

MECHANICAL COMPLIANCE SUMMARY

2021 WSEC Compliance Forms for Commercial Buildings including Group R1, R2, and Group R3 & R4 over 3 stories

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Project & Applicant Information	Project Title	Red Dot Test Booths - 2021 WSEC	For Building Department Use:	Date: Nov 18, 2025
	Project Address	2504 E. Main Ave Puyallup, WA 98372		
	Applicant Name	Ted Veach		
	Applicant Phone	253-274-5701		
	Applicant Email	tedv@veacheng.com		

Mechanical Compliance Summary Scope - Compliance verification provided in this report is limited to code minimum efficiency requirements for mechanical equipment types defined in Tables C403.3.2(1) through C403.3.2(16) of the 2021 WSEC-C. This includes efficiency multipliers for economizer exceptions. Performance criteria for additional energy efficiency and load management measures ARE NOT included in this report. Additional documentation is required to demonstrate compliance with all other provisions of the energy code, including better than code efficiency criteria for Section C406. For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com.

General Occupancy	All Commercial		General Building Use Type(s)	Laboratory	Building Cond. Floor Area	474	
General Project Types	Alteration	New Building or Addition Mechanical Scope		Alteration Mechanical Scope	Multiple Zone Systems & Equipment	Project Cond. Floor Area	474
						Floors Above Grade	1
						Overall Compliance Path	General Prescriptive
						Mechanical Project Description	
Space conditioning of two testing rooms (237sf each) inside a large warehouse/factory. Testing rooms contain monitoring equipment for nearby environmental test room for testing of vehicle-mounted HVAC equipment.							

Mechanical Compliance Scope and Method	Project Type	Mechanical Scope	Economizer Exception(s) Applied?	DOAS Ventilation Provided?		Equipment Efficiency Compliance Verification
	Alteration	Multiple Zone Systems & Equipment	Yes	Yes		COMPLIES
Additional Energy Efficiency Measures (AEM)	HVAC cooling equipment - 5-20% better than code efficiency & improved fan efficiency			Load Management Measures (LDM)	No mechanical load management measures included in project	
Does building include occupancy classifications requiring DOAS?			Yes	Does project include DOAS equipment?		Yes
Based on project scope do TSPR requirements apply?			No	Do all systems comply with Appendix D standard reference design or qualify for an exception to TSPR?		No

Scope & Space Conditioning	ALTERATION - MULTIPLE ZONE SYSTEMS & EQUIPMENT	Compliance Verification	COMPLIES
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Multiple Zone Air Systems Category - Dedicated outside air system (DOAS)

Air Systems Summary Information

System ID	Paired with other Systems/Equip	Ventilation Airflow Control	Ventilation Standard	Ventilation CFM	Ventilation energy recovery	Energy Recovery Efficiency (%)
HRV-1	Stand alone DOAS (not paired with other system)	Constant volume	IMC Multiple Zones Ventilation	110	Yes per C403.6 DOAS	77

Air Systems & Equipment - Cooling

System/Equip ID	Cooling System/Equip Type	Specific Type	Cooling Capacity (Btu/h)	Econo Exception Multiplier (Full)	Required Cooling Efficiency (Code Min + Econo)	Proposed Cooling Efficiency	CE Units	Efficiency Compliance Verification
HRV-1	DX-DOAS heat pump, air cooled	Without energy recovery	34,200	0	4.0	23.0	ISMRE	COMPLIES

Air Systems & Equipment - Heating

System /Equip ID	Heating System/Equip Type	Specific Type	Heating Output Capacity (Btu/h)	Heat Pump Heating Capacity (Btu/h)	Cooling Capacity (Btu/h) (Identical to Cooling Table)	Required Heat Pump Heating Efficiency	Proposed Heat Pump Heating Efficiency	HPH Units	Efficiency Compliance Verification
HRV-1	DX-DOAS heat pump, air cooled, heating	Without energy recovery	0	37,000	34,200	2.7	9.6	ISCOP	COMPLIES

Air Terminal Equipment						
System ID	Air Terminal Type	Specific Type	Quantity	Addl Cooling Capacity (Btu/h) (Total For All Air Terminals)	Addl Heating Capacity (Btu/h) (Total For All Air Terminals)	Reheat Type
HRV-1	Air terminal units	 	2	34,200	37,000	No reheat

Air Systems & Equipment Details			
System/Equip ID	Discrete Area(s) Served	Location In Project Documents - Plan/Detail #	System/Equip Compliance Path
HRV-1	Control Rooms	ALL	General Prescriptive
	WSEC Equip Efficiency Reference Table - Cooling: Table C403.3.2(12) DX-DOAS Units, Without ER		
	Economizer Compliance Method: Economizer not required		WSEC Equip Efficiency Reference Table - Heating: Refer to Cooling Reference Table