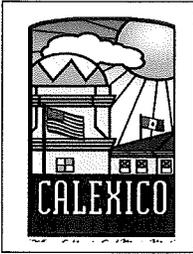


**AGENDA  
ITEM**

**13**



# AGENDA STAFF REPORT

**DATE:** December 6, 2017

**TO:** Mayor and City Council

**APPROVED BY:** Armando G. Villa, City Manager *Armando Villa*

**PREPARED BY:** David Dale, PE, Public Works Director/City Engineer *David Dale*

**SUBJECT:** Resolution of the City Council of the City of Calexico (City) Pursuant to Public Contracts Code (PCC) Section 20168 Finding that an Emergency Exists Due to the Need for a New Variable Frequency Drive at the Water Treatment Plant and Authorize Contracting without the need for Bidding Pursuant to PCC Section 22050.

=====

**Recommendation:**

Adopt a Resolution of the City Council of the City of Calexico (City) Pursuant to Public Contracts Code (PCC) Section 20168 Finding that an Emergency Exists Due to the Need for a New Variable Frequency Drive at the Water Treatment Plant and Authorize Contracting without the need for Bidding Pursuant to PCC Section 22050.

**Background:**

A Variable Frequency Drive (VFD) is a type of adjustable-speed drive used to control AC motor speed and torque by varying motor input frequency and voltage. VFD technology has improved substantially over the past decades. In 1998, the City of Calexico purchased VFD No. 1 for Distribution Pump #1 at the Water Treatment Plant. There are five (5) VFD's that control the (5) main distribution pumps for the City's distribution system. VFD No. 1 is an inoperative, so Distribution Pump #1 is offline until it is replaced. Public Works staff was recently informed that this equipment is obsolete and the parts to repair it have been discontinued. Since this VFD for the Water Treatment Plant are obsolete, Public Works staff requests City Council authorization to purchase one (1) VFD on an emergency basis. Public Works staff requested price quotes from various companies, but only one company provided a price quote. Control Systems Engineering, Inc. proposes to remove and replace VFD No. 1 with a new modern enclosed Schneider Electric VFD for \$22,977.29. Control Systems Engineering, Inc. has years of experience in providing electrical testing and maintenance services as well as worked on other projects at the Water Treatment Plant. The price is deemed very reasonable, partly because this Contractor is already mobilized on the site installing the emergency backup generators at the water treatment plant.

**AGENDA  
ITEM  
13**

**Discussion & Analysis:**

Pursuant to Public Contracts Code (PCC) § 20168, the City Council may declare that the public interest and necessity demand the immediate expenditure of public money to safeguard life, health or property. In accordance with PCC §§ 20168 and 22050, the City Council may repair or replace a public facility, take any related and immediate action required by that emergency, and procure the necessary equipment, services and supplies for those purposes, without giving notice for bids to let contracts. Under PCC § 1102 an emergency means a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services.

The recent discovery of the significant operability problems with VFD No. 1, which is an unexpected occurrence, poses a clear and imminent danger requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, and/or essential public services, and constitutes an emergency. Sufficient funds exist in the City's water operating fund to pay for the purchase of the new VFD No. 1. Thus, Public Works staff recommends that the City Council approves the attached resolution authorizing the purchase of the new VFD No. 1 without competitive bidding.

**Fiscal Impact:**

Budgeted Item for Fiscal Year 2017-2018  
Water Operating Fund      \$22,977.29

**Coordinated With:**

Public Works Department.

**Attachment(s):**

1. Resolution of the City Council of the City of Calexico (City) Pursuant to Public Contracts Code (PCC) Section 20168 Finding that an Emergency Exists Due to the Need for a New Variable Frequency Drive at the Water Treatment Plant and Authorize Contracting without the need for Bidding Pursuant to PCC Section 22050
2. Control Systems Engineering, Inc. Proposal

RESOLUTION NO. 2017-\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CALEXICO (CITY) PURSUANT TO PUBLIC CONTRACTS CODE (PCC) SECTION 20168 FINDING THAT AN EMERGENCY EXISTS DUE TO THE NEED FOR A NEW VARIABLE FREQUENCY DRIVE AT THE WATER TREATMENT PLANT AND AUTHORIZING CONTRACTING WITHOUT THE NEED FOR BIDDING PURSUANT TO PCC SECTION 22050**

WHEREAS, pursuant to Public Contracts Code (PCC) § 20168, the City Council may declare that the public interest and necessity demand the immediate expenditure of public money to safeguard life, health or property; and

WHEREAS, in accordance with PCC §§ 20168 and 22050, the City Council may repair or replace a public facility, take any related and immediate action required by that emergency, and procure the necessary equipment, services and supplies for those purposes, without giving notice for bids to let contracts; and

WHEREAS, under PCC § 1102 an emergency means a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services; and

WHEREAS, the City of Calexico (City) provides water services to its residents via the City's Water Treatment Plant (Plant); and

WHEREAS, the Plant has five (5) variable frequency drives (VFD) that control the pumps that distribute the treated water into the City's distribution system; and

WHEREAS, Public Works staff recently discovered the significant operability problems with VFD No. 1 during an inspection, which is an unexpected occurrence that poses a clear and imminent danger requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, and/or essential public services and constitutes an emergency; and

WHEREAS, City staff has identified a contractor, Control Systems Engineering, Inc. to provide a new VFD No. 1 for a reasonable price totaling Twenty-Two Thousand Nine Hundred Seventy Seven and 29/100 Dollars (\$22,977.29); and

WHEREAS, sufficient funds exist in the City's water operating fund to pay for the new VFD No. 1.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CALEXICO HEREBY RESOLVES AS FOLLOWS:

Section 1. The above-listed recitals are true and correct and incorporated herein.

Section 2. The City Council finds, determines and declares that the public interest and necessity demand the immediate expenditure of public money to safeguard life, health and/or

Resolution No. 2017-\_\_\_\_\_

property at the City of Calexico's Water Treatment Plant due to the inoperability of the VFD. The City Council further finds that under these emergency conditions, the delay resulting from public bidding for a new VFD No. 1 would imperil essential public services.

Section 3. Based on the foregoing, the City Council authorizes the City Manager to execute a purchase order and/or contract with Control Systems Engineering, Inc. for the purchase of a new VFD No. 1, totaling Twenty-Two Thousand Nine Hundred Seventy Seven and 29/100 Dollars (\$22,977.29), in accordance with the specific terms set forth in the accompanying staff report.

Section 4. The City Council will review this emergency action at its next regularly scheduled meeting and at every regularly scheduled meeting thereafter until the work described above is completed. If necessary, the City Council must determine by a four-fifths vote that there is a need to continue the work at each meeting.

Section 5. This Resolution shall become effective immediately upon its adoption.

PASSED, APPROVED AND ADOPTED this 6<sup>th</sup> day of December, 2017.

\_\_\_\_\_  
Maritza Hurtado, Mayor

Attest:

\_\_\_\_\_  
Gabriela T. Garcia, City Clerk

Approved as to Form:

\_\_\_\_\_  
Carlos L. Campos, Interim City Attorney

State of California     )  
County of Imperial    ) ss.  
City of Calexico       )

I, Gabriela T. Garcia, City Clerk of the City of Calexico, California, do hereby certify that the above and foregoing Resolution No. 2017-\_\_\_\_\_ was duly passed, approved and adopted by the City Council at its regular meeting held on the 6<sup>th</sup> day of December, 2017, by the following vote, to-wit:

Resolution No. 2017-\_\_\_\_\_

AYES:  
NOES:  
ABSENT:

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Gabriela T. Garcia, City Clerk

**Control Systems Engineering, Inc.**

P O Box 128, Murrieta, CA 92564

Phone 951.696.3689 Fax 888.398.2734

**COST ESTIMATE SUMMARY**

Cost Estimate #: **CE-03**

Job Name:

City of Calexico

WTP Emergency Generator

545 Peirce Ave

Calexico, CA 92231

CSEI Job Number: 17.01

9/19/2017

To: City of Calexico  
608 Heber Ave  
Calexico, CA 92231

Attention: David Dale

Date Revised:

**DESCRIPTION:**

Remove existing Square D 250HP VFD Altivar #66. Purchase and install Square D 250HP VFD

Altivar 660 # ATV660C16T4N2ANWAANCU

Totals Transferred from Estimate of Direct Costs				TOTALS	
(1) Total BURDENED	(2) Total	(3) Total			
Labor Costs	Material Costs	Equip Costs	Subtotal 1, 2 and 3	(5)	\$17,507.32
1,615.32	15,892.00				
Workman's Comp...		23%			
FICA Combined Med & Soc...		10%			
Calif State Training...		1%			
Calif State and Fed UI...		6%			
Total Labor Burden			40% of (1)	(6)	\$646.13
**Riverside County Sales Tax			8.50% of (2)	(7)	\$1,350.82
Estimated Material Shipping & Handling Costs				(8)	\$750.00
			Subtotal (5) thru (8)	(9)	\$20,254.27
Contractor Labor Markup			15%		\$339.22
Contractor Material Markup			15%		\$2,383.80
<b>TOTAL PROPOSED COST OF CHANGE ORDER</b>					<b>\$22,977.29</b>

REMARKS:

PREVAILING LABOR RATES FOR IMPERIAL COUNTY PROJECT >\$500K

JOURNEYMAN ELECTRICIANS



Eric Blom, Project Manager

9/20/2017

Job: **City of Calexico**

Remove existing Square D 250HP VFD Altivar #66. Purchase and install Square D 250HP VFD Altivar 660 # ATV660C16T4N2ANWAANCU

Cost Estimate #: **CE-03**

**Contractor's Estimate of Costs**

No.	Item of Work	No. of Units	Unit	Labor			Material			Equipment		
				M.H. Per Unit	M.H. Total	Cost/ M.H.	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	
1	Graybar Quote #	1.00	EA	0.000	0.00	0.00	\$0.00	\$15,892.00	\$15,892.00	\$0.00	\$0.00	\$0.00
2	Remove Existing Unit	1.00	LUMP	10.000	10.00	57.69	\$576.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3	Install New Unit	1.00	LUMP	12.000	12.00	57.69	\$692.28	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
4	Start-up & Testing	1.00	LUMP	6.000	6.00	57.69	\$346.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
5			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6	Extended Warranty (?) Add \$ if required		EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
7			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8	Exclusion: Customer to dispose of old VFD		EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	Recommended they save for spare parts		EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
11			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
12			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
13			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
14			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
15			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
16			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
17			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
18			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
19			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
20			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
22			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
23			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
24			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
25			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
26			EA	0.000	0.00	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>ITEM TOTALS</b>												
							<b>28</b>	<b>\$1,615.32</b>		<b>\$15,892.00</b>		<b>\$0.00</b>



655 SOUTH H ST  
 SAN BERNARDINO CA 92410-3417  
 Phone: 909-386-6308  
 Fax: 909-381-6873

To: CONTROL SYSTEMS ENG.  
 PO BOX 128  
 MURRIETA CA 92564-0128  
 Attn: Eric Blom  
 Phone: 951-551-6347  
 Fax: 951-696-7219  
 Email: zackary.odom@graybar.com

Date: 09/19/2017  
 Proj Name: CITY OF CALEXICO WATER  
 GB Quote #: 0228450205  
 Valid From: 09/19/2017  
 Valid To: 10/19/2017  
 Contact: ZACKARY ODOM  
 Email: zackary.odom@graybar.com

### Proposal

We Appreciate Your Request and Take Pleasure in Responding As Follows

Item	Quantity	Supplier	Catalog Nbr	Description	Price	Unit	Ext.Price
100	1 EA	SQUARE D CO.	ATV660C16T4N2ANW AANCU		\$15,892.66	1	\$15,892.66

Total in USD (Tax not included): \$15,892.66

This equipment and associated installation charges may be financed for a low monthly payment through Graybar Financial Services (subject to credit approval). For more information call 1-800-241-7408 to speak with a leasing specialist.

To learn more about Graybar, visit our website at [www.graybar.com](http://www.graybar.com)

24-Hour Emergency Phone#: 1-800-GRAYBAR

Subject to the standard terms and conditions set forth in this document. Unless otherwise noted, freight terms are F.O.B. shipping point prepaid and bill. Unless noted the estimated ship date will be determined at the time of order placement.

To: CONTROL SYSTEMS ENG.  
 PO BOX 128  
 MURRIETA CA 92564-0128  
 Attn: Eric Blom

Date: 09/19/2017  
 Proj Name: CITY OF CALEXICO WATER  
 GB Quote #: 0228450205

## Proposal

We Appreciate Your Request and Take Pleasure in Responding As Follows

Item	Quantity	Supplier	Catalog Nbr	Description	Price	Unit	Ext.Price
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GRAYBAR ELECTRIC COMPANY, INC.  
 TERMS AND CONDITIONS OF SALE

1. ACCEPTANCE OF ORDER; TERMINATION - Acceptance of any order is subject to credit approval and acceptance of order by Graybar Electric Company, Inc. ("Graybar") and, when applicable, Graybar's suppliers. If credit of the buyer of the goods ("Buyer") becomes unsatisfactory to Graybar, Graybar reserves the right to terminate upon notice to Buyer and without liability to Graybar.
2. PRICES AND SHIPMENTS - Unless otherwise quoted, prices shall be those in effect at time of shipment, which shall be made F.O.B. shipping point, prepaid and bill.
3. RETURN OF GOODS - Credit may be allowed for goods returned with prior approval. A deduction may be made from credits issued to cover cost of handling.
4. TAXES - Prices shown do not include sales or other taxes imposed on the sale of goods. Taxes now or hereafter imposed upon sales or shipments will be added to the purchase price. Buyer agrees to reimburse Graybar for any such tax or provide Graybar with acceptable tax exemption certificate.
5. DELAY IN DELIVERY - Graybar is not to be accountable for delays in delivery occasioned by acts of God, failure of its suppliers to ship or deliver on time, or other circumstances beyond Graybar's reasonable control. Factory shipment or delivery dates are the best estimates of our suppliers, and in no case shall Graybar be liable for any consequential or special damages arising from any delay in shipment or delivery.
6. LIMITED WARRANTIES - Graybar warrants that all goods sold are free of any security interest and will make available to Buyer all transferable warranties (including without limitation warranties with respect to intellectual property infringement) made to Graybar by the manufacturer of the goods. GRAYBAR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, AND SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE. UNLESS OTHERWISE AGREED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF GRAYBAR, PRODUCTS SOLD HEREUNDER ARE NOT INTENDED FOR USE IN OR IN CONNECTION WITH (1) ANY SAFETY APPLICATION OR THE CONTAINMENT AREA OF A NUCLEAR FACILITY OR (2) IN A HEALTHCARE APPLICATION, WHERE THE GOODS HAVE POTENTIAL FOR DIRECT PATIENT CONTACT OR WHERE A SIX (6) FOOT CLEARANCE FROM A PATIENT CANNOT BE MAINTAINED AT ALL TIMES.
7. LIMITATION OF LIABILITY - Buyer's remedies under this agreement are subject to any limitations contained in manufacturer's terms and conditions to Graybar, a copy of which will be furnished upon written request. Furthermore, Graybar's liability shall be limited to either repair or replacement of the goods or refund of the purchase price, all at Graybar's option, and IN NO CASE SHALL GRAYBAR BE LIABLE FOR INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. In addition, claims for shortages, other than loss in transit, must be made in writing not more than five (5) days after receipt of shipment.
8. WAIVER - The failure of Graybar to insist upon the performance of any of the terms or conditions of this agreement or to exercise any right hereunder shall not be deemed to be a waiver of such terms, conditions, or rights in the future, nor shall it be deemed to be a waiver of any other term, condition, or right under this agreement.
9. MODIFICATION OF TERMS AND CONDITIONS - These terms and conditions supersede all other communications, negotiations, and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions shall be binding upon Graybar unless made in writing and signed on its behalf by a duly authorized representative of Graybar. No conditions, usage of trade, course of dealing or performance, understanding or agreement, purporting to modify, vary, explain, or supplement these terms and conditions shall be binding unless hereafter made in writing and signed by the party to be bound. Any proposed modifications or additional terms are specifically rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer's assent to any additional or different terms set forth herein.
10. REELS - When Graybar ships returnable reels, a reel deposit may be included in the invoice. The Buyer should contact the nearest Graybar service location to return reels.
11. CERTIFICATION - Graybar hereby certifies that these goods were produced in compliance with all applicable requirements of Sections 6, 7, and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof. This agreement is subject to Executive Order 11246, as amended, the Rehabilitation Act of 1973, as amended, the Vietnam Veterans' Readjustment Assistance Act of 1974, as amended, E.O. 13496, 29 CFR Part 471, Appendix A to Subpart A, and the corresponding regulations, to the extent required by law. 41 CFR 60-1.4, 60-741.5, and 60-250.5 are incorporated herein by reference, to the extent legally required.
12. FOREIGN CORRUPT PRACTICES ACT - Buyer shall comply with applicable laws and regulations relating to anti-corruption, including, without limitation, (i) the United States Foreign Corrupt Practices Act (FCPA) (15 U.S.C. §§78dd-1, et. seq.) irrespective of the place of performance, and (ii) laws and regulations implementing the Organization for Economic Cooperation and Development's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, the U.N. Convention Against Corruption, and the Inter-American Convention Against Corruption in Buyer's country or any country where performance of this agreement or delivery of goods will occur.
13. ASSIGNMENT - Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Graybar, and any such assignment, without such consent, shall be void.
14. GENERAL PROVISIONS - All typographical or clerical errors made by Graybar in any quotation, acknowledgment or publication are subject to correction. This agreement shall be governed by the laws of the State of Missouri applicable to contracts to be formed and fully performed within the State of Missouri, without giving effect to the choice or conflicts of law provisions thereof. All suits arising from or concerning this agreement shall be filed in the Circuit Court of St. Louis County, Missouri, or the United States District Court for the Eastern District of Missouri, and no other place unless otherwise determined in Graybar's sole discretion. Buyer hereby irrevocably consents to the jurisdiction of such court or courts and agrees to appear in any such action upon written notice thereof.
15. PAYMENT TERMS - Payment terms shall be as stated on Graybar's invoice or as otherwise mutually agreed. As a condition of the sales agreement, a monthly service charge of the lesser of 1-1/2% or the maximum permitted by law may be added to all accounts not paid by net due date. Visa, MasterCard, American Express, and Discover credit cards are accepted at point of purchase only.
16. EXPORTING - Buyer acknowledges that this order and the performance thereof are subject to compliance with any and all applicable United States laws, regulations, or orders. Buyer agrees to comply with all such laws, regulations, and orders, including, if applicable, all requirements of the International Traffic in Arms Regulations and/or the Export Administration Act, as may be amended. Buyer further agrees that if the export laws are applicable, it will not disclose or re-export any technical data received under this order to any countries for which the United States government requires an export license or other supporting documentation at the time of export or transfer, unless Buyer has obtained prior written authorization from the United States Office of Export Control or other authority responsible for such matters.

Signed: \_\_\_\_\_

This equipment and associated installation charges may be financed for a low monthly payment through Graybar Financial Services (subject to credit approval). For more information call 1-800-241-7408 to speak with a leasing specialist.

To learn more about Graybar, visit our website at [www.graybar.com](http://www.graybar.com) 24-Hour Emergency Phone#: 1-800-GRAYBAR

Subject to the standard terms and conditions set forth in this document. Unless otherwise noted, freight terms are F.O.B. shipping point prepaid and bill.  
 Unless noted the estimated ship date will be determined at the time of order placement.

## Wendy Ann Cramer

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**From:** Odom, Zackary <Zackary.Odom@graybar.com>  
**Sent:** Tuesday, September 19, 2017 9:02 AM  
**To:** Eric A. Blom  
**Subject:** Graybar Square D Quote - City of Calexico Water Treatment Plant  
**Attachments:** Graybar Quotation - 228450205 CITY OF CALEXICO WAT.PDF; Calexico VFD Replacement.pdf; ATV660 Brochure\_r5.pdf

Eric,

See attached quote with BOM requested. Square D quoted the ATV600 replacement for the ATV61.

Attached is a ATV660 brochure to review the new features.

If you have any question please let me know.

Thanks

**Zackary Odom** | Inside Sales Representative  
San Bernardino, CA | Office (909) 386-6308 | [zackary.odom@graybar.com](mailto:zackary.odom@graybar.com)  
[www.graybar.com](http://www.graybar.com) - Works to Your Advantage



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**From:** Eric A. Blom [mailto:eric@controlsystemseng.com]  
**Sent:** Wednesday, September 13, 2017 9:09 AM  
**To:** Odom, Zackary <Zackary.Odom@graybar.com>  
**Subject:** Need Square D Quote

Good Morning Zack,

We have been asked to provide a quote to remove and replace a VFD drive for the City of Calexico Water Treatment Plant on Pierce Drive in Calexico. It would seem to me the Square D Sales office should have already gotten the request for this VFD quote prior to us getting involved. We know the city engineer probably asked for a quote to determine their budget. Reference the attached photos for an idea of the required door components. We can get Square D drawings from an installed unit to match once we are hired to do the job. Thank you

Removing Altivar 66, replacing with Altivar 61 Plus

Quote New Drive: Square D Altivar 61 Plus, 250HP 460v 3PH NEMA type 12 enclosure, Variable torque

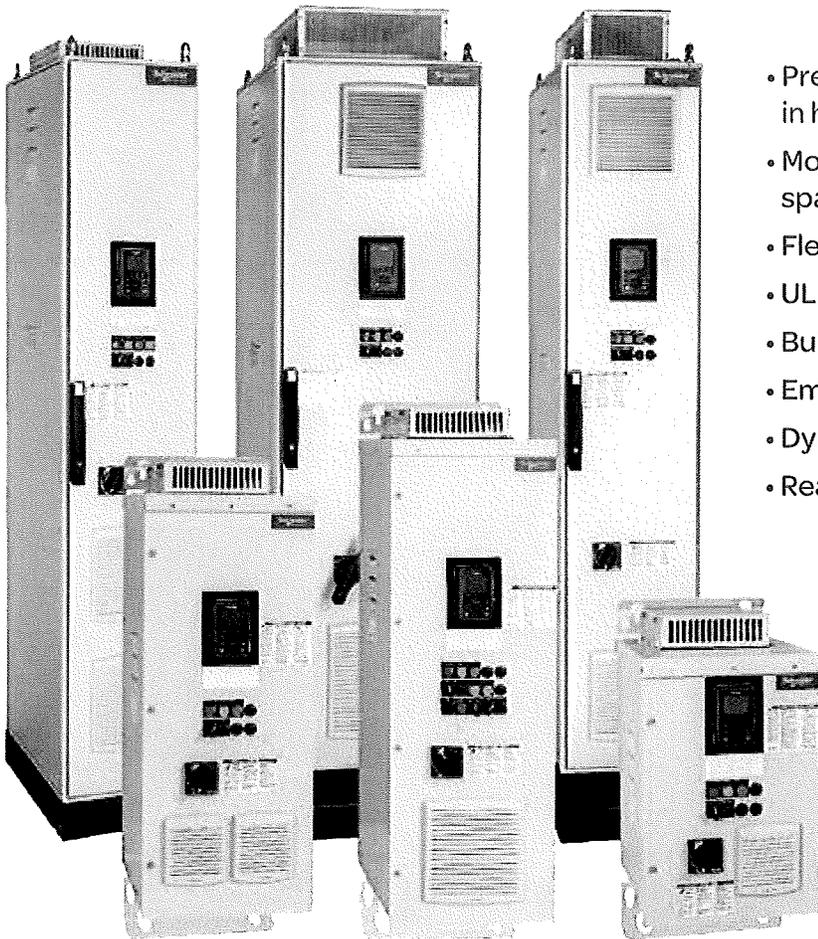
Include Delivery to Calexico CA

Quote an optional adder for a field services technician to assist the startup

# Altivar™ 660 Drive Systems

The Schneider Electric Altivar™ 660 Drive Systems provides a robust, packaged, adjustable-speed solution for commercial, industrial, and municipal applications. All ratings are UL 508A listed, with selectable control and power configurations. These drives combine the reliability and ease-of-use of the Altivar drives family with proven, validated, and tested drive system designs.

- 1 - 900hp at 460V Normal Duty
- 1 - 60hp at 230V Normal Duty
- 1 - 700hp at 460V Heavy Duty
- 1 - 50hp at 230V Heavy Duty



- Pre-engineered, ready to use solutions in highly efficient designs
- Modular and compact to maximize space utilization
- Flexibility for application requirements
- UL Type 1, 12 and 3R rated enclosures
- Built in pump curves
- Embedded ethernet and web server
- Dynamic QR codes
- Real time clock

# ATV660 Drive Systems

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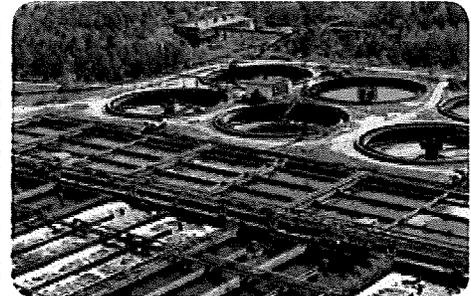
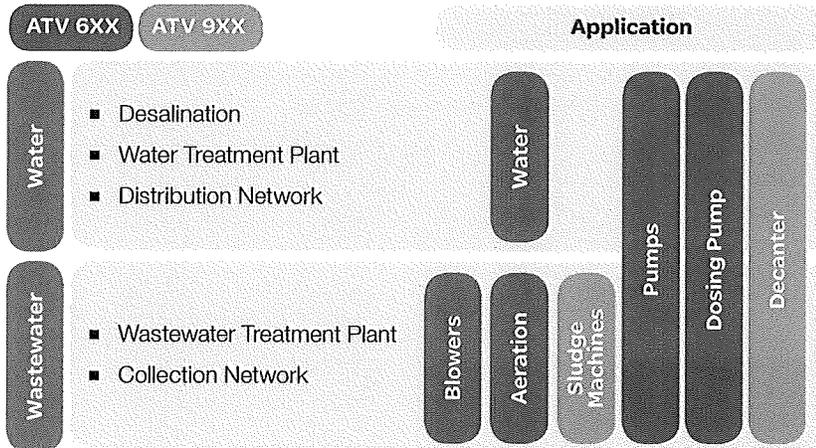
# ATV660 Drive Systems    Content

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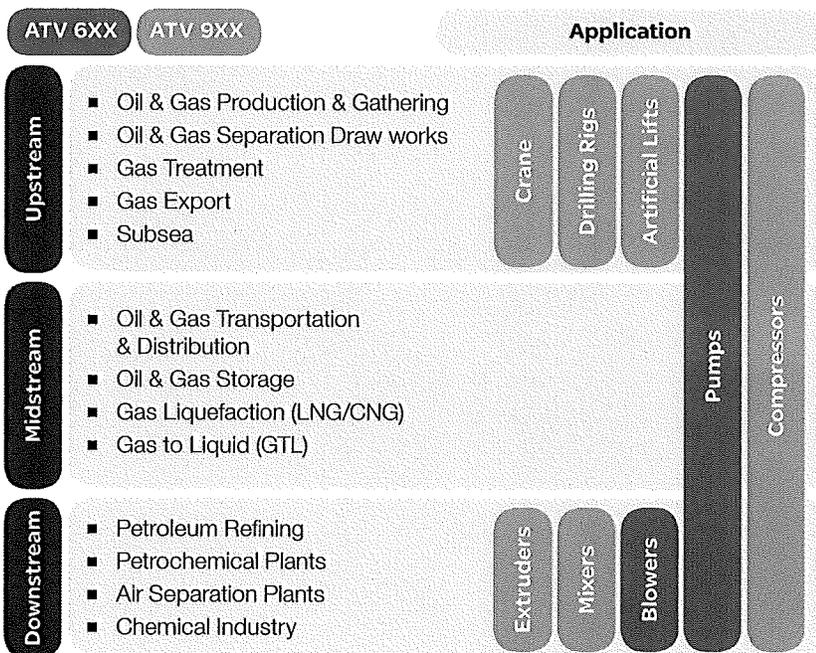
## ATV660 Drive Systems

- Applications .....4
- 1-125hp.....6
- 150-900hp.....8
- Configured to Order .....10
- Make the Switch .....11
- Specifications .....12

Applications in WWW

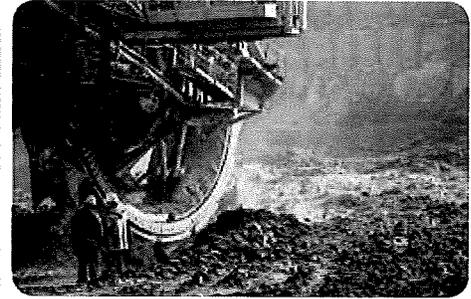
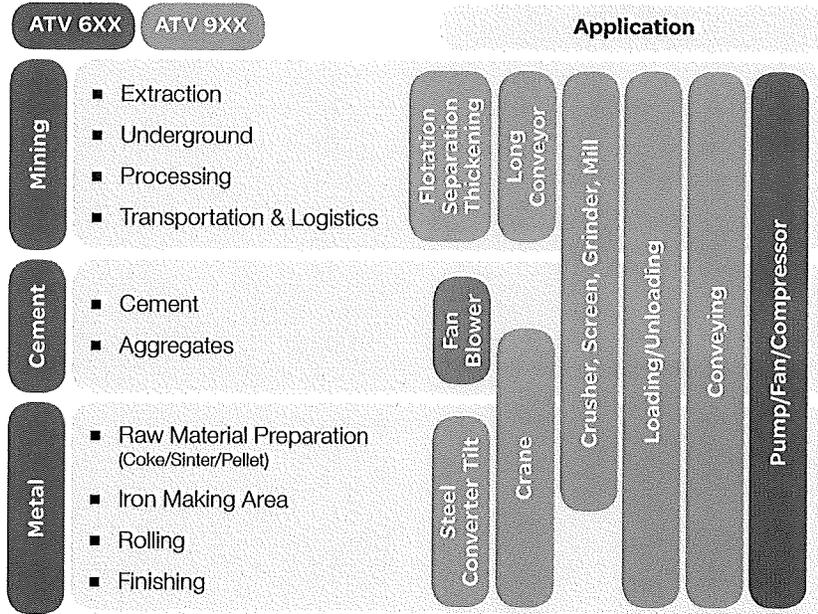


Applications in O&G

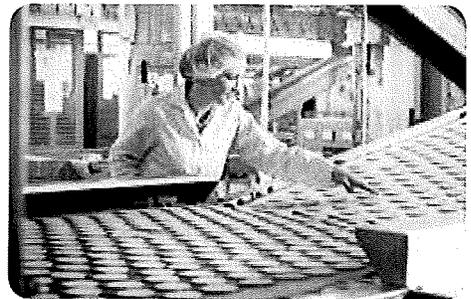
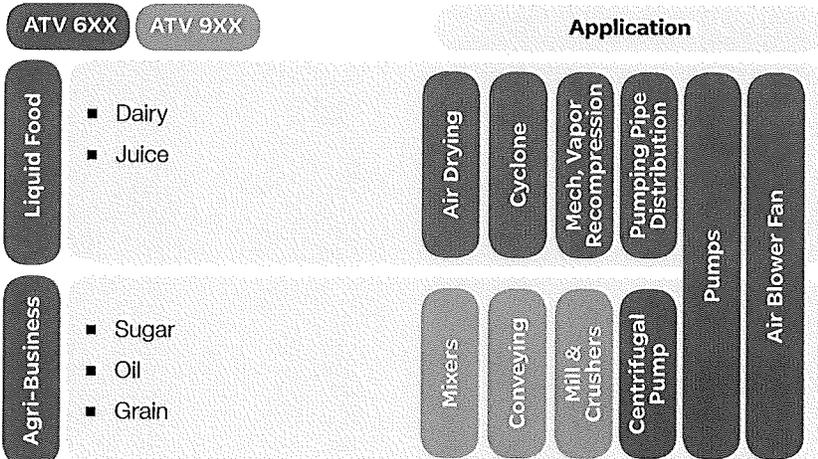


# ATV660 Drive Systems Applications

## Applications in MMM

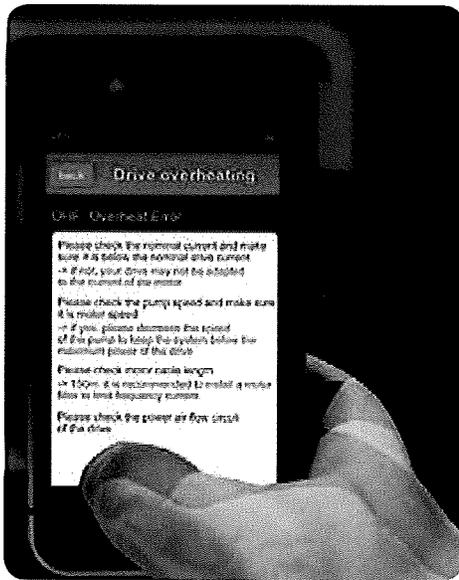


## Applications in F&B



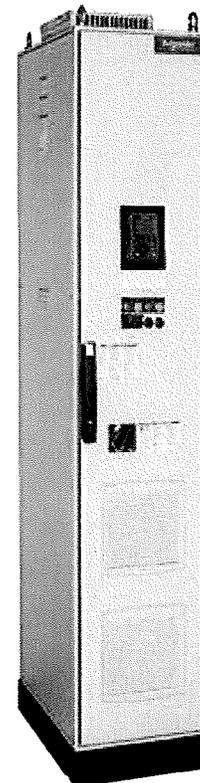
# ATV660 Drive Systems

## ATV660 Drive Systems (1-125hp ND)

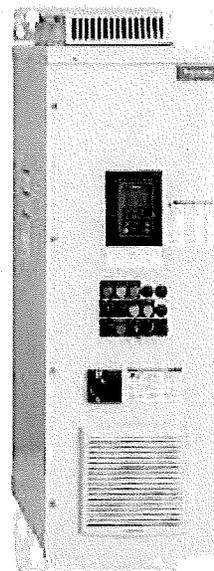


- 1–125hp Normal Duty at 460V, 1-100hp Heavy Duty at 460V, 1–60hp Normal Duty at 230V, 1-50hp at 230V Heavy Duty
- All four frames are 16 in wide
- All wall mount frames are 19.5 in deep
- Two additional frame enclosures available for ETO options
- UL Type 1, 12 & 3R rated enclosures
- 100,000 SCCR short circuit rating
- Energy management (integrated power measurement)
- Remote graphic keypad
- Standard 3% equivalent impedance
- Circuit breaker disconnect
- White component mounting plate
- Service entrance - 3R

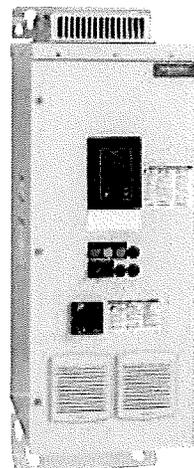
75-125hp ND  
@460V



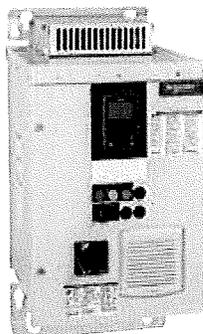
40-60hp ND  
@460V



20-30hp ND  
@460V



1-15hp ND  
@460V



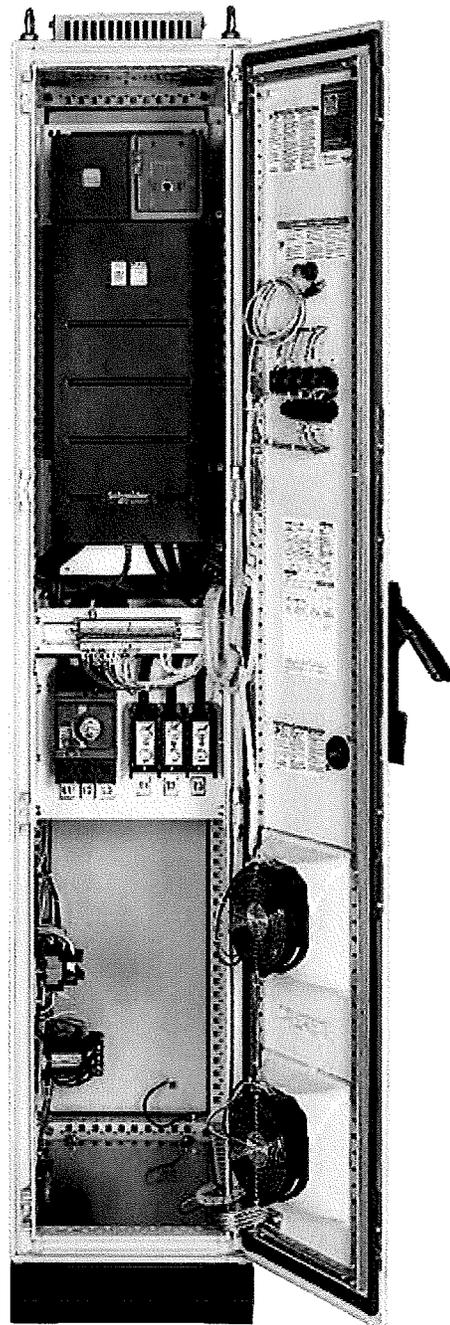
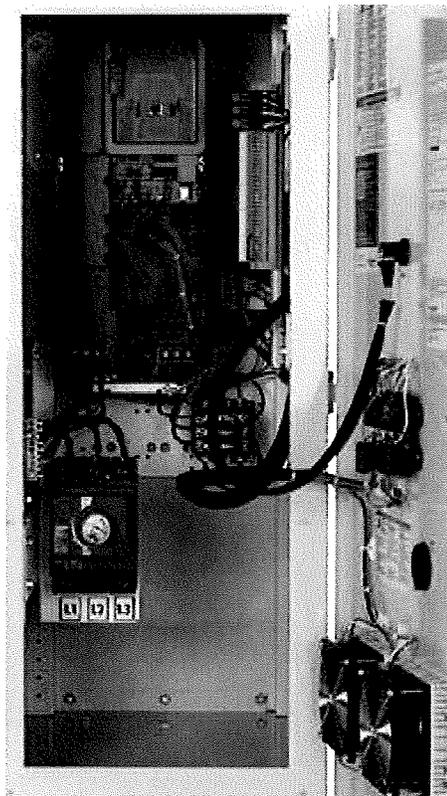
# ATV660 Drive Systems

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## ATV660 Drive Systems (1-125hp ND)

### Available options:

- Bypass-utilizing Zello Smart Relay (up to 250hp)
- Harmonic filter
- Service switch (bypass)
- DV/DT motor filter
- 50 Deg C (3R)
- Communication cards
- Control and indicator options
- 5% equivalent impedance option
- Many more to meet customer requirements



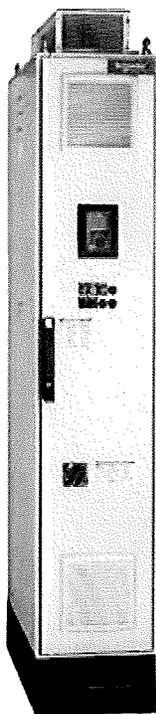
## ATV660 Drive Systems

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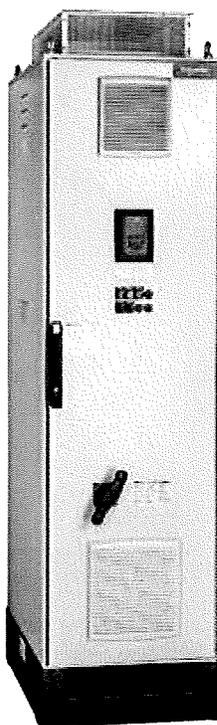
### ATV660 Drive Systems (150-900hp ND)

- 150-900hp Normal Duty @ 460V, 125-700hp Heavy Duty at 460V
- UL Type 1 & Type 12 rated enclosures
- UL 508A
- 100,000 AIC short circuit rating
- Contains frequency inverter & rectifier modules, circuit breaker, line reactor, motor choke
- Remote graphic keypad
- Removable conduit entry plate

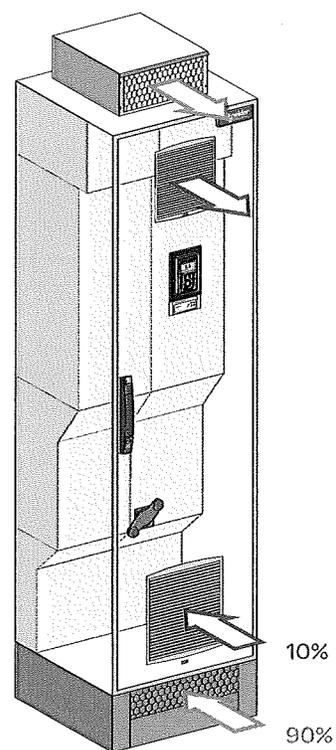
150-250hp ND  
@460V



300-500hp ND  
@460V

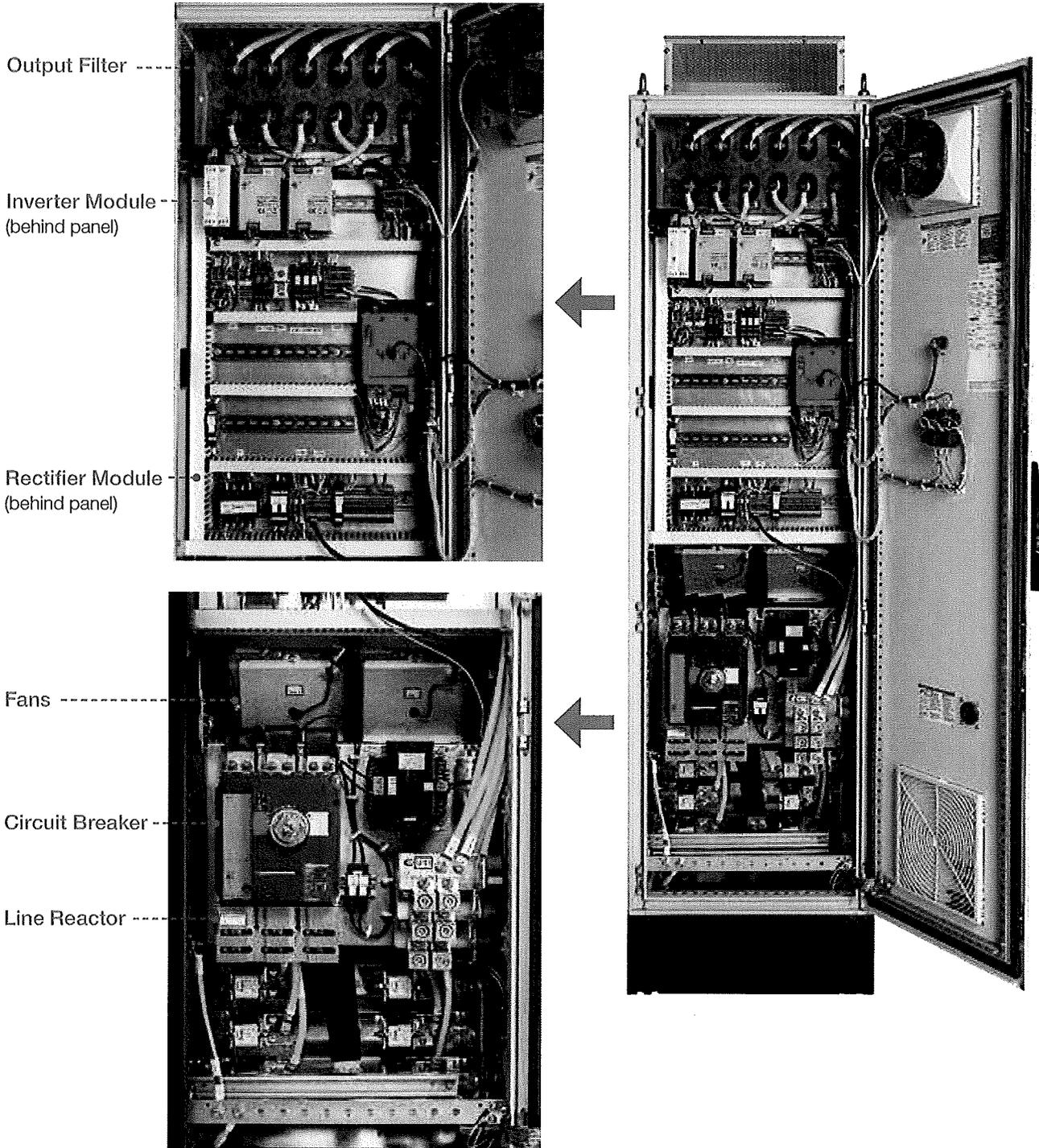


Cooling concept



# ATV660 Drive Systems

## ATV660 Drive Systems (150-900hp ND)



Configuration To Order

Catalog number example: ATV660D22T4N2ANWAANAGK

ATV660 D22 T4 N 2 A N W A A N A G K

**Product line (Utility)**  
**660** ATV660 Drive System  
**680** Low Harmonic

**Product line (Industry)**  
**960** ATV960 Drive System  
**980** Regen

**Voltage**  
**U3** 230V  
**T4** 460V

**2** UL (default)  
**6** cUL

**Power Circuit**  
**W** W/O bypass (default)  
**Y** Bypass (<300hp)

**Light Options**  
**N** None  
**A** Red pwr on, Yell trip gr AFC run, Yell auto  
**B** Red pwr on, Yell trip gr AFC run

**Misc Options**  
**N** None  
**A** Ethernet port on front door (PC/iPad)  
**B** Line contactor  
**C** Drive I/O extension  
**D** Drive extended relay module (3 NO)  
**E** 0-10V auto speed reference  
**F** 1 NO auxiliary auto mode contact  
**G** Type 1 SPD 40 k  
**H** Type 2 SPD 80 k  
**J** Not assigned  
**K** Additional 150VA control power transformer  
**L** Push-to-test pilot lights  
**M** Not assigned  
**P** Permanent wire markers (sleeve type)  
**Q** Trip reset button  
**R** Not assigned  
**S** 50 deg C (3R only, 125hp & below)  
**T** Service Switch  
**U** Top entry cubical (150hp & above)  
**V** Assembled in US (60hp & below)  
**W** Not assigned  
**X** DV/DT filter

**N** Normal Duty (default)  
**H** Heavy Duty

**Normal Duty Values**

Code	HP at 460V
U07	1
U15	2
U22	3
U40	5
U55	7.5
U75	10
D11	15
D15	20
D18	25
D22	30
D30	40
D37	50
D45	60
D55	75
D75	100
D90	125
C11	150
C13	200
C16	250
C20	300
C25	400
C31	500
C40	600
C50	700
C63	900

**Heavy Duty Values**

Code	HP at 460V
U15	1
U22	2
U30	3
U55	5
U75	7.5
D11	10
D15	15
D18	20
D22	25
D30	30
D37	40
D45	50
D55	60
D75	75
D90	100
C11	125
C13	150
C16	200
C20	250
C25	300
C31	400
C40	500
C50	600
C63	700

**Enclosure**

**G** Type 1 (default)  
**A** Type 12  
**H** Type 3R (<150hp)

**Control Options**

**N** Prewired for HOA  
**A** HOA, Speed Pot (default)  
**B** HOA, Speed Pot, Start-Stop

**Harmonic Mitigation**

**N** None (default)  
**A** 5% line impedance  
**M** Harmonic filter

**Comms Options**

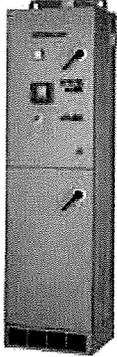
**N** None  
**A** Profibus DP  
**B** CANopen daisy chain  
**C** Devicenet  
**D** CANopen sub-D9  
**E** CANopen open style  
**F** Profinet  
**G** Ethernet/IP-VW3A3720

# ATV660 Drive Systems Make the Switch

## Make the Switch Today

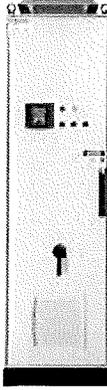
**M-Flex**

- Commercial
- Industrial
- WWW



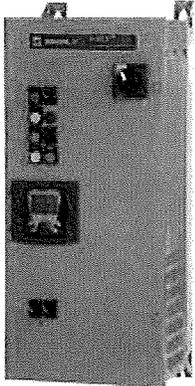
**ATV Plus**

- Commercial
- Industrial
- WWW



**E-Flex**

- Industrial
- Some WWW



Smaller footprint  
Advanced keypad  
Option rich

Embedded pump curves  
Embedded web server  
Dynamic QR codes



ATV660 Drive Systems

## ATV660 Drive Systems (1-900hp ND)

Electrical Specifications		Environmental Specifications	
Input mains voltage	230 Vac $\pm$ 10%, 460 Vac $\pm$ 10%	Storage temperature	-13 to +149 °F (-25 to +65 °C)
Short circuit current rating (AC symmetrical)	100 kA	Operating temperature	+14 to +104 °F (-10 to +40 °C) Type 1/12; +14 to +122 °F (-10 to +50 °C) Type 3R
Control voltage	24 Vdc, 115 Vac $\pm$ 10%/-15% (control power transformer included)	Humidity	95% with no condensation or dripping water, conforming to IEC 60068-2-78
Displacement power factor	98% through speed range	Altitude	3,300 ft (1000 m), without derating, derating of the current by 1% for each additional 330 ft (100 m) up to 9,842 ft. (3000 m) maximum
Input frequency	50/60Hz $\pm$ 5%	Enclosure	UL Type 1 : General indoor; UL Type 12: Indoor dust-tight (ventilated); UL Type 3R: Outdoor (ventilated)
Output voltage	Three-phase output, maximum voltage equal to input voltage	Pollution degree	Pollution degree 2 or 3 per NEMA ICS-1 Annex A and IEC 60664-1
Galvanic isolation	Galvanic isolation between power and control (inputs outputs, & power supplies)	Operational test vibration	Conforming to IEC 60721-3-3-3M3 amplitude 1.5 mm peak to peak from 3-13 Hz 1 g from 13-200Hz
Torque/Over torque	Normal Duty: 110% of nominal motor torque for 60s Heavy Duty: 150% of nominal motor torque for 60s	Transit shock test	15 g, 11 ms
Current (transient)	Normal Duty: 110% of drive rated current for 60s Heavy Duty: 150% of drive rated current for 60s	Codes and standards	UL Listed per UL 508A IEEE519 compliant (passive harmonic filter required); Conforms to applicable NEMA ICS, NFPA, and IEC standards; Manufactured under ISO 9001 standards
Switching frequency	Selectable from .5-8 kHz Factory setting: 2.5 kHz The drive reduces the switching frequency automatically in the event of excessive heat sink temperature	Cyber Security	Achilles™ Level 2 certification
Efficiency	95% (or greater) at full load typical		

Process drives without bypass are available up to 700hp HD / 900hp ND at 460V or 50hp HD / 60hp ND at 230V. The following standard features for process drives without bypass, when no options are ordered:

- Disconnect handle with lockout/tagout provisions
- Door mounted keypad holder and display
- One form C tripped relay
- Two form A sequence relays
- Six programmable digital inputs
- Standard color RAL735
- Class 10 overload protection
- Controller programming
  - Acceleration (ACC): 10s
  - Deceleration (DEC): 10s
  - Low Speed (LSP): 3Hz

# ATV660 Drive Systems Specifications

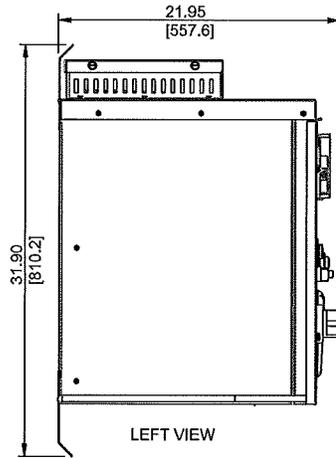
1HP[.75KW] - 15HP[11KW]  
AT 460V NORMAL DUTY\*

1HP[.37KW] - 10HP[7.5KW]  
AT 460V HEAVY DUTY\*

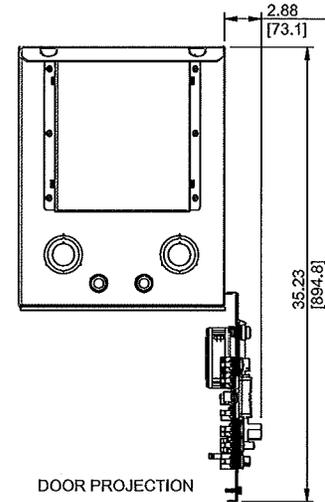
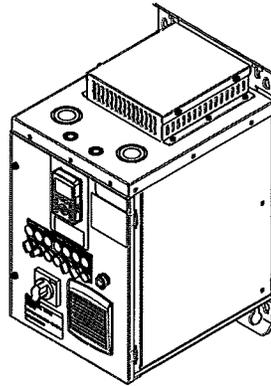
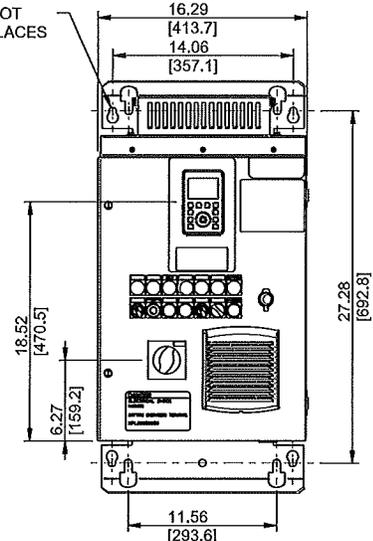
1HP[.75KW] -  
7.5HP[5.5KW] AT 230V  
NORMAL DUTY\*

\*STANDARD DRIVE  
PACKAGE

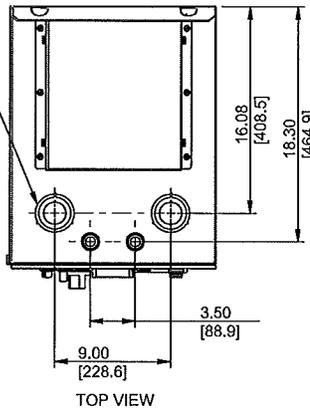
ELEVATION 600MM  
TYPE 1, 12



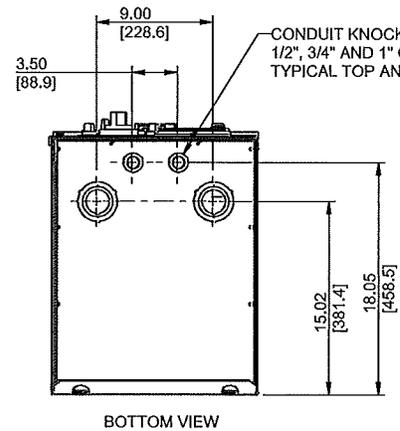
0.56 [14.2] SLOT  
TYPICAL 4 PLACES



CONDUIT KNOCKOUTS FOR  
1-1/4", 2" AND 2-1/2" CONDUIT.  
TYPICAL TOP AND BOTTOM



CONDUIT KNOCKOUTS FOR  
1/2", 3/4" AND 1" CONDUIT.  
TYPICAL TOP AND BOTTOM



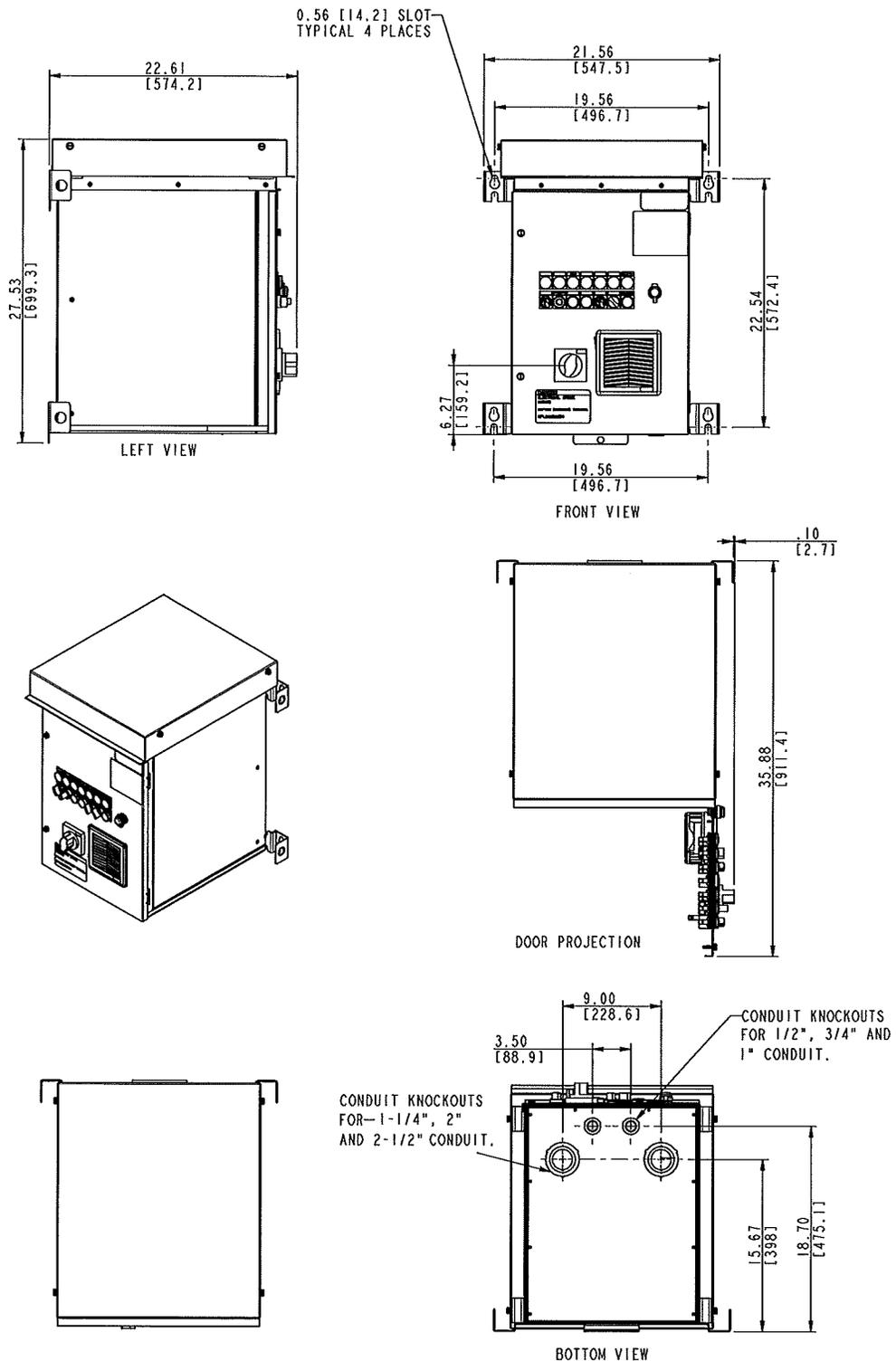
1HP[.75KW] - 15HP[11KW]  
AT 460V NORMAL DUTY\*

1HP[.37KW] - 10HP[7.5KW]  
AT 460V HEAVY DUTY\*

1HP[.75KW] -  
7.5HP[5.5KW] AT 230V  
NORMAL DUTY\*

\*STANDARD DRIVE  
PACKAGE

ELEVATION 600MM  
TYPE 1, 12



# ATV660 Drive Systems Specifications

20HP[15KW] - 30HP[22KW]  
AT 460V NORMAL DUTY\*

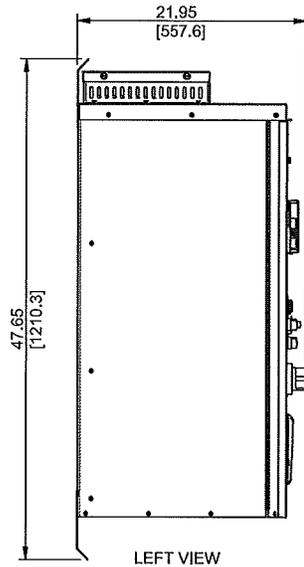
15HP[11KW] - 25HP[19KW]  
AT 460V HEAVY DUTY\*

10HP[7.5KW] -  
15HP[11KW] AT 230V  
NORMAL DUTY\*

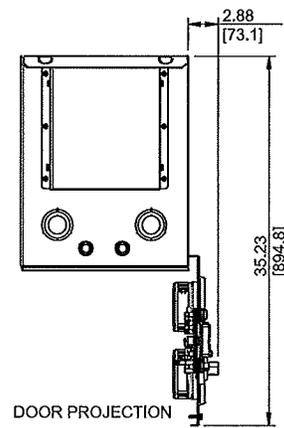
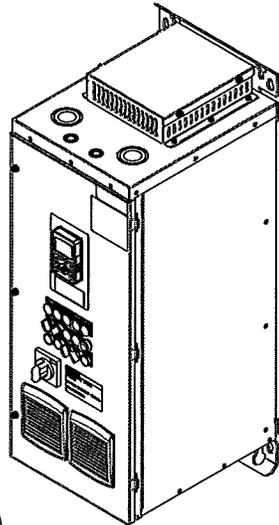
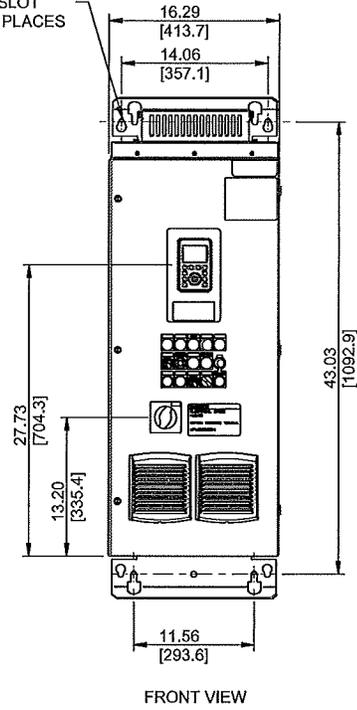
7.5HP[5.5KW] -  
10HP[7.5KW] AT 230V  
HEAVY DUTY\*

\*STANDARD  
DRIVE PACKAGE

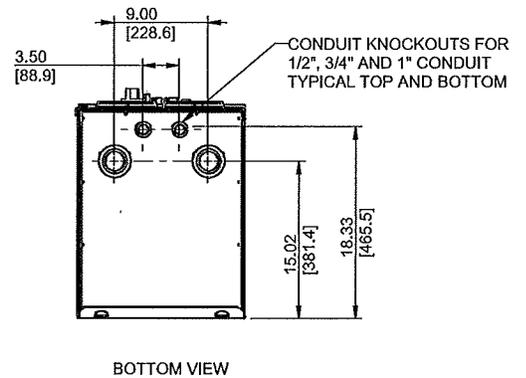
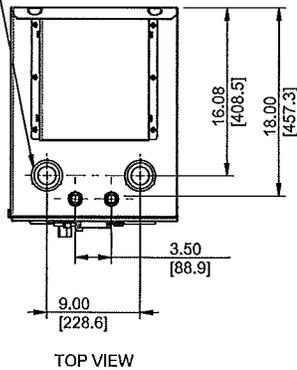
ELEVATION 1000MM  
TYPE 1, 12



0.56 [14.2] SLOT  
TYPICAL 4 PLACES



CONDUIT KNOCKOUTS FOR  
1-1/4", 2" AND 2-1/2" CONDUIT  
TYPICAL TOP AND BOTTOM



# ATV660 Drive Systems

# Specifications

20HP[15KW] - 30HP[22KW]  
AT 460V NORMAL DUTY\*

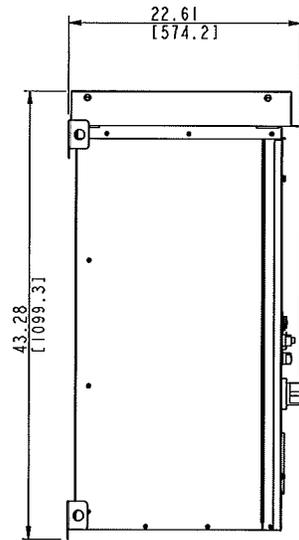
15HP[11KW] - 25HP[19KW]  
AT 460V HEAVY DUTY\*

10HP[7.5KW] -  
15HP[11KW] AT 230V  
NORMAL DUTY\*

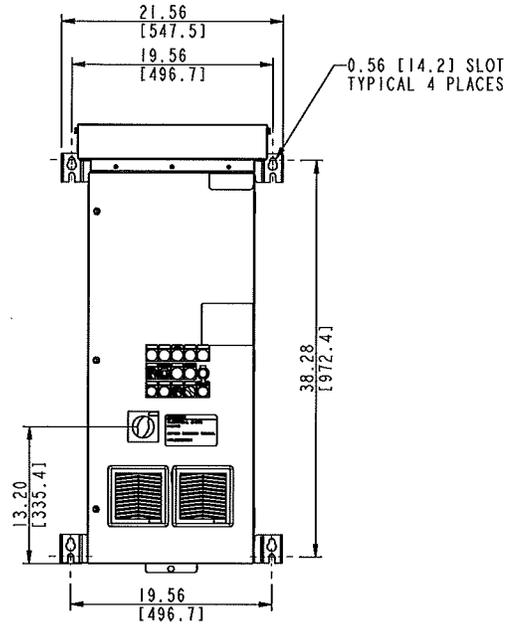
7.5HP[5.5KW] -  
10HP[7.5KW] AT 230V  
HEAVY DUTY\*

\*STANDARD DRIVE  
PACKAGE

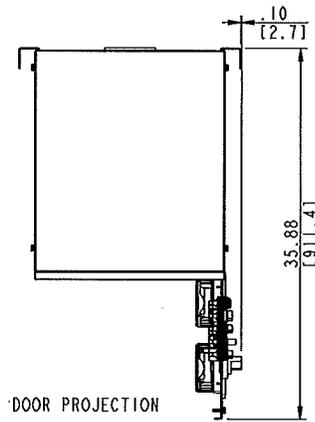
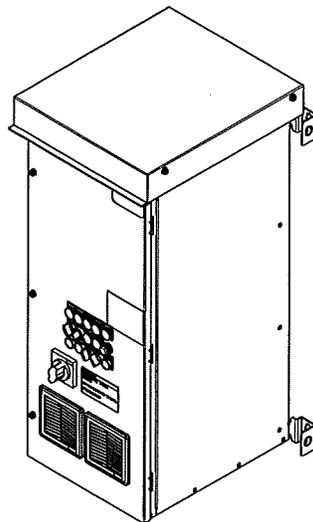
ELEVATION 1000MM  
TYPE 3R



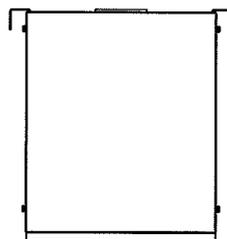
LEFT VIEW



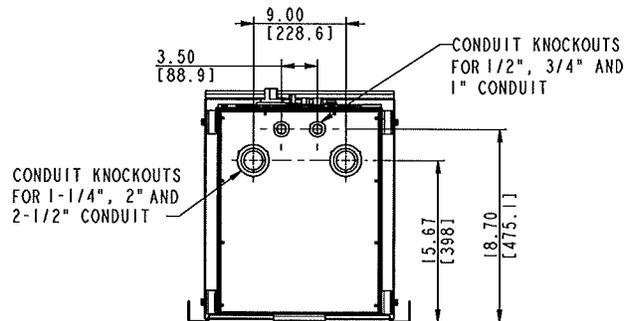
FRONT VIEW



DOOR PROJECTION



TOP VIEW



BOTTOM VIEW

# ATV660 Drive Systems Specifications

40HP[30KW] - 60HP[45KW]  
AT 460V NORMAL DUTY\*

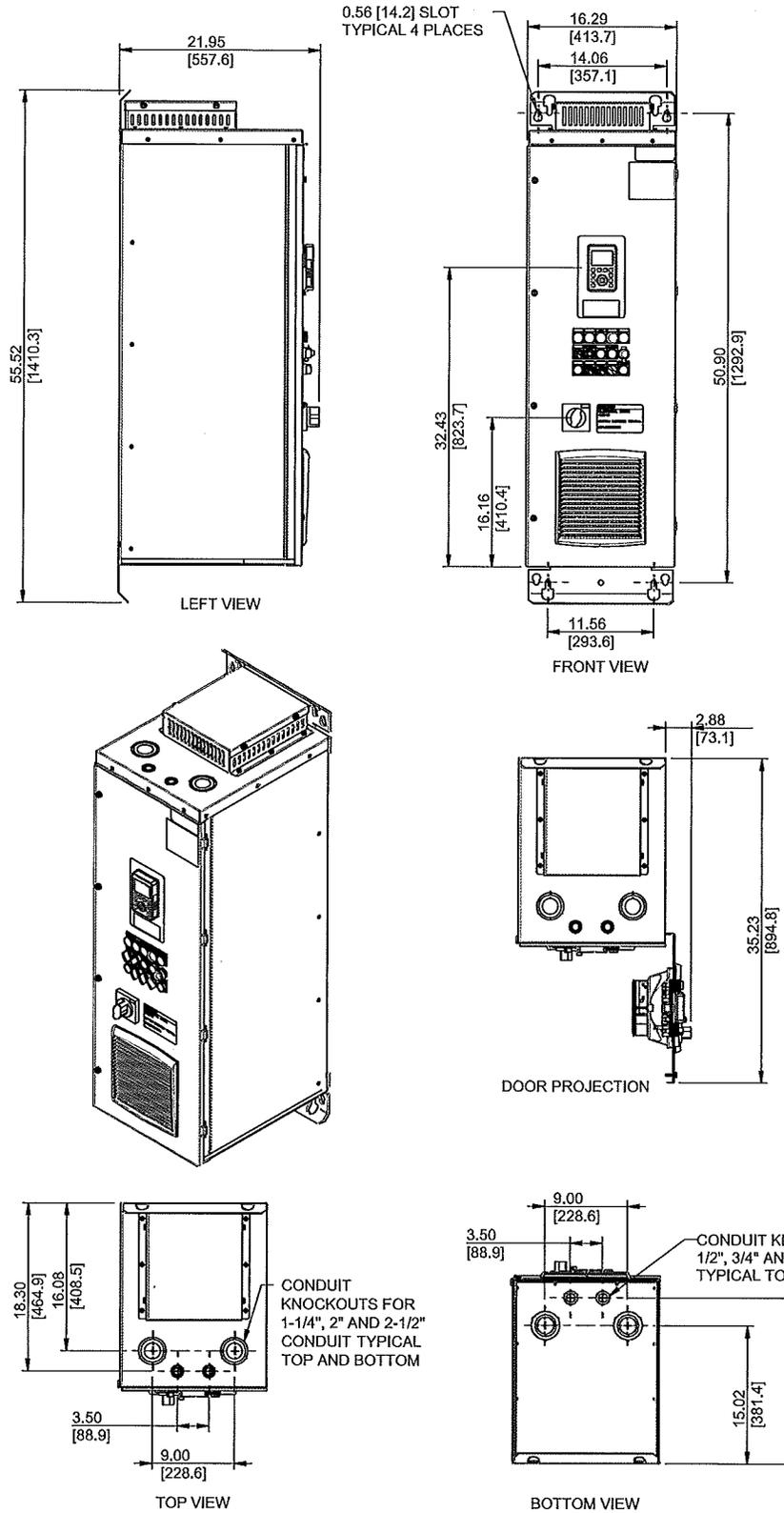
30HP[22KW] - 50HP[37KW]  
AT 460V HEAVY DUTY\*

20HP[15KW] - 30HP[22KW]  
AT 230V NORMAL DUTY\*

15HP[11KW] - 25HP[19KW]  
AT 230V HEAVY DUTY\*

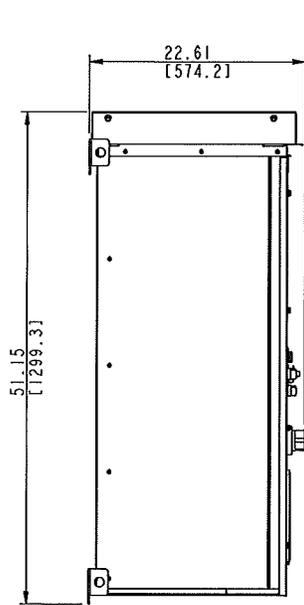
\*STANDARD DRIVE  
PACKAGE

ELEVATION 1200MM  
TYPE 1, 12

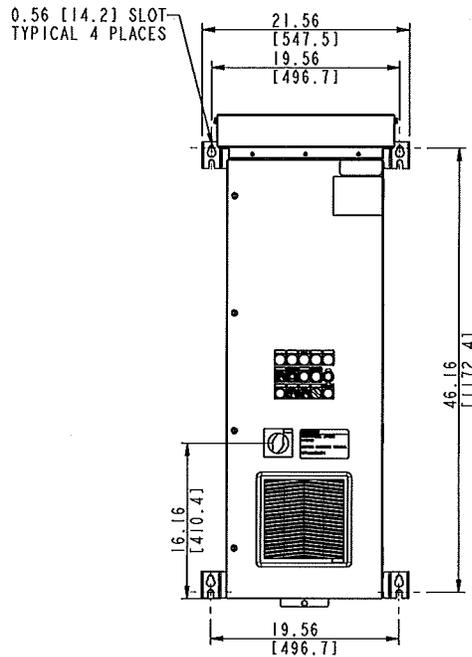


40HP[30KW] - 60HP[45KW]  
 AT 460V NORMAL DUTY\*  
 30HP[22KW] - 50HP[37KW]  
 AT 460V HEAVY DUTY\*  
 20HP[15KW] - 30HP[22KW]  
 AT 230V NORMAL DUTY\*  
 15HP[11KW] - 25HP[19KW]  
 AT 230V HEAVY DUTY\*  
 \*STANDARD DRIVE  
 PACKAGE

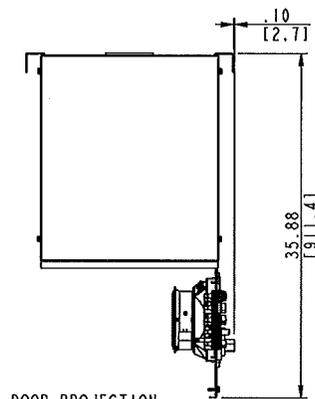
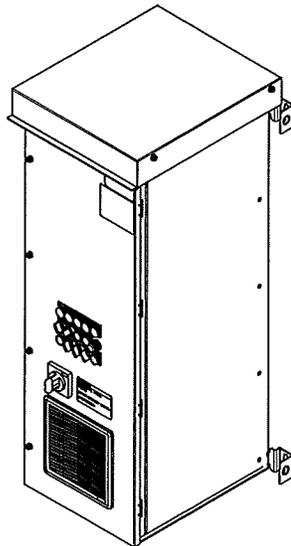
ELEVATION 1200MM  
 TYPE 3R



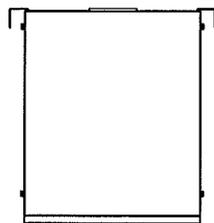
LEFT VIEW



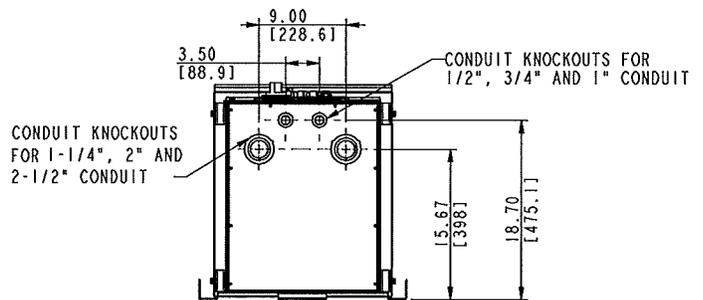
FRONT VIEW



DOOR PROJECTION



TOP VIEW



BOTTOM VIEW

# ATV660 Drive Systems

75HP[55KW] -  
125HP[90KW] AT 460V  
NORMAL DUTY\*

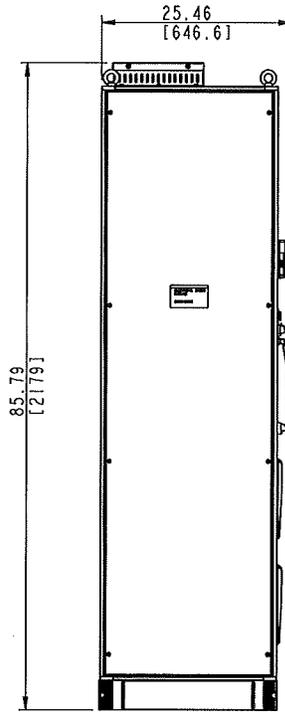
60HP[45KW] -  
100HP[75KW] AT 460V  
HEAVY DUTY\*

40HP[30KW] - 60HP[45KW]  
AT 230V NORMAL DUTY\*

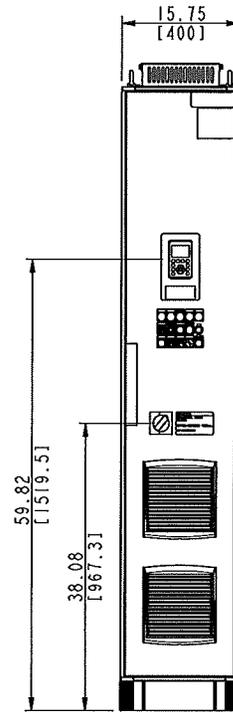
30HP[22KW] - 50HP[37KW]  
AT 230V HEAVY DUTY\*

\*STANDARD DRIVE  
PACKAGE

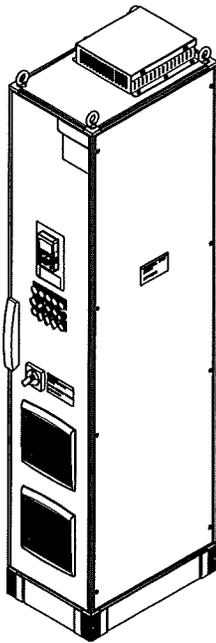
ELEVATION 2000MM  
TYPE 1



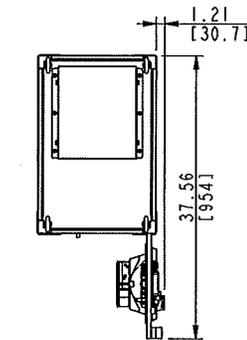
LEFT VIEW



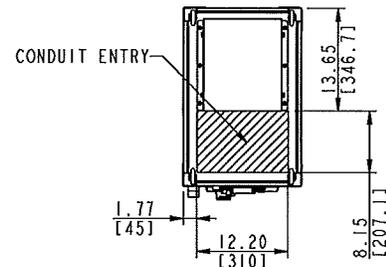
FRONT VIEW



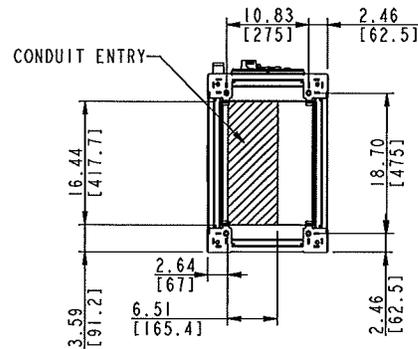
TYPE 1 CONFIGURATION



DOOR PROJECTION



TOP VIEW



BOTTOM VIEW  
MOUNTING LOCATIONS

# ATV660 Drive Systems

75HP[55KW] -  
125HP[90KW] AT 460V  
NORMAL DUTY\*

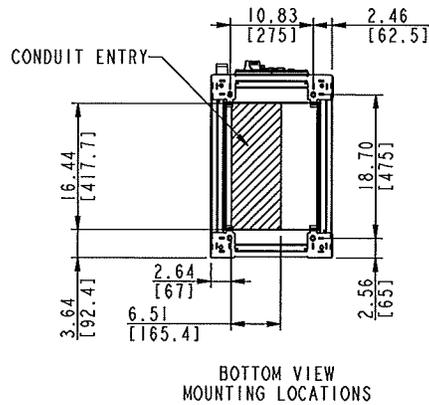
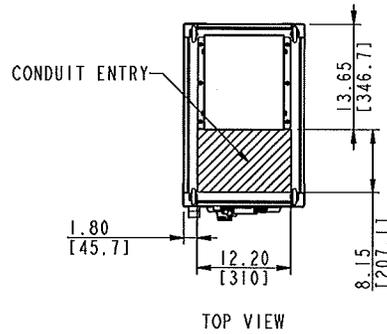
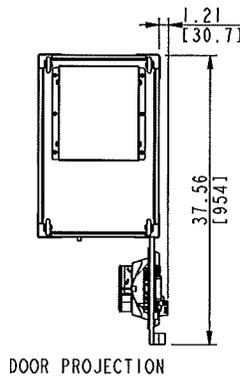
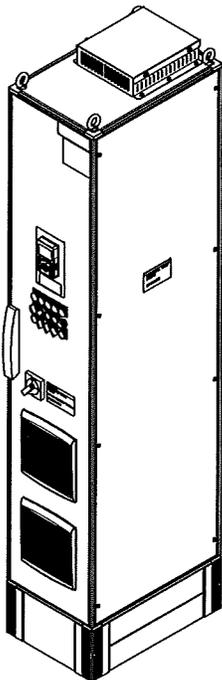
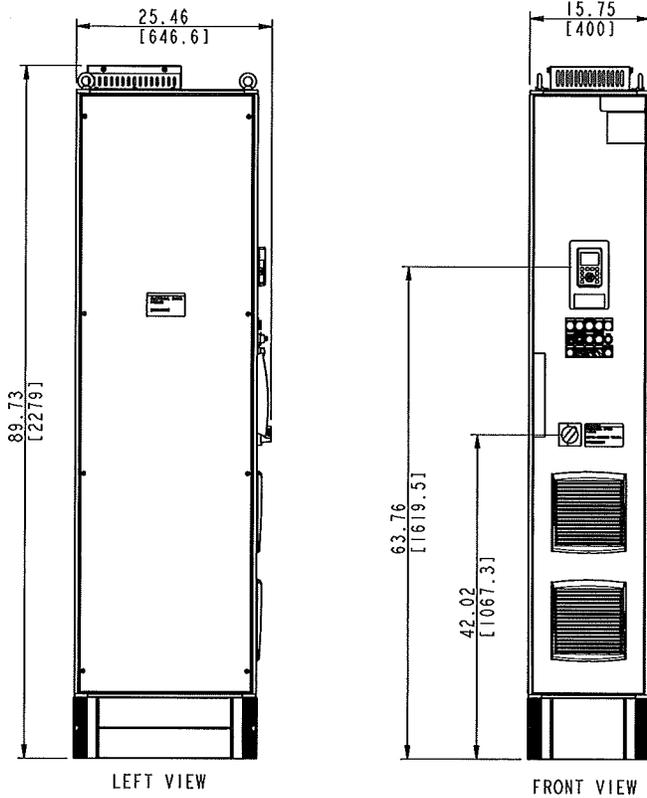
60HP[45KW] -  
100HP[75KW] AT 460V  
HEAVY DUTY\*

40HP[30KW] - 60HP[45KW]  
AT 230V NORMAL DUTY\*

30HP[22KW] - 50HP[37KW]  
AT 230V HEAVY D

\*STANDARD DRIVE  
PACKAGE

ELEVATION 2000MM  
TYPE 12



TYPE 12 CONFIGURATION

# ATV660 Drive Systems

75HP[55KW] -  
125HP[90KW] AT 460V  
NORMAL DUTY\*

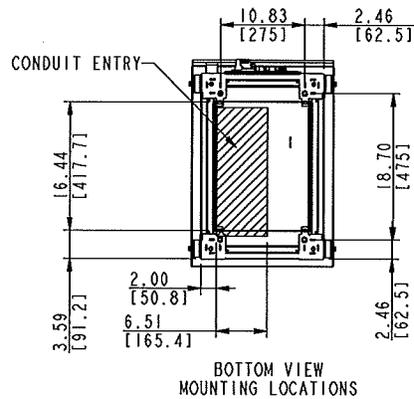
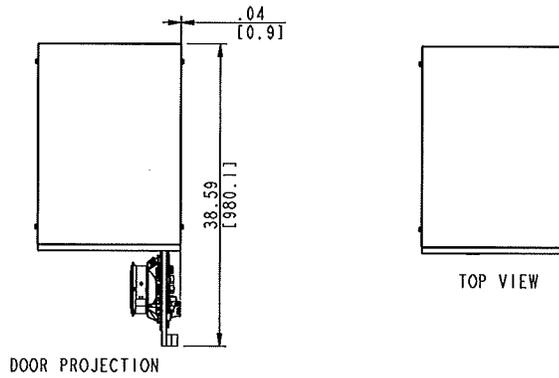
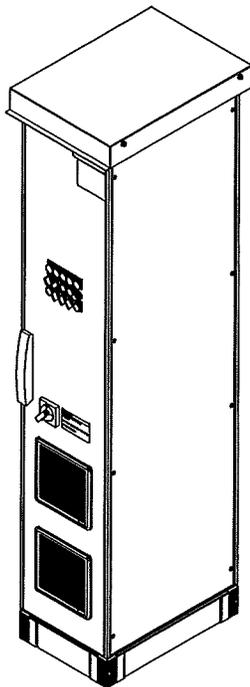
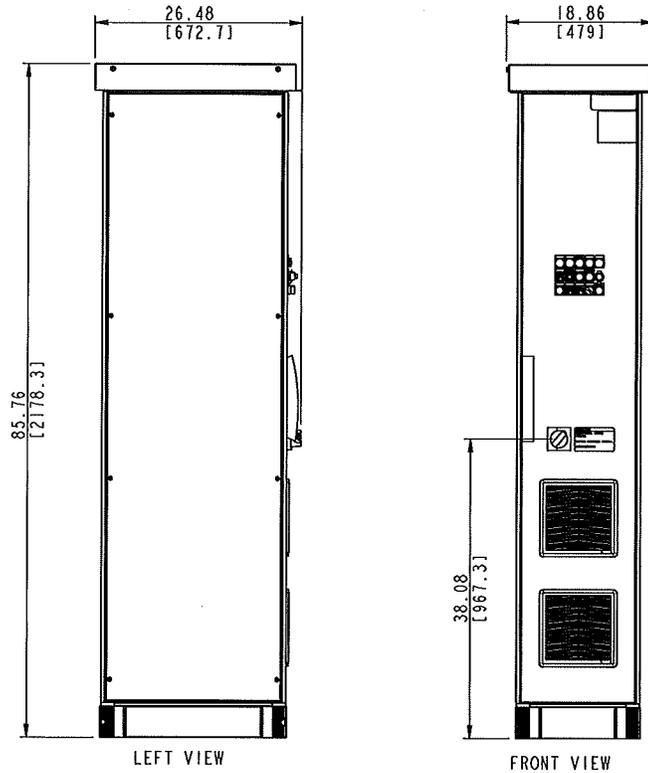
60HP[45KW] -  
100HP[75KW] AT 460V  
HEAVY DUTY\*

40HP[30KW] - 60HP[45KW]  
AT 230V NORMAL DUTY\*

30HP[22KW] - 50HP[37KW]  
AT 230V HEAVY DUTY\*

\*STANDARD DRIVE  
PACKAGE

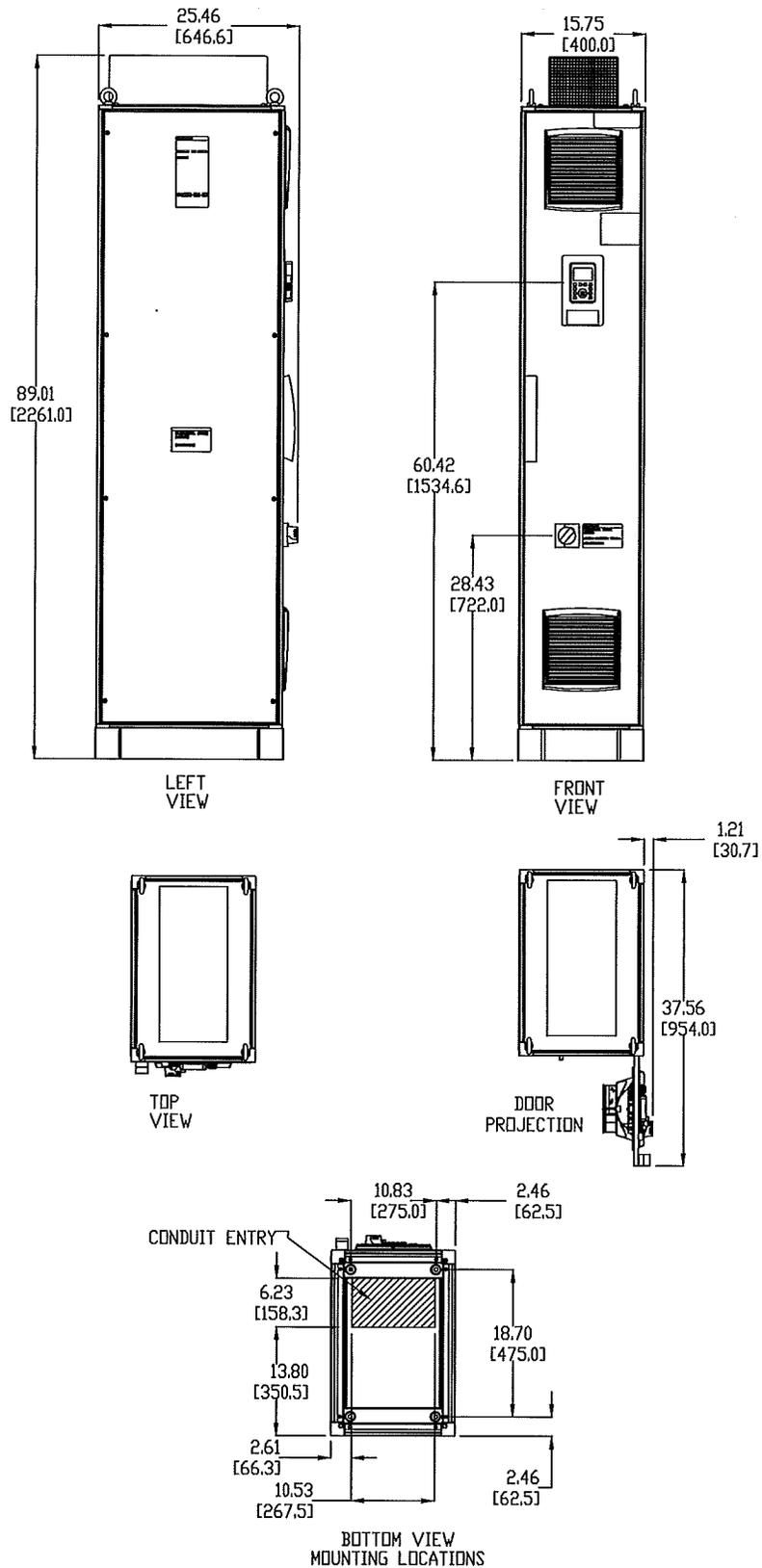
ELEVATION 2000MM  
TYPE 3R



# ATV660 Drive Systems

ATV660  
TYPE 1 FRAME 1P  
150-250HP @ 460V

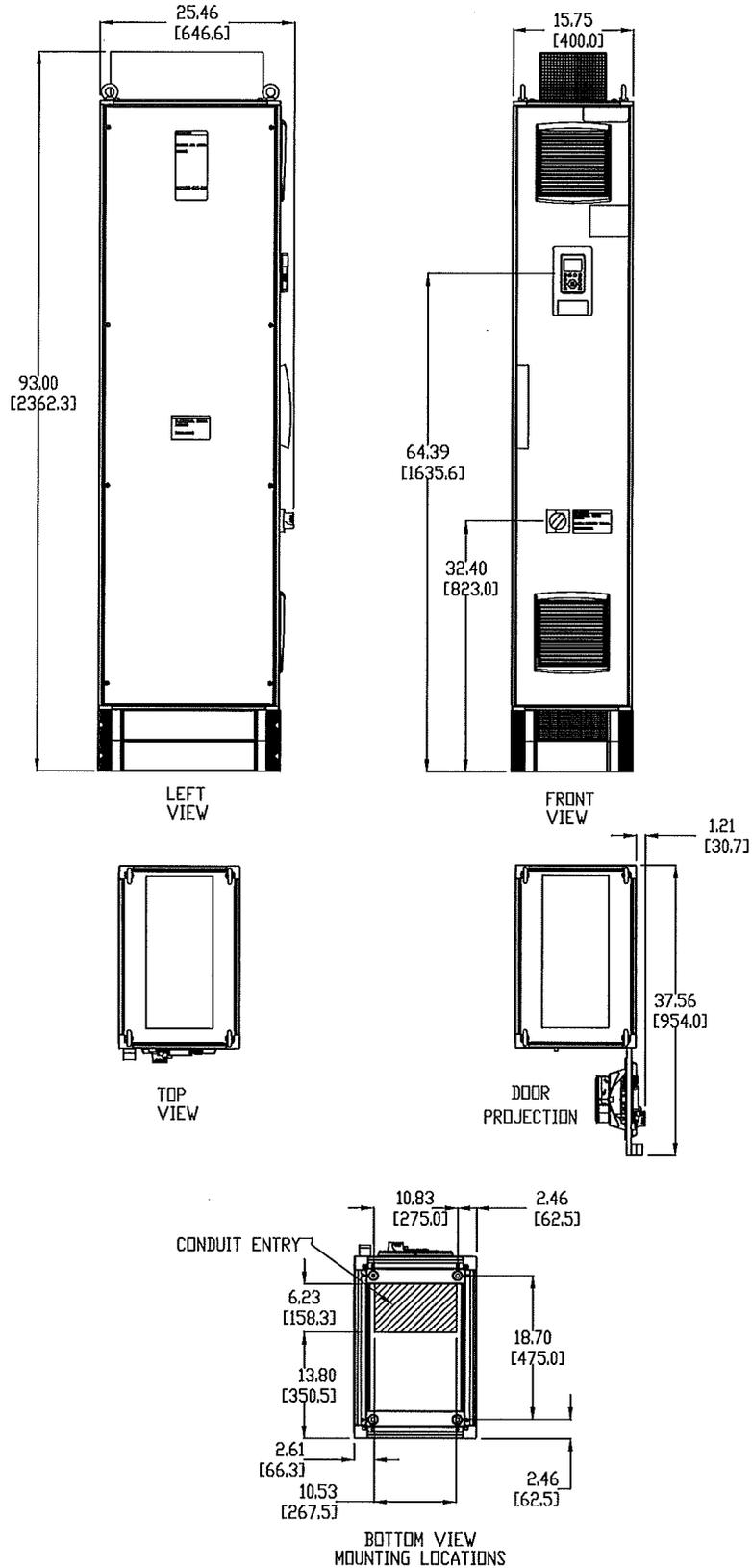
ELEVATION 2000MM  
TYPE 1



# ATV660 Drive Systems

ATV660  
TYPE 12 FRAME 1P  
150-250HP @ 460V

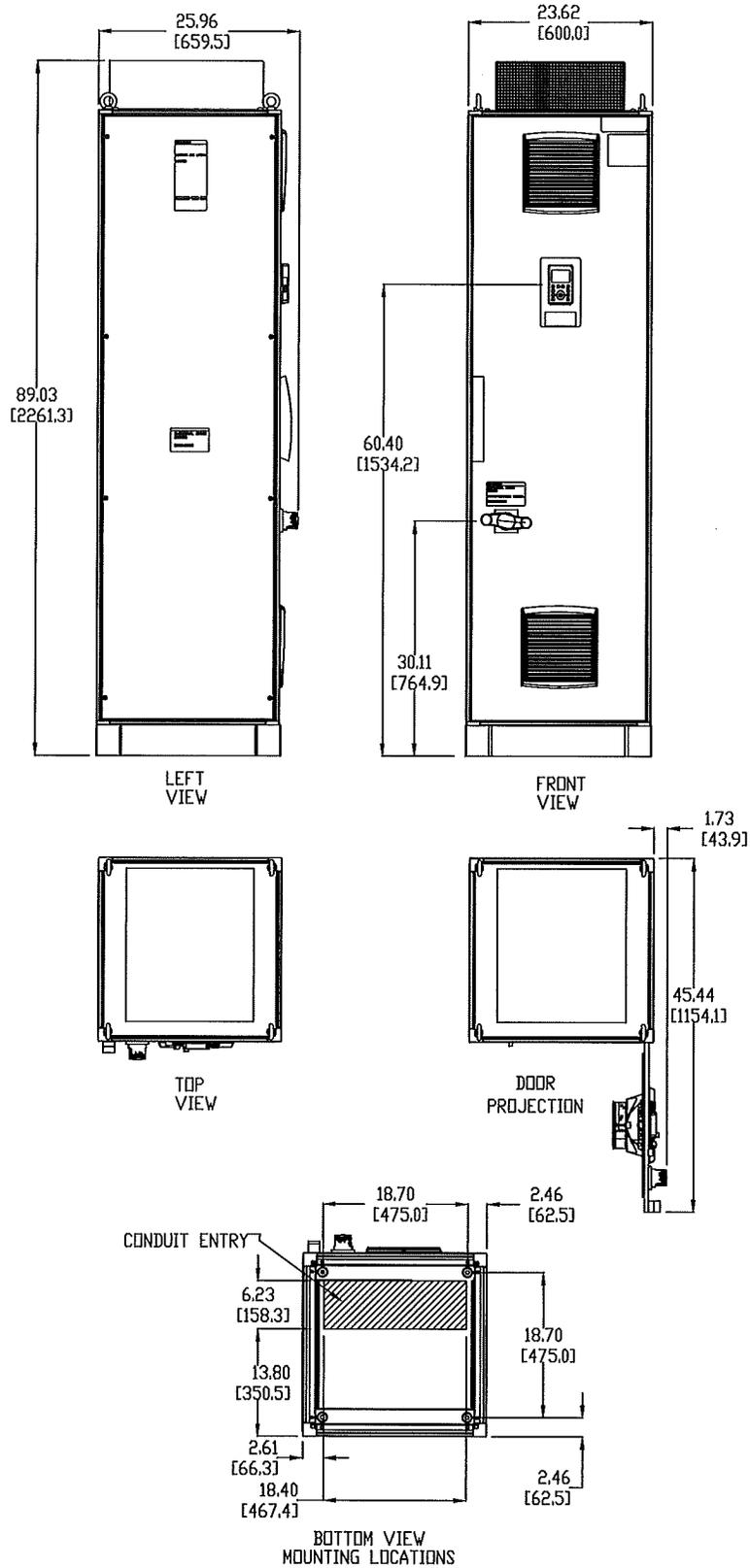
ELEVATION 2000MM  
TYPE 12



# ATV660 Drive Systems

ATV660  
TYPE 1 FRAME 2P  
300-500HP @ 460V

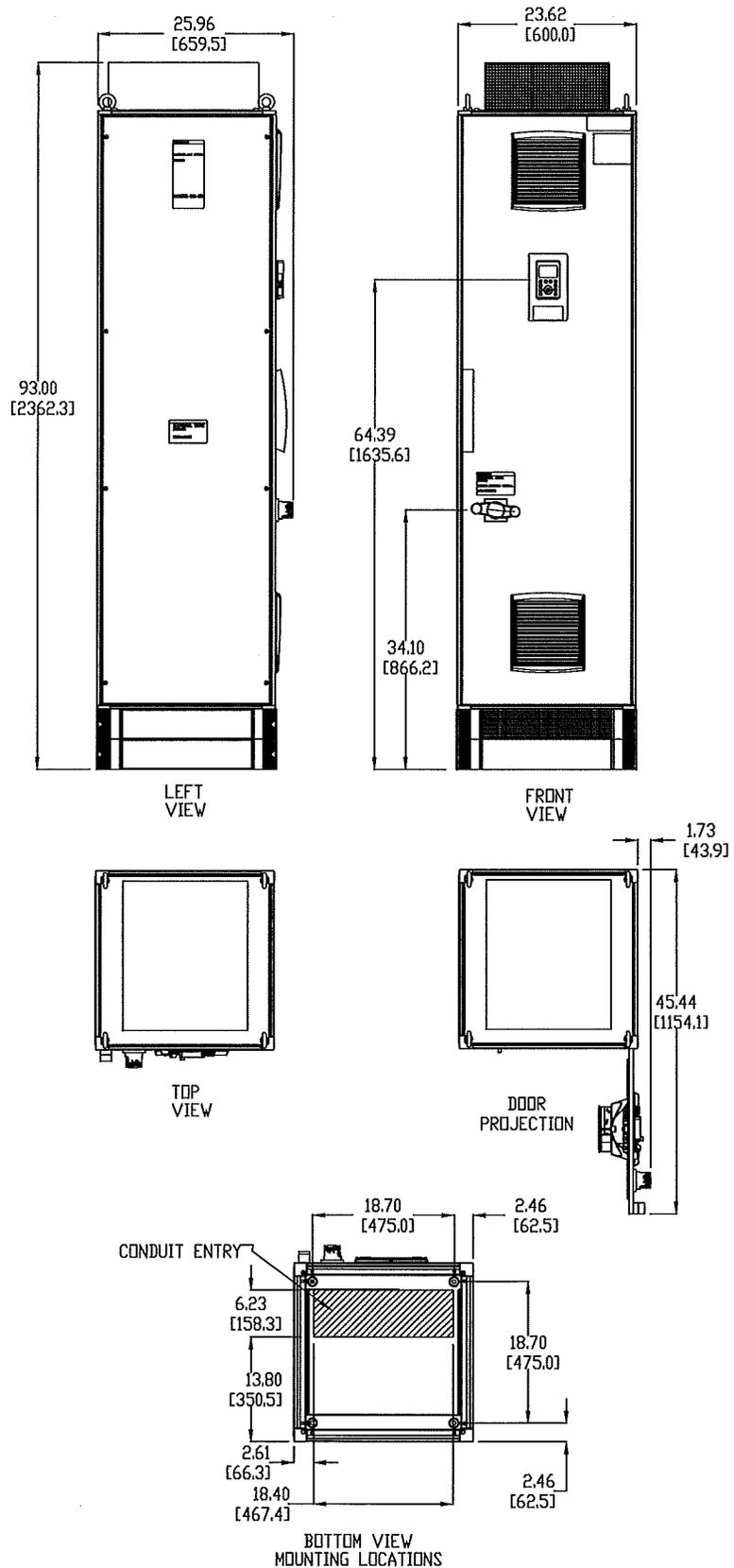
ELEVATION 2000MM  
TYPE 1



# ATV660 Drive Systems

ATV660  
TYPE 12 FRAME 2P  
300-500HP @ 460V

ELEVATION 2000MM  
TYPE 12



# ATV660 Drive Systems

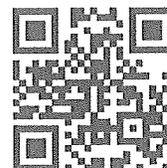
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# ATV660 Drive Systems

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For additional information,  
contact your local field office.



**Schneider Electric USA, Inc.**

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8001 Knightdale Blvd.  
Knightdale, NC 27545

USA Customer Care Center  
Tel: 888-778-2733

[altivardrives.com](http://altivardrives.com)

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Design: Schneider Electric  
Photos: Schneider Electric



# Quotation

**Q2C Number: 40433171**

**Quote Number: 1**

**Revision Number: 0**

**Project Name: CALEXICO WATER TREATMENT PLANT**

**Project Location: LOS ANGELES, CA**

Please review quote.

Q2C Number: 40433171

Quote Number: 1

Revision Number: 0

Project Name: CALEXICO WATER TREATMENT PLANT

Quote Name: CALEXICO WATER TREATMENT  
PLANT

Item No.	Qty.	Catalog Number / Details
001-00	1	<p>ATV660C16T4N2ANWAANCU  Altivar 660  ATV660C16T4N2ANWAANCU  Main circuit breaker disconnect  100k AIC rated  Selected for 460 Vac 3 phase motor  250 Horsepower  Sized for Normal duty.  Drive controller rated for 302 Max. Output  Amps  Type 12 Enclosure  UL508A Label  RAL7035 (Gray)  Power Circuit W: Drive combination package  Control options:  Hand-Off-Auto selector switch  Speed Potentiometer  Pilot light options:  Auto pilot light (yellow)  Power on pilot light (red)  Run pilot light (green)  Trip pilot light (yellow)  Auxiliary contacts:  1 NO/NC run contact  1 NO/NC trip contact  1 NO auto mode contact  I/O Extension Card Discrete 6I/2O, Analog 2I  Line Reactor as standard  U14 - Top Entry Cubicle  This device contains selected features that  require factory engineered configurations.  Standard published lead times no longer  apply. Enclosure dimensions are subject to  change.  Revision - 9/12/2017 - (20170908/20170908)  9/15/2017 12:11:43 PM</p>

**Estimated days to ship excluding transit:** 50 working days after  
customer release to manufacture. See Conditions of Sale.