

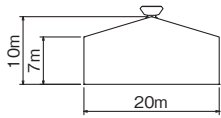
SVM-W型連続型ベンチレーター算出法

長さを求める場合(型式が決められている)

■例：鑄造工場

$$L = \frac{aV}{60Q}$$

L：連続型ベンチレーターの全長(m)
a：建物1時間当たりの換気回数
Q：連続型ベンチレーターの1m当たりの排気量(m³/min)
V：建物の容積(m³)



a=20回/h V=8,500m³ 設置高=10m
室内外温度差=5℃ 外気風速=3m/s
SVM-1200Wで上記の条件の場合
P.24性能表より、Q=97.1m³/min

$$L = \frac{20 \times 8,500}{60 \times 97.1} \approx 29\text{m}$$
となり

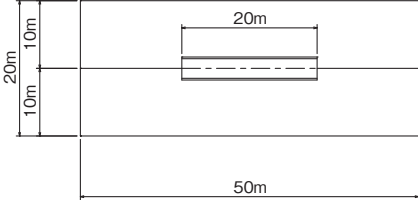
長さ29mが求められます。

使用型式を求める場合(長さが決められている)

■例：機械工場

$$Q = \frac{aV}{60L}$$

Q：連続型ベンチレーターの1m当たりの排気量(m³/min)
a：建物1時間当たりの換気回数
L：連続型ベンチレーターの全長
V：建物の容積(m³)



a=10回/h V=8,500m³ 設置高=10m
室内外温度差=5℃ 外気風速=3m/s
L=20mで上記の条件の場合

$$Q = \frac{10 \times 8,500}{60 \times 20} \approx 70.8\text{m}^3/\text{min}$$

よってP.24性能表よりSVM-900Wの
72.9m³/minに近い数値となり、
SVM-900Wが適当となります。

SVM-W型風量性能表 (1m当たりm³/min)

型式		室内外温度差 (°C)		Δt=3°C						Δt=5°C						Δt=10°C						Δt=15°C					
				5	10	15	20	25	30	5	10	15	20	25	30	5	10	15	20	25	30	5	10	15	20	25	30
設置高 (m)		外氣 風速 (m/s)																									
SVM-750W	1	27.4	36.0	42.9	48.9	54.2	59.0	33.4	45.0	54.2	62.0	68.9	75.2	45.0	62.0	75.2	86.5	96.4	105.4	54.2	75.2	91.6	105.4	117.6	128.7		
	2	37.1	43.8	49.7	54.9	59.6	64.0	41.7	51.5	59.6	66.8	73.3	79.3	51.5	66.8	79.3	90.0	99.6	108.3	59.6	79.3	94.9	108.3	120.3	131.1		
	3	49.1	54.4	59.2	63.6	67.8	71.7	52.7	60.7	67.8	74.2	80.1	85.6	60.7	74.2	85.6	95.6	104.7	113.0	67.8	85.6	100.2	113.0	124.5	135.0		
	4	62.2	66.4	70.4	74.2	77.8	81.2	65.1	71.7	77.8	83.4	88.7	93.7	71.7	83.4	93.7	102.9	111.4	119.3	77.8	93.7	107.2	119.3	130.2	140.3		
	5	75.7	79.3	82.6	85.9	89.0	92.0	78.1	83.7	89.0	94.0	98.7	103.2	83.7	94.0	103.2	111.6	119.5	126.9	89.0	103.2	115.6	126.9	137.2	146.8		
SVM-900W	1	32.9	43.2	51.5	58.6	65.0	70.8	40.1	54.0	65.0	74.4	82.7	90.3	54.0	74.4	90.3	103.8	115.7	126.5	65.0	90.3	109.9	126.5	141.2	154.4		
	2	44.5	52.6	59.6	65.9	71.6	76.9	50.0	61.8	71.6	80.2	88.0	95.1	61.8	80.2	95.1	108.0	119.5	130.0	71.6	95.1	113.9	130.0	144.3	157.3		
	3	59.0	65.3	71.0	76.4	81.3	86.0	63.2	72.9	81.3	89.0	96.1	102.7	72.9	89.0	102.7	114.7	125.6	135.6	81.3	102.7	120.3	135.6	149.4	162.0		
	4	74.6	79.7	84.5	89.0	93.3	97.4	78.1	86.0	93.3	100.1	106.4	112.4	86.0	100.1	112.4	123.5	133.7	143.1	93.3	112.4	128.7	143.1	156.2	168.3		
	5	90.9	95.1	99.2	103.0	106.8	110.4	93.7	100.5	106.8	112.7	118.4	123.8	100.5	112.7	123.8	134.0	143.4	152.2	106.8	123.8	138.8	152.2	164.6	176.2		
SVM-1000W	1	36.6	48.0	57.2	65.2	72.2	78.6	44.5	60.0	72.2	82.6	91.9	100.3	60.0	82.6	100.3	115.3	128.5	140.5	72.2	100.3	122.1	140.5	156.8	171.6		
	2	49.5	58.4	66.2	73.2	79.5	85.4	55.6	68.6	79.5	89.1	97.7	105.7	68.6	89.1	105.7	120.0	132.8	144.4	79.5	105.7	126.6	144.4	160.3	174.8		
	3	65.5	72.5	78.9	84.9	90.4	95.6	70.3	81.0	90.4	98.9	106.8	114.1	81.0	98.9	114.1	127.5	139.6	150.7	90.4	114.1	133.6	150.7	166.0	180.0		
	4	82.9	88.6	93.9	98.9	103.7	108.3	86.7	95.6	103.7	111.2	118.3	124.9	95.6	111.2	124.9	137.2	148.5	159.0	103.7	124.9	143.0	159.0	173.6	187.0		
	5	101.0	105.7	110.2	114.5	118.6	122.7	104.1	111.6	118.6	125.3	131.6	137.6	111.6	125.3	137.6	148.8	159.3	169.2	118.6	137.6	154.2	169.2	182.9	195.7		
SVM-1200W	1	43.9	57.6	68.7	78.2	86.7	94.4	53.5	72.0	86.7	99.2	110.3	120.4	72.0	99.2	120.4	138.4	154.3	168.7	86.7	120.4	146.5	168.7	188.2	205.9		
	2	59.4	70.1	79.5	87.8	95.4	102.5	66.7	82.3	95.4	106.9	117.3	126.8	82.3	106.9	126.8	144.0	159.3	173.3	95.4	126.8	151.9	173.3	192.4	209.8		
	3	78.6	87.0	94.7	101.8	108.5	114.7	84.3	97.1	108.5	118.7	128.1	136.9	97.1	118.7	136.9	153.0	167.5	180.8	108.5	136.9	160.4	180.8	199.2	216.0		
	4	99.5	106.3	112.7	118.7	124.4	129.9	104.1	114.7	124.4	133.5	141.9	149.9	114.7	133.5	149.9	164.7	178.2	190.8	124.4	149.9	171.6	190.8	208.3	224.5		
	5	121.2	126.8	132.2	137.4	142.4	147.2	125.0	134.0	142.4	150.3	157.9	165.1	134.0	150.3	165.1	178.6	191.2	203.0	142.4	165.1	185.0	203.0	219.5	234.9		
SVM-1500W	1	54.9	72.1	85.9	97.7	108.3	118.0	66.8	90.0	108.3	124.0	137.9	150.5	90.0	124.0	150.5	172.9	192.8	210.8	108.3	150.5	183.1	210.8	235.3	257.4		
	2	74.2	87.7	99.3	109.8	119.3	128.1	83.4	102.9	119.3	133.6	146.6	158.5	102.9	133.6	158.5	180.0	199.2	216.7	119.3	158.5	189.8	216.7	240.5	262.2		
	3	98.3	108.8	118.4	127.3	135.6	143.4	105.4	121.4	135.6	148.4	160.2	171.1	121.4	148.4	171.1	191.2	209.3	226.0	135.6	171.1	200.5	226.0	249.0	270.0		
	4	124.4	132.9	140.8	148.4	155.6	162.4	130.1	143.4	155.6	166.8	177.4	187.3	143.4	166.8	187.3	205.8	222.8	238.6	155.6	187.3	214.5	238.6	260.4	280.6		
	5	151.5	158.5	165.3	171.7	178.0	184.0	156.2	167.4	178.0	187.9	197.3	206.3	167.4	187.9	206.3	223.3	239.0	253.7	178.0	206.3	231.3	253.7	274.4	293.6		
SVM-1800W	1	65.9	86.5	103.0	117.3	130.0	141.6	80.2	108.0	130.0	148.8	165.4	180.6	108.0	148.8	180.6	207.5	231.4	253.0	130.0	180.6	219.8	253.0	282.3	308.9		
	2	89.0	105.2	119.2	131.7	143.1	153.7	100.1	123.5	143.1	160.4	175.9	190.2	123.5	160.4	190.2	216.0	239.0	260.0	143.1	190.2	227.8	260.0	288.6	314.6		
	3	117.9	130.6	142.1	152.7	162.7	172.1	126.5	145.7	162.7	178.1	192.2	205.4	145.7	178.1	205.4	229.4	251.2	271.2	162.7	205.4	240.6	271.2	298.8	324.0		
	4	149.3	159.4	169.0	178.1	186.7	194.9	156.1	172.1	186.7	200.2	212.9	224.8	172.1	200.2	224.8	247.0	267.4	286.3	186.7	224.8	257.4	286.3	312.5	336.7		
	5	181.8	190.2	198.3	206.1	213.6	220.8	187.5	200.9	213.6	225.5	236.8	247.6	200.9	225.5	247.6	267.9	286.8	304.5	213.6	247.6	277.5	304.5	329.3	352.3		
SVM-2100W	1	76.8	100.9	120.2	136.8	151.7	165.1	93.6	126.0	151.7	173.6	193.0	210.6	126.0	173.6	210.6	242.1	269.9	295.2	151.7	210.6	256.4	295.2	329.4	360.4		
	2	103.9	122.7	139.1	153.7	167.0	179.3	116.8	144.1	167.0	187.1	205.3	221.9	144.1	187.1	221.9	252.0	278.8	303.3	167.0	221.9	265.8	303.3	336.7	367.1		
	3	137.6	152.3	165.8	178.2	189.8	200.8	147.6	170.0	189.8	207.7	224.2	239.6	170.0	207.7	239.6	267.7	293.1	316.5	189.8	239.6	280.7	316.5	348.6	378.0		
	4	174.1	186.0	197.2	207.7	217.8	227.4	182.1	200.8	217.8	233.6	248.3	262.3	200.8	233.6	262.3	288.2	311.9	334.0	217.8	262.3	300.3	334.0	364.6	392.8		
	5	212.1	221.9	231.4	240.4	249.2	257.6	218.7	234.4	249.2	263.1	276.3	288.9	234.4	263.1	288.9	312.6	334.6	355.2	249.2	288.9	323.8	355.2	384.1	411.0		
SVM-2400W	1	87.8	115.3	137.4	156.4	173.3	188.7	106.9	144.0	173.3	198.4	220.6	240.7	144.0	198.4	240.7	276.7	308.5	337.3	173.3	240.7	293.0	337.3	376.4	411.8		
	2	118.7	140.3	158.9	175.6	190.8	204.9	133.5	164.7	190.8	213.8	234.6	253.6	164.7	213.8	253.6	288.0	318.7	346.6	190.8	253.6	303.7	346.6	384.8	419.5		
	3	157.2	174.1	189.4	203.6	216.9	229.4	168.7	194.3	216.9	237.4	256.2	273.8	194.3	237.4	273.8	305.9	334.9	316.7	216.9	273.8	320.8	361.7	398.4	432.0		
	4	199.0	212.6	225.3	237.4	248.9	259.9	208.2	229.4	248.9	266.9	283.8	299.8	229.4	266.9	299.8	329.3	356.5	381.7	248.9	299.8	343.2	381.7	416.7	448.9		
	5	242.4	253.6	264.4	274.8	284.8	294.4	249.9	267.9	284.8	300.6	315.7	330.1	267.9	300.6	330.1	357.2	382.4	406.0	284.8	330.1	370.0	406.0	439.0	469.7		
SVM-2700W	1	98.8	129.7	154.6	175.9	195.0	212.3	120.3	162.0	195.0	223.2	248.1	270.8	162.0	223.2	270.8	311.3	347.1	379.5	195.0	270.8	329.7	379.5	423.5	463.3		
	2	133.5	157.8	178.8	197.6	214.7	230.6	150.1	185.3	214.7	240.6	263.9	285.3	185.3	240.6	285.3	324.0	358.5	390.0	214.7	285.3	341.7	390.0	432.9	472.0		
	3	176.9	195.8	213.1	229.1	244.0	258.1	189.7	218.6	244.0	267.1	288.3	308.0	218.6	267.1	308.0	344.1	376.8	406.9	244.0	308.0	360.8	406.9	448.2	486.0		
	4	223.9	239.2	253.5	267.1	280.0	292.3	234.2	258.1	280.0	300.3	319.3	337.2	258.1	300.3	337.2	370.5	401.0	429.4	280.0	337.2	386.1	429.4	468.7	505.0		
	5	272.7	285.3	297.5	309.1	320.3	331.2	281.2	301.4	320.3	338.2	355.2	371.4	301.4	338.2	371.4	401.9	430.2	456.7	320.3	371						