Torque Controller System
Global 400

Series

Mixed Model Manufacturing Mandates Flexibility:

We specialize in solving the most complex assembly challenges. The Global 400 is designed to organize work stations where highly customized products are assembled. It can work with 16 primary torque tools, 8 holding tools, and an additional 8 I/O tools. It has the capacity for 100 sets of parameters that can be grouped allowing 4 operators to work as a team. These parameters or groups can be formed into jobs containing a fixed build sequence of up to 35 steps.

Mixed Model Manufacturing Mandates Communication:

The Global 400 communicates with the operators, the tools, and your network in multiple ways. Parameters or jobs can be assigned via the Ethernet or by the operator via a bar code scanner. Tools can be selected or programmed wirelessly, while the controller displays the required work to the operator. As the operator works through their task, the tools and controller provide auditory, tactile, and visual guidance. The tools provide the controller with immediate notification of operator results. The controller stores up to 10,000 results in on-board memory, and automatically updates your production system via multiple protocols. No production interruptions!

System Capabilities:

- Six inch diagonal, back-lit, color LCD display 2-RJ-45 Ethernet ports allow for chain, or ring network communication.
- USB-A connector for use with bar code scanner, or updating firmware, and saving files.
- RS-232 D-Sub9 Connector for use with serial bar code scanner or serial printer.
- Ten pin I/O connector providing discreet I/O capabilities.
- Five pin connector for the additional I/O capabilities of the optional GIM400.
- Power Supply 100-240 VAC at 50-60 Hz.
- Key switch for programming access. 21-function keys for programming.
- Adjustable and programmable beeper for audio communication.

Protocols: EtherNet IP, Open Protocol, ToolsNet,

Software: SR Global Manager (Included) optional SR GlobalHost reporting software (Part No. 10622)

Order Global 400, Part No. 10497

Enhance your controller with our GIM400 Global Input/Output Multiplier, part number 10611. For more information see page 11.

Multi-Port
Torque Controller System
Global 400mp

Series

The mp Takes You To The Next Level:

The Global 400mp distributes all the power, flexibility, ease and capabilities of the Global 400 over four (4) individual network interfaces. The result? Up to four (4) operators can work independently and don't even have to be in the same work cell.

Four separate network interfaces and Global 400mp architecture eliminate the need for groups in order to support simultaneous work.

Parameters are formed directly into jobs. With 4 network interfaces each operator can work on their own job, independent of the other operators.

The Global 400mp can be applied to assembly, repair, and maintenance operations.

The Global 400mp works with up to 16 torque tools, 8 holding tools and 8 I/O tools divided among the 4 network interfaces.

Flexible, multi-tool control including wireless connectivity to our Exacta line of digital wrenches, SLTC-FM wireless torque wrenches, and HT Series holding tools, and wired connectivity with our SLTC hardwired wrenches, and PST-1200 pneumatic sensor transceiver.

System Capabilities:

- Six inch diagonal, back-lit, color LCD display
- 2-RJ-45 Ethernet ports allow for chain, or ring network communication.
- USB-A connector for use with bar code scanner, or updating firmware, and saving files.
- RS-232 D-Sub9 connector for use with serial bar code scanner or serial printer.
- Ten pin I/O connector providing discreet I/O capabilities.
- Five pin connector for the additional I/O capabilities of the optional GIM400.
- Power Supply 100-240 VAC at 50-60 Hz.
- Key switch for programming access. 21-function keys for programming.
- Adjustable and programmable beeper for audio communication.

Protocols: EtherNet IP, Open Protocol, ToolsNet,

Software: SR Global Manager (Included) optional SR GlobalHost reporting software (Part No. 10622)

Order Global 400mp, Part No. 10612

Quick Guide

Global 400 and Global 400mp Tools & Accessories

Our wireless tools and torque controllers are designed to make error proofing fast, easy, and provide a remarkably fast return on investment.

We built these systems with the focus on error proofing and data capture to provide digital date and time stamped documentation for hand tools. Customers also found that their throughput increased and as a result the ROI was even faster than anticipated.

These systems work together, providing error proofing by design, by guidance, and by changing and reinforcing positive behavior. From a simple I/O driven OK/NOK to the highly sophisticated network interfaces, Sturtevant Richmont error proofing has the right solution for you.

1250 Series Exacta 2 Digital Torque & Angle — Page 8

Part No.	Model	Capacity	Head
10652	1250 Series Exacta 2 - 25	25 ft lb/33.8 Nm	Dovetail
10653	1250 Series Exacta 2 - 75	75 ft lb/101.5 Nm	Dovetail
10654	1250 Series Exacta 2 - 150	150 ft lb/203.3 Nm	Dovetail
10659	1250 Series Exacta 2 - 250	250 ft lb/338.9 NM	Dovetail
10655	1250 Series Exacta 2 - 250 R	250 ft lb/338.9 Nm	1/2" SD Ratchet
10656	1250 Series Exacta 2 - 400	400 ft lb/542 Nm	Dovetail
10671	1250 Series Exacta 2 - 400 R	400 ft lb/542 Nm	3/4" SD Ratchet
10657	1250 Series Exacta 2 - 600 R	600 ft lb/813 Nm	3/4" SD Ratchet
10666	1250 Series Exacta 2 - 25 QC	25 ft lb/33.8 Nm	Quick Change
10667	1250 Series Exacta 2 - 75 QC	75 ft lb/101.5 Nm	Quick Change
10668	1250 Series Exacta 2 - 150 QC	150 ft lb/203.3 Nm	Quick Change
10669	1250 Series Exacta 2 - 250 QC	250 ft lb/338.9 Nm	Quick Change

1200 Series Exacta 2 Digital Torque Wrench — Page 10

Part No.	Model	Capacity	Type
10646	1200 Series Exacta 2 - 25	25 ft lb / 33.8 Nm	Dovetail
10647	1200 Series Exacta 2 - 75	75 ft lb / 101.5 Nm	Dovetail
10648	1200 Series Exacta 2 - 150	150 ft lb / 203.3 Nm	Dovetail
10658	1200 Series Exacta 2 - 250	250 ft lb / 338.9 Nm	Dovetail
10649	1200 Series Exacta 2 - 250 R	250 ft lb / 338.9 Nm	1/2" SD Ratchet
10650	1200 Series Exacta 2 - 400	400 ft lb / 542 Nm	Dovetail
10670	1200 Series Exacta 2 - 400 R	400 ft lb / 542 Nm	3/4" SD Ratchet
10651	1200 Series Exacta 2 - 600 R	600 ft lb / 813 Nm	3/4" SD Ratchet
10662	1200 Series Exacta 2 - 25 QC	25 ft lb / 33.8 Nm	Quick Change
10663	1200 Series Exacta 2 - 75 QC	75 ft lb / 101.5 Nm	Quick Change
10664	1200 Series Exacta 2 - 150 QC	150 ft lb / 203.3 Nm	Quick Change
10665	1200 Series Exacta 2 - 250 QC	250 ft lb / 338.9 Nm	Quick Change

HT Holding Tool Technology Wrenches — Page 12

Part No.	Model	Length
810673	HTS 13"	13" / 33.02 cm
810674	HTL 20"	20" / 50.8 cm

SLTC-FM 2.4 GHz Wireless Torque Wrench

Global 400 Global Controller | **Global 400 mp** Global Controller | **Wireless**

Part No.	Model	Torque Capacity*	Head
810411	SLTC FM 2.4 A3 50 I	50 in lb / 6 Nm	Dovetail
810412	SLTC FM 2.4 A3 150 I	150 in lb / 17 Nm	Dovetail
810413	SLTC FM 2.4 A3 300 I	300 in lb / 34 Nm	Dovetail
810410	SLTC FM 2.4 A3 300 I OHT	300 in lb / 34 Nm	Dovetail
810414	SLTC FM 2.4 A3 750 I	750 in lb / 85 Nm	Dovetail
810415	SLTC FM 2.4 A3 1800 I	1800 ih lb / 204 Nm	Dovetail
810421	SLTC FM 2.4 A3 1800 I ERGO	1800 in lb / 204 Nm	Dovetail
810420	SLTC FM 2.4 A3 3000 I	3000 In lb / 339 Nm	Dovetail
810417	SLTC FM 2.4 A3 3600 I	3600 in lb / 408 Nm	Dovetail
810418	SLTC FM 2.4 A3 4800 I	4800 in lb / 542 Nm	Dovetail
810423	SLTCR FM 2.4 A3 750 I	750 in lb / 84.73 Nm	3/8" SD Ratchet
810424	SLTCR FM 2.4 A3 1800 I	1800 in lb / 203.73 Nm	1/2" SD Ratchet
810425	SLTCR FM 2.4 A3 1800 I ERGO	1800 in lb / 203.73 Nm	1/2" SD Ratchet
810416	SLTCR FM 2.4 A3 3000 I	3000 in lb / 339 Nm	1/2" SD Ratchet
810419	SLTCR FM 2.4 A3 7200 I	7200 in lb / 813 Nm	3/4" SD Ratchet

SLTC Hardwired Torque Wrench

Global 400 Global Controller | **Global 400 mp** Global Controller | **Wired**

Part No.	Model	Capacity	Head
810854	SLTC 150 I	150 in. lb. / 17 Nm	Dovetail
810855	SLTC 300 I	300 in. lb. / 34 Nm	Dovetail
810856	SLTC 750 I	750 in. lb. / 85 Nm	Dovetail
810857	SLTC 1800 I	1800 in. lb. / 204 Nm	Dovetail
810858	SLTC 3600 I	3600 in. lb. / 408 Nm	Dovetail
810859	SLTCS 7200 I	7200 in. lb. / 813 Nm	3/4" SD
810860	SLTCR 7200 I	7200 in. lb. / 813 Nm	3/4" SD Ratchet

PST 1200 Pneumatic Sensor Transceiver

Global 400 Global Controller | **Global 400 mp** Global Controller | **Wireless**

Part No.	Model	Description
10514	PST 1200 BATT	PST 1200 Pressure Sensor Transceiver Battery Power
10515	PST 1200 Hardwired	PST 1200 Pressure Sensor Transceiver Hardwired

GIM 400

Global Input/Output Multiplier

Global 400 Global Controller | **Global 400 mp** Global Controller | **Wireless**

Part No.	Model
10611	Global Input/Output Multiplier

GSM 400

Global Bar Code Scanner Manager

Global 400 mp Global Controller | **Wireless**

Part No.	Model
10613	Global Bar Code Scanner Manager

SR GlobalHost Reporting Software

Global 400 Global Controller | **Global 400 mp** Global Controller

Part No.	Model
10622	SR GlobalHost Software

Over 100 interchangeable heads to choose from without changing torque values. Simply slide the heads on and "lock on quality".

1250 SERIES
EXACTA® 2

Digital Torque & Angle Wrench

- Bi-directional +/- 1% Indicated Value from 20% to 100% of tool capacity.

- Meets/Exceeds the ASME and ISO standards.

- Angle measurements include: Torque To Angle, Torque With Angle Monitoring, Residual Torque, Prevailing Torque Mode.

- Also operates in Peak Mode with no angle measurements

- Included with the 1250 Series wrenches are two single cartridge batteries and charger. One battery can be charging while the other is in use.

- Vibrating handle when the target torque and angle values are reached.

- Programmable wrench display "lighting sequence" works with both torque and angle. Within the engineering specifications, a target can be set to acknowledge target achieved feedback with display color change and handle vibration.

- Up to four tools can operate simultaneously with the Global 400/400mp.

- Robust radio communication speeds support the shortest takt times.

- Operator can complete active P-Set even if radio communication is severed.

- When radio communication resumes, the wrench automatically uploads all missed P-Set data.

- The wrench automatically recalibrates for P-Sets requiring different head lengths.

- Wrenches are available with our traditional fixed ratchet, pin/spring dovetail, optional quick change (QC) dovetail with access to well over 100 interchangeable heads

Compatible Products

Fully compatible with Global 400 and Global 400mp controller where multiple tools with simultaneous uses are needed. The 1250 Series Exacta 2 does not communicate with the Global 8, PTV or TCV.

Why Torque and Angle?

Torque with angle measurement provides a significantly more accurate and repeatable clamp load from one assembly to the next.

Traceability and Digital Data Capture

Provides digital date/time stamped documentation on every fastening achieved with our wireless tools.

Global 400
Global Controller

Global 400mp
Global Controller

Wireless

Interchangeable Head

**The 1250 Series measures torque in:
cNm, Nm, cmkg, In lb, and ft lb**

Five Operational Modes:

Torque to Angle: T2A
Measures torque first and then degrees of fastener rotation to stretch the fastener a predetermined amount. That closely managed bolt stretch creates greater repeatability than using torque alone.

Torque with Angle Monitoring: TAM
Measures torque while ensuring sufficient rotation. Helps identify "double-tightened" fasteners and changing joint conditions.

Prevailing Torque Mode: PTM
Factors out friction inherent to lock nuts.

Residual: RES
Audit torque value on previously tightened fasteners with greater accuracy.

Peak
Pure torque measurement without angle measurement.

1250 Series Exacta 2 Digital Torque and Angle Wrenches

Part No.	Model Designation	Capacity	Head Style	Lever Length	Overall Length	Weight
10652	1250 Series Exacta 2 - 25	25 ft lb	Dovetail	12.5"/317mm	16.1"/409mm	2.8 lb/1.27 kg
10653	1250 Series Exacta 2 - 75	75 ft lb	Dovetail	15.8"/401mm	19.4"/493mm	3.0 lb/1.36 kg
10654	1250 Series Exacta 2 - 150	150 ft lb	Dovetail	17.8"/452mm	21.5"/546mm	3.1 lb/1.40 kg
10659	1250 Series Exacta 2 - 250	250 ft lb	Dovetail	21.2"/538mm	23.0"/584mm	4.1 lb/1.86 kg
10655	1250 Series Exacta 2 - 250 R	250 ft lb	1/2" SD Ratchet	20.8"/527mm	25.0"/634mm	4.1 lb/1.86 kg
10656*	1250 Series Exacta 2 - 400	400 ft lb	Dovetail	35.9"/912mm	35.2"/895mm	7.7 lb/3.49 kg
10671	1250 Series Exacta 2 - 400 R	400 ft lb	3/4" SD Ratchet	33.7"/856mm	38.3"/973mm	7.7 lb/3.49 kg
10657	1250 Series Exacta 2 - 600 R	600 ft lb	3/4" SD Ratchet	55.1"/1399mm	59.7"/1519mm	13.0 lb/5.90 kg
10666	1250 Series Exacta 2 - 25 QC	25 ft lb	Quick Change	12.5"/317mm	16.1"/409mm	2.8 lb/1.27 kg
10667	1250 Series Exacta 2 - 75 QC	75 ft lb	Quick Change	15.8"/401mm	19.4"/493mm	3.0 lb/1.36 kg
10668	1250 Series Exacta 2 - 150 QC	150 ft lb	Quick Change	17.8"/452mm	21.5"/546mm	3.1 lb/1.40 kg
10669	1250 Series Exacta 2 - 250 QC	250 ft lb	Quick Change	21.0"/533mm	25.2"/640mm	4.1 lb/1.86 kg

Lever Length and Overall Length
The lever length on models up to 250 are based on 1 7/16" or 36.5mm head length.
*Lever length for the 10656 is based on a 3 7/8" or 98.4mm head length.

1250 Series Exacta 2 Digital Torque Wrench Batteries and Chargers

Part No.	Model Designation	Capacity
10674	Kit, Two Battery Packs and One Charger	N/A
10673	Battery Pack Charger, NiMH	Fast charge with built in circuitry protection against over charging.
10672	Battery Pack, NiMH	3.6V, 2.1 Ah

*Use ONLY the Sturtevant Richmont specified NiMH battery cartridge.

1200 SERIES
EXACTA® 2

Digital Torque Wrench

The 1200 Series Exacta has all the features and characteristcs of the 1250 with these exceptions:

• Uses 4 AA NiMH Rechargeable batteries (Batteries not included)

• Non-vibrating handle

• Torque measurement only

Accuracy, reliablity, durability are the same as the 1250 Series Exacta 2.

Global 400 — Global Controller

Global 400 mp — Global Controller

Wireless

Interchangeable Head

The 1200 Series Exacta 2 radio speed is 10x that of the 1100 Series Exacta 2.

The 1200 Series measures torque in: cNm, Nm, cmkg, In lb, and ft lb

Over 100 interchangeable heads to choose from without changing torque values. Simply slide the heads on and "lock on quality".

1200 Series Exacta 2 Digital Torque Wrenches

Part No.	Model	Capacity	Head Type	Lever Length	Overall Length	Weight
10646	1200 Series Exacta 2 - 25	25 ft lb/33.8Nm	Dovetail	12.5"/317mm	16.1"/409mm	2.8 lb/1.27 kg
10647	1200 Series Exacta 2 - 75	75 ft lb/101.5Nm	Dovetail	15.8"/401mm	19.4"/493mm	3.0 lb/1.36 kg
10648	1200 Series Exacta 2 - 150	150 ft lb/203.3Nm	Dovetail	17.8"/452mm	21.5"/546mm	3.1 lb/1.40 kg
10658	1200 Series Exacta 2 - 250	250 ft lb/338.9Nm	Dovetail	21.2"/538mm	23.0"/584mm	4.1 lb/1.86 kg
10649	1200 Series Exacta 2 - 250 R	250 ft lb/338.9Nm	1/2" SD Ratchet	20.8"/527mm	25.0"/634mm	4.1 lb/1.86 kg
10650*	1200 Series Exacta 2 - 400	400 ft lb/542Nm	Dovetail	35.9"/912mm	35.2"/895mm	7.7 lb/3.49 kg
10670	1200 Series Exacta 2 - 400 R	400 ft lb/542Nm	3/4" SD Ratchet	33.7"/856mm	38.3"/973mm	7.7 lb/3.49 kg
10651	1200 Series Exacta 2 - 600 R	600 ft lb/813Nm	3/4" SD Ratchet	55.1"/1399mm	59.7"/1519mm	13.0 lb/5.90 kg
10662	1200 Series Exacta 2 - 25 QC	25 ft lb/33.8Nm	Quick Change	12.5"/317mm	16.1"/409mm	2.8 lb/1.27 kg
10663	1200 Series Exacta 2 - 75 QC	75 ft lb/101.5Nm	Quick Change	15.8"/401mm	19.4"/493mm	3.0 lb/1.36 kg
10664	1200 Series Exacta 2 - 150 QC	150 ft lb/203.3Nm	Quick Change	17.8"/452mm	21.5"/546mm	3.1 lb/1.40 kg
10665	1200 Series Exacta 2 - 250 QC	250 ft lb/338.9Nm	Quick Change	21.0"533mm	25.2"/640mm	4.1 lb/1.86 kg

Lever Length and Overall Length
The lever length on models up to 250 are based on 1 7/16″ or 36.5mm head length.
*Lever length for the 10650 is based on a 3 7/8″ or 98.4mm head length.

NiMH Batteries rated 1400 mAh to 2400 mAh are acceptable. Higher mAh ratings mean more cycles between recharge and longer recharge times.
Use only NiMH AA rechargeable batteries in the 1200 Series Exacta 2 wrenches. Other batteries will damage the wrench and void the warranty.

We build highly durable tools with sophisticated electronics. We design circuits to be as energy efficient as possible. We are also concerned about the environment.

Our tool and tester circuit boards are designed on the highly consistent 1.2 volt power curve provided by rechargeable NiMH batteries. Other batteries like Alkaline or Lithium batteries provide 1.5 volts in the power curve. The additional voltage will damage the circuit board.

GIM400

Global Input/Output Multiplier

The GIM400 is a very flexible accessory for the Global 400 and Global 400mp. It is virtually a Windows-based PLC that can be configured using the Global Manager Freeware that is included with every controller. It can be configured to provide 24 VDC to power the 16 I/O. By adding an additional 3 GIM400 a total of 64 I/O is possible.

A single GIM 400 can also be configured to connect with a PLC in a binary fashion, providing up to 100 I/O.

A serial bus cable along with all the appropriate Phoenix connectors are provided with the GIM400.

Compatible with the Global 400 (Part No. 10497) and Global 400mp (Part No. 10612).

Order the GIM400 using part number 10611.

Global 400
Global Controller

Global 400mp
Global Controller

Wired

GSM400

Global Bar Code Scanner Manager

The GSM400 is a perfect accessory to the Global 400mp. Powered off the USB port (on the side of the Global 400mp) it allows connection for up to four (4) serial barcode scanners. Each scanner can be assigned to a network interface and the GSM keeps the scanner and interface paired.

Compatible with the Global 400mp (Part No. 10612).

Order the GSM400 using part number 10613.

Global 400mp
Global Controller

Wired

HT

Stop Hydraulic Leaks Before They Start

Engineers with hydraulic assemblies immediately recognize the value this tool brings to their assembly quality.

Simple Solution to a Complex Problem

Applications involving hydraulic hoses, and or, hydraulic connections, require a counter torque reaction tool. When these tools are not used hoses can be twisted and or, connectors can be misaligned, creating rework or increased warranty costs.

The SR solution is to ensure both torque wrench and back up tool are used during the fastening operation.

At the P-Set level, holding (back-up) tools are paired to the primary torque wrench. The back-up tool must be engaged prior to, during, and after the torque tool is used.

No Drips, No Runs, No Errors!

Using thrust force to activate the holding (back-up) wrench is similar to using a screwdriver. This helps focus the operator to hold the hose or the connector in a static position while the torque wrench applies the torque.

Global 400 Global Controller

Global 400 mp Global Controller

Wireless

Interchangeable Head

Part No.	Model	Weight	Length
810673	HTS 13"	1.9 lbs. / .86 kg	13" / 33.02 cm
810674	HTL 20"	4.9 lbs. / 2.22 kg	20" / 50.8 cm

PST 1200 & PST 2000

Pressure Sensor Transceivers

There are a variety of pneumatic torque controlled tools that accommodate high speed assembly. The very nature of high speed assembly creates opportunities for errors. Operators moving too fast can miss tightening some fasteners, attempt to tighten previously tightened fasteners, cross-thread, or release the trigger before final torque is achieved.

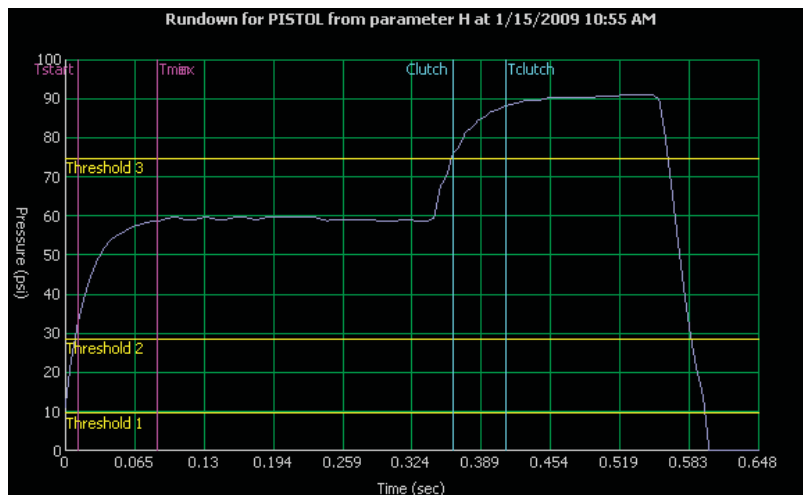The PST, in conjunction with the Global controller can:
• Batch count to ensure all fasteners achieved target torque
• Identify previously tightened fasteners that are attempted again
• Be set to identify cross threaded fasteners at installation
• Identify premature "clutch out" when the operator releases the tool trigger or lever prior to target torque

The PST Series works with most trigger or lever activated, ported torque sensing power tools. Whether a continuous drive, or shut-off pulse tool, the PST monitors air pressure in the motor compartment while applying timers to the various stages of the "run down." This algorithm is created during the auto-cal process and is used to validate or reject all fastenings performed by that tool.

The PST Pressure Sensor Transceivers will provide a more robust assembly process from your pneumatic tools.

For more information contact the factory worldwide: +1.847.455.8677 (between 0730 and 1600 CST) or go to www.srtorque.com/error-proofing-tools/pst-series-pneumatic-transceiver-sensors/

PST 1200

Global **400** Global Controller Global **400** mp Global Controller Wireless

PST 2000

Global **8** Global Controller Wireless

Rundown for PISTOL from parameter H at 1/15/2009 10:55 AM

Part No.	Model	Description
10514	PST 1200 BATT	PST 1200 Pressure Sensor Transceiver Battery Power
10515	PST 1200 Hardwired	PST 1200 Pressure Sensor Transceiver Hardwired
10499	PST 2000 BATT	PST 1200 Pressure Sensor Transceiver Battery Power
10498	PST 2000 Hardwired	PST 1200 Pressure Sensor Transceiver Hardwired
21689	PST Power Extension Cable (5 meters)	

WESTEC® - Sales & Services In India

Office No. 12, 1st Floor, Hermes Atrium,
B wing, Plot 57, Sector – 11,
CBD Belapur, Navi Mumbai – 400 614

Mob: 9821 0327 20 | Tel:+91-22-2756 6533
Telefax: +91-22-2756 6534 | Website - http://westec-india.com/
E-mail: westecnavimumbai@vsnl.net