

# Common Venting Guide

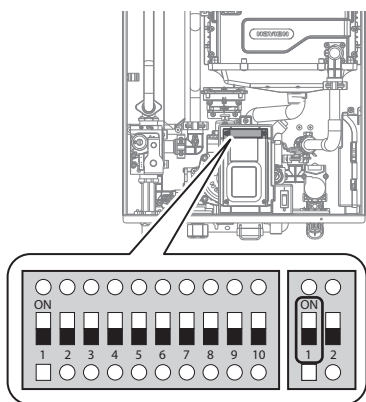
Model : NPE-180(A,S)/ 210(A,S)/ 240(A,S)

When cascading the water heaters with other Navien water heaters, you can install a common venting system. Do not use common venting if the water heater is used in a cascading system with other manufacturer's water heaters. Include a condensate drain in the main trunk as illustrated in the following examples.



## DANGER

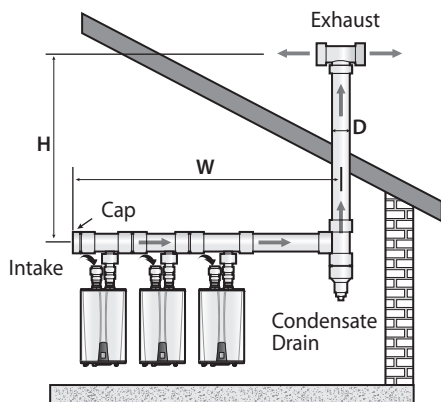
Improper DIP switch settings can cause severe personal injury, death or substantial property damage.



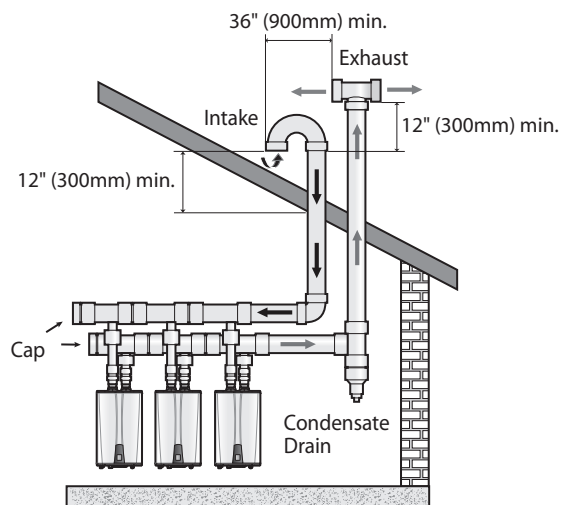
Switch	Function	Setting
1	Cascade Vent	Common Vent 1-OFF
		Individual Vent 1-ON

The following are examples of common venting options:

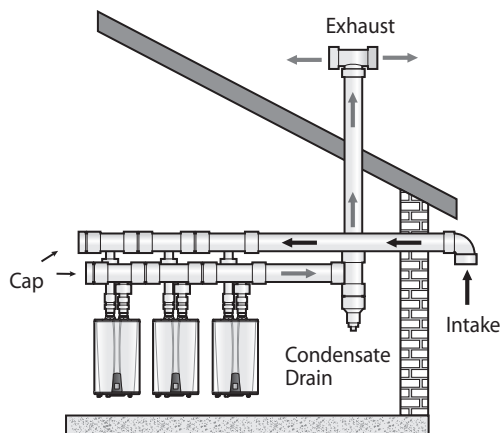
- Venting the Exhaust Only (Non-Direct)



- Venting Intake and Exhaust to the Same Location

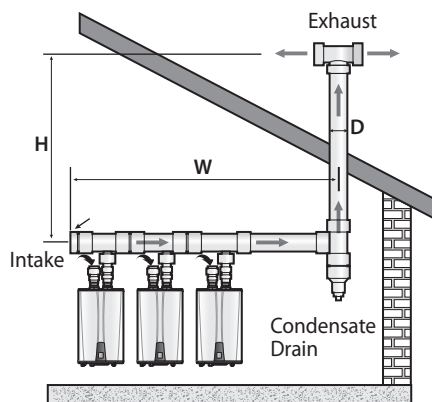


- Venting Intake and Exhaust to Different Locations



To determine the size of a common vent:

- Add the BTU/H input ratings for each water heater in the cascading system to determine the total BTU/H rating.
- Determine the total length (L) of the common vent, which consists of the horizontal width (W) and the vertical height (H): Total length (L) = W + H.



- Refer to the common vent table below to determine the maximum allowable lengths for the common vent, based on the total BTU/H rating, and the diameter of the vent pipe.

**Note** For each short radius elbow that will be used in the vent, add 8 feet (2.4 m) to the total length. For each long radius elbow that will be used in the vent, add 5 feet (1.5m) to the total length.



### CAUTION

Regardless of the vent size listed in the table, the connection to the common vent must always be as large as the largest connector. If the largest connector and the recommended vent are the same size, use the next largest size for the vent.

**Total length (L) = W + H**

Required Load (Total BTU/H)	Model			Total length (ft)			
	NPE-180A	NPE-210A	NPE-240A	D= 3"	D=4"	D=5"	D=6"
300,000	2			60(18m)	100(30m)	160(48m)	-
330,000	1	1		60(18m)	100(30m)	160(48m)	-
360,000		2		60(18m)	100(30m)	160(48m)	-
379,000		1	1	60(18m)	100(30m)	160(48m)	-
398,000			2	60(18m)	100(30m)	160(48m)	-
540,000		3			70(21m)	110(33m)	160(48m)
559,000		2	1		70(21m)	110(33m)	160(48m)
578,000		1	2		70(21m)	110(33m)	160(48m)
597,000			3		70(21m)	110(33m)	160(48m)
				D=5"	D=6"	D=7"	D=8"
739,000		3	1	80(24m)	120(37m)	-	-
758,000		2	2	80(24m)	120(37m)	-	-
777,000		1	3	80(24m)	120(37m)	-	-
796,000			4	80(24m)	120(37m)	-	-
995,000			5	60(18m)	90(27m)	130(40m)	-
1,194,000			6	-	80(24m)	100(30m)	140(43m)
1,393,000			7		70(21m)	90(27m)	120(36m)
				D=7"	D=8"	D=9"	D=10"
1,592,000			8	82(25m)	107(33m)	135(41m)	
1,791,000			9	73(22m)	95(29m)	120(37m)	148(45m)
1,990,000			10	65(20m)	85(26m)	108(33m)	133(41m)
2,189,000			11		78(24m)	98(30m)	121(37m)
2,388,000			12		71(22m)	90(27m)	111(34m)
				D=9"	D=10"	D=11"	D=12"
2,587,000			13	83(25m)	103(31m)	124(38m)	
2,786,000			14	77(23m)	95(29m)	115(35m)	137(42m)
2,985,000			15	72(22m)	89(27m)	108(33m)	128(39m)
3,184,000			16	68(21m)	83(25m)	101(31m)	120(36m)