



# DRILLING

## Drilling Overview

X - Drill Inserts (SYMX)

Square Drill Inserts (SPMX)

Triagonal Drilling Inserts (WCMX)

Drill Holder

## Drilling Overview

### Drilling Grades

Drilling Grades	P Steel					M Stainless steel					K Cast iron				
	P05	P15	P25	P35	P45	M05	M15	M25	M35	M45	K05	K15	K25	K35	K45
PVD	YG713		713					713					713		
	YG602			602					602					602	
	YG613				613					613					

<b>YG713</b> P15 - P30 M15 - M30 K15 - K30 H20 - H30	PVD - TiAlN 	<b>Drilling Grade for General Steel Application</b> <ul style="list-style-type: none"> <li>Multi - layer TiAlN structure realizes stronger crater and flank wear resistance</li> <li>Fine - grained carbide and balanced substrate</li> </ul>
<b>YG602</b> P20 - P35 M20 - M40 K20 - K40 S15 - S25	PVD - TiAlN 	<b>Universal grade for General Drilling Application</b> <ul style="list-style-type: none"> <li>Ultra Dense PVD Coating with optimal thermal resistance &amp; strength</li> <li>Sub - Micron substrate designed for demanding application</li> </ul>
<b>YG613</b> P30 - P50 M30 - M50	PVD - TiAlN 	<b>Drilling Grade for Stainless Steel Application</b> <ul style="list-style-type: none"> <li>New coating layer with lubrication preventing built - up edge on ultra fine grain substrate with high toughness.</li> <li>The toughest substrate provides excellent cutting performance in stainless steel</li> </ul>

### Universal Drilling Inserts

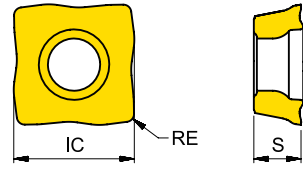
	4 Corner	SYMX Series <span style="color:red">NEW</span>	SYMX	05, 06, 07, 08
	4 Corner	SPMX Series	SPMX	05, 06, 07, 09, 11, 14
	ISO 3 Corner	WCMX Series	WCMX	03, 04, 05, 06, 08

### Drilling Chipbreakers

P	M	K		
	M		-ST	 • Sharp Geometry • Sticky Material, Stainless Steel
P	M	K	General Inserts (No Description)	 • First Choice for General Application

Drilling - Inserts  
**X - Drill Inserts (SYMX)**


Recommended Cutting Conditions : p.165



Series	IC	S
SYMX 0502	.196	.093
SYMX 0602	.236	.093
SYMX 07T2	.275	.110
SYMX 0803	.326	.126

EDP 3200..

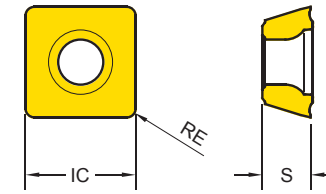
	P25 M25 K30	P20 M20 K20	P40 M40
YG602	●	●	●
YG713	●	●	●
YG613	●	●	●

SYMX	Designation	RE (inch)	Fn (inch/rev.)
	SYMX 050204	.016	.002~.005
	SYMX 060204	.016	.002~.005
	SYMX 07T206	.024	.002~.005
	SYMX 080306	.024	.003~.008

● : Stock item ○ : Order made item

Drilling - Inserts  
**Square Drill Inserts (SPMX)**



Recommended Cutting Conditions : p.165



Series	IC	S
SPMX 0502	.197	.094
SPMX 0602	.236	.095
SPMX 07T3	.313	.156
SPMX 0904	.386	.169
SPMX 1104	.453	.189
SPMX 1405	.563	.205

EDP 3200..

	P25 M25 K30	P20 M20 K20	P40 M40
YG602	●	●	●
YG713	●	●	●
YG613	●	●	●

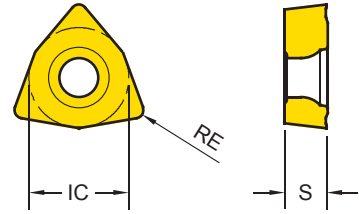
SPMX	Designation	RE (inch)	Fn (inch/rev.)
  	SPMX 050204	.016	.003~.006
	SPMX 060204	.016	.003~.006
	SPMX 07T308	.031	.003~.006
	SPMX 090408	.031	.003~.006
	SPMX 110408	.031	.004~.007
	SPMX 140512	.047	.004~.008
	SPMX 050204 - ST	.016	.001~.004
	SPMX 060204 - ST	.016	.002~.004
	SPMX 07T308 - ST	.031	.002~.004
	SPMX 090408 - ST	.031	.002~.005
	SPMX 110408 - ST	.031	.002~.005
	SPMX 140512 - ST	.047	.002~.006

● : Stock item ○ : Order made item



**Triagonal Drill Inserts (WCMX)**

Recommended Cutting Conditions : p.165



Series	IC	S
WCMX 0302	.219	.094
WCMX 0402	.250	.094
WCMX 0503	.313	.125
WCMX 06T3	.375	.156
WCMX 0804	.500	.187

EDP 3200..

P25	P20	P40
M25	M20	M40
K30	K20	M40

WCMX	Designation	RE (inch)	Fn (inch/rev.)	EDP 3200..		
				YG602	YG713	YG613
General	WCMX 030208	.031	.002~.005	●	●	
	WCMX 040208	.031	.002~.005	●	●	
	WCMX 050308	.031	.002~.006	●	●	
	WCMX 06T308	.031	.003~.006	●	●	
	WCMX 080412	.047	.003~.006	●	●	●

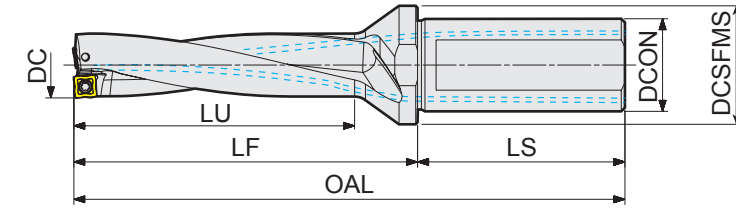
● : Stock item ○ : Order made item

☐ : p. 148 Unit: inch

\* Clamping Torque (Nm) 0.6Nm

**X - Drill Holder (SYM05) (DC .563 ~ .656)**

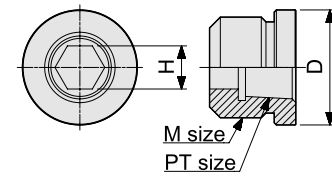
NEW



Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
.563	1.126	YGSY2 - 0.563S0.75 - 05I	1067	1.835	3.835	.75			
	1.689	YGSY3 - 0.563S0.75 - 05I	1083	2.398	4.398				
	2.252	YGSY4 - 0.563S0.75 - 05I	1099	2.961	4.961				
	2.815	YGSY5 - 0.563S0.75 - 05I	1115	3.524	5.524				
.591	1.182	YGSY2 - 0.591S0.75 - 05I	1068	1.935	3.935				
	1.773	YGSY3 - 0.591S0.75 - 05I	1084	2.529	4.529				
	2.364	YGSY4 - 0.591S0.75 - 05I	1100	3.123	5.123				
.626	2.955	YGSY5 - 0.591S0.75 - 05I	1116	3.717	5.717				
	1.252	YGSY2 - 0.626S0.75 - 05I	1069	2.037	4.037				
	1.878	YGSY3 - 0.626S0.75 - 05I	1085	2.663	4.663				
.656	2.504	YGSY4 - 0.626S0.75 - 05I	1101	3.287	5.287				
	3.13	YGSY5 - 0.626S0.75 - 05I	1117	3.913	5.913				
	1.312	YGSY2 - 0.656S0.75 - 05I	1070	2.099	4.099				
	1.968	YGSY3 - 0.656S0.75 - 05I	1086	2.756	4.756				
.656	2.624	YGSY4 - 0.656S0.75 - 05I	1102	3.411	5.411				
	3.28	YGSY5 - 0.656S0.75 - 05I	1118	4.067	6.067				

NEW  
**SYM050204**

**PLUG (DCON0.75)**



Designation	EDP No.	DCON	ØD	M size	PT size	H
PLUG M12 - 1/8	38000001	0.75	.55	M12x1.0	PT 1/8	.236

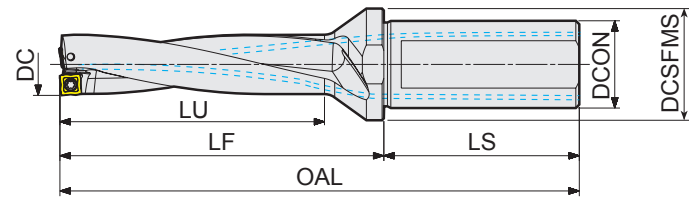
\* Plug for turning lathe should be ordered separately.

SYM05	Screw	Wrench
Description	TP062004 - GS	TPWFTP06
EDP	18000252	18000262

Plug	DCON	0.75	1.00	1.25
	Description	PLUG M12 - 1/8	PLUG M14 - 1/8	PLUG M22 - 1/4
EDP	38000001	38000002	38000003	

**X - Drill Holder (SYM06) (DC .689 ~ .813)**

NEW

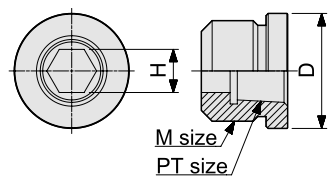


ⓐ: p. 148

Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
NEW SYM060204	.689	1.378	YGSY2 - 0.689S1.00 - 06I	0870	2.165	5.165	1.00	1.375	3.00
		2.067	YGSY3 - 0.689S1.00 - 06I	0875	2.854	5.854			
		2.756	YGSY4 - 0.689S1.00 - 06I	0880	3.543	6.543			
		3.445	YGSY5 - 0.689S1.00 - 06I	0885	4.232	7.232			
.719	1.438	YGSY2 - 0.719S1.00 - 06I	0871	2.265	5.265				
	2.157	YGSY3 - 0.719S1.00 - 06I	0876	2.984	5.984				
	2.876	YGSY4 - 0.719S1.00 - 06I	0881	3.703	6.703				
.75	3.595	YGSY5 - 0.719S1.00 - 06I	0886	4.422	7.422				
	1.5	YGSY2 - 0.750S1.00 - 06I	0872	2.327	5.327				
	2.157	YGSY3 - 0.750S1.00 - 06I	0877	3.077	6.077				
.781	2.876	YGSY4 - 0.750S1.00 - 06I	0882	3.827	6.827				
	3.595	YGSY5 - 0.750S1.00 - 06I	0887	4.577	7.577				
	1.562	YGSY2 - 0.781S1.00 - 06I	0873	2.467	5.467				
.813	2.343	YGSY3 - 0.781S1.00 - 06I	0878	3.248	6.248				
	3.124	YGSY4 - 0.781S1.00 - 06I	0883	4.030	7.030				
	3.905	YGSY5 - 0.781S1.00 - 06I	0888	4.811	7.811				
.813	1.626	YGSY2 - 0.813S1.00 - 06I	0874	2.531	5.531				
	2.439	YGSY3 - 0.813S1.00 - 06I	0879	3.344	6.344				
	3.252	YGSY4 - 0.813S1.00 - 06I	0884	4.157	7.157				
4.065	YGSY5 - 0.813S1.00 - 06I	0889	4.970	7.970					

**PLUG (DCON1.0)**



Designation	EDP No.	DCON	ØD	M size	PT size	H
PLUG M14 - 1/8	38000002	1.0	.630	M14x1.0	PT 1/8	.236

\* Plug for turning lathe should be ordered separately.

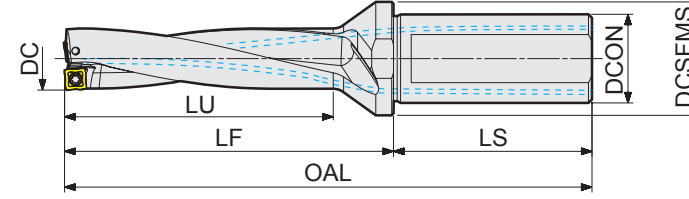
\* Clamping Torque (Nm) 0.7Nm

SYM06	Screw	Wrench
Description	TP072205 - GS	TPWFTP07
EDP	18000253	18000001

Plug	DCON	0.75	1.00	1.25
	Description	PLUG M12 - 1/8	PLUG M14 - 1/8	PLUG M22 - 1/4
EDP	38000001	38000002	38000003	

**X - Drill Holder (SYM07) (DC .843 ~ .906)**

NEW

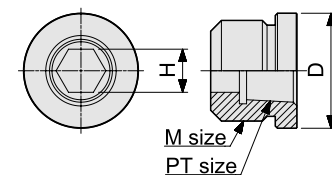


ⓐ: p. 148

Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
NEW SYM07T206	.843	1.686	YGSY2 - 0.843S1.00 - 07I	1071	2.591	5.591	1.00	1.375	3.00
		2.529	YGSY3 - 0.843S1.00 - 07I	1087	3.435	6.435			
		3.372	YGSY4 - 0.843S1.00 - 07I	1103	4.278	7.278			
		4.215	YGSY5 - 0.843S1.00 - 07I	1119	5.120	8.120			
		1.75	YGSY2 - 0.875S1.00 - 07I	1072	2.656	5.656			
.875	2.625	YGSY3 - 0.875S1.00 - 07I	1088	3.531	6.531				
	3.5	YGSY4 - 0.875S1.00 - 07I	1104	4.406	7.406				
	4.375	YGSY5 - 0.875S1.00 - 07I	1120	5.281	8.281				
.906	1.812	YGSY2 - 0.906S1.00 - 07I	1073	2.678	5.678				
	2.718	YGSY3 - 0.906S1.00 - 07I	1089	3.584	6.584				
	3.624	YGSY4 - 0.906S1.00 - 07I	1105	4.490	7.490				
	4.53	YGSY5 - 0.906S1.00 - 07I	1121	5.396	8.396				

**PLUG (DCON1.0)**



Designation	EDP No.	DCON	ØD	M size	PT size	H
PLUG M14 - 1/8	38000002	1.0	.630	M14x1.0	PT 1/8	.236

\* Plug for turning lathe should be ordered separately.

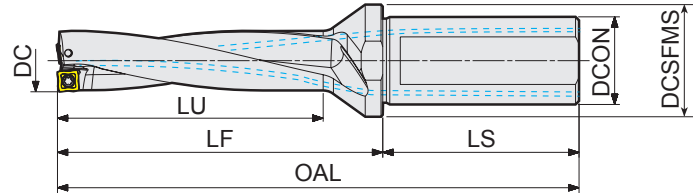
\* Clamping Torque (Nm) 0.7Nm

SYM07	Screw	Wrench
Description	TP072205 - GS	TPWFTP07
EDP	18000253	18000001

Plug	DCON	0.75	1.00	1.25
	Description	PLUG M12 - 1/8	PLUG M14 - 1/8	PLUG M22 - 1/4
EDP	38000001	38000002	38000003	

**X - Drill Holder (SYMXX08) (DC .937 ~ 1.063)**

NEW

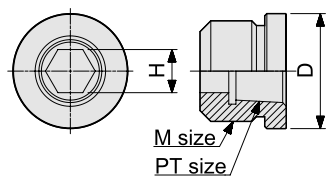


①: p. 148 Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
.937	1.874		YGSY2 - 0.937S1.25 - 08I	1074	2.740	5.990	1.25	1.625	3.25
	2.811		YGSY3 - 0.937S1.25 - 08I	1090	3.677	6.927			
	3.748		YGSY4 - 0.937S1.25 - 08I	1106	4.614	7.864			
	4.685		YGSY5 - 0.937S1.25 - 08I	1122	5.551	8.801			
.969	1.938		YGSY2 - 0.969S1.25 - 08I	1075	2.804	6.054			
	2.907		YGSY3 - 0.969S1.25 - 08I	1091	3.773	7.023			
	3.876		YGSY4 - 0.969S1.25 - 08I	1107	4.742	7.992			
.984	4.845		YGSY5 - 0.969S1.25 - 08I	1123	5.711	8.961			
	1.968		YGSY2 - 0.984S1.25 - 08I	1076	2.834	6.084			
	2.952		YGSY3 - 0.984S1.25 - 08I	1092	3.818	7.068			
1.000	3.936		YGSY4 - 0.984S1.25 - 08I	1108	4.802	8.052			
	4.92		YGSY5 - 0.984S1.25 - 08I	1124	5.786	9.036			
	2.000		YGSY2 - 1.000S1.25 - 08I	1077	2.866	6.116			
1.031	3.000		YGSY3 - 1.000S1.25 - 08I	1093	3.866	7.116			
	4.000		YGSY4 - 1.000S1.25 - 08I	1109	4.866	8.116			
	5.000		YGSY5 - 1.000S1.25 - 08I	1125	5.866	9.116			
1.063	2.062		YGSY2 - 1.031S1.25 - 08I	1078	2.928	6.178			
	3.093		YGSY3 - 1.031S1.25 - 08I	1094	3.920	7.170			
	4.124		YGSY4 - 1.031S1.25 - 08I	1110	4.990	8.240			
1.063	5.155		YGSY5 - 1.031S1.25 - 08I	1126	6.021	9.271			
	2.126		YGSY2 - 1.063S1.25 - 08I	1079	2.992	6.242			
	3.189		YGSY3 - 1.063S1.25 - 08I	1095	4.094	7.344			
	4.252		YGSY4 - 1.063S1.25 - 08I	1111	5.118	8.368			
5.315		YGSY5 - 1.063S1.25 - 08I	1127	6.181	9.431				

NEW  
SYMXX  
080306

**PLUG (DCON1.25)**



Designation	EDP No.	DCON	ØD	M size	PT size	H
PLUG M22 - 1/4	38000003	1.25	.945	M22x1.25	PT 1/4	.394

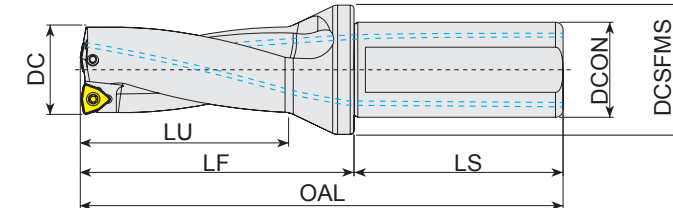
\* Plug for turning lathe should be ordered separately.

\* Clamping Torque (Nm) 1.2Nm

SYMXX08	Screw	Wrench
Description	TP072506 - GS	TPWFTP07
EDP	18000261	18000001

Plug	DCON	0.75	1.00	1.25
	Description	PLUG M12 - 1/8	PLUG M14 - 1/8	PLUG M22 - 1/4
	EDP	38000001	38000002	38000003

**Trigonal Drill Holder (WCMX03) (DC .750)**



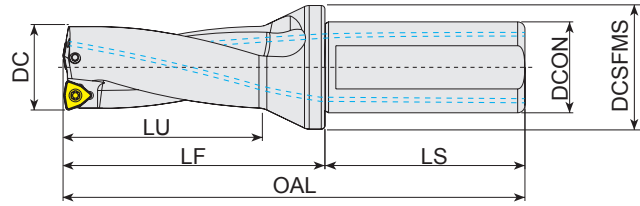
①: p. 150 Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
WCMX 030208	.750	2.250	YGWC3 - 0750S100F2250 - 03	0811	3.110	5.315	1.000	1.260	2.205
		3.750	YGWC5 - 0750S100F3750 - 03	0823	4.606	6.811			

WCMX03	Screw	Wrench
Description	T0622557	TWFT06
EDP	18000183	18000031

\* Clamping Torque (Nm) 0.6Nm

**Trigonal Drill Holder (WCMX04) (DC .8125 ~ .875)**

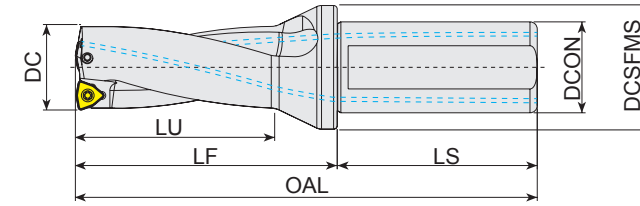


△: p. 150 Unit: inch

Series	DC	LU	Designation	EDP 370..	LF	OAL	DCON	DCSFMS	LS
<b>WCMX 040208</b>	.8125	2.433	YGWC3 - 0812S100F2433 - 04	0812	3.228	5.433	1.000	1.260	2.205
		4.055	YGWC5 - 0812S100F4055 - 04	0824	5.000	7.205			
	.875	2.624	YGWC3 - 0875S100F2624 - 04	0813	3.465	5.669			
		4.374	YGWC5 - 0875S100F4374 - 04	0825	5.197	7.402			

△: p. 150 Unit: inch

**Trigonal Drill Holder (WCMX05) (DC .937 ~ 1.125)**



Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
<b>WCMX 050308</b>	.937	2.811	YGWC3 - 0937S100F2811 - 05	0814	3.701	5.906	1.000	1.260	2.205
		4.685	YGWC5 - 0937S100F4685 - 05	0826	5.591	7.795			
	1.000	3.000	YGWC3 - 1000S100F3000 - 05	0815	3.819	6.024			
		5.000	YGWC5 - 1000S100F5000 - 05	0827	5.787	7.992			
	1.063	3.189	YGWC3 - 1063S100F3189 - 05	0816	4.055	6.260			
		5.315	YGWC5 - 1063S100F5135 - 05	0828	6.181	8.386			
	1.125	3.366	YGWC3 - 1125S100F3366 - 05	0817	4.173	6.378			
		5.610	YGWC5 - 1125S100F5610 - 05	0829	6.476	8.681			

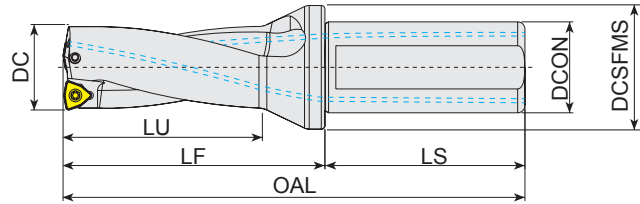
\* Clamping Torque (Nm) 1.2Nm

WCMX04	Screw	Wrench
Description	T072565D	TWFT07
EDP	18000184	18000032

\* Clamping Torque (Nm) 1.6Nm

WCMX05	Screw	Wrench
Description	T693072D	TWFT08
EDP	18000185	18000033

**Trigonal Drill Holder (WCMX06) (DC 1.250 ~ 1.750)**



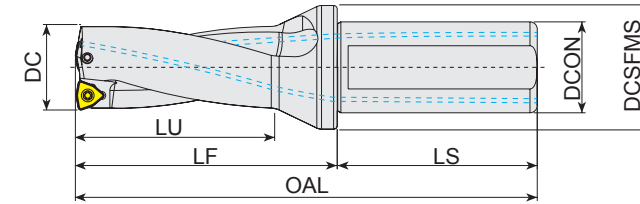
⊕: p. 150 Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
<b>WCMX 06T308</b>	1.250	3.750	YGWC3 - 1250S125F3750 - 06	0818	4.843	7.205	1.250	1.575	2.362
		6.250	YGWC5 - 1250S125F6250 - 06	0830	7.313	9.675			
	1.375	4.122	YGWC3 - 1375S125F4122 - 06	0819	5.197	7.559			
		6.870	YGWC5 - 1375S125F6870 - 06	0831	7.953	1.315			
	1.500	4.500	YGWC3 - 1500S125F4500 - 06	0820	5.551	7.913			
		7.500	YGWC5 - 1500S125F7500 - 06	0832	8.543	1.906			
	1.750	5.250	YGWC3 - 1750S125F5250 - 06	0821	6.260	8.622			
		8.750	YGWC5 - 1750S125F8750 - 06	0833	9.969	12.331			

\* Clamping Torque (Nm) 2.4Nm

WCMX06	Screw	Wrench
Description	T103588D	TWFT10
EDP	18000180	18000034

**Trigonal Drill Holder (WCMX08) (DC 2.000)**



⊕: p. 150 Unit: inch

Series	DC	LU	Designation	EDP 3700..	LF	OAL	DCON	DCSFMS	LS
<b>WCMX 080412</b>	2.000	6.000	YGWC3 - 2000S150F6000 - 08	0822	7.283	1.039	1.500	1.969	2.756
		10.000	YGWC5 - 2000S150F10000 - 08	0834	11.299	14.055			

\* Clamping Torque (Nm) 3.0Nm

WCMX08	Screw	Wrench
Description	T154011D	TWFT15
EDP	18000186	18000035