

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICE USE ONLY
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.petersen@	@watercontrolinc.com
FORCODEC	Ora
Product Information	P P P P P P P P P P P P P P P P P P P
Product Name: Other OSHPD	T.
Product Type: Water Filtration OSP-0677	- Cr
Product Model Number: Phoenix GT High-Capacity Ultrafiltration	
General Description: Floor mounted High-Capacity Ultrafiltration (HUF building water systems.	systems for legionella and pathogen control in
Mounting Description: Rigid, Floor Mounted	
Tested Seismic Enhancements: Seismic enhancements made to the te anomalies during the tests shall be inc	est units and/or modifications required to address corporated into the production units.
Applicant Information	DE.
Applicant Company Name: Manwill Engineering LLC	cor
Contact Person: Derek Manwill	
Mailing Address: PO Box 1194, Bend, OR 97709	
Telephone: (541) 241-2102 Email: derek@manwi	illse.com
Title: President	

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY

OSHPD



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

California Licensed Structural Engineer Responsible 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 Email: derek@manwillse.com
Certification Method
GR-63-Core X ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
Other (Please Specify):
FOR CODE CO
Testing Laboratory
Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)
Contact Person: Jeremy Lange
Mailing Address: 11034 Indian Trail, Dallas TX 75229
Telephone: (972) 247-9657 Email: jeremy@etldallas.com
DATE: 05/18/2021
CF.
CRIVIA BUILDING CODE. 200
RNIA

"Access to Safe. Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





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Seismic Parameters

Design	Basis of Equipment or Components	(Fp/Wp) =	1.50 (SDS=2.00, z/h=1), 1.13 (SDS	S=2.50, z/h=0)
S	DS (Design spectral response accele	eration at sho	ort period, g) = $2.00 (z/r)$	n=1), 2.50 (z	/h=0)
a	o (Amplification factor) =	2.5			
R	p (Response modification factor) =	6.0			
Ω	0 (System overstrength factor) =	2.0			
lp	(Importance factor) =	1.5			
z/	/h (Height ratio factor) =	1 and 0			
Ν	atural frequencies (Hz) =	See Attachr	nent		
0	verall dimensions and weight =	See Attachr	mentCODF		
OSHPE	D Approval (For Office Use Only) - Approva	al Expires on 12/31/2	0252	
Date:	5/18/2021		OSP-0677	- m	
Name:	Mohammad Aliaari			Title:	Senior Structural Engineer
Special	Seismic Certification Valid Up to: SE	os (g) =s	ee Above	z/h =	See Above
Conditio	on of Approval (if applicable):	DATE:	05/18/2021	1/////	
	Chy	KIRORNIA	BUILDING CON	E-010	

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WATER CONTROL CORPORATION

ATTACHMENT 1: CERTIFIED COMPONENTS

SPECIAL SEISMIC CERTIFICATION

TABLE 1

DOCUMENT NO.: 20095CR1.0

BASIS	DESCRIPTION / NOTES	MAX. WT.	(in)	MENSIONS	DIN	MODEL NUMBER				
		(lb)	HEIGHT	epth width heig		MODEL NOMBER				
					Itration	ligh-Capacity Ultrafi	Phoenix GT H			
UUT 1		225	73.4	24.6	23.1	Phoenix GT Control Module				
UUT 2		315	73.4	15.9	23.1	Phoenix GT Filter Module				
UUT 1+	Control (UUT 1) + 1 Filter (UUT 2)	540	73.4	56.3	23.1	GT-1				
) EXTRA	Control (UUT 1) + 2 Filters (UUT 2)	855	73.4	87.9	23.1	GT-2				
) EXTRA	Control (UUT 1) + 3 Filters (UUT 2)	1170	73.4	119.6	23.1		GT-3			
) EXTRA	Control (UUT 1) + 4 Filters (UUT 2)	1485	73.4	151.2	23.1		GT-4			
I _P = 1.5	$S_{DS} = 2.0g$ for z/h = 1 $S_{DS} = 2.5g$ for z/h = 0	SEISMIC		DFOF		Rigid floor mounted.	MOUNTING:			
· 2 · 2 · 2	$\begin{array}{c} \mbox{Control (UUT 1) + 2 Filters (UUT 1) + 3 Filters (UUT 1) + 3 Filters (UUT 1) + 3 Filters (UUT 1) + 4 Filters (UUT 1) + 4 Filters (UUT 1) \\ \mbox{S}_{DS} = 2.0g \mbox{ for } z/h = 1 \end{array}$	855 1170 1485 SEISMIC LEVELS: vethersulfone (ntified by the m	73.4 73.4 73.4 73.4 modified poly uniquely ide	87.9 119.6 151.2 steel framing; mponents are	23.1 23.1 23.1 n: Stainless s	Product Constructio Options/Subcompor	Phoenix GT Filter Module GT-1 GT-2 GT-3 GT-4 MOUNTING: Rigid floor mounted NOTES: Product Construct			

	BY: Mohammad Aliaari	
	DATE: 05/18/2021	
G		
	ORAL CODE.	
	ANIA BUILDING COT	

MANWILL ENGINEERING

DIMENSIONS (in)

WATER CONTROL **CORPORATION**

ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

N/A

SPECIAL SEISMIC CERTIFICATION

UUT 1

MANUFACTURER:

MODEL NUMBER:

UNIT FUNCTION:

SERIAL NUMBER:

DOCUMENT NO.: 20095CR1.0 WATER CONTROL CORPORATION PHOENIX GT CONTROL MODULE HIGH-CAPACITY ULTRAFILTRATION WEIGHT RES. FREQ. (Hz)

			-									
DEPTH	BORATORY: & DATE:	HEIGHT	(lb)	F-B	S-S	V						
23.1	24.6	73.4	225	15.5	9.6	14.4						
CODE & C	RITERIA:	2019 CBC		ICC-ES AC156								
TEST LABORATORY: ENVIRONMENTAL TESTING LABORATORY												
REPORT 8	DATE:	20095TR1	.0	November 23, 2020								
					,							
S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V}	(g) A _R	_{IG-V} (g)	5					
S _{DS} (g) 2.0	z/h 1					_{IG-V} (g)	-					
_	z/h 1 0	A _{FLX-H} (g) 3.20	А _{RIG-H} (g) 2.40	A _{FLX-V} 1.68			2					
2.0 2.5	z/h 1 0 ANCE FAC	3.20	2.40			_{IG-V} (g)						

maintained structural integrity and remained functional per manufacturer

requirement after shake	
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. USP-UD//
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	12/18/2	
MODEL NU	JMBER:	PHOENIX	GT FILTER	MODULE		
UNIT FUNC	-	HIGH-CAF	PACITY ULTR	RAFILTRATIC	DN N	
SERIAL NU	RIAL NUMBER: N/A					
DIN	IENSIONS	(in)	WEIGHT	RES. FR	REQ. (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	C156	
TEST LAB	ORATORY:	ENVIRON	MENTAL TES	STING LABO	RATORY	
REPORT &	DATE:	20095TR1	.0	November	r 23, 2020	
S _{DS} (g)	z/h	A _{FLX-H} (g)	А _{гід-н} (g)	A _{FLX-V} (g)	A _{RIG-V} (g	
2.0	1	3.20	2.40	1.68	0.68	
2.5	0	5.20	2.40	1.00	0.00	
Unit was for maintained	ANCE FACT ull of operatin d structural in nt after shake	g content duri tegrity and rei	ng the shake			
MOUNTING						
	6:	-				s through 2in long 1-3/4x3x1/4in formed carbon steel angle brackets. e with (1) 1/2in Grade 2 bolt (4 bolts total).
CONSTRU		Each angl	e bracket is c	onnected to t	he unit bas	
	CTION:	Each angl Stainless	e bracket is c steel framing;	onnected to the modified poly	he unit bas yethersulfo	e with (1) 1/2in Grade 2 bolt (4 bolts total).

derek@manwillSE.com

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 CC	RPORA	TION				-		-		-	1
MODEL NU	JMBER:	GT-1					- 1			Lead of the	(Beal	-		A A
UNIT FUNC	CTION:	HIGH-CAF	PACITY ULTF	RAFILTR	ATION					E TO				
SERIAL NU	JMBER:	N/A							. January			2		- 11
DIN	IENSIONS	(in)	WEIGHT	RES	. FREG	Q. (Hz)		i.	Contraction of the second			6	3	
DEPTH	WIDTH	HEIGHT	(lb)	F-B	S-S	V							1	
23.1	56.25	73.4	540	11.5	9.4	14.4		1 Martin				10-1		
CODE & C	RITERIA:	2019 CBC	;	56						5				
TEST LAB	ORATORY:	ENVIRON	MENTAL TE	STING L	ABORA ⁻	TORY								4/57
REPORT &	REPORT & DATE: 20095TR1.0				mber 23	, 2020						-		
S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V}	(g) A	_{RIG-V} (g)	- 1	5	4				1-	
2.0	1	3.20	2.40	1.68	,	0.68		55						
2.5	0	3.20	2.40	1.00	,	0.00					1 Mar	_		
Unit was f	ull of operatin	FOR, $I_P = 1.5$ g content durities to the second reprind the second reprind the second se	ing the shake				C TT	A		6				
MOUNTING	6:	-	mounted usine bracket is c					-					steel a	ngle bracket
CONSTRU	CTION:	Stainless	steel framing;	modified	l polyeth	nersulfone	e (PES	S) membr	ane; UP	VC mem	brane	housing		
SUBCOMP	ONENTS:	Subcompo	onents are un	iquely ide	entified b	by the mod	del n	umber.						
TESTING N	IOTES:		UUT 2 were								to che	ck funct	ionality	. The test





WATER CONTROL CORPORATION

ATTACHMENT 3: MODEL NOMENCLATURE

SPECIAL SEISMIC CERTIFICATION

PHOENIX GT

DOCUMENT NO.: 20095CR1.0

		-																		-										
DIGIT:	1		2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
SAMPLE	G	; .	Т	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
DIGIT	IGIT DIGIT DESCRIPTION		C	COD	ES	ES DEFINITIONS																								
1-2	Мос	lel L	.ine	¢								Ģ	ЭT		P	hoe	nix G	Τ												
4	Filte	r Mo	odu	ule D	Desi	gnati	on					1			System with 1 Filter Module															
												2	-		System with 2 Filter Modules															
							3 System with 3 Filter M								er Mo	dule	S													
												4			S	yste	m w	ith 4	Filte	r Mo	dule	s								
																			-											

