

Mixing Safety & Performance for Over 100 Years





# **DIGITAL TEMPERATURE CONTROL & MONITORING**











ASSE 1017 | NSF 372 CERTIFIED Made in the USA with Domestic and Imported Parts



## DIGITAL TEMPERATURE CONTROL & MONITORING

# LEGIONELLA PREVENTION STARTS HERE



**Nucleus Megatron NV-150-LF** 







## Why Digital

Electronic master mixers provide a faster, more accurate way to control temperature within +/- 2°F. With user-programmable temperature set points, building owners have full control over their domestic hot water systems. In addition, the Nucleus Series has features that allow for compliance with the ASHRAE 188 Standard and can assist facility managers with minimizing serious health risks, such as Legionella.

## **Benefits**

- Daily self cleaning feature
- Self balancing even during times of no demand
- No laptop required for setup or adjustments
- Standard serviceable check valves and outlet ball valves
- Total digital temperature sensors
- Historical temperature data records up to a year
- Sanitization mode
- Multiple point alarms
- Primary temperature measurement on mixed outlet
- Energy efficient circulator on most models

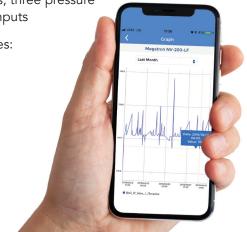
## **Monitor & Communicate**

- Monitor and adjust locally and/or cloud based remotely
- Smartphone temperature monitoring available

 Up to eight temperature inputs, three pressure inputs, and two flow channel inputs

Six standard protocol languages:

- BACNet IP
- BACNet MS/TP
- Modbus RTU
- Modbus TCP/IP
- Metasys N2 by JCI
- □ Ethernet/IP



Available via smartphone



# **Options**

## ■ RDU | Leonard Remote Display Unit

- Alarm delay module with yellow, red, and green LED indicators
- Recommended maximum distance from controller to RDU is 500′

### ■ BPS | Backup Power Supply Option

 Uninterruptable power supply with up to two hours of run time

## LC | Less Circulator

Only available for Megatron configurations

#### ■ DB | Daughter Board

 Display up to four additional temperature inputs, one flow channel input, and one configurable flow or pressure input channel

#### SCO | Solenoid Control Option

□ Switch power to solenoid when in alarm mode

#### Digital Thermometer

## Digital Aqua Stat

- Additional integral temperature measurement sensors for three critical measurement points: inlet hot, inlet cold, and return water temperature
- Options to display: four additional temperature inputs, one additional pressure input, one additional flow input, one configurable channel input flow or pressure



**RDU Option** 



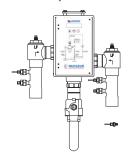
## **Configurations**

### MANY MODELS AVAILABLE

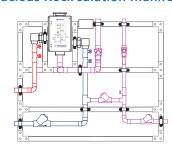
#### **Nucleus Base Valve Only**



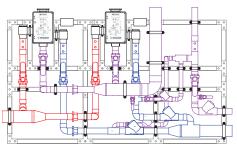
# Nucleus with Inlet Fittings & Return Temperature Sensor



## **Nucleus Recirculation Manifolds**

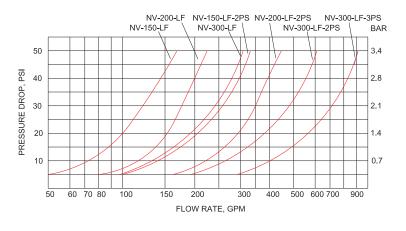


# Nucleus Megatron 2PS-High Capacity Units



# **DIGITAL TEMPERATURE CONTROL & MONITORING**

# Flows & Capacities



HIGH TEMPERATURE FIXTURES (IF APPLICABLE)

S BAR

3.4

FIXTURES SUPPLIED BY TEMPERED WATER

N/C BALL VALVE

OPTIONAL CHECK VALVE,
CHECK LOCAL CODES

FIXTURES SUPPLIED BY TEMPERED WATER

N/C BALL VALVE

OPTIONAL CHECK VALVE,
CHECK VALVE

COLD SUPPLY

BALL
VALVE

CHECK VALVE

	IN	OUT	MINIMUM FLOW GPM	PRESSURE DROP										
MODEL				5	10	15	20	25	30	35	40	45	50	PSI
			L/MIN	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.4	BAR
NV-150-LF	1 1/4"	1 1/2"	0.25*	50	72	86	100	115	122	136	140	158	165	GPM
	(31.6mm)	(38.1mm)	0.95*	189	273	326	379	435	462	515	530	598	625	L/MIN
NV-200-LF	2"	2"	0.25*	80	115	130	147	165	173	189	198	215	226	GPM
	(50.8mm)	(50.8mm)	0.95*	303	435	492	556	625	655	715	750	814	856	L/M <b>I</b> N
NV-300-LF	3"	3"	0.25*	97	135	163	191	213	235	262	288	296	303	GPM
	(76.2mm)	(76 <b>.</b> 2mm)	0.95*	366	510	616	722	805	888	990	1089	1119	1145	L/MIN
NV-150-LF-2PS	2"	3"	0.25*	100	144	177	200	222	244	262	280	305	330	GPM
	(50.8mm)	(76 <b>.</b> 2mm)	0.95*	378	544	669	756	839	922	990	1058	1153	1247	L/MIN
NV-200-LF-2PS	4"	4"	0.25*	160	230	262	294	320	346	371	396	424	451	GPM
	(102mm)	(102mm)	0.95*	605	896	990	1111	1210	1308	1402	1497	1603	1709	L/MIN
NV-300-LF-2PS	6"	6"	0.25*	194	270	326	382	432	470	523	576	596	606	GPM
	(152mm)	(152mm)	0.95*	733	1021	1232	1444	1633	1777	1977	2177	2253	2291	L/MIN
NV-300-LF-3PS	6"	6"	0.25*	291	405	489	573	639	705	785	864	887	909	GPM
	(152mm)	(152mm)	0.95*	1100	1531	1848	2166	2415	2665	2967	3266	3353	3436	L/MIN
VALVE ASSEMBLIES ARE ASSE 1017 CERTIFIED														

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VALVE ASSEMBLIES ARE JUPC CERTIFIED 
ALL VALVE ASSEMBLIES ARE STO PARTY CERTIFIED 
TO BE LEAD FREE 
"WHEN INSTALLED NEAR HOT WATER SOURCE AND WITH 
A PROPERLY SIZED, CONTINUOUSLY OPERATING 
RECIRCULATION PUMP

MAXIMUM FLOW CAPACITY

PRESSURE DROP



1360 Elmwood Ave., Cranston, RI 02910 TF: 800.222.1208 | P: 401.461.1200 | F: 401.941.5310 www.leonardvalve.com

