

# 5813 TITAN® II Motors

## WPI and WP II Vertical Motors



**Horsepower:** 250 – 1750 HP

**Speed Range:** 400 – 1800 RPM

**Rated Voltages:** 460 through 6900 Volts, 3 Phase,  
50 or 60 Hz

**Insulation:** Class F  
VPI 2000, 5000 or Premium EVERSEAL®

**Enclosure:** WPI or WP II



### Product Overview and Features

The 5813 frame Vertical TITAN® II motor is custom built, based on customer specifications and requirements. It includes WPI and WP II (weather protected) enclosures, and is available in speed ranges from 400 to 1800 RPM. 5813 frame verticals can be manufactured with either a hollow shaft or solid shaft in both low and medium voltage. Oil-lubricated bearings are standard on high and extra-high thrust capacity designs. Normal thrust motors feature grease lubricated bearings. The 5813 vertical TITAN II can be built with or without the BALLOMATIC® non-reverse ratchet and can be rated either standard or premium efficiency.

The U.S. MOTORS® brand 5813 Frame Vertical TITAN II motor is manufactured using a cast iron rather than a fabricated frame allowing the winding and frame assembly to be produced in parallel rather than in series. This feature reduces production time and means faster delivery to the customer. Additionally, the 5813 frame Vertical TITAN II incorporates the latest, improved rotor fabrication process for extra reliability.

U.S. MOTORS brand vertical motors have been a standard in the pumping industry since 1922. These motors are recognized for their longevity, reliability and ease of use for virtually any centrifugal pump application in every major stage of water treatment and processing.

### Product Options:

- Solid Shaft or HOLLOSHAFT®
- Inverter duty with insulated bearings and shaft grounding provisions
- Bearing and winding temperature detectors
- BALLOMATIC® non-reverse ratchet
- Winding space heater
- Thrust bearing cooling coils
- Aluminum or copper bar rotor
- Vibration switch options



5813 Frame TITAN® II

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**Nidec**  
NIDEC MOTOR CORPORATION

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# 5812 TITAN® II Motors

## TEFC Vertical Motors



**Horsepower:** 200 – 1250 HP

**Speed Range:** 400 – 1800 RPM

**Rated Voltages:** 460 through 6900 Volts, 3 Phase,  
50 or 60 Hz

**Insulation:** Class F  
VPI 2000, 5000 or Premium EVERSEAL®

**Enclosure:** Totally Enclosed Fan Cooled (TEFC)



### Product Overview and Features

The 5812 frame Vertical TITAN® II motor is custom built, based on customer specifications and requirements for applications such as, mining and oil and gas industries. It includes a TEFC enclosure, and is available in speed ranges from 400 to 1800 RPM. The 5812 frame verticals can be manufactured with either a hollow shaft or solid shaft in both low and medium voltage. Oil-lubricated bearings are standard on high and extra-high thrust capacity designs. Normal thrust motors feature grease lubricated bearings. The 5812 vertical TITAN II can be built with or without the BALLOMATIC® non-reverse ratchet and can be rated either standard or premium efficiency.

The U.S. MOTORS® brand 5812 frame Vertical TITAN II motor is designed and built to high standards utilizing materials and manufacturing processes that ensure reliability and long life. The design incorporates our latest, improved rotor fabrication process for extra reliability. U.S. MOTORS® brand vertical motors can be manufactured to meet API 610 standards for applications such as booster, transfer, pipeline, chemical process and in refinery water treatment facilities. They can also be designed with many features that are required by API 547.

This new vertical TEFC frame from Nidec Motor Corporation satisfies the industry need for a high horsepower, totally enclosed electric motor that requires less service and less variation in design. The 5812 full cast iron frame does not require cleaning of cooling tubes or filters and, unlike fabricated steel frames, performs consistently.

### Product Options:

- Solid Shaft or HOLLOSHAFT®
- Inverter duty with insulated bearings and shaft grounding provisions
- Bearing and winding temperature detectors
- BALLOMATIC® non-reverse ratchet
- Winding space heater
- Thrust bearing cooling coils
- Aluminum or copper bar rotor
- Vibration switch options
- API 547 features



5812 Frame TITAN® II

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# 6813 TITAN® II Motors

## WPI and WPII Vertical Motors



**Horsepower:** 500 – 4000 HP

**Speed Range:** 400 – 1800 RPM

**Rated Voltages:** 460 through 6900 Volts, 3 Phase,  
50 or 60 Hz

**Insulation:** Class F, INSULIFE VPI 2000, 5000  
or Premium EVERSEAL®

**Enclosure:** WPI or WPII



### Product Overview and Features

The 6813 frame vertical TITAN® II motor is custom built, based on customer specifications and requirements. It includes WPI and WPII (weather protected) enclosures, and is available in speed ranges from 400 to 1800 RPM. 6813 frame verticals can be manufactured with either a hollow shaft or solid shaft in both low and medium voltage. Oil-lubricated bearings are standard on high and extra-high thrust capacity designs. The 6813 vertical TITAN II can be built with or without the BALLOMATIC® non-reverse ratchet and can be rated either standard or premium efficiency.

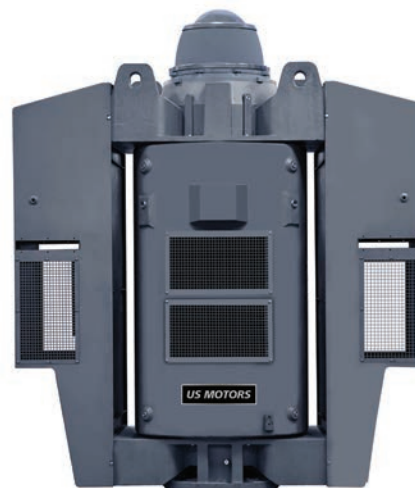
The U.S. MOTORS® brand 6813 vertical TITAN II motor is manufactured using a cast iron rather than a fabricated frame allowing the winding and frame assembly to be produced in parallel rather than in series. This feature reduces production time and means faster delivery to the customer. Additionally, the 6813 vertical TITAN II incorporates the latest, improved rotor fabrication process for extra reliability.

U.S. MOTORS brand vertical motors have been a standard in the pumping industry since 1922. These motors are recognized for their longevity, reliability and ease of use for virtually any centrifugal pump application in every major stage of water treatment and processing.

The 6813 vertical TITAN II incorporates a newly designed cooling circuit that moves more cooling air over the endturns of the stator increasing the efficiency of the cooling system. The new cooling circuit reduces the thermal stresses on the insulation and winding of the motor leading to more reliability, less services, and a longer life of the motor.

### Product Options:

- Solid Shaft or HOLLOSHAFT®
- Inverter duty with insulated bearings and shaft grounding provisions
- Bearing and winding temperature detectors
- BALLOMATIC® non-reverse ratchet
- Winding space heater
- Thrust bearing cooling coils
- Aluminum or copper bar rotor
- Vibration switch options



6813 vertical  
TITAN® II

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# 6812 TITAN® II Motors

## TEFC Vertical Motors



**Horsepower:** 450 – 2000 HP

**Speed Range:** 400 – 1800 RPM

**Rated Voltages:** 460 through 6900 Volts, 3 Phase,  
50 or 60 Hz

**Insulation:** Class F, INSULIFE VPI 2000, 5000  
or Premium EVERSEAL®

**Enclosure:** Totally Enclosed Fan Cooled (TEFC)



### Product Overview and Features

The 6812 frame vertical TITAN® II motor is custom built, based on customer specifications and requirements for applications such as, mining and oil and gas industries. It includes a TEFC enclosure, and is available in speed ranges from 400 to 1800 RPM. The 6812 frame verticals can be manufactured with either a hollow shaft or solid shaft in both low and medium voltage. Oil-lubricated bearings are standard on high and extra-high thrust capacity designs. Normal thrust motors feature grease lubricated bearings. The 6812 vertical TITAN II can be built with or without the BALLOMATIC® non-reverse ratchet and can be rated either standard or premium efficiency.

The U.S. MOTORS® brand 6812 vertical TITAN II motor is designed and built to high standards utilizing materials and manufacturing processes that ensure reliability and long life. The design incorporates our latest, improved rotor fabrication process for extra reliability. U.S. MOTORS® brand vertical motors can be manufactured to meet API 610 standards for applications such as booster, transfer, pipeline, chemical process and in refinery water treatment facilities. They can also be designed with many features that are required by API 547.

This new vertical TEFC frame from Nidec Motor Corporation satisfies the industry need for a high horsepower, totally enclosed electric motor that requires less service and less variation in design. The 6812 full cast iron frame does not require cleaning of cooling tubes or filters and, unlike fabricated steel frames, performs consistently.

### Product Options:

- Solid Shaft or HOLLOSHAFT®
- Inverter Duty with insulated bearings and shaft grounding provisions
- Bearing and winding temperature detectors
- BALLOMATIC® non-reverse ratchet
- Winding space heater
- Thrust bearing cooling coils
- Aluminum or copper bar rotor
- Vibration switch options
- API 547 features



6812 vertical  
TITAN® II

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# Vertical Normal Thrust TEFC Motors



**Horsepower:** 1 — 200 HP

**Frame Sizes:** 143 — 447

**Pole:** 2, 4, 6, 8 and 10

**Design Voltages:** 208 through 690 Volts, 3 Phase,  
50 or 60 Hz

**Insulation:** Class F insulation with Class B temperature  
rise at full load

**Enclosure:** Totally Enclosed Fan Cooled (TEFC)

**Efficiency Level:** Standard Efficient, Energy Efficient  
and NEMA<sup>®</sup> Premium Efficient

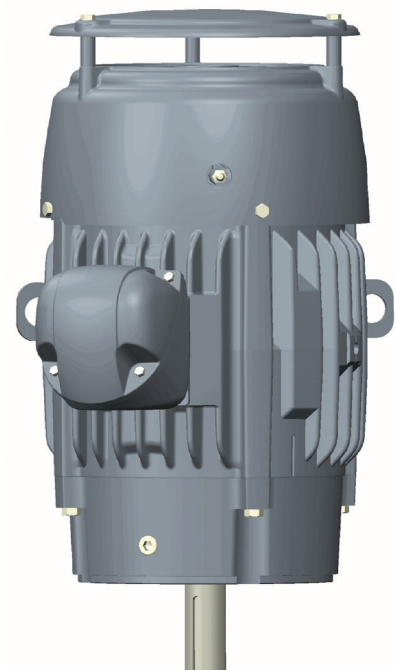


## Product Overview and Features

Nidec Motor Corporation, the leader in vertical motors, now offers a newly designed line of vertical normal thrust totally enclosed fan cooled motors. These custom built motors are designed and built to high standards that ensure reliability and long life for applications in water treatment facilities, agriculture, chemical process plants, refineries, and pipelines. Designed for pump OEMs and aftermarket replacement, these vertical motors are ideal for use on centrifugal pumps, turbine pumps, sump pumps and process pumps. Many modifications are available to this new product design, including HOSTILE DUTY<sup>™</sup>, Inverter Duty, D-Flange, special shafts, special voltages and high altitude or ambient.

### FEATURES:

- Construction: HOSTILE DUTY<sup>™</sup>, CORRO DUTY<sup>®</sup>, and 841 PLUS<sup>®</sup>
- All cast iron construction (steel frame on 140 frame)
- Corrosion resistant mill & chemical duty paint
- Stainless steel nameplate (with "CE" Mark)
- Shafts: P, VP, TSC, TC, JM, JP, TD and TSD
- Shaft slinger on both ends for IP54 protection
- P-Base, C-Face and D-Flange
- Regreasable bearings 140 frame & up, lifting provisions 180 frame & up
- 40°C ambient, NEMA<sup>®</sup> design B performance on 60 Hz sine wave power
- 50 Hz. rated at 190/380V (140-250 frame) or 380V (280 frame & larger)
- Open Bearings 180-447 (double shielded bearings on 140 Frame)
- Steel canopy cap/drip cover (cast iron on 140 frame)
- Condensation drain with threaded brass breather plug
- Zinc Plated Hardware



Vertical C-Face (Discount Symbol DS-3CE)					
HP	RPM	Voltage	Frame	Catalog Number	List
1	3600	208-230/460	143TC	C1P1DCR	\$818
	1800	208-230/460	145TC	C1P2DCR	\$796
1 1/2	3600	208-230/460	143TC	C32P1DCR	\$891
	1800	208-230/460	145TC	C32P2DCR	\$866
2	3600	208-230/460	145TC	C2P1DCR	\$1,013
	1800	208-230/460	145TC	C2P2DCR	\$926
3	3600	208-230/460	182TC	C3P1DCR	\$1,122
	1800	208-230/460	182TC	C3P2DCR	\$1,021
5	3600	208-230/460	184TC	C5P1DCR	\$1,342
	1800	208-230/460	184TC	C5P2DCR	\$1,145
7 1/2	3600	208-230/460	213TC	C7P1DCR	\$1,665
	1800	208-230/460	213TC	C7P2DCR	\$1,536
10	3600	208-230/460	215TC	C10P1DCR	\$1,896
	1800	208-230/460	215TC	C10P2DCR	\$1,789
15	3600	208-230/460	254TC	C15P1DCR	\$2,617
	1800	208-230/460	254TC	C15P2DCR	\$2,396
20	3600	208-230/460	256TC	C20P1DCR	\$3,141
	1800	208-230/460	256TC	C20P2DCR	\$2,856
25	3600	460	284TSC	C25P1FCSR	\$3,913
	1800	460	284TC	C25P2FCR	\$3,510
	1800	460	284TSC	C25P2FCSR	\$3,510
30	3600	460	286TSC	C30P1FCSR	\$4,474
	1800	460	286TC	C30P2FCR	\$3,983
	1800	460	286TSC	C30P2FCSR	\$3,983
40	3600	460	324TSC	C40P1FCSR	\$5,824
	1800	460	324TC	C40P2FCR	\$5,234
	1800	460	324TSC	C40P2FCSR	\$5,234
50	3600	460	326TSC	C50P1FCSR	\$7,235
	1800	460	326TC	C50P2FCR	\$6,221
	1800	460	326TSC	C50P2FCSR	\$6,221
60	3600	460	364TSC	C60P1FCSR	\$9,632
	1800	460	364TC	C60P2FCR	\$8,912
	1800	460	364TSC	C60P2FCSR	\$8,912
75	3600	460	365TSC	C75P1FCSR	\$11,801
	1800	460	365TC	C75P2FCR	\$11,015
	1800	460	365TSC	C75P2FCSR	\$11,015
100	3600	460	405TSC	C100P1FCSR	\$16,042
	1800	460	405TC	C100P2FCR	\$14,022
	1800	460	405TSC	C100P2FCSR	\$14,022
125	3600	460	444TSC	C125P1FCSR	\$19,461
	1800	460	444TC	C125P2FCR	\$16,896
	1800	460	444TSC	C125P2FCSR	\$16,896
150	3600	460	445TSC	C150P1FCSR	\$23,468
	1800	460	445TC	C150P2FCR	\$19,664
	1800	460	445TSC	C150P2FCSR	\$19,664
200	3600	460	447TSC	C200P1FCSR	\$29,321
	1800	460	447TC	C200P2FCR	\$23,716
	1800	460	447TSC	C200P2FCSR	\$23,716

Vertical Normal Thrust P-Base (Discount Symbol DS-7CE)					
HP	RPM	Voltage	Frame	Catalog Number	List
3	3600	208-230/460	182HP	CNT3P1DE	\$1,459
	1800	208-230/460	182HP	CNT3P2DE	\$1,327
5	3600	208-230/460	184HP	CNT5P1DE	\$1,745
	1800	208-230/460	184HP	CNT5P2DE	\$1,489
7 1/2	3600	208-230/460	213HP	CNT7P1DE	\$2,165
	1800	208-230/460	213HP	CNT7P2DE	\$1,997
10	3600	208-230/460	215HP	CNT10P1DE	\$2,465
	1800	208-230/460	215HP	CNT10P2DE	\$2,326
15	3600	208-230/460	254HP	CNT15P1DE	\$3,140
	1800	208-230/460	254HP	CNT15P2DE	\$2,875
20	3600	208-230/460	256HP	CNT20P1DE	\$3,770
	1800	208-230/460	256HP	CNT20P2DE	\$3,427
25	3600	460	284HP	CNT25P1FE	\$4,696
	1800	460	284HP	CNT25P2FE	\$4,212
30	3600	460	286HP	CNT30P1FE	\$5,369
	1800	460	286HP	CNT30P2FE	\$4,780
40	3600	460	324HP	CNT40P1FG	\$6,698
	1800	460	324HP	CNT40P2FG	\$6,020
50	3600	460	326HP	CNT50P1FG	\$8,320
	1800	460	326HP	CNT50P2FG	\$7,154
60	3600	460	364HP	CNT60P1FG	\$11,077
	1800	460	364HP	CNT60P2FG	\$10,294
75	3600	460	365HP	CNT75P1FG	\$13,571
	1800	460	365HP	CNT75P2FG	\$12,667
100	3600	460	405HP	CNT100P1FG	\$18,448
	1800	460	405HP	CNT100P2FG	\$16,125
125	3600	460	444HP	CNT125P1FG	\$22,380
	1800	460	444HP	CNT125P2FG	\$19,430
150	3600	460	445HP	CNT150P1FG	\$26,988
	1800	460	445HP	CNT150P2FG	\$22,614
200	3600	460	447HP	CNT200P1FG	\$33,720
	1800	460	447HP	CNT200P2FG	\$27,273

For additional information, please visit [usmotors.com](http://usmotors.com) or contact your Nidec Motor Corporation representative.

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