY CLOSED. PRECOAT LINE MUST BE PLUMBED INDEPENDENTLY TO WASTE.
F35	3/4" PRECOAT LINE VENT VALVE	SHOWN WITH AUTOMATED OPTION
F36	1/2" SHUT OFF VALVE	NONE
F37	FLOW METER	4-20 ma OUTPUT