



Propellers and Impellers



Specialised Air Motors & Transmission (SAMT) - incorporating TONSON - was founded in 1966 and provides efficient solutions and equipment to all major industries including mining, chemical, food, paper, plastic, power transmission, manufacturing and pharmaceutical.

Our commitment to you is best service, quick lead times and very competitive prices.

Innovation & Quality

Specialised Air Motors & Transmission is committed to providing clever solutions for all hazardous environments and continues to develop smart ways to meet requirements from all different industries; our products meet CE standards ISO9002, ISO9001 and patents are registered globally including USA, Taiwan and China.

Unlike other conventional methods our products mainly use air instead of electricity as the source of power. This eliminates the chance of electricity shock and fire, which are the most crucial factors for industries involved in chemical, flammable or volatile contents.

Specialised Air Motors & Transmission products include air/electric motors, air/electric mixers and air fans which are engineered to meet the highest standards featuring 100% explosion-proof, low air consumption, light weight, high torque, reversible step less speed control, easy maintenance and various mounting methods. And can be used in very harsh conditions such as humidity, high temperature and flammable environments.

Products & Services

SAMT's other popular products include Pressure Tanks up to 200L (with and without integrated mixer), spray guns, pneumatic double diaphragm pumps, vertical pumps, magic drum carriers, non-spark drum openers, propellers, plus many more exciting and innovative products.

We also have the technical capability and expertise to provide complete power transmission solutions to meet your specific requirements, including full engineering assistance with design, selection and site installation. We also specialise in the supply of all types of Industrial gearboxes including Helical, Worm, Bevel-Helical, Bevel, screw jacks and planetary. All are interchangeable with other internationally recognised brands.








SAMT can also customise any product to suit your specific requirements and will investigate the possibilities of developing new products to satisfy your special specifications.
















Specifications
subject to
change
without notice

AXIAL FLOW IMPELLER







For blending, solids suspension, solids incorporation or draw down, gas inducement, and heat transfer. Custom axial flow impellers may be designed with a different pitch to change the combination of pumping rate and thrust.

Propeller							
Style	A1	A2	A3	A4	A5	A8	A9
Dia.(inch)	Ø2 ³ / ₄ "~15"	Ø10"	Ø8"	Ø8" left	Ø14"	Ø6"	Ø6"
Bore(mm)	Ø16 ~ 25	Ø16 ~ 25	Ø16 ~ 25	Ø16 ~ 25	Ø12 ~ 16	Ø12	Ø12
Material	Aluminum	Aluminum, SS	Aluminum, SS	Aluminum, SS	Aluminum	Aluminum	Stainless Steel

Propeller							
Style	D3	D4	D6	B4	B5	B6	B9
Dia.(inch)	Ø12"	Ø8"~12"	Ø12"	Ø5"	Ø4"	Ø2 ³ / ₄ "	Ø6"
Bore(mm)	Ø16 ~ 25	Ø12 ~ 25	Ø16 ~25	Ø12 ~ 16	Ø12 ~ 16	Ø7	Ø12
Material	Aluminum, SS	Aluminum, SS	Aluminum, SS	Aluminum, SS	Aluminum, SS	SS	SS


Two Bladed Propellers						
Style	E1	E2	E3	E4	E6	E7
Dia.(inch)	Ø10"~18"	Ø10"	Ø6"~7"	Ø12"~16"	Ø6"~12"	Ø6"~12"
Bore(mm)	Ø20	Ø16	Ø16	Ø12 ~ 25	Ø12 ~ 25	Ø12 ~ 25
Material	Aluminum	Aluminum	Aluminum	Aluminum, SS	SS	SS
Several propellers may be mounted on a single shaft for mixing heavy viscous materials. Available in both left and right hand rotation.						

Create circular, axial and radial turbulence force solids off the bottom with minimum swirl and vortex.

Pitched Blade Turbine				Mixed Flow Impeller			
Style	A7	AT5	E5	Style	MF1	E2	R1
Dia.(inch)	Ø6"	Ø6"~12"	Ø10"~14"	Dia.(inch)	Ø6"~10"	Ø10"	Ø11"
Bore(mm)	Ø12 ~ 16	Ø12 ~ 25	Ø20 ~ 30	Bore(mm)	Ø12 ~25	Ø16	Ø16
Material	Aluminum	SS	SS	Material	SS	Aluminum	SS


HIGH-SHEAR IMPELLER

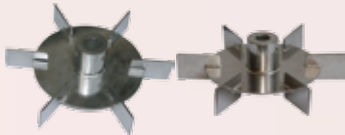
Operated at high speeds and for the addition of a second phase (ex. Gas, liquid, solid, powder) in grinding, dispersing pigments, and making emulsions. Providing high intensity of turbulence in the vicinity of the impeller, maximizing flow per horsepower input. Suitable for paint, clay slurries, paper coating...etc.



High Shear							
Style	B7	B8	C1	C2	C3	D1	D2
Dia.(inch)	Ø2"~5"	Ø5"~6"	Ø8"	Ø8"	Ø6"~11"	Ø8.5"	Ø5"~12"
Bore(mm)	Ø8~20	Ø12~20	Ø16~25	Ø16	Ø16~50	Ø16~25	Ø16~25
Material	SS	Aluminum	Aluminum, SS	Aluminum	SS	Aluminum, SS	Aluminum, SS

OPEN FLAT BLADE


For low to medium viscosity fluids; most effective for gas-liquid and liquid-liquid dispersion, higher shear & turbulence levels with lower pumping. Providing strong top-to-bottom flows both above and below the impeller when used with suitable baffles.

Open Flat Blade	
Style	F1
Dia.(inch)	Ø6"~10"
Bore(mm)	Ø12 ~25
Material	SS
Providing strong top-to-bottom flows both above and below the impeller when used with suitable baffles.	



Disk Style	
Style	C6
Dia.(inch)	Ø6"~10"
Bore(mm)	Ø12 ~25
Material	SS
Prevents gas from rising along the mixer shaft. Suitable for use with a pitched blade turbine for use in gas-liquid mixing.	

Hydrofoil		
Style	C4	C4-4
Dia.(inch)	Ø6"~14"	Ø6"~14"
Bore(mm)	Ø12 ~25	Ø12 ~25
Material	SS	SS
For application where axial flow is important and low shear is desired. Efficient for liquid blending and solid suspension. Turbo propellers provide low resistance.		

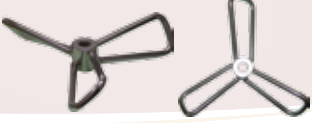
FOR HANDHELD MIXERS

Small Batch	
Style	D5
Dia.(inch)	Ø4"
Bore(mm)	Ø12 ~25
Material	SS

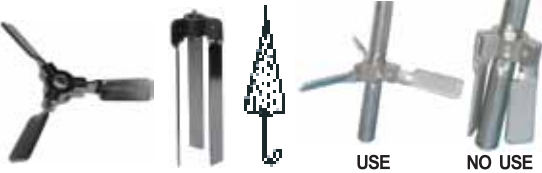
LABORATORY IMPELLER

Laboratory		
Style	B6	B7
Dia.(inch)	Ø2 ³ / ₄ "	Ø2"
Bore(mm)	Ø7mm	Ø8mm
Material	SS	SS

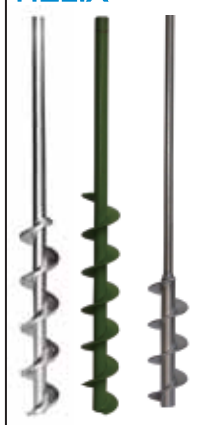
HIGH VISCOSITY

High Viscosity	
Style	A6
Dia.(inch)	Ø6"~12"
Bore(mm)	Ø12 ~ 25
Material	SS

EXTENSIBLE BLADE

Extensible	
Style	C5
Dia.(inch)	Ø6"~10"
Bore(mm)	Ø12 ~ 20
Material	SS
Closed to enter drum or bulk tank, opens up with mixing rotation. For thin materials, use one impeller; for thicker materials use two or three. Set screws included. Shafts are sold separately.	

HELIX



HELICAL RIBBON

Provides top-to-bottom physical movement of the liquid.



TEFLON COAT



CUSTOM





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