

① Spiral Fluted Tap Series for blind hole	
VUSP Z-PRO Series Spiral Fluted Taps, Coated	①-1
ISP Spiral Fluted Taps for General Purpose	①-9
SP Spiral Fluted Taps	①-13
SP 1.5P Spiral Fluted Taps 1.5P	①-33
+SP Plus Series Spiral Fluted Taps	①-35
XSP X Series Spiral Fluted Taps	①-37
SP OX Spiral Fluted Taps, Oxidized	①-39
SP LH Spiral Fluted Taps for Left Hand Threads	①-54
AU+SP Plus Series Spiral Fluted Taps, Optimum Coating for the tapping	①-59
AUXSP X Series Spiral Fluted Taps, Coated	①-63
LS-SP Long Shank Spiral Fluted Taps	①-66
LS-SP OX Long shank oxidized spiral tap	①-71
LS-SP LH Long Shank Spiral Fluted Taps for Left Hand Threads	①-72
LS-SP V Long Shank Spiral Fluted Taps, Coated	①-73
LS-SP-K Long Shank Spiral Fluted Taps with Neck	①-74
SU+SP/SU-SP Spiral Fluted Taps for Stainless Steels	①-75
SUXSP X Series Spiral Fluted Taps for Stainless Steels	①-91
SU2-SP Spiral Fluted Taps for Tough Stainless Steels	①-93
SU-S-SP Spiral Fluted Taps for Stainless Steels, Deep Hole Use	①-98
LS-SU-S-SP Long Shank Spiral Fluted Taps for Stainless Steels, Deep Hole Use	①-99

S-SP Short Spiral Fluted Taps, Deep Hole Use	①-101
E-SP Spiral Fluted Taps for Soft Structural Steels	①-109
HC+SP/HC-SP Spiral Fluted Taps for High Carbon Steels	①-113
HC+SP OX/HC-SP OX Spiral Fluted Taps for High Carbon Steels, Oxidized	①-116
AL+SP/AL-SP Spiral Fluted Taps for Aluminum	①-117
AL-SP 1.5P Spiral Fluted Taps for Aluminum 1.5P	①-119
LO-SP Low Spiral Fluted Taps	①-125
LS-LO-SP Long Shank Low Spiral Fluted Taps	①-133
MC-SP Spiral Fluted Taps with Internal Coolant Hole	①-134
ZET-B Spiral Fluted Taps for Titanium Alloys	①-137
ZEN-B Spiral Fluted Taps for Nickel Base Alloys	①-145
PM-SP Spiral Fluted Taps for Hard-to-Machine Materials	①-152
LS-PM-SP Long Shank Spiral Fluted Taps for Hard-to-Machine Materials	①-158
F-SP Spiral Fluted Taps for High Speed Tapping	①-161
LS-F-SP Long Shank Spiral Fluted Taps for High Speed Tapping	①-166
HFIHS For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Carbon Steels	①-169
HFISP For Ultra Fast Tapping, Horizontal Use, Low Spiral Fluted Taps for Carbon Steels	①-173
HFAHS For Ultra Fast Tapping, Vertical Use. Spiral Fluted Taps for Aluminum	①-177
HFASP For Ultra Fast Tapping, Horizontal Use, Low Spiral Fluted Taps for Aluminum	①-181
HDISP For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Steels	①-185



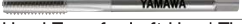
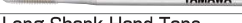
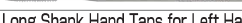

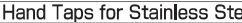



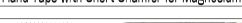
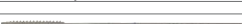




② Spiral Fluted Tap Series for through hole	
HDASP For Dry Tapping, Blind Hole Use. Spiral Fluted Taps for Aluminum	①-189
HVSP Z-PRO Series Spiral Fluted taps for forged parts in the heavy metalworking industry	①-193
MHSP Z-PRO Series Spiral Taps for Medium Hard Carbon Steels	①-199

XSL X Series Spiral Fluted Taps, Through Hole Use (with LH spiral flutes)	②-1
AU+SL Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)	②-3
AUXSL X Series Spiral Fluted Taps, Coated, Through Hole Use (with LH spiral flutes)	②-7
LKSL Z-PRO Series Long Neck Spiral Fluted Tap for Through Hole	②-11
LKSL XL Z-PRO Series Extra-Long Neck Spiral Fluted Tap for Through Hole	②-12
SU+SL Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	②-13
SUXSL X Series Spiral Fluted Taps for Stainless Steels, Through Hole Use (with LH spiral flutes)	②-17
ZET-P Spiral Fluted Taps for Titanium Alloys, Through Hole Use (with LH spiral flutes)	②-19
F-SL Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)	②-25
LS-F-SL Long Shank Spiral Fluted Taps for High Speed Tapping, Through Hole Use (with LH spiral flutes)	②-30
HDISL Spiral Fluted Taps for Steels for Dry Tapping and for Ultra High Speed Tapping, Through Hole Use (with LH spiral flutes)	②-31
MHSL Spiral Fluted Taps for Carbon Steels of middle hardness, Through Hole Use (with LH spiral flutes)	②-35




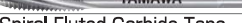
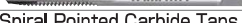



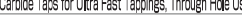
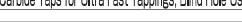
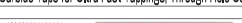


③ Spiral Pointed Tap Series for through hole	
VUPO Z-PRO Series Spiral Pointed Taps, Coated	③-1

IPO Spiral Pointed Taps for General Purpose	③-7
PO Spiral Pointed Taps	③-11
+PO Plus Series Spiral Pointed Taps	③-30
PO OX Spiral Pointed Taps, Oxidized	③-31
PO LH Spiral Pointed Taps for Left Hand Threads	③-43
PO V Spiral Pointed Taps, Coated	③-45
LS-PO Long Shank Spiral Pointed Taps	③-48
LS-PO V Long Shank Spiral Pointed Taps, Coated	③-52
LS-PO-K Long Shank Spiral Pointed Taps with Neck	③-53
SU+PO/SU-PO Spiral Pointed Taps for Stainless Steels	③-55
LS-SU-S-PO Long Shank Short Spiral Pointed Taps for Stainless Steels	③-67
S-PO Short Spiral Pointed Taps for Deep Hole Use	③-69
HC+PO/HC-PO Spiral Pointed Taps for High Carbon Steels	③-71
HC-PO OX Spiral Pointed Taps for High Carbon Steels, Oxidized	③-73
MC-PO Spiral Pointed Taps with Internal Coolant Hole	③-77
EH-PO Spiral Pointed Taps for Hard-to-Machine Materials	③-79
ZEN-P Spiral Pointed Taps for Nickel Base Alloys	③-83
PM-PO Spiral Pointed Taps for Hard-to-Machine Materials	③-90
LS-PM-PO Long Shank Spiral Pointed Taps for Hard-to-Machine Materials	③-93

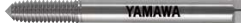



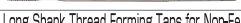



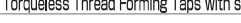
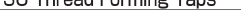
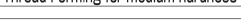


④ Hand Tap Series

IHT	 Hand Taps for General Purpose	④-1
HT	 Hand Taps	④-5
HT LH	 Hand Taps for Left Hand Threads	④-60
LS-HT	 Long Shank Hand Taps	④-68
LS-HT LH	 Long Shank Hand Taps for Left Hand Threads	④-79
LS-HT V	 Long Shank Hand Taps, Coated	④-81
SU-HT	 Hand Taps for Stainless Steels	④-83
FC-HT	 Hand Taps for Cast Irons	④-87
LA-HT	 Hand Taps for Die Cast Materials	④-99
AXE-HT	 AXE Hand Taps	④-103
MG-HT	 Hand Taps with Short Chamfer for Magnesium Alloy Castings	④-107
PL1	 Hand Taps for Plastics	④-109
MC-HT	 Hand Taps with Internal Coolant Hole	④-111
EH-HT	 Hand Taps for Hard-to-Machine Materials	④-115
RE-HT	 Hand tap with a replaceable head	④-123
MS+TR	 Hand Tap for Miniature Screws	④-128

⑤ Cemented Carbide Tap Series


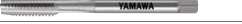

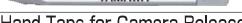




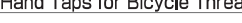
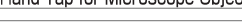
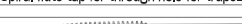






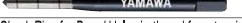
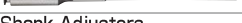


N-CT LA	 Carbide Taps for Light Alloys	⑤-1
N-CT FC	 Carbide Taps for Cast Irons	⑤-8
LS-N-CT	 Long Shank Carbide Taps	⑤-16
N-CT-SP	 Spiral Fluted Carbide Taps	⑤-18
N-CT-PO	 Spiral Pointed Carbide Taps	⑤-19
MC-AD-CT	 Carbide Taps with Oil Hole	⑤-21
EH-CT	 Carbide Taps for Hard Materials	⑤-23
UH-CT	 Carbide taps for ultra hard materials	⑤-27
HFACT-P	 Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Aluminum	⑤-31
HFACT-B	 Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Aluminum	⑤-33
HFICT-P	 Carbide Taps for Ultra Fast Tappings, Through Hole Use, for Cast Irons	⑤-35
HFICT-B	 Carbide Taps for Ultra Fast Tappings, Blind Hole Use, for Cast Irons	⑤-37
ACHSP	 Spiral Fluted Tap for Aluminum Casting	⑤-39

⑥ Roll Tap Series
















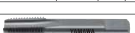
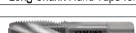

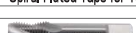

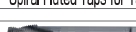
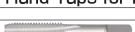
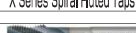
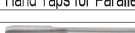



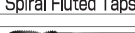
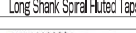


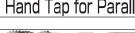






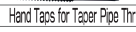

R-Y	 Thread Forming Taps for Thin Soft Structural Steel Sheets	⑥-1
N+RZ/ N-RZ	 Thread Forming Taps for Steels	⑥-5
LS-N-RZ	 Long Shank Thread Forming Taps for Steels	⑥-15
N+RS/ N-RS	 Thread Forming Taps for Non-Ferrous Materials	⑥-17
LS-N-RS	 Long Shank Thread Forming Taps for Non-Ferrous Materials	⑥-28
R+V	 Thread Forming Taps, Coated	⑥-30
OL+RZ/ OL-RZ	 Thread Forming Taps for Dry Tapping, Coated	⑥-33
HP+RZ/ HP-RZ	 High Performance Thread Forming Taps, Coated	⑥-39
SC-TL-RZ	 Torqueless Thread Forming Taps with short chamfer	⑥-49
SURZ	 SU Thread Forming Taps	⑥-51
MHRZ	 Thread Forming for medium hardness carbon steel	⑥-53
MS+RS	 Roll Taps for Miniature Threads	⑥-57
HPsRZ	 High Performance Taps for Miniature Threads	⑥-57

⑦ Special Thread Taps / Simple Inspection Tools

AL-HT STI	 Hand Taps for Aluminum Materials (for Helical Coil Wire Screw Thread Inserts)	⑦-1
AL-SP STI	 Spiral Fluted Taps for Aluminum Materials (for Helical Coil Wire Screw Thread Inserts)	⑦-8
AL-PO STI	 Spiral Pointed Taps for Aluminum Materials (for Helical Coil Wire Screw Thread Inserts)	⑦-16
N-RS STI	 Roll Taps for Nonferrous Materials (for Helical Coil Wire Screw Thread Inserts)	⑦-23
N-CT LA STI	 Carbide Hand Taps for Light Alloys (for Helical Coil Wire Screw Thread Inserts)	⑦-24









NT	 Nut Taps	⑦-25
HT TRI	 Hand Taps for Tripod Threads	⑦-28
SP TRI	 Spiral Fluted Taps for Tripod Threads	⑦-29
RLS-HT	 Hand Taps for Camera Release Threads	⑦-30
HT TV	 Hand Taps for Automobile Tire Valve Threads	⑦-31
HT CTV	 Hand Taps for Bicycle Tire Valve Threads	⑦-33
HT CTC	 Hand Taps for Steel Conduit Threads	⑦-34
HT CTG	 Hand Taps for Thick Steel Conduit Threads	⑦-35
HT BC	 Hand Taps for Bicycle Threads	⑦-36
HT MST	 Hand Tap for Microscope Objective Lens	⑦-38
SL Tr	 Spiral flute tap for through hole for trapezoidal threads	⑦-39
SL LH Tr	 Spiral flute tap for through hole for trapezoidal threads, LH	⑦-40
SIT	 Simple Thread Inspection Tools	⑦-41
SITD	 Simple Thread Inspection Tools, Tandem Type	⑦-47
CPC-S	 Check Pins for Bored Hole in thread out tapping (Straight Type)	⑦-53
CPC-T	 Check Pins for Bored Holes in thread out tapping (Taper Type)	⑦-65
CPR-S	 Check Pins for Bored Hole in thread form tapping (Straight Type)	⑦-67
CPR-T	 Check Pins for Bored Holes in thread form tapping (Taper Type)	⑦-69
CPR-Y	 Check-Pins for Bored Holes in thread form tapping for R-Y taps	⑦-71
SA	 Shank Adjusters	⑦-73
ITRD	 Broken Tap Removal Tools	⑦-75

⑧ Pipe Tap Series











Rc	 ⑧-1 Hand Taps for Taper Pipe Threads	SU-PT	 ⑧-23 Hand Taps for Taper Pipe Threads Long (Ø g) Type, for Stainless Steels
PT	 ⑧-2 Hand Taps for Taper Pipe Threads, Long (Ø g) Type	SU-S-PT	 ⑧-24 Hand Taps for Taper Pipe Threads Short (Ø g) Type, for Stainless Steels
PT LH	 ⑧-3 Hand Taps for Taper Pipe Threads Long (Ø g) Type for LH Threads	SU-SP-PT	 ⑧-25 Spiral Fluted Taps for Taper Pipe Threads, Long (Ø g) Type for Stainless Steels
PT-X	 ⑧-4 X Series Hand Taps for Taper Pipe Threads Short (Ø g) Type	SU-SP-S-PT	 ⑧-26 Spiral Fluted Taps for Taper Pipe Threads Short (Ø g) Type for Stainless Steels
S-PT	 ⑧-5 Hand Taps for Taper Pipe Threads Short (Ø g) Type	FC-PT	 ⑧-27 Hand Taps for Taper Pipe Threads, Long (Ø g) Type, for Cast Irons
S-PT LH	 ⑧-6 Hand Taps for Taper Pipe Threads Short (Ø g) Type for LH Threads	FC-S-PT	 ⑧-28 Hand Taps for Taper Pipe Threads, Short (Ø g) Type, for Cast Irons
LS-PT	 ⑧-7 Long Shank Hand Taps for Taper Pipe Threads Long (Ø g) Type	CT-PT	 ⑧-29 Carbide Taps for Taper Pipe Threads, Long (Ø g) Type, for Cast Irons
LS-S-PT	 ⑧-8 Long Shank Hand Taps for Taper Pipe Threads, Short (Ø g) Type	CT-S-PT	 ⑧-30 Carbide Taps for Taper Pipe Threads, Short (Ø g) Type, for Cast Irons
SP-PT	 ⑧-9 Spiral Fluted Taps for Taper Pipe Threads, Long (Ø g) Type	Rp	 ⑧-31 Hand Taps for Parallel Pipe Threads
SP-S-PT	 ⑧-10 Spiral Fluted Taps for Taper Pipe Threads Short (Ø g) Type	PS	 ⑧-32 Hand Taps for Parallel Pipe Threads
SP-PT-X	 ⑧-11 X Series Spiral Fluted Taps for Taper Pipe Threads Short (Ø g) Type	PS LH	 ⑧-34 Hand Taps for Parallel Pipe Threads, for LH Threads
AUSP Rc	 ⑧-13 Z-PRO Series Spiral Fluted Taps for Taper Pipe Threads, Coated	LS-PS	 ⑧-35 Long Shank Hand Taps for Parallel Pipe Threads
LS-SP-PT	 ⑧-15 Long Shank Spiral Fluted Taps for Taper Pipe Threads, Long (Ø g) Type	SP-PS	 ⑧-36 Spiral Fluted Taps for Parallel Pipe Threads
LS-SP-S-PT	 ⑧-16 Long Shank Spiral Fluted Taps for Taper Pipe Threads, Short (Ø g) Type	LS-SP-PS	 ⑧-37 Long Shank Spiral Fluted Taps for Parallel Pipe Threads
INT-PT	 ⑧-17 Interrupted Taps for Taper Pipe Threads, Long (Ø g) Type	FC-PS	 ⑧-38 Hand Tap for Parallel Pipe Threads in Cast Iron
INT-S-PT	 ⑧-18 Interrupted Taps for Taper Pipe Threads, Short (Ø g) Type	AUSP Rp	 ⑧-39 Z-PRO Series Spiral Fluted Taps for Parallel Pipe Threads, Coated
LS-INT-PT	 ⑧-19 Long Shank Interrupted Taps for Taper Pipe Threads, Long (Ø g) Type	CT-PS	 ⑧-41 Carbide Taps for Parallel Pipe Threads
LS-INT-S-PT	 ⑧-20 Long Shank Interrupted Taps for Taper Pipe Threads, Short (Ø g) Type	G	 ⑧-42 Hand Taps for Parallel Pipe Threads
LC-PT	 ⑧-21 Hand Taps for Taper Pipe Threads Long (Ø g) Type, for Low Carbon Steels	PF	 ⑧-43 Hand Taps for Parallel Pipe Threads
LC-S-PT	 ⑧-22 Hand Taps for Taper Pipe Threads Short (Ø g) Type, for Low Carbon Steels	PF LH	 ⑧-45 Hand Taps for Parallel Pipe Threads, for LH Threads

⑨ Thread Mills

LS-PF	 ⑧-46 Long Shank Hand Taps for Parallel Pipe Threads
SP-PF	 ⑧-47 Spiral Fluted Taps for Parallel Pipe Threads
LS-SP-PF	 ⑧-48 Long Shank Spiral Fluted Taps for Parallel Pipe Threads
SU-PF	 ⑧-49 Hand Taps for Parallel Pipe Threads, for Stainless Steels
SU-SP-PF	 ⑧-50 Spiral Fluted Taps for Parallel Pipe Threads, for Stainless Steels
FC-PF	 ⑧-51 Hand Taps for Parallel Pipe Threads, for Cast Irons
AUSP G	 ⑧-53 Z-PRO Series Spiral Fluted Taps for Parallel Pipe Threads, Coated
CT-PF	 ⑧-55 Carbide Taps for Parallel Pipe Threads
NPT	 ⑧-56 Hand Taps for American Taper Pipe Threads
S-NPT	 ⑧-60 Hand Taps for American Taper Pipe Threads, Short (Ø g) Type
LS-NPT	 ⑧-61 Long Shank Hand Taps for American Taper Pipe Threads
SP-NPT	 ⑧-62 Spiral Fluted Taps for American Taper Pipe Threads
LS-SP-S-NPT	 ⑧-64 Long Shank Spiral Fluted Taps for American Taper Pipe Threads, Short (Ø g) Type
INT-NPT	 ⑧-65 Interrupted Taps for American Taper Pipe Threads
INT-S-NPT	 ⑧-67 Interrupted Taps for American Taper Pipe Threads, Short (Ø g) Type
NPTF	 ⑧-68 Hand Taps for American Dryseal Taper Pipe Threads
LS-NPTF	 ⑧-72 Long Shank Hand Taps for American Dryseal Taper Pipe Threads
NPS	 ⑧-73 Hand Taps for American Parallel Pipe Threads
NPSF	 ⑧-75 Hand Taps for American Dryseal Parallel Pipe Threads

MC-CSLC	 ⑨-1 Carbide Thread Mills for Metric Internal Threads
MC-CSLC	 ⑨-3 Carbide Thread Mills for Taper Pipe Threads
MC-CSLC	 ⑨-4 Carbide Thread Mills for Parallel Pipe Threads
MC-HLC	 ⑨-5 Thread Mills for Metric Internal Threads
MC-HLC	 ⑨-6 Thread Mills for Taper Pipe Threads
MC-HLC	 ⑨-7 Thread Mills for Parallel Pipe Threads
PRML	 ⑨-9 Z-PRO Series Premium Thread Mills
PRML TI	 ⑨-11 Z-PRO Series Premium Thread Mills for Heat-Resistant Alloys

⑩ Dies

D	 ⑩-1 Solid Round Dies
D LH	 ⑩-16 Solid Round Dies for Left Hand Threads
D PF	 ⑩-26 Solid Round Dies for Parallel Pipe Threads
D PF LH	 ⑩-27 Solid Round Dies for Parallel Pipe Threads, for Left Hand Threads
D NPSM	 ⑩-28 Solid Round Dies for American Parallel Pipe Threads
D PT	 ⑩-29 Solid Round Dies for Taper Pipe Threads
D PT LH	 ⑩-30 Solid Round Dies for Taper Pipe Threads, for Left Hand Threads
D NPT	 ⑩-31 Solid Round Dies for American Taper Pipe Threads
D NPTF	 ⑩-32 Solid Round Dies for American Dryseal Taper Pipe Threads
HS-D	 ⑩-33 HSS Dies for Auto Lathe for stainless steel