

Gas Entrainment Impellers

Optional Fittings

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New Stirrer Design

Parr is pleased to introduce a new series of gas entrainment impellers for users who want to obtain maximum gas dispersion into a liquid system. This is obtained with a unique impeller attached to a hollow stirring shaft through which gases are continuously recirculated from the head space above the liquid to the impeller. Gas enters openings near the top of the shaft and is expelled through dispersion ports located at the tips of the impellers. As with all impellers, the speed of the stirrer creates a vacuum at the tip of the impeller. In this new Parr system with dispersion ports located at the very tips of the impellers, the higher the stirring speed - the higher the vacuum - and the higher the driving force for this very effective gas dispersion system.

These impellers are offered as a complete package which includes the impeller, the hollow shaft with coupling, and any required foot bearings and brackets for the intended reaction. The baffles are a separate option which must be ordered separately. Since these gas entrainment impellers operate best in the 800 - 1200 rpm range, users will want to ensure that their stirrer drive system is set up to deliver these operating speeds.



Left: A 2L Gas Entrainment, showing hollow shaft

Right: Gas Entrainment impeller for mini reactors showing holes

Baffles Help

Because it is the relative speed of the tip of the impeller to the liquid phase that governs the mass transfer, baffles which impede the rotation of the liquid with the impeller can greatly enhance the operation of these gas entrainment impellers. While some natural baffling is provided by the internal thermowell, dip tube and cooling coils, the removable baffles listed in the table are recommended for use with these impellers. These removable baffles may also be beneficial with the more traditional turbine type impellers for certain applications.

Gas Entrainment Impellers & Baffle Sets for Standard Magnetic Drives

Reactor Model No.	Volume mL.	Impeller Part No.	Baffle Set Part No.
4561	300	A2042HC	A2043HC
4562	450	A2042HC2	A2043HC2
4563	600	A2042HC3	A2043HC3
4564	160	A2042HC4	A2043HC4
4565	100	A2042HC4	NA
4566	300	A2042HC5	A2043HC
4567	450	A2042HC6	A2043HC2
4568	600	A2042HC7	A2043HC3
4566B	160	A2042HC8	A2043HC4
4566C	100	A2042HC8	NA
4521/31	1000	A2044HC	A2045HC
4522/32	2000	A2044HC2	A2045HC2
4521/31 HD	1000	A2046HC	A2045HC
4522/32 HD	2000	A2046HC2	A2045HC2
4544/45	600	A2492HC	A2493HC
4546/47	1200	A2492HC2	A2493HC2
4551	3750	A2048HC	A2049HC
4552	7500	A2048HC2	A2049HC2
4555	18750	A2110HC	A2111HC
4571/73	1000	A2050HC	A2045HC
4572	1800	A2050HC2	A2045HC2
4571/73 HD	1000	A2050HC3	A2045HC
4572 HD	1800	A2050HC4	A2045HC
4575	500	A2052HC	A2043HC2
4576	250	A2052HC2	A2043HC5
4581	3750	A2054HC	A2055HC
4582	5600	A2054HC2	A2049HC2
4592	50	A2116HC5	NA
4593	100	A2116HC6	NA

Gas Entrainment Impellers & Baffle Sets for Footless Magnetic Drives

Reactor Model No.	Volume mL.	Impeller Part No.	Baffle Set Part No.
4561	300	A2042HC13	A2043HC
4562	450	A2042HC14	A2043HC2
4563	600	A2042HC15	A2043HC3
4566	300	A2042HC9	A2043HC
4567	450	A2042HC10	A2043HC2
4568	600	A2042HC11	A2043HC3
4566B	160	A2042HC12	A2043HC4
4566C	100	A2042HC12	NA
4521/31	1000	A2540HC	A2045HC
4522/32	2000	A2540HC2	A2045HC2
4523	1000	A2540HC3	A2045HC
4524	2000	A2540HC4	A2045HC2
4544	600	A2494HC	A2493HC

4546	1200	A2494HC2	A2493HC2
4545/48	600	A2494HC3	A2493HC
4547	1200	A2494HC4	A2493HC2
4551	3750	A2***HC	A2049HC
4552	7500	A2***HC2	A2049HC2
4555	18750	A2514HC	A2111HC
4571	1000	A2050HC3	A2045HC
4572	1800	A2050HC4	A2045HC2
4575	500	A2605HC	A2043HC2
4576	250	A2605HC2	A2043HC5
4577	1000	A2050HC5	A2045HC
4578	1800	A2050HC6	A2045HC2
4581	3750	A2***HC	A2055HC
4582	5600	A2***HC2	A2049HC2