

HOW TO SELECT TIP SIZE AND PROPER FILTER

Coating	Fan Size (measured at 1 foot)					
	2"	4"	6"	8"	10"	12"
Lacquer, varnish, furniture stain <small>(viscosity of 23 to 45 seconds, similar to vegetable oil)</small>	1-09 R	2-09 R	3-09 R	4-11 R	5-11 R	6-11 R
Industrial enamels, stain, colored lacquer <small>(viscosity of 30 to 70 seconds, similar to dish washing liquid)</small>	1-09 R	2-11 R	3-11 R	4-13 R	5-13 R	6-15 Y
Shop primer, solid stain, oil base, latex <small>(viscosity of 58 to 125 seconds, similar to 10-30 motor oil)</small>	1-11 R	2-13 Y	3-13 R	4-15 Y	5-15 Y	6-17 W
Flat oil base, latex <small>(viscosity of 80 to 180 seconds, similar to 50 weight oil)</small>	1-13 Y	2-15 W	3-15 Y	4-17 W	5-17 W	6-19 W
Thick latex, prepared blockfiller <small>(viscosity of 180+ seconds, similar to gear oil)</small>	1-15 W	2-17 W	3-17 W	4-19 W	5-19 W	6-21 *
Most block fillers <small>(viscosity of over 180 seconds, are not measurable with the Lemmer cup)</small>	1-17 W	2-19 W	3-19 W	4-21 *	5-21 *	6-23 *

explanation of tip and filter sizing: **eg: 4-15 Y**

4 = half of fan width (8" @ 1 foot)

15 = orifice size in thousands of an inch (.015)

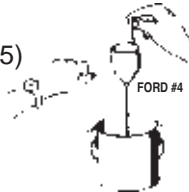
Y = Yellow 100 mesh filter.

(**R** = Red 200 mesh)

(**Y** = Yellow 100 mesh)

(**W** = White 50 mesh)

(* = *not required)



Measure the paint's viscosity as follows: (note, paints that are intended to be rolled should be thinned for air or airless spraying. A general rule of thumb is 5 to 15% for latex and oils, 30% or more for fine finishes. (consult your paint supplier for best results).

- Submerge the Lemmer FORD 4 viscosity cup in the paint.
- Lift the cup out of the paint and begin timing.
- Stop timing when the steady paint stream is first broken.
- The time recorded is the paint's viscosity.

↑ ok for L-1095 ↑

Coating	2"	4"	6"	8"	10"	12"
Lacquer, varnish, furniture stain	1-09 R	2-09 R	3-09 R	4-11 R	5-11 R	6-11 R
Industrial enamels, stain, colored lacquer	1-09 R	2-11 R	3-11 R	4-13 R	5-13 R	6-15 Y
Shop primer, solid stain, oil base, latex	1-11 R	2-13 Y	3-13 R	4-15 Y	5-15 Y	6-17 W
Flat oil base, latex	1-13 Y	2-15 W	3-15 Y	4-17 W	5-17 W	6-19 W
Thick latex, prepared blockfiller	1-15 W	2-17 W	3-17 W	4-19 W	5-19 W	6-21 *
Most block fillers	1-17 W	2-19 W	3-19 W	4-21 *	5-21 *	6-23 *

Tip volume at various pressures.

—Gallons per minute—

Results are based on water, heavier viscosities will produce less volume. This is especially noticeable with large tips and very heavy coatings.

Pump	Pump maximum tip size	
	Absolute maximum	To allow for tip wear
L-1095	.017	.015
DC-3100	.021	.019
DC-5500	.025	.023 (2X.015)
DC-7700	.031	.029 (2X.021)
HP-9500	.045	.043(3X.025)

Notes:

TIP SIZE	500 PSI	1000 PSI	1500 PSI	2000 PSI
.009	.039	.055	.067	.078
.011	.06	.08	.10	.12
.013	.09	.12	.15	.18
.015	.12	.16	.20	.23
.017	.16	.23	.27	.32
.019	.20	.27	.33	.39
.021	.24	.33	.41	.47
.023	.28	.40	.49	.57
.025	.33	.47	.58	.68
.027	.37	.52	.64	.76
.029	.47	.65	.79	.98
.031	.53	.75	.91	1.1
.035	.69	.9	1.0	1.2
.043	1.1	1.5	1.8	2.1
.053	1.5	2.2	2.9	3.4
.057	1.8	2.5	3.1	3.5
.063	2.2	3.1	3.9	4.4
.067	2.5	3.5	4.3	5.0
.073	2.9	4.1	5.1	5.9
.079	3.6	5.1	6.3	7.3
.085	3.9	5.5	6.7	7.8
.089	4.3	6.0	7.4	8.5
.099	5.3	7.5	9.2	10.6

Approximate wear values comparing tungsten tips and paint type. (Paint is in gallons)				
New tip size	.015	.017	.019	.027
	worn to	worn to	worn to	worn to
Tip worn to	.017	.019	.021	.029
Lacquer	400	-	-	-
Latex	75	150	250	-
Block filler	-	-	75	250
Road marking paint	2	20	50	200

The two most important things to remember about tips.....

- Low pressure** means longer life, for tips and the pump. Less overspray too!
- Worn tips** waste paint and overwork the pump, causing premature pump wear. The maximum tip for a pump is the largest tip that will deliver a proper pressure for spraying without overworking or overloading. When a tip is used for some period of time, it can wear beyond the maximum size recommended for the pump, which will cause low pressure and poor spray pattern.
 - Stains and thick latex products often cause the most rapid wear of the tip, while clear lacquers and varnishes cause the least wear. Thus tip life can vary from as little as 50 gallons to as much as 200 or more, depending on the product being sprayed and the pressure used.
 - Filter screen mesh for the gun or pump are picked not because of the type of paint being used, but to protect a given size of tip. Pick the tip for the type of paint and job being done and then choose the filter to protect that tip.