

Title: President

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

ADDITION FOR OCHED SEECIAL SEISMIC

AFFLICATION FOR OBIFF BFECIAL BEISINIC	
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSP-0677
OSHPD Special Seismic Certification Preapproval (OSP)	
Type: X New Renewal	
Manufacturer Information	
Manufacturer: WATER CONTROL CORPORATION	
Manufacturer's Technical Representative: Josh Petersen	
Mailing Address: 7150 143rd Avenue NW, Ramsey, MN 55303	
Telephone: (866) 405-1268 Email: josh.peters	sen@watercontrolinc.com
FORCODE	COA
Product Information	MA
Product Name: Other OSAP	D Z
Product Type: Water Filtration OSP-067	7 8
Product Model Number: Phoenix GT High-Capacity Ultrafiltration	mmmuuum (MMA)
General Description: Floor mounted High-Capacity/Ultrafiltration (h	HUF) systems for legionella and pathogen control in
Mounting Description: Rigid, Floor Mounted	21
	ne test units and/or modifications required to address e incorporated into the production units.
Applicant Information	K.
Applicant Company Name: Manwill Engineering LLC	IG COT
Contact Person: Derek Manwill	
Mailing Address: PO Box 1194, Bend, OR 97709	
Telephone: (541) 241-2102 Email: derek@ma	anwillse.com





OFFICE USE ONLY



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

allla t	
California Licensed Structural Engineer Respon	sible for the Engineering and Test Report(s)
Company Name: MANWILL ENGINEERING LLC	
Name: Derek Manwill	California License Number: S6266
Mailing Address: PO Box 1194, Bend, OR 97709	
Telephone: (541) 241-2102 Emai	il: derek@manwillse.com
Certification Method	
GR-63-Core X ICC-ES AC156	☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3
Other (Please Specify):	
EC	RCODECO
Testing Laboratory	Mp,
Company Name: ENVIRONMENTAL TESTING LABOR	ATORIES, INC. (ETL)
Contact Person: Jeremy Lange	08B 0877
Mailing Address: 11034 Indian Trail, Dallas TX 75229	33P-0077
Telephone: (972) 247-9657	il: jeremy@etldallas.com
DATE:	05/18/2021
G.	BUILDING CODE. 10°
PNI	COL
· A	BUILDING





Page 2 of 7



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters											
Design Basis of Equipment or Components	s (Fp/Wp) = 1.50 (SDS=2.00, z/h=1), 1.13 (SDS=2.50, z/h=0)										
SDS (Design spectral response accele	eration at short period, g) = 2.00 (z/h=1), 2.50 (z/h=0)										
ap (Amplification factor) =	2.5										
R _p (Response modification factor) =	6.0										
Ω ₀ (System overstrength factor) =	2.0										
I _p (Importance factor) =	1.5										
z/h (Height ratio factor) =	1 and 0										
Natural frequencies (Hz) =	See Attachment										
Overall dimensions and weight =	See Attachment CODE										

OSHPE	Approval (For Office Use Only) - Ap	proval Expires on 12/31/202	251	
Date:	5/18/2021	OSP-0677	18	
Name:	Mohammad Aliaari		Title:	Senior Structural Engineer
Special	Seismic Certification Valid Up to: SDS (g) =	Y: IVIONAMMAD Aliaari See Above	z/h =	See Above
Conditio	n of Approval (if applicable):	ATE: 05/18/2021		







WATER CONTROL **CORPORATION**

ATTACHMENT 1: CERTIFIED COMPONENTS

SPECIAL SEISMIC CERTIFICATION

DOCUMENT NO.: 20095CR1.0 TABLE 1

MANUFACTURER: WATER CONTROL CORPORATION

connections similar to the test assembly.

MODEL NU	MRED	DIN	MENSIONS	(in)	MAX. WT.	DESCRIPTION / NOTES	BASIS				
MODEL NO	MIDEK	DEPTH	WIDTH	HEIGHT	(lb)	DESCRIPTION / NOTES	DASIS				
Phoenix GT F	ligh-Capacity Ultrafi	iltration									
Phoenix GT C	Control Module	23.1	24.6	73.4	225		UUT 1				
Phoenix GT Filter Module		23.1	15.9	73.4	315		UUT 2				
GT-1		23.1	56.3 73.4		540	Control (UUT 1) + 1 Filter (UUT 2)	UUT 1+2				
GT-2		23.1	87.9	73.4	855	Control (UUT 1) + 2 Filters (UUT 2)	EXTRAF				
GT-3		23.1	119.6	73.4	1170	Control (UUT 1) + 3 Filters (UUT 2)	EXTRAF				
GT-4		23.1	151.2	73.4	1485	Control (UUT 1) + 4 Filters (UUT 2)	EXTRAF				
MOUNTING:	Rigid floor mounted.				SEISMIC LEVELS:	55					
NOTES:	Options/Subcompor	nents: Subco	nponents are	uniquely ide	ntified by the m	PES) membrane; UPVC membrane hou lodel number of the module. ne Control Module and one to four Filter	Ü				

BY: Mohammad Aliaari

OSP-0677

Connections between the Control Module and a Filter Module as well as a Filter Module to another Filter Module shall be flexible

CALIKORNIA BUI

541.241.2102 derek@manwillSE.com www.manwillSE.com

05/18/2021 OSP-0677 Page 4 of 7



WATER CONTROL CORPORATION

ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 1 DOCUMENT NO.: 20095CR1.0

MANUFAC	TURER:	WATER C	ONTROL CO	RPORAT	TION							
MODEL NU	JMBER:	PHOENIX GT CONTROL MODULE										
UNIT FUNC	CTION:	HIGH-CAPACITY ULTRAFILTRATION										
SERIAL NU	JMBER:	N/A										
DIN	MENSIONS ((in)	WEIGHT	RES.	. FR	EQ.	(Hz)					
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-	S	٧					
23.1	24.6	73.4	225	15.5	9.	6	14.4					
CODE & CI	RITERIA:	2019 CBC		ICC-ES AC156								
TEST LAB	ORATORY:	ENVIRON	MENTAL TES	STING LA	BOF	RAT	ORY					
REPORT &	DATE:	20095TR1	.0	Noven	nber	23,	2020					
S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V}	(g)	A_R	_{IG-V} (g)					
2.0	1	3.20	2.40	1.68			0.68					
2.5 0		3.20	2.40	1.00		0.00						

IMPORTANCE FACTOR, $I_P = 1.5$

Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

requirement after enance	additional and a second a second and a second a second and a second a second and a second and a second and a
MOUNTING:	Rigid floor mounted using (4) 3/8in Grade 8 bolts through 2in long 1-3/4x3x1/4in formed carbon steel angle brackets. Each angle bracket is connected to the unit base with (1) 1/2in Grade 2 bolt (4 bolts total).
CONSTRUCTION:	Stainless steel framing.
SUBCOMPONENTS:	Subcomponents are uniquely identified by the model number.
TESTING NOTES:	UUT 1 and UUT 2 were connected using flexible pipe connections during the test to check functionality. The test units were spaced 15.75in apart to accommodate the flexible connectors.

UUT 2

MANUFAC	TURER:	WATER C	ONTROL CO	RPORATION	12/16/20							
MODEL NU	JMBER:	PHOENIX GT FILTER MODULE										
UNIT FUNC	CTION:	HIGH-CAPACITY ULTRAFILTRATION										
SERIAL NU	JMBER:	N/A	N/A									
DIN	MENSIONS	(in)	WEIGHT	RES. FR	EQ. (Hz)							
DEPTH	WIDTH	HEIGHT	(lb)	F-B S	S V							
23.1	15.9	73.4	315	11.5 9	.4 >33							
CODE & C	RITERIA:	2019 CBC	ICC-ES A	AC156								
TEST LAB	ORATORY:	ENVIRON	MENTAL TES	STING LABO	RATORY							
REPORT &	DATE:	20095TR1	.0	November	23, 2020							
S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)							
2.0	1	3.20	2.40	1.68	0.68							
2.5	0	3.20	2.40	1.00	0.00							

IMPORTANCE FACTOR, $I_P = 1.5$

Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

MOUNTING:	Rigid floor mounted using (4) 3/8in Grade 8 bolts through 2in long 1-3/4x3x1/4in formed carbon steel angle brackets. Each angle bracket is connected to the unit base with (1) 1/2in Grade 2 bolt (4 bolts total).
CONSTRUCTION:	Stainless steel framing; modified polyethersulfone (PES) membrane; UPVC membrane housing.
SUBCOMPONENTS:	Subcomponents are uniquely identified by the model number.
TESTING NOTES:	UUT 1 and UUT 2 were connected using flexible pipe connections during the test to check functionality. The test units were spaced 15.75in apart to accommodate the flexible connectors.

derek@manwillSE.com 541.241.2102 www.manwillSE.com

05/18/2021 OSP-0677 Page 5 of 7



WATER CONTROL CORPORATION

ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 1 + UUT 2

DOCUMENT NO.: 20095CR1.0

MANUFAC	TURER:	WATER C	ONTROL CO	RPORATIO	N	1				_		K	
MODEL NU	JMBER:	GT-1				Н	1	1	mile	miles.			. 4
UNIT FUNC	CTION:	HIGH-CAF	PACITY ULTF	RAFILTRATIO	NC					03**	100		
SERIAL NU	JMBER:	N/A					-	- Carriera			21		
DIN	MENSIONS	(in)	WEIGHT	RES. F	REQ. (Hz)	W		S WALLS	1		E 1000		_
DEPTH	WIDTH	HEIGHT	(lb)	F-B S	S-S V	~		Address of the same of the sam			AE		_
23.1	56.25	73.4	540	11.5	9.4 14.4	7					100		
CODE & CI	RITERIA:	2019 CBC		ICC-ES A	C156						5		
TEST LAB	ORATORY:	ENVIRON	MENTAL TES	STING LABO	RATORY								4/67
REPORT &	DATE:	20095TR1	.0	November 23, 2020							-		
S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)							1	
2.0	1	3.20	2.40	1.68	0.68		25	-		1			
2.5	0	3.20	2.40	1.00	0.00				and a	O LOS	/		
		$TOR, I_P = 1.5$	5	501	K CODI	-	120				/		-
maintained		g content duri tegrity and rer e table test.	-						6				1
maintained	d structural in nt after shake	tegrity and reretable table test. Rigid floor	-	onal per man	nufacturer Grade 8 bolts							steel angl	e brackets.
maintained requireme	d structural in nt after shake	tegrity and rer table test. Rigid floor Each angl	mained function	onal per man	oufacturer Grade 8 bolts the unit base	with	h (1) 1/2in	Grade 2	oolt (8 b	olts tota	al).		e brackets.
maintained requirement	d structural in nt after shake	tegrity and rerectable test. Rigid floor Each angle Stainless	mained function mounted using bracket is continued.	onal per man ng (8) 3/8in C onnected to modified pol	oufacturer Grade 8 bolts the unit base lyethersulfond	with e (P	h (1) 1/2in PES) mem	Grade 2	oolt (8 b	olts tota	al).		e brackets.



derek@manwillSE.com 541.241.2102 www.manwillSE.com

05/18/2021 OSP-0677 Page 6 of 7



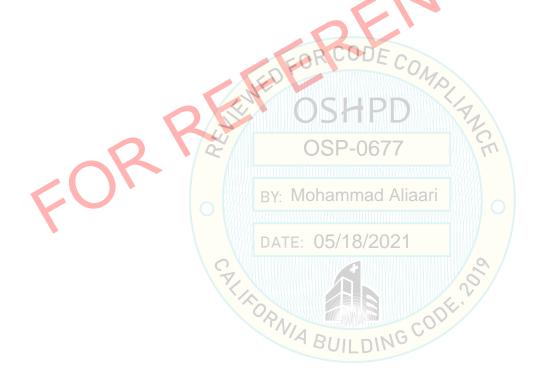
WATER CONTROL CORPORATION

ATTACHMENT 3: MODEL NOMENCLATURE

SPECIAL SEISMIC CERTIFICATION

PHOENIX GT	DOCUMENT NO.: 20095CR1.0
------------	--------------------------

DIGIT:		1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SAMPLE	:	G	T	-	1	-	•	-	•	-	•	-	-	-	-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	-
DIGIT DESCRIPTION				(COD	DES DEFINITIONS																								
1-2	Model Line						(ЭT		Phoenix GT																				
4	F	lter I	Mod	ule [Desig	natio	on					1			S	yste	m w	ith 1	Filte	r Mo	dule			J						
												2	2		S	yste	m w	ith 2	Filte	r Mo	dule	S								
								3	}		System with 3 Filter Modules																			
												4			System with 4 Filter Modules															



derek@manwillSE.com 541.241.2102 www.manwillSE.com

05/18/2021 OSP-0677 Page 7 of 7