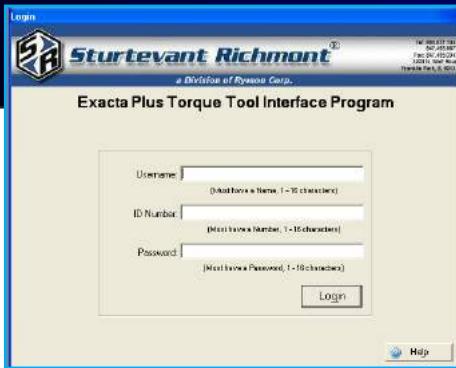


3000-Series Exacta® 2



**The 3000-Series
redefines your
remote assembly
and auditing!**



**Sturtevant
Richmont®**

Torque Measurement Systems

The **3000-Series Exacta® 2** system allows you to organize your torque tasks, prioritize them, guide the operator in performing them and collect the data - all with a single tool! Better still, the system software downloads the specifications to the tool, then later records and saves the data!

It's a System - Torque Wrench and Software Working Together!

The 3000-Series system incorporates a specially-designed **Exacta® 2** digital torque wrench that communicates with and is controlled by proprietary software. The data export capabilities of the system facilitate integration with your plant's quality software. This eliminates inefficiencies associated with information and data handling, and allows you to focus on joint quality!

The software manages three databases.

- The Task database holds information pertinent to each single task, such as: unit of measure, min torque, max torque, number of fasteners, mode of operation and related specifications.
- The Tools database contains information on the **3000-Series Exacta® 2** wrenches you have, such as capacity and serial number of each.
- The Users database contains the data on your operators, such as employee number, name, and what operations they are permitted to perform with the software and tool.

These databases are combined to create Job Templates. Job templates are combinations of tasks that are assigned to a tool and user when a job is created. They speed job creation for future uses of the same task sequence.

To create a job, you simply open a window, select the tool from the Tools Database and the appropriate Job Template. Enter the information pertinent to what is to be worked on and the work order number to be used. Save it and you are done. Now it's in a list that the operator will use when beginning the work order!

Job Card				
Date	26 Jan 2010	Work Order	12345A	Task Record
Worker ID	admin	Unit Number	Day 100126	
Tool SN	892692			
Customer ID	Brakes			
Template Name	Widget Sub Assy BA1			
Task Number	Location	Description	Socket Head	Number of Records Min
1	Brake Assy Area 1	Widget Subassembly 1	4	220
2	Brake Assy Area 1	Widget Subassembly 2	3	240

The operator then logs in, selects the work order from the list, prints the Job Card that contains all of the information, downloads the matching information to the tool (1 Button!), logs out and goes to work!

Visual Support at Each Step; Making the Operator's Life Easy!

Each job is a series of sequential tasks to be performed with the wrench; torque three nuts here, four there, and so forth. This information is on the Job Card that was printed at download.

The tool display augments and supports this at every step!

At the start of the job, the lower right-hand corner of the display shows the operator he is at "Task 01 Nut 01". The main part of the display shows the target torque (mid-spec value), the unit of measure and the mode of operation.

As the operator begins applying torque to the first fastener, the display changes to provide current information on the status of the torque application. The current torque shows as it is applied, and when the operator gets close to the torque specification, an LED emits a bright yellow-orange light that backlights the display and appears in a prominent lens on the back of the wrench. Warning - you're getting close!

When the torque specification is achieved, the light turns bright green. All the operator needs to do is stop applying force - "Green is Good!"

The tool displays the torque for a couple of seconds longer in case the operator wishes to review it, then stores the value and indexes to the next fastener - "Task 01 Nut 02"!

In the event of an error, the tool informs the operator by illuminating a bright red backlight and activating a "BAD" icon on the bottom of the display. This gives the operator the opportunity to correct the error immediately, and to record the new correct torque before moving on!



Green is good!



This Inform/Record/Index cycle repeats until all of the fasteners in the first task are complete. The operator can then move to "Task 02 Nut 01". There is never a question about what is to be done or where the operator is in the job - the current status is in hand and on display!

When all of the individual tasks in the work order are complete, the data is uploaded to the computer. The operator plugs the serial cable into the tool, logs on to the software, clicks on one button (Finish a Job) and at the screen that follows, uses one more button to upload the data. The software stores the data and can clear the tool memory so it's ready for the next job. At every step the operator has been guided through the tasks with the information immediately needed!

Audible Prompts

Supplementing the visual information are audible prompts from a beeper. You'll always know when the torque is right!

User-Friendly Job Data Management

The data on every fastener torqued by every tool and every operator on every assembly is in the database. Preformatted reports can be viewed or printed for every completed job, or the data can be exported for analysis and reporting by spreadsheets or quality software.

Since the data is in the database these functions can be performed immediately upon upload from the tool or reserved for later, as best fits your needs.

Three Modes of Operation - Track, Peak and Residual

Assembly and auditing are both accommodated with these three modes! The residual mode improves torque audit consistency for most hard and many medium joints.

Extremely Accurate

The 3000-Series **Exacta® 2** is accurate to +/- 1% of Indicated Value from 20% to 100% of rated capacity in Track and Peak modes. The Residual mode assists the user in determining retained torque on a joint. The actual accuracy percentage is contingent upon joint condition and user technique.

Multiple Units of Measure

English and Standard International units of measure are on each tool. The exact units vary by tool capacity.

The 3000-Series Exacta® 2 Uses the S/R Interchangeable Head System

The S/R line of Interchangeable Heads provides exceptional strength and rigidity of connection through our unique dovetail connection. Virtually all of these heads are made from a single piece of alloy steel, which assures durability and strength. With over 100 heads of 1 7/16" Common Centerline Length to choose from, the versatility of your 3000-Series **Exacta® 2** is greatly multiplied! Note: 250 and 600 foot-pound capacity tools use the S/R slide pin ratchet.



**Meets or exceeds
the requirements of
ASME B107.28.**

**The 3000-Series
Exacta® 2 Comes with
a FREE Certificate of
Calibration from our
ISO 17025 Accredited
Calibration Laboratory!**



3000-Series Exacta® 2

www.srtorque.com

Sturtevant Richmont

Extended Battery Life

The 3000-Series **Exacta® 2** uses four (4) AA NiMH batteries of 2200 mAh capacity. These batteries (sold separately with 15-minute charger in NAFTA countries only) provide ample operating time between charges. Backup batteries (NAFTA countries only) are available with 2500 mAh capacity.

Dimensional / Physical Information

Model Capacity	Lever Length	Overall Length	Weight
25 ft. lbs.	12.5" / 317 mm	16.1" / 409 mm	2.8 lbs. / 1.27 kg
75 ft. lbs.	15.8" / 401mm	19.4" / 493 mm	3.0 lbs. / 1.36 kg
150 ft. lbs.	17.8" / 452 mm	21.5" / 546 mm	3.1 lbs. / 1.40 kg
250 ft. lbs.	21.0" / 533 mm	25.2" / 640 mm	4.1 lbs. / 1.86 kg
400 ft. lbs.	36.5" / 927.1 mm	35.9" / 911.8 mm	7.7 lbs. / 3.49 kg
600 ft. lbs.	55.1" / 1399 mm	59.7" / 1516 mm	13.0 lbs. / 5.90 kg

Ordering Information

Part No.	Model	Description
10550	3000-Series Exacta 25	25 ft.lb, 33.8 Nm cap., 3/8" SD Int. Head inc., batteries not inc.*
10551	3000-Series Exacta 75	75 ft.lb, 101.5 Nm cap., 3/8" SD Int. Head inc., batteries not inc.*
10552	3000-Series Exacta 150	150 ft.lb, 203.3 Nm cap., 1/2" SD Int. Head inc., batteries not inc.*
10553	3000-Series Exacta 250	250 ft.lb, 338.9 Nm cap., 1/2" Ratcheting Sq. Dr., batteries not inc.*
10554	3000-Series Exacta 600	600 ft.lb, 813 Nm cap., 3/4" Ratcheting Sq. Dr., batteries not inc.*
10555	3000-Series Exacta 400	400 ft.lb, 543 Nm cap., Dovetail, batteries not inc.* **
21259*	Charger & 4 AA NiMH	4 AA NiMH 2200 mAh batteries & charger, NAFTA only
816261	4 AA NiMH	Batteries 2500 mAh NiMH batteries, spare

** Wrenches calibrated for use with heads having 3 7/8" Common Centerline.



Sturtevant Richmont

3203 N. Wolf Road

Franklin Park, IL 60131

Phones: 847/455-8677 800/877-1347

Fax: 847/455-0347

E-mail: CustomerService@srtorque.com

Web: www.srtorque.com



Interchangeable Heads



SQUARE DRIVE (SD)



SQUARE DRIVE
RATCHET (SDRT)



OPEN END (OE)

Why Our Interchangeable Head System is the World's Best

Virtually all interchangeable heads on these pages are made as a single piece from alloy steel. This construction method provides strength and durability rarely attained by the more common cut and weld method. In addition, to achieve constant torque values when changing heads, exact lever length must be maintained. S/R heads share a precise distance from end of wrench to center of fastener. This is referred to as a Common Centerline and is very difficult to maintain when using the welded construction method.

The unique dovetail design used to join head and wrench provides exceptionally strong connection and allows complete interchangeability. Competing manufacturers find it necessary to increase the size of the mating connection at higher torque values, creating duplication of wrenches and heads while losing interchangeability.

SQUARE DRIVE (SD)

1 1/8" Common Centerline

SQUARE DRIVE

Part Number	Model	Drive Size	Max. Torque (in. lbs.)
819057	SD-1/4	1/4"	250
819058	SD-3/8	3/8"	1250
819059	SD-1/2	1/2"	2500
819119	SD-3/4*	3/4"	4800

* 3/8" Common Centerline

SQUARE DRIVE RATCHET (SDRT)

1 1/8" Common Centerline

RATCHET SQ. DR.

Part Number	Model	Drive Size	Max. Torque (in. lbs.)
809504	SDRT-1/4	1/4"	250
809505	SDRT-3/8	3/8"	1250
809506	SDRT-1/2	1/2"	2500
809507	SDRT-3/4*	3/4"	4800

* 3/8" Common Centerline

RATCHET RENEWAL KITS

for ratcheting wrenches and SDRT Heads

1/4" Ratchet Renewal Kit P/N 816998

3/8" Ratchet Renewal Kit P/N 816958

1/2" Ratchet Renewal Kit P/N 816956

3/4" Ratchet Renewal Kit P/N 816999

OPEN END (OE)

1 1/8" Common Centerline

OPEN END - ENGLISH

Part Number	Model	Hex Size	Max. Torque (in. lbs.)
819000	OE-1/4	1/4"	100
819001	OE-5/16	5/16"	150
819002	OE-3/8	3/8"	200
819003	OE-7/16	7/16"	300
819004	OE-1/2	1/2"	350
819005	OE-9/16	9/16"	400
819006	OE-5/8	5/8"	600
819007	OE-11/16	1 1/16"	800
819008	OE-3/4	3/4"	1000
819009	OE-13/16	1 3/16"	1250
819010	OE-7/8	7/8"	1500
819011	OE-15/16	1 15/16"	1750
819012	OE-1	1"	2000
819013	OE-1 1/16	1 1/16"	2250
819014	OE-1 1/8	1 1/8"	2500
819015	OE-1 1/4	1 1/4"	2750
819016	OE-1 1/2	1 1/2"	3000

OPEN END - METRIC

Part Number	Model	Hex Size	Max. Torque (Nm)
809291	OE-7mm	7mm	11
809292	OE-8mm	8mm	16
809293	OE-9mm	9mm	22
819943	OE-10mm	10mm	22
819944	OE-11mm	11mm	34
809226	OE-12mm	12mm	39
819945	OE-13mm	13mm	39
819946	OE-14mm	14mm	45
809227	OE-15mm	15mm	67
819947	OE-16mm	16mm	67
819948	OE-17mm	17mm	90
809228	OE-18mm	18mm	90
819949	OE-19mm	19mm	113
819950	OE-21mm	21mm	141
819951	OE-22mm	22mm	169
819952	OE-24mm	24mm	197
809229	OE-27mm	27mm	254
819956	OE-30mm	30mm	310
853043	OE-31mm	31mm	328
819958	OE-32mm	32mm	338



FLARE NUT (FN)

1 1/8" Common Centerline

FLARE NUT - ENGLISH

Part Number	Model	Hex Size	Max. Torque (in. lbs.)
819025	FN-1/4	1/4"	100
819026	FN-5/16	5/16"	150
819027	FN-3/8	3/8"	200
819028	FN-7/16	7/16"	250
819029	FN-1/2	1/2"	300
819030	FN-9/16	9/16"	350
819031	FN-5/8	5/8"	400
819032	FN-11/16	1 1/16"	475
819033	FN-3/4	3/4"	600
819034	FN-13/16	1 3/16"	700
819035	FN-7/8	7/8"	800
819036	FN-15/16	1 5/16"	900
819037	FN-1	1"	1000
819038	FN-1 1/16	1 1/16"	1050
819039	FN-1 1/8	1 1/8"	1100
819040	FN-1 1/16	1 1/16"	1150
819041	FN-1 1/4	1 1/4"	1200

FLARE NUT - METRIC

Part Number	Model	Hex Size	Max Torque (Nm)
809243	FN-8mm	8mm	16
809217	FN-9mm	9mm	19
809218	FN-10mm	10mm	22
809221	FN-11mm	11mm	28
809241	FN-12mm	12mm	30
809000	FN-12mm*	12mm	30
809219	FN-13mm	13mm	33
809220	FN-14mm	14mm	40
809001	FN-14mm*	14mm	40
809222	FN-15mm	15mm	45
809238	FN-16mm	16mm	50
809223	FN-17mm	17mm	54
809239	FN-18mm	18mm	61
809224	FN-19mm	19mm	68
809240	FN-21mm	21mm	80
809242	FN-22mm	22mm	90
809225	FN-24mm	24mm	105
809244	FN-27mm	27mm	118

* 6 pt hex



FLARE NUT (FN)

BOX HEAD (BH)

1 1/8" Common Centerline

BOX HEAD - ENGLISH

Part Number	Model	Hex Size	Max. Torque (in. lbs.)
819060	BH-1/4	1/4"	250
819061	BH-5/16	5/16"	350
819062	BH-3/8	3/8"	450
819063	BH-7/16	7/16"	650
819064	BH-1/2	1/2"	850
819065	BH-9/16	9/16"	1050
819066	BH-5/8	5/8"	1250
819067	BH-11/16	1 1/16"	1450
819068	BH-3/4	3/4"	1800
819069	BH-13/16	1 3/16"	2100
819070	BH-7/8	7/8"	2400
819071	BH-1 1/16	1 1/16"	2700
819072	BH-1	1"	3000
819073	BH-1 1/16	1 1/16"	3150
819074	BH-1 1/8	1 1/8"	3300
819085	BH-1 1/16	1 1/16"	3450
819075	BH-1 1/4	1 1/4"	3600

BOX HEAD - METRIC

Part Number	Model	Hex Size	Max. Torque (Nm)
809301	BH-7mm	7mm	28
809302	BH-8mm	8mm	39
809303	BH-9mm	9mm	50
809230	BH-10mm	10mm	50
809231	BH-11mm	11mm	73
809304	BH-12mm	12mm	96
809232	BH-13mm	13mm	96
809233	BH-14mm	14mm	119
809234	BH-15mm	15mm	141
809305	BH-16mm	16mm	141
809235	BH-17mm	17mm	163
809306	BH-18mm	18mm	163
809236	BH-19mm	19mm	203
809307	BH-21mm	21mm	237
809308	BH-22mm	22mm	271
809237	BH-24mm	24mm	305
809352	BH-27mm	27mm	355



BOX HEAD (BH)

HEX DRIVE (HD)

1 1/8" Common Centerline

HEX DRIVE - ENGLISH

Part Number	Model	Hex Size	Max. Torque (in. lbs.)
853030	HD-5/64	5/64"	20
819687	HD-3/32	3/32"	30
853031	HD-7/64	7/64"	40
819689	HD-1/8	1/8"	70
853032	HD-9/64	9/64"	70
819691	HD-5/32	5/32"	135
819692	HD-3/16	3/16"	235
819693	HD-7/32	7/32"	340
819694	HD-1/4	1/4"	450
819695	HD-9/32	9/32"	850
819696	HD-5/16	5/16"	850
819697	HD-11/32	11/32"	1450
819699	HD-13/32	13/32"	1450
819700	HD-1/2	1/2"	2100
819701	HD-3/4	3/4"	2400
819702	HD-7/8	7/8"	2700

HEX DRIVE - METRIC

Part Number	Model	Hex Size	Max. Torque (Nm)
809315	HD-4mm	4mm	15
809316	HD-5mm	5mm	27
809317	HD-6mm	6mm	38
809328	HD-8mm	8mm	96
809330	HD-10mm	10mm	141
809332	HD-12mm	12mm	164
809334	HD-14mm	14mm	164
809339	HD-19mm	19mm	270



HEX DRIVE (HD)



Interchangeable Heads



RATCHETING OPEN END (ROE)

RATCHETING OPEN END (ROE)

1 $\frac{1}{16}$ " Common Centerline

Slight disengagement from the fastener allows operator to rapidly rotate wrench.

RATCHETING OPEN END - ENGLISH

Part Number	Model	Hex Size	Max. Torque (in. lbs.)
819200	ROE-1/4	1/4"	60
819202	ROE-5/16	5/16"	120
819203	ROE-7/16	7/16"	180
819204	ROE-1/2	1/2"	210
819205	ROE-9/16	9/16"	240
819206	ROE-5/8	5/8"	360
819208	ROE-3/4	3/4"	600
819209	ROE-1 1/16	1 1/16"	750
819210	ROE-7/8	7/8"	900
819211	ROE-1 5/16	1 5/16"	1050
819212	ROE-1	1"	1200
819213	ROE-1 1/8	1 1/8"	1350
819214	ROE-1 1/4	1 1/4"	1500
819215	ROE-1 3/8	1 3/8"	1650

RATCHETING OPEN END - METRIC

Part Number	Model	Hex Size	Max. Torque (Nm)
819217	ROE-7mm	7 mm	7
819218	ROE-8mm	8 mm	10
819219	ROE-9mm	9 mm	13
819220	ROE-10mm	10 mm	13
819221	ROE-11mm	11 mm	20
819222	ROE-12mm	12 mm	23
819223	ROE-13mm	13 mm	23
819224	ROE-14mm	14 mm	27
819225	ROE-15mm	15 mm	40
819226	ROE-16mm	16 mm	40
819227	ROE-17mm	17 mm	54
819228	ROE-18mm	18 mm	54
819229	ROE-19mm	19 mm	68
819231	ROE-22mm	22 mm	101
819232	ROE-24mm	24 mm	118
819233	ROE-27mm	27 mm	152
819238	ROE-32mm	32 mm	203



RATCHETING FLARE NUT (RFN)

RATCHETING FLARE NUT (RFN)

1 $\frac{1}{16}$ " Common Centerline

Single-direction ratchet for use with hydraulic or pneumatic fittings.

Part Number	Model	Hex Size	Max. Torque (Nm)
819086	RFN-10mm	10 mm	25
819087	RFN-11mm	11 mm	25



SPECIAL TOE-IN ADJUSTMENT TOOL
A/F 21 mm to be used with Sturtevant
Richmont SLTC 7501 hardwired switch
wrench developed for Volkswagen

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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