ESTIC

SERVO NUTRUNNER
Z50 Series

Integrated expandability and rapidity

AC Servo Nutrunner Z50 series enables to build a synthetic control system for various tightening controls of multi spindles with user friendly operation.

Various tightening methods equipped

- Tightening control such as Torque Control, Angle Control Torque Monitoring, Yield Control, etc. support various types of tightening.
- Monitoring function such as Torque Rate monitoring, Zone monitoring detect abnormality on tightening.

MU50 actual size

AU50 (Axis Control Unit)

The Controller for single spindle specifically developed for Nutrunner enables to realize high quality and high accuracy tightening

- Tightening Parameter: 99 programs
- Tightening Result: 5115 records (maximum) *
- System Error History: 50 records

* Numbers of the records which can be stored in the controller varies depending on the items selected for tightening history

MU50 (Master Control Unit)

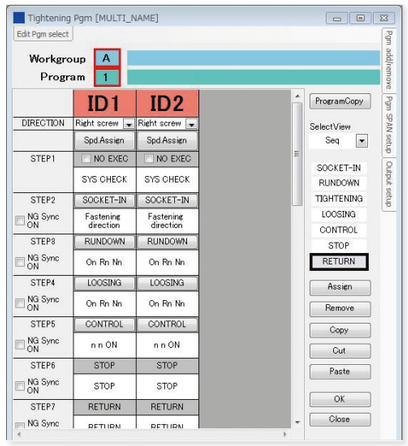
The Master unit enables to control multi spindles up to 31 spindles, and has a capability for PLC serial communication which reduces wiring.

- Work Group: 4 groups
- Tightening Program: 99 programs
- Tightening Result: 20,000 records *
- Torque Curve: 50 records *
- System Error: 200 records

* Numbers of the records which can be stored in the controller varies depending on the items selected for tightening history

Sequence Program for tightening

Each step of pre tightening, loosening, final tightening can be programed as a sequence under 1 Program. Maximum of 20 steps can be programed in 1 Program.



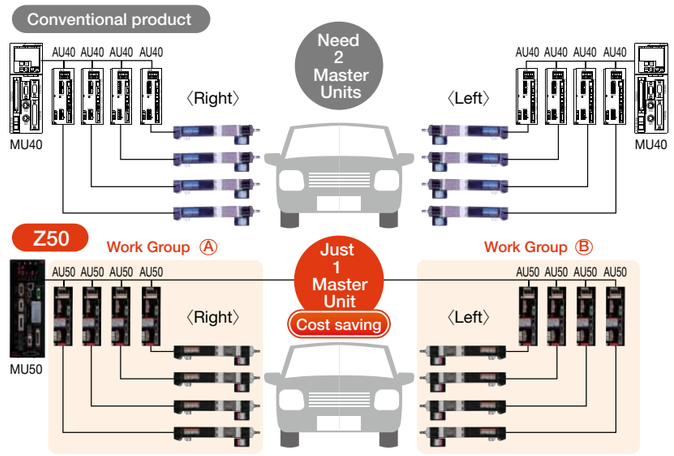
MU50
Tightening Program Edit screen

Parallel motion of Work Group

1 Master Unit has a capability of handling maximum of 4 Work Groups, and each Work Group can work independently. 1 Master Unit can control maximum of 4 separate tightening systems.

1 Master Unit can control for both Left and Right Wheel Tightening Machines.

example: Wheel Tightening Machine



USB port

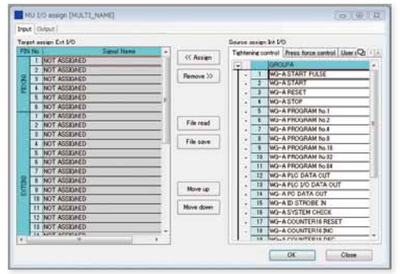
PC-USB port and Computer can be connected with USB cable.
It makes easier for the communication between Computer and Master Unit if Computer does not have RS-232C port.
It is also possible to communicate via RS-232C port or Ethernet port.

USB download/upload capability

Tightening/System Program,Tightening Result can be exported to USB flash drive on USB port.

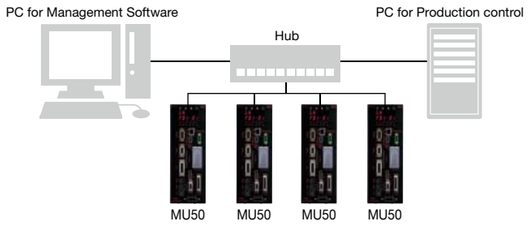
I/O Allocation function

Signal can be freely assigned on each output and input for Control I/O, Extended I/O (optional), Remote I/O (optional). Signal assigning on PLC serial communication and Fieldbus is also freely changed.



Ethernet port

Ethernet port is a standard equipment. By using Ethernet communication, remote control from the office for monitoring and editing settings can be made. Several units of Master Units can be controlled by 1 Computer.



PLC Serial Communication

Serial Communication between Master Unit and PLC can be made via RS-232C or RS-422. (RS-232C and RS-422 cannot use together)

Corresponding PLC type

Maker	PLC type
Mitsubishi	MELSEC-A series
	MELSEC-Q series
Omron	SYSMAC-CS1 series SYSMAC-CJ1 series
Sharp	JW30 series JW300 series
JTEKT	TOYOPUC

Fieldbus (optional)

Corresponding to Devicenet, Profibus, CC-Link, Ethernet/IP
***Please inquire to our distributor for the corresponding version.**

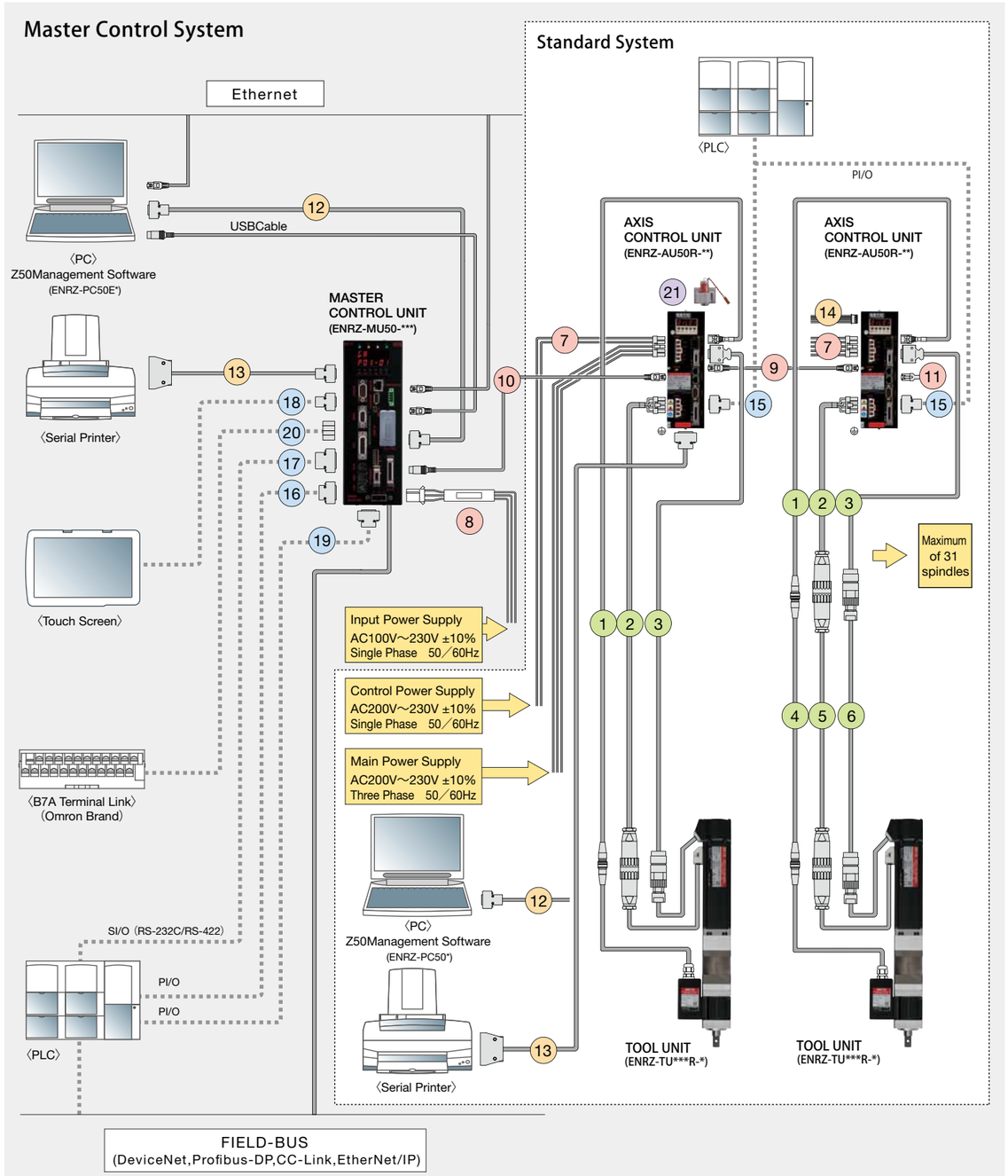
System Configuration

Master Control System

Master Control Unit is designed for creating a sequence program for multi spindles with easy settings without complicated PLC logic. This unit is able to connect with PLC with serial connection, and has capability to connect up to 31 spindles by master link connection. This system enables users to obtain tightening results into PLC easily and it will also help to reduce the wiring works and save wires.

Standard System

This is a system configuration without using a Master Unit.
One control on One spindle system, and each spindle is controlled by using I/O signals. Maximum of 31 spindles can be connected by master link connection.



Cables and Accessories

No.	Description	Length	Model Type
1	Torque Transducer Cable	5[m]	ENRZ-CVTN2-050
		10[m]	ENRZ-CVTN2-100
		15[m]	ENRZ-CVTN2-150
		20[m]	ENRZ-CVTN2-200
2	Motor Cable	5[m]	ENRZ-CVMN2-050
		10[m]	ENRZ-CVMN2-100
		15[m]	ENRZ-CVMN2-150
		20[m]	ENRZ-CVMN2-200
3	Resolver Cable	5[m]	ENRZ-CVRN-050
		10[m]	ENRZ-CVRN-100
		15[m]	ENRZ-CVRN-150
		20[m]	ENRZ-CVRN-200
4	Torque Transducer Relay cable	3[m]	ENRZ-CVTN-030
		6[m]	ENRZ-CVTN-060
		10[m]	ENRZ-CVTN-100
5	Motor Relay Cable	3[m]	ENRZ-CVMP-030
		6[m]	ENRZ-CVMP-060
		10[m]	ENRZ-CVMP-100
6	Resolver Relay Cable	3[m]	ENRZ-CVRP-030
		6[m]	ENRZ-CVRP-060
		10[m]	ENRZ-CVRP-100
7	AU50R Power Supply Cable *1	3[m]	ENRZ-CVDC2-030
8	MU50 Power Supply Cable *1	3[m]	ENRZ-CVDC3-030

No.	Description	Length	Model Type
9	AU50R NET Cable (AU50R to AU50R)	0.2[m]	ENRZ-CVNK2A-002
		1[m]	ENRZ-CVNK2A-010
		2[m]	ENRZ-CVNK2A-020
10	MU50 NET Cable (MU50 to AU50R)	0.3[m]	ENRZ-CVNK3M-003
		1[m]	ENRZ-CVNK3M-010
		3[m]	ENRZ-CVNK3M-030
		10[m]	ENRZ-CVNK3M-100
11	NET Terminal End Resistor *2	–	ENRZ-CVST3
12	Serial Communication Cable	1.5[m]	ENRZ-CVSR-015
		5[m]	ENRZ-CVSR-050
		10[m]	ENRZ-CVSR-100
13	Serial Printer Cable	3[m]	ENRZ-CVSP-030
		5[m]	ENRZ-CVSP-050
		10[m]	ENRZ-CVSP-100
14	Check Connector Cable	3[m]	ENRZ-CVCK-030
15	AU50R Control Connector	–	ENRZ-CNAU
16	MU50 Control Connector	–	ENRZ-CN14-CR
17	PLC Connector	–	ENRZ-CN15-PL
18	Panel Connector	–	ENRZ-CN9-PA
19	EX-I/O Connector	–	ENRZ-CN36-EX
20	Remote I/O Connector	–	EH2-FCN4-RM
21	AU50R Battery *3	–	ENRZ-BATT

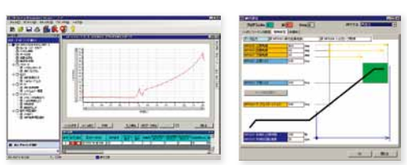
*1 Included in the controller unit
*2 Master Unit System: need 1 pc
Standard System (Multi spindles) : need 2 pcs
*3 needed on Standard System

Application Software

PC50 (Management Software)

Windows based management software. User friendly interface helps to edit parameters and maintenance of the system configuration easily.

- Create a new and edit parameter file
- Monitor and display tightening results and torque curve
- OS (Windows XP or later version)
- Language (Japanese/English)



DataLogger

This is a software to collect tightening results for traceability and quality measurement which is installed in the PC and works on Ethernet network environment.

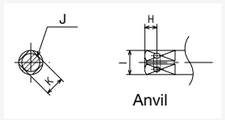
- Collect Tightening results/Torque curve
- ODBC complied database (SQL Server)
- OS (Windows XP or later version)
- Language (Japanese/English)

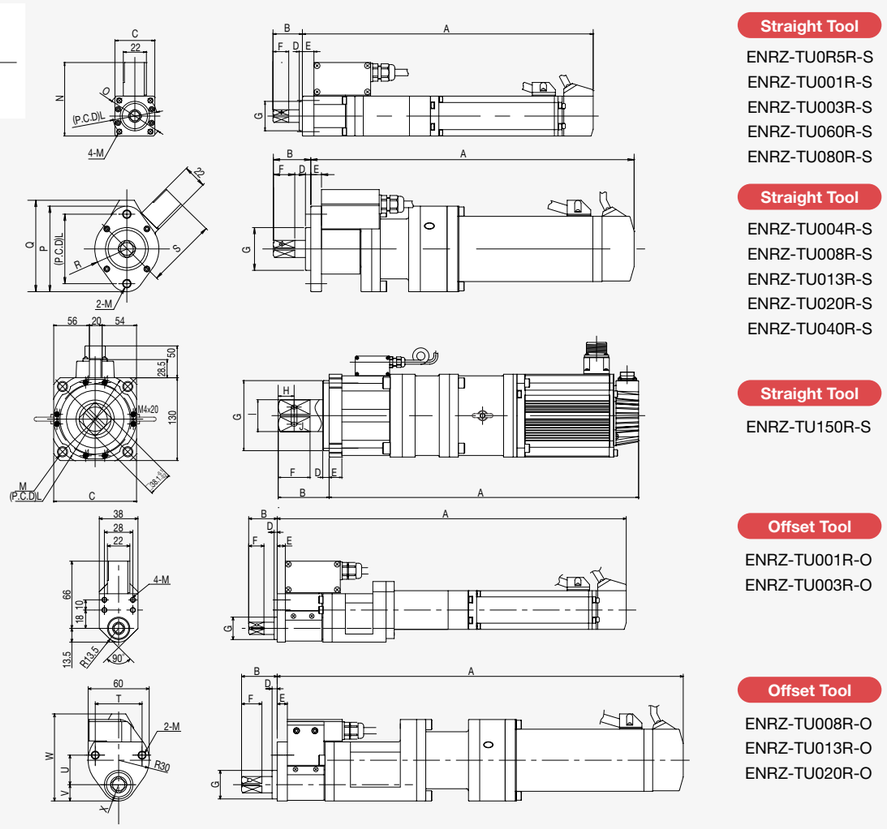
Tool Unit Specifications

Model	Rated Torque(N·m)	Applicable Torque Range(N·m)	Max. Speed (rpm)	Controller Model	Main Power Supply Capacity (at Rated Operation)
ENRZ-TU0R5R-S	5	0.5～5	2814	ENRZ-AU50R-10	0.4kVA
ENRZ-TU001R-*	10	1～10	1224		
ENRZ-TU003R-*	30	3～30	468		
ENRZ-TU004R-S	40	4～40	1464	ENRZ-AU50R-20	1.2kVA
ENRZ-TU008R-*	80	8～80	714		
ENRZ-TU013R-*	130	13～130	500		
ENRZ-TU020R-*	200	20～200	291		
ENRZ-TU040R-*	400	40～400	148		
ENRZ-TU060R-S	600	60～600	113	ENRZ-AU50R-40	1.7kVA
ENRZ-TU080R-S	800	80～800	83		
ENRZ-TU150R-S	1500	150～1500	60	ENRZ-AU50R-2K	3.8kVA

• Suffix * : S for Straight tool, O for Offset tool For Bent tool, please inquire to your nearest Estic representative. • Please make sure to read Operation Manual carefully on your selection of the power supply capacity.

Dimensions





Straight Tool
ENRZ-TU0R5R-S
ENRZ-TU001R-S
ENRZ-TU003R-S
ENRZ-TU060R-S
ENRZ-TU080R-S

Straight Tool
ENRZ-TU004R-S
ENRZ-TU008R-S
ENRZ-TU013R-S
ENRZ-TU020R-S
ENRZ-TU040R-S

Straight Tool
ENRZ-TU150R-S

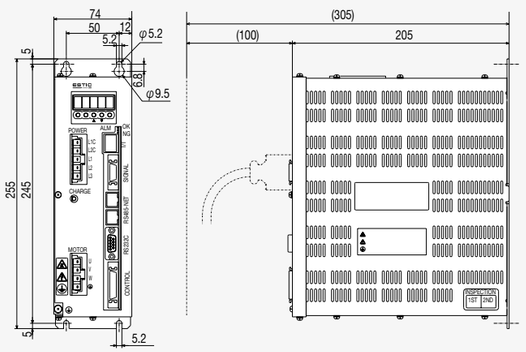
Offset Tool
ENRZ-TU001R-O
ENRZ-TU003R-O

Offset Tool
ENRZ-TU008R-O
ENRZ-TU013R-O
ENRZ-TU020R-O

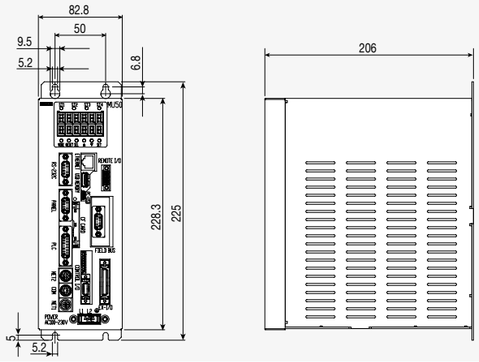
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
ENRZ-TU0R5R-S	277	28	38	3	11	15	φ28g7	8	φ12h7	φ3	□9.5	42	M5	70	φ52	–	–	–	–	–	–	–	–	–
ENRZ-TU001R-S	286	28	38	3	11	15	φ28g7	8	φ12h7	φ3	□9.5	42	M5	70	φ52	–	–	–	–	–	–	–	–	–
ENRZ-TU001R-O	343	28	–	3	8	15	φ22g7	8	φ12h7	φ3	□9.5	–	M5	–	–	–	–	–	–	–	–	–	–	–
ENRZ-TU003R-S	292	28	38	3	11	15	φ28g7	8	φ12h7	φ3	□9.5	42	M5	70	φ52	–	–	–	–	–	–	–	–	–
ENRZ-TU003R-O	349	28	–	3	8	15	φ22g7	8	φ12h7	φ3	□9.5	–	M5	–	–	–	–	–	–	–	–	–	–	–
ENRZ-TU004R-S	302.5	35	–	5	10	20	φ40g7	8	φ16h7	φ4.5	□12.7	65	M8	–	–	80	85.5	R30	65.5	–	–	–	–	–
ENRZ-TU008R-S	329	35	–	5	14	20	φ40g7	8	φ16h7	φ4.5	□12.7	65	M8	–	–	80	85.5	R30	65.5	–	–	–	–	–
ENRZ-TU008R-O	399	35	–	5	10	20	φ28g7	8	φ16h7	φ4.5	□12.7	–	M8	–	–	–	–	–	–	46	29	16	85.5	R16
ENRZ-TU013R-S	329	40	–	6	14	25	φ46g7	9	φ20h7	φ4.5	□15.9	65	M10	–	–	80	85.5	R30	65.5	–	–	–	–	–
ENRZ-TU013R-O	412	40	–	5	10	25	φ32g7	9	φ20h7	φ4.5	□15.9	–	M10	–	–	–	–	–	–	44	32	19	91.5	R19
ENRZ-TU020R-S	384	40	–	6	14	25	φ46g7	9	φ25h7	φ4.5	□19.0	65	M10	–	–	80	85.5	R30	65.5	–	–	–	–	–
ENRZ-TU020R-O	468	40	–	5	10	25	φ40g7	9	φ24h7	φ4.5	□19.0	–	M10	–	–	–	–	–	–	44	36.5	23	100	R23
ENRZ-TU040R-S	398	55	–	7	15	30	φ60g7	14.5	φ30h7	φ6.3	□25.4	84	M12	–	–	100	–	R33	71	–	–	–	–	–
ENRZ-TU060R-S	446	55	80	7	15	30	φ55g7	14.5	φ32h7	φ6.3	□25.4	88	M12	113	φ110	–	–	–	–	–	–	–	–	–
ENRZ-TU080R-S	446	55	80	7	15	30	φ60g7	14.5	φ40h7	φ6.3	□31.8	88	M12	113	φ110	–	–	–	–	–	–	–	–	–
ENRZ-TU150R-S	486	80	130	10	20	50	φ110g7	25	φ50h7	φ9	□38.1	145	M16	–	–	–	–	–	–	–	–	–	–	–

Dimensions

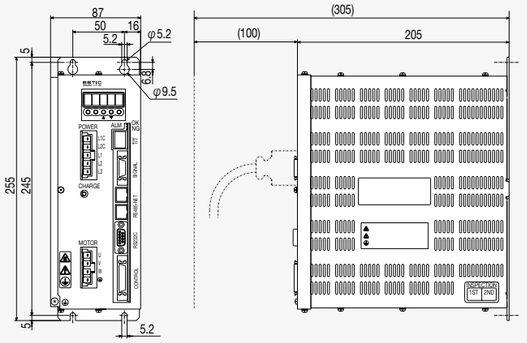
AU50(100W)



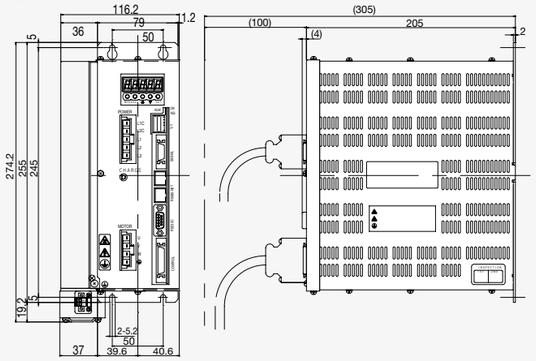
MU50



AU50(200W , 400W)



AU50(2400W)



Model

ENRZ-AU50 R - 10
- Controller Model
- Rated Power: 10 : 100W / 20 : 200W / 40 : 400W

ENRZ-MU50 - N N N
- Controller Model
- Fieldbus: N : Nil (Standard) / D : DeviceNet(optional) / P : Profibus(optional) / C : CC-Link(optional) / E : Ethernet/IP(optional)
- NN : Without Extended I/O and Remote I/O / EN : With Extended I/O, Without Remote I/O / ER : With Extended I/O and Remote I/O

MU50 AU50

Socket Assembly & Socket Adaptor (Floating mechanism)

▶ Socket Assembly

Model	Applicable Tool Type	Adaptor Insert Size
TNA1-SA02-30	ENRZ-TU0R5R-S ENRZ-TU001R-* ENRZ-TU003R-*	□ 9.5
TNA1-SA05-35	ENRZ-TU004R-S ENRZ-TU008R-*	□ 12.7
TNA1-SA20-45C	ENRZ-TU013R-*	□ 15.9
TNA1-SA20-45Z	ENRZ-TU020R-*	□ 15.9
TNA1-SA40-70	ENRZ-TU040R-S ENRZ-TU060R-S	□ 25.4
TNA1-SA80-80	ENRZ-TU080R-S	□ 31.8
TNA1-SA150-50	ENRZ-TU150R-S	□ 38.1
TNA1-SA150-120	ENRZ-TU150R-S	□ 38.1

▶ Socket Adaptor

Model	Socket Assembly SQ Size – Socket Adaptor SQ Size
TNA1-AD01-01	□ 9.5 – □ 9.5
TNA1-AD05-01	□ 12.7 – □ 12.7
TNA1-AD05-02	□ 12.7 – □ 9.5
TNA1-AD20-01	□ 15.9 – □ 15.9
TNA1-AD20-02	□ 15.9 – □ 12.7
TNA1-AD20-03	□ 15.9 – □ 19.0
TNA1-AD40-01	□ 25.4 – □ 25.4
TNA1-AD40-02	□ 25.4 – □ 19.0
TNA1-AD80-01	□ 31.8 – □ 31.8
TNA1-AD80-02	□ 31.8 – □ 25.4
TNA1-AD150-01	□ 38.1 – □ 38.1
TNA1-AD150-02	□ 38.1 – □ 25.4

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JQA-2805

VEGETABLE OIL INK

This catalog uses vegetable oil ink.

The contents of the catalog are as of April, 2012.

- The colors of the products may slightly differ from those of the actual products, which inevitable in printing.
- The specifications and designs of the products may be changed without previous notice.

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