



Product Data Sheet
Product: Tank Cleaning Machine
Type: CAT

The Butterworth Type CAT automated tank cleaning machines is a fully programmable, single nozzle machine designed with pitch and speed control for cleaning the inside of tanks and process vessels.

Industries

The Butterworth Type CAT is a versatile, maintenance friendly machine that can be used in all types of tanks for process, storage and transportation. The programmable pattern feature allows for rapid cleaning cycles at reduced cleaning fluid consumption.

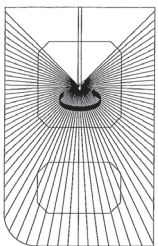
Operational

The Butterworth Type CAT features an externally mounted gearbox and turbine. This allows for maintenance on the machine, without pulling the main body from the vessel. Through the programmable gearbox, vertical pitch is controlled through three pitch settings of approximately 2, 4 and 9 degrees. This combined with two speed settings, provides a total of six basic cleaning patterns.

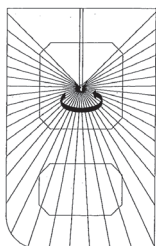
User Benefits

- Elimination of Confined Space Entry
- High Jet-Stream Impingement
- Reduced Cleaning Times
- Reduced Effluent Generation
- Reduced Energy Costs
- Reduced Maintenance and Installation costs

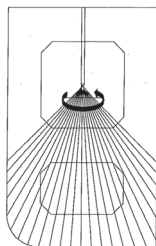
Average Cleaning



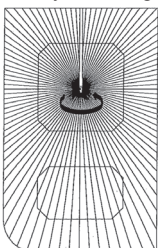
Light Cleaning 1



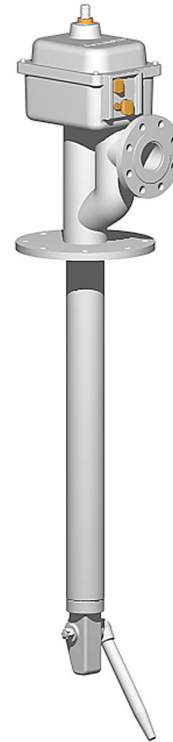
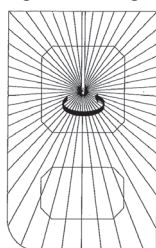
Bottom Cleaning



Heavy Cleaning



Light Cleaning 2



Specifications Summary

Materials of Construction

- 316SS

Weight

See table on reverse side.

Lubrication

- Gearbox is grease lubricated.

Pressure Range

- 85-175 psig (6-12 bar)

Jet-Length Radius

- 0-75' (0-22.9m)

Temp Range

- Static: 300F(149C)
- Operational: 300F(149C)

Inlet Connection Type

- 6" (152mm) Flange

Minimum Tank Opening

- 3" (76.2mm)

Butterworth

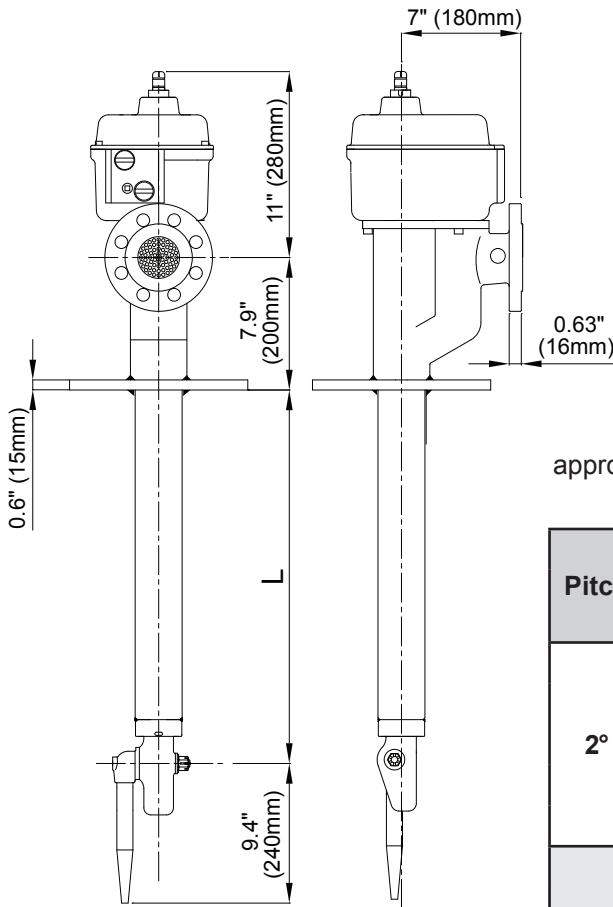
Butterworth, Inc.

16737 West Hardy Road, Houston, TX 77060

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Approximate Weights	
Length Ft (m)	Weight Lbs (kg)
3.3 (1.0)	92 (42)
6.6 (2.0)	108 (49)
9.8 (3.0)	126 (56)
13.1 (4.0)	139 (63)
16.4 (5.0)	154 (70)

Due to the design of the nozzle, the figures below are approximate and based on a capacity of 17m³/h at 8 to 10 BAR

TIME CALCULATION GUIDE

Pitch	RPM	Cleaning Time (in minutes)				
		0°-45° range	0°-90° range	0°-135° range	0°-180° range	360° range
2°	1	22.5	45	67.5	90	180
	1.5	15	30	45	60	120
	2	11	22.5	34	45	90
	2.5	7.5	15	22.5	30	60
	3	5.5	11.25	17	22.5	45
4°	1	11	22.5	34	45	90
	1.5	7.5	15	22.5	30	60
	2	6	11	17	22.5	45
	2.5	3.25	7.5	11.25	15	30
	3	3	5.5	8.5	11.25	22.5
9°	1	5	10	15	20	40
	1.5	3	7	10	13	27
	2	2.5	5	7.5	10	20
	2.5	1.5	3.5	5	6.5	13.5
	3	1.25	2.5	3.25	5	10

Pressure	Nozzle Ø8mm		Nozzle Ø9mm		Nozzle Ø10mm		Nozzle Ø12mm	
	GPM (m ³ /min)	Ft (m)	GPM (m ³ /min)	Ft (m)	GPM (m ³ /min)	Ft (m)	GPM (m ³ /min)	Ft (m)
175 (12)	29 (6.5)	64 (19.5)	44 (10)	67 (20.5)	57 (13)	71 (21.5)	79 (18)	75 (23)
160 (11)	26 (6.0)	61 (18.5)	40 (9)	66 (20)	53 (12)	67 (20.5)	75 (17)	75 (22.5)
145 (10)	24 (5.5)	59 (18.0)	35 (8)	62 (19)	48 (11)	66 (20)	70 (16)	71 (21.5)
130 (9)	22 (5.0)	56 (17.0)	33 (7.5)	59 (18)	46 (10.5)	62 (19)	66 (15)	67 (20.5)
115 (8)	20 (4.5)	52 (16.0)	31 (7)	56 (17)	44 (10)	59 (18)	62 (14)	64 (19.5)
100 (7)	18 (4.0)	49 (15.0)	26 (6)	52 (16)	40 (9)	56 (17)	57 (13)	61 (18.5)
85 (6)	15 (3.5)	46 (14.0)	24 (5.5)	49 (15)	35 (8)	52 (16)	53 (12)	57 (17.5)

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