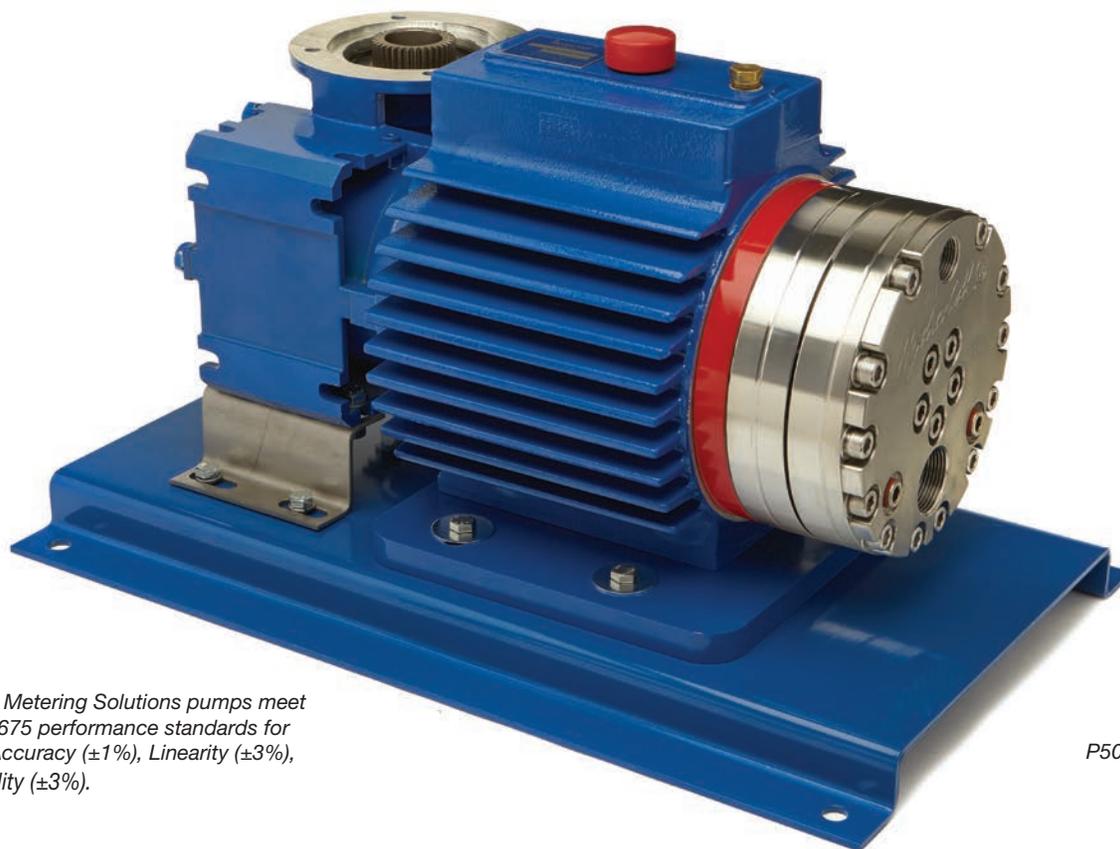


# P500 PRO SERIES METERING PUMPS

Maximum Flow Rate: 425.9 gph (1343.5 lph)  
Maximum Pressure: 2500 psi (172 bar) for Metallic Pump Heads

**WANNER™** HYDRA-CELL® PRO  
METERING PUMP SOLUTIONS



*Hydra-Cell Pro Metering Solutions pumps meet or exceed API 675 performance standards for Steady-State Accuracy ( $\pm 1\%$ ), Linearity ( $\pm 3\%$ ), and Repeatability ( $\pm 3\%$ ).*

UK  
CA CE

*P500 with Hastelloy C  
pump head*

## Metering Pump with “Pulse-Free” Linear Flow

- Handles a wide range of fluids from clear water to thick slurries
- Electronic flow control increases accuracy and reliability
- Smaller footprint saves valuable space
- One pump covers a wide range of flows and pressures – reducing inventory requirements with fast, simple field conversion
- Duplexing option doubles capacity and equipment savings
- Hydraulically-actuated, balanced diaphragms provide superior performance across entire pressure range
- Rugged construction with a variety of affordable choices for liquid end, diaphragm and check valve materials
- Seal-less design means no seals, cups, or packing to leak or replace
- A replenishment valve in every piston assembly ensures optimum actuating oil on every stroke for continuous accuracy

**WANNER™**

# P500 Pro Series Metering | Performance

## Performance

Flows are based upon lab testing of multiple pumps. However, flows listed are approximate values and pumps must be calibrated once installed into any system. Flow variations will occur, but calibration will ensure proper pump performance.

### Maximum Flow (gph) at Designated Pressure (psi)

100 psi	Metallic Pump Heads Only (gph)			Pump rpm	Gear Ratio	Motor rpm
	500 psi	1500 psi	2500 psi			
17.48	16.96	15.74	14.47	30	60:1	1800
20.97	20.43	19.11	17.71	36	50:1	
26.39	25.73	24.20	22.67	45	40:1	
35.27	34.47	32.63	30.80	60	30:1	
42.37	41.47	39.37	37.31	72	25:1	
53.03	51.97	49.49	47.07	90	20:1	
70.78	69.46	66.35	63.34	120	15:1	
106.3	104.4	100.1	95.88	180	10:1	
141.8	139.4	133.8	128.4	240	7.5:1	
212.8	209.4	201.2	193.5	360	5:1	
283.9	279.4	268.7	258.6	480	7.5:1	3600
425.9	419.3	403.6	388.7	720	5:1	

### Required Motor hp

1/4	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20
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### Maximum Flow (lph) at Designated Pressure (bar)

7 bar	Metallic Pump Heads Only (lph)			Pump rpm	Gear Ratio	Motor rpm
	34 bar	103 bar	172 bar			
55.14	53.50	49.66	45.641	25	60:1	1500
66.16	64.44	60.28	55.85	30	50:1	
83.25	81.16	76.32	71.50	37.5	40:1	
111.26	108.75	102.92	97.16	50	30:1	
133.66	130.82	124.19	117.69	60	25:1	
167.27	163.93	156.11	148.49	75	20:1	
223.28	219.11	209.29	199.81	100	15:1	
335.31	329.47	315.67	302.45	150	10:1	
447.33	439.83	422.05	405.10	200	7.5:1	
671.4	660.6	634.8	610.4	300	5:1	
895.4	881.3	847.6	815.7	400	7.5:1	3000
1343.5	1322.7	1273.1	1226.3	600	5:1	

### Required Motor kW

0.37	0.55	0.75	1.1	1.5	2.2
3	3.7	4	5.5	7.5	11

Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

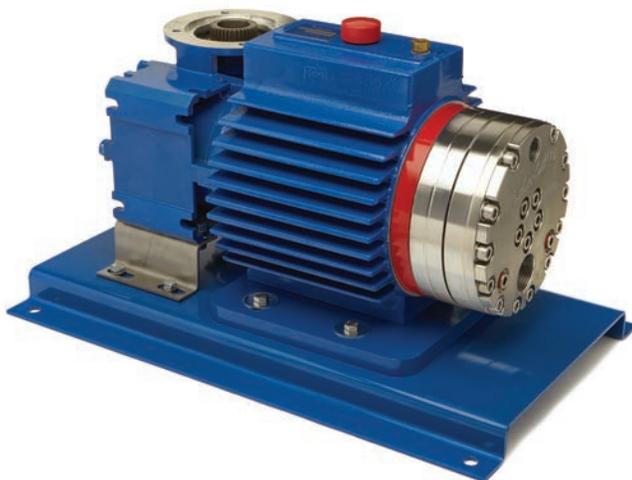
## Pump Data

<b>Diaphragms per Liquid End</b>	5
<b>Flow Control</b>	Electronic variable speed drive
<b>Maximum Discharge Pressure</b>	
Metallic Heads:	2500 psi (172 bar)
<b>Maximum Inlet Pressure</b>	500 psi (34 bar)
<b>Maximum Operating Temperatures</b>	
Metallic Heads:	250°F (121°C)
<i>Consult factory for correct metallic head component selection for temperatures from 160°F (71°C) to 250°F (121°C).</i>	
<b>Maximum Solids Size</b>	500 microns
<b>Inlet Port</b>	1-1/4 inch NPT or BSPT
<b>Discharge Port</b>	3/4 inch NPT or BSPT
<b>Shaft Rotation</b>	Bi-directional
<b>Oil Capacity</b>	2.2 US quarts (2.1 liters)
<b>Weight (less motor)</b>	
Metallic Heads:	192.1 lbs. (88.5 kg)
<b>Dimensions (less motor)</b>	
Metallic Heads:	14.5" W x 24.0" D x 13.9" H (368.3 mm W x 609.6 mm D x 353.1 mm H)
<i>For NEMA 56 motor frames only; see page 6 for other motor frame sizes.</i>	

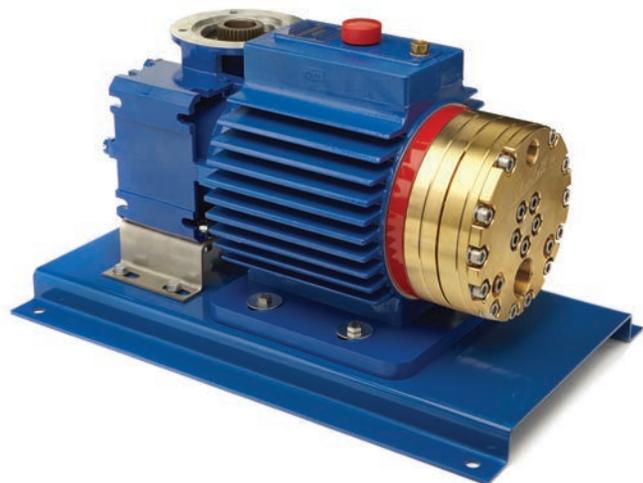
## Accessories, Options and Services

Consult Wanner Engineering for complete details about available accessories and options as well as special services.

- Manifolds and Flanges
- Multiplexing Capability
- Different Gearbox Ratios
- Oil Cooler Systems
- Actuating Oils
- Magnetic Drain Plug
- Motors (Standard/Hazardous-duty)
- Controllers
- Control Freak™ Touch-screen Metering Controller
- SmartDrive Motor-Controller
- Calibration Cylinders
- Back Pressure Valves
- Pressure Relief Valves
- Pulsation Dampeners
- Demonstration (Cutaway) Units
- Testing Services
- System Components, Priming Kits and Plugs
- Replacement Part Kits and Tool Kits
- Customization Services



P500 with Stainless Steel pump head

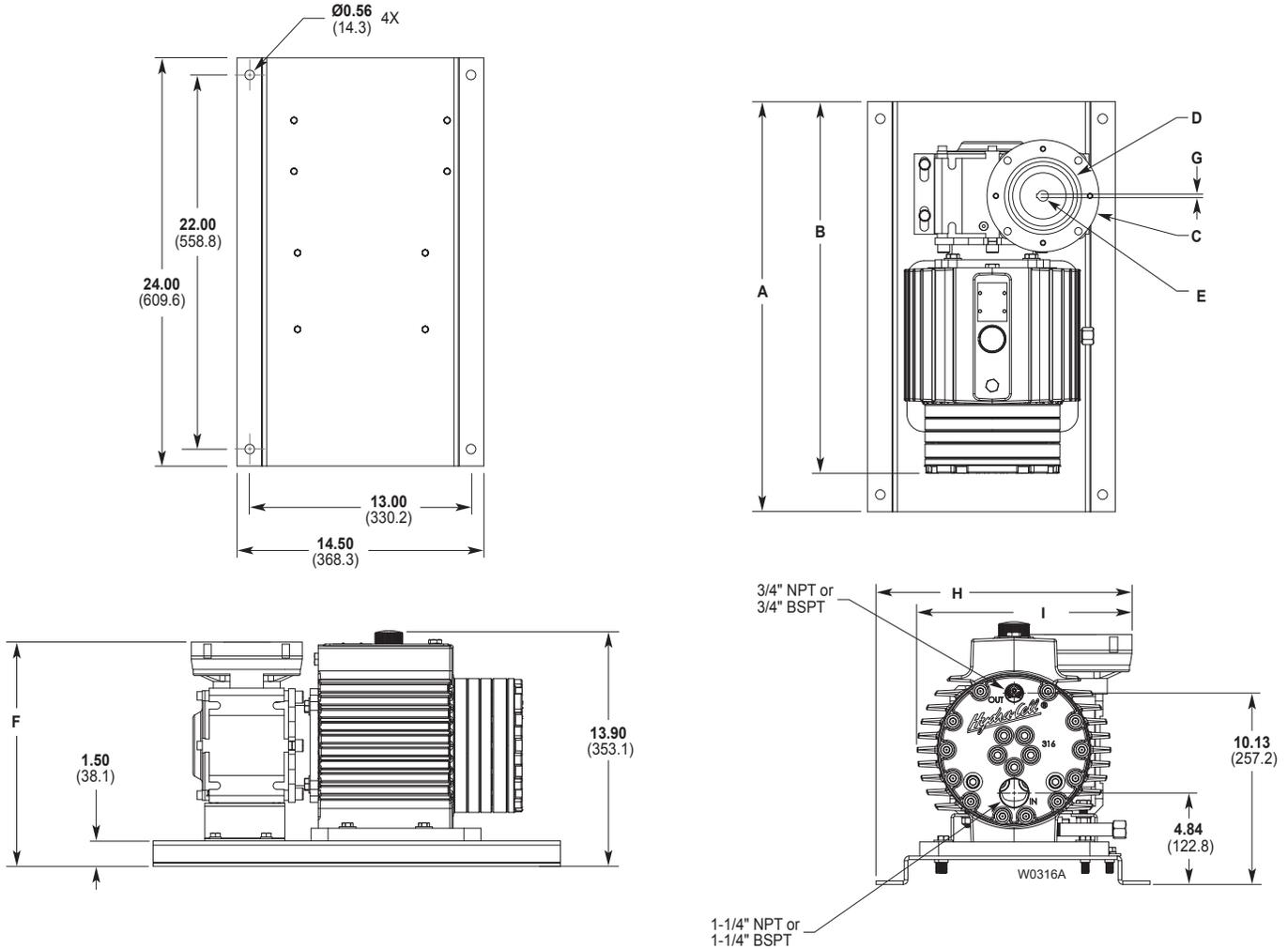


P500 with Brass pump head

Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

# P500 Pro Series Metering | Representative Drawings

## Metallic Pump Heads Inches (mm)



P500 representative drawings for C and D reducers (NEMA motor sizes 213/215TC and 254/256TC), please visit [www.Hydra-Cell.com](http://www.Hydra-Cell.com).

**Note:** Dimensions are for reference only. Contact factory for certified drawings.

## Dimensions: Inches (mm)

Input Frame Size	A	B	C	D	E	F	G (Square Key)	H	I
NEMA 56C	21.76 (552.6)	19.05 (495.3)	ø 6.54 (ø 166)	ø 4.50 (ø 114.3)	ø 0.62 (ø 15.7)	13.22 (335.9)	0.187 (4.75)	13.53 (343.7)	11.36 (288.5)
NEMA 143/145 TC	21.76 (552.6)	19.05 (495.3)	ø 6.54 (ø 166)	ø 4.50 (ø 114.3)	ø 0.87 (ø 22.2)	13.22 (335.9)	0.187 (4.75)	13.53 (343.7)	11.36 (288.5)
NEMA 182/183 TC	26.07 (585)	20.36 (517.1)	ø 9.17 (ø 233)	ø 8.50 (ø 218.9)	ø 1.12 (ø 26.6)	13.77 (349.75)	0.25 (6.35)	14.84 (376.95)	12.68 (322)
IEC 71 B5	21.64 (549.7)	18.93 (480.8)	ø 6.54 (ø 166)	ø 4.33 (ø 110)	ø 0.55 (ø 14)	13.42 (340.7)	0.196 (5)	13.41 (340.6)	11.24 (285.4)
IEC 80 B5	22.42 (569.6)	19.71 (500.6)	ø 7.87 (ø 200)	ø 5.12 (ø 130)	ø 0.75 (ø 19)	13.42 (340.7)	0.236 (6)	14.20 (360.6)	12.02 (305.3)
IEC 90 B5	22.42 (569.6)	19.71 (500.6)	ø 7.87 (ø 200)	ø 5.12 (ø 130)	ø 0.94 (ø 24)	13.42 (340.7)	0.314 (8)	14.20 (360.6)	12.02 (305.3)
IEC 100/112 B14	21.64 (549.7)	18.93 (480.8)	ø 6.30 (ø 160)	ø 4.33 (ø 110)	ø 1.10 (ø 28)	13.42 (340.7)	0.314 (8)	13.41 (340.6)	11.24 (285.4)

# P500 Pro Series Metering | How to Order

## Ordering Information

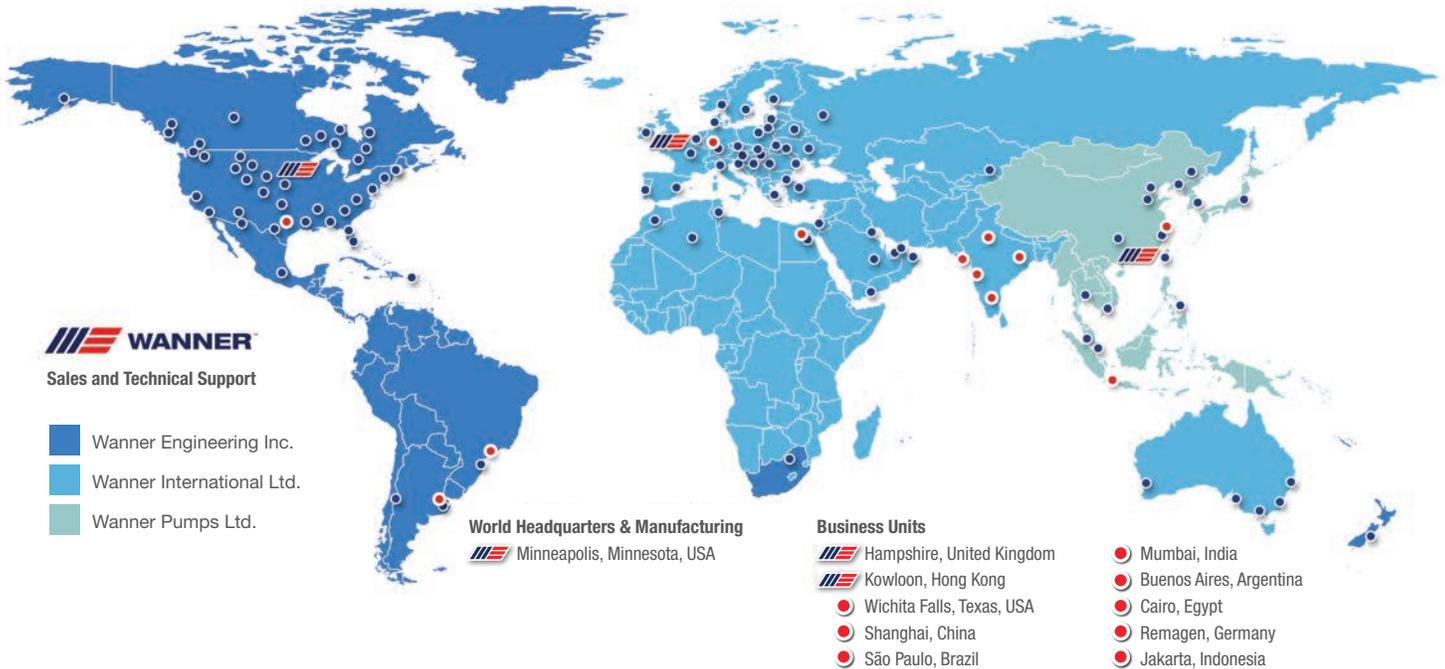
A complete pump order number contains 13 digits based on the specified pump materials listed below.

1	2	3	4	5	6	7	8	9	10	11	12	13
P	5	0	0									

Digit	Order Code	Description
1-4	<b>P500</b>	<b>Pump Configuration</b> For all P500 Pumps (Advanced Diaphragm Position Control)
5	<b>N</b> <b>M</b> <b>X</b>	<b>Pump Version</b> NPT Ports (NEMA motors only) BSPT Ports (IEC motors only) ATEX BSPT Ports (IEC motors only)
6	<b>B</b> <b>S</b> <b>T</b>	<b>Pump Head / Retainer Material</b> Brass / Hastelloy C 316L Stainless Steel / Hastelloy C Hastelloy C / Hastelloy C
7	<b>A</b> <b>X</b> <b>T</b>	<b>Diaphragm &amp; O-ring Material / Oil<sup>▲</sup></b> Aflas / PTFE O-ring (Synthetic oil) FKM (Synthetic oil) Buna-N (Synthetic oil)
<sup>▲</sup> See price list for different actuating oils available with these materials.		
8-9	<b>SS</b> <b>TT</b> <b>SD</b> <b>TD</b>	<b>Check Valve Material</b> <b>(Valve Spring / Valve Seat / Valve)</b> Elgiloy / Nitronic 50 / Nitronic 50 Hastelloy C / Hastelloy C / Hastelloy C Elgiloy / Tungsten Carbide / Tungsten Carbide Hastelloy C / Tungsten Carbide / Tungsten Carbide
10-12	<b>060</b> <b>050</b> <b>040</b> <b>A40</b> <b>030</b> <b>A30</b> <b>025</b> <b>A25</b> <b>020</b> <b>A20</b> <b>015</b> <b>A15</b> <b>B15</b> <b>010</b> <b>A10</b> <b>B10</b> <b>007</b> <b>A07</b>	<b>Gearbox Ratio / NEMA Motors</b> 60:1 (56C Motor Frame) 50:1 (56C Motor Frame) 40:1 (56C Motor Frame) 40:1 (143/145TC Motor Frame) 30:1 (56C Motor Frame) 30:1 (143/145TC Motor Frame) 25:1 (56C Motor Frame) 25:1 (143/145TC Motor Frame) 20:1 (56C Motor Frame) 20:1 (143/145TC Motor Frame) 15:1 (56C Motor Frame) 15:1 (143/145TC Motor Frame) 15:1 (182/184TC Motor Frame) 10:1 (56C Motor Frame) 10:1 (143/145TC Motor Frame) 10:1 (182/184TC Motor Frame) 7.5:1 (56C Motor Frame) 7.5:1 (143/145TC Motor Frame)

Digit	Order Code	Description
	<b>B07</b> <b>C07</b> <b>D07</b> <b>005</b> <b>A05</b> <b>B05</b> <b>C05</b> <b>D05</b>	7.5:1 (182/184TC Motor Frame) 7.5:1 (213/215TC Motor Frame) 7.5:1 (254/256TC Motor Frame) 5:1 (56C Motor Frame) 5:1 (143/145TC Motor Frame) 5:1 (182/184TC Motor Frame) 5:1 (213/215TC Motor Frame) 5:1 (254/256TC Motor Frame)
13	<b>H</b> <b>G</b>	<b>Base Plate / NEMA Motors</b> Carbon Steel (Epoxy painted) for 0, A & B reducers, size 75 Carbon Steel (Epoxy painted) for C & D reducers
10-12	<b>A60</b> <b>B60</b> <b>A50</b> <b>B50</b> <b>A40</b> <b>B40</b> <b>A30</b> <b>B30</b> <b>B25</b> <b>C25</b> <b>B20</b> <b>C20</b> <b>B15</b> <b>C15</b> <b>B10</b> <b>C10</b> <b>D10</b> <b>B07</b> <b>C07</b> <b>D07</b> <b>B05</b> <b>C05</b> <b>D05</b>	<b>Gearbox Ratio / IEC Motors</b> 60:1 (71 B5 Motor Frame) 60:1 (80 B5 Motor Frame) 50:1 (71 B5 Motor Frame) 50:1 (80 B5 Motor Frame) 40:1 (71 B5 Motor Frame) 40:1 (80 B5 Motor Frame) 30:1 (71 B5 Motor Frame) 30:1 (80 B5 Motor Frame) 25:1 (80 B5 Motor Frame) 25:1 (90 B5 Motor Frame) 20:1 (80 B5 Motor Frame) 20:1 (90 B5 Motor Frame) 15:1 (80 B5 Motor Frame) 15:1 (90 B5 Motor Frame) 10:1 (80 B5 Motor Frame) 10:1 (90 B5 Motor Frame) 10:1 (100/112 B14 Motor Frame) 7.5:1 (80 B5 Motor Frame) 7.5:1 (90 B5 Motor Frame) 7.5:1 (100/112 B14 Motor Frame) 5:1 (80 B5 Motor Frame) 5:1 (90 B5 Motor Frame) 5:1 (100/112 B14 Motor Frame)
13	<b>H</b>	<b>Base Plate/ IEC Motors</b> Carbon Steel (Epoxy painted) size 75

## Partners in over 70 countries



## Wanner worldwide

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