WHITE MOUNTAIN PROCESS

MIXERS STIRRERS IMPELLERS

MIXER SIZING CHART

First **determine the amount of horsepower** suggested to effectively mix your material. The consideration in horsepower selection is batch turnover time (turnovers/min), viscosity of the mixture, and the size of the batch (and tank geometry). The table below can be used for basic selection in 80% of mixing applications. Selections from this chart will provide mixing/pumping turnover time of approximately 1 to 2 minutes. For rapid agitation, use the next larger size mixer. For help sizing a mixer please contact www.wmprocess.com with your mixture details and tank geometry and we can help choose the right mixer at the price range that fits your budget.

VISCOSITY (CPS)	TANK SIZE (GALLONS)								
	25	50	100	250	500	750	1000	2500	5000
1	250 DD	250 DD	333 DD	333 DD	500 DD	500 DD 750 DD	1000 DD 1500 DD	1500 GD	2000 GD
100	250 DD	250 DD	333 DD	333 DD	500 DD 750 DD	500 DD 750 DD	500 GD 1000 DD	1500 GD	2000 GD
300	250 DD	250 DD	333 DD	333 DD	500 DD 750 DD	500 DD 750 DD	750 DD 1000 DD	1500 GD	2000 GD
500	250 GD 250 DD	250 GD 250 DD	250 GD 333 DD	333 GD 333 DD	500 GD 750 GD	500 DD 750 DD	750 GD 1000 DD	1500 GD	2000 GD
1000	250 GD	250 GD	333 GD	333 GD	500 GD	500 GD	(3) 750 GD	2000 GD	2000 GD
2000	(1) 333 GD	(1) 333 GD	(1) 333 GD	500 GD	500 GD	(3) 750 GD	1000 GD	2000 GD	2000 GD
3000	(2) 333 GD	(2) 333 GD	(2) 500 GD	(2) 500 GD	(4) 1000 GD	1000 GD	(5) 1500 GD	2000 GD	3000 GD

Key:

(1) Uses ½ HP Motor

(2) Uses ¾ HP Motor

(3) Uses 1 HP Motor

(4) Uses 1½ HP Motor

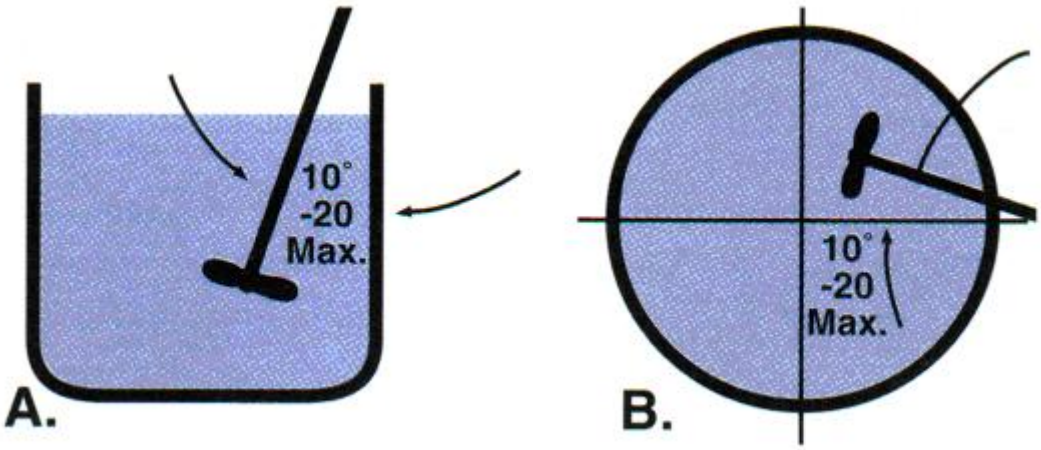
(5) Uses 2 HP Motor

Some **typical viscosities (at 70º F)** are listed below for reference:

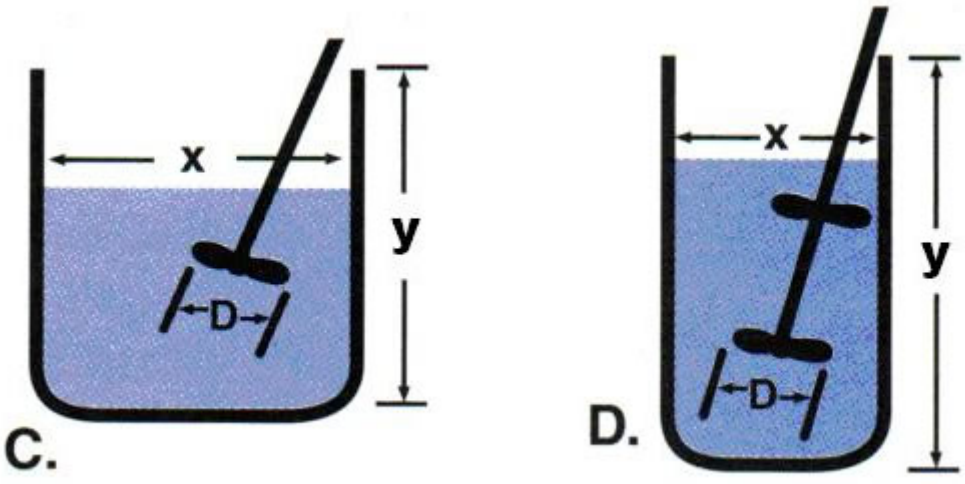
Water	1 cps
SAE 10 Oil	100 cps
SAE 40 Oil	250 cps
Varnish Coating	350 cps
SAE 60 Oil	800 cps
SAE 70 Oil	1000 cps
Tomato Ketchup	3000 cps

After the mixer is chosen, you can then **specify a shaft length and the number of mixing blades/impellers desired**. The following illustrations show recommendations for mounting mixers and number of propellers required. For the best mixing action in

tanks without baffles, mixer shafts should typically be mounted 10º to 20º off vertical centerline and 10º to 20º off the tank center line (to the right hand side of vessel).



If the depth of the liquid (y) is close to the diameter of the tank (x), a single propeller is typically ok, see Illustration C. Dual propellers (two mixing props) are usually specified when the mixture depth (y) is 1.5 times (or greater) the diameter of the tank (x), as shown in picture D. The bottom/lower propeller can be placed 1 impeller diameter from the tank bottom, although the range can be from ½ x impeller diameter to 4 x prop diameter depending on the specifics of the application.



The above charts should only be used only as a guide; www.wmprocess.com is happy to help with any technical questions you have.