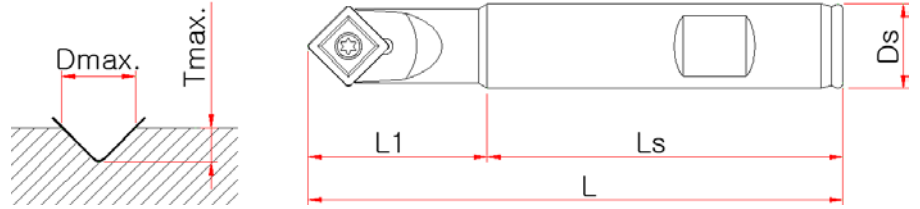


► **MS Drill will perform Multi-function, Multi-application**

- Spotting, Centering, Grooving, Chamfering, Engraving on CNC lathes, CNC turning centers and Machining centers.
- MS Drill comes with both single Item(Holder1pcs) and Packag(Holder1pcs + Insert 5pcs)



● **Holder**

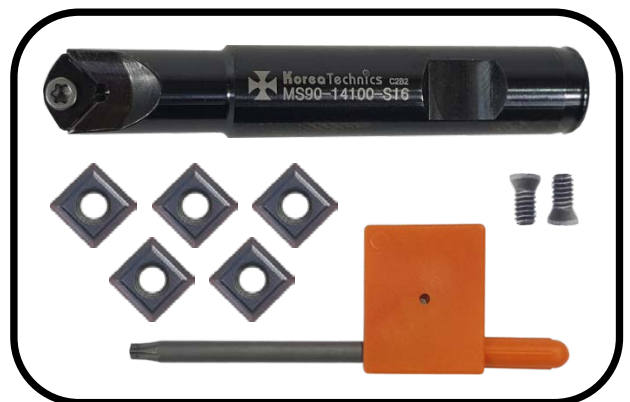
형번 Code No.	치수 Dimension(mm)						인서트 Insert	부품 Component	
	D max.	T max.	L1	L	Ds	Ls		Screw	Wrench
MS90-14100-S12	14	7	33	100	12	67	SKMX11T308 -MS	TSB-35078	TXL-15
MS90-14100-S16	14	7	35	100	16	65			
MS90-14150-S16	14	7	35	150	16	115			
MS90-14220-S20	14	7	40	220	20	180			

※T max. ► Centering, Spotting and Chamfering = 7mm(0.29") / Grooving = 5mm(0.20")

● **Insert**

형번 Code No.	치수 Dimension(mm)				피삭재 Workpiece			
	L	t	r	d				
SKMX11T308-MS	11	3.97	0.8	4.3	<b>P</b>	<b>M</b>	<b>K</b>	

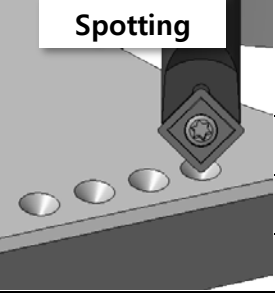
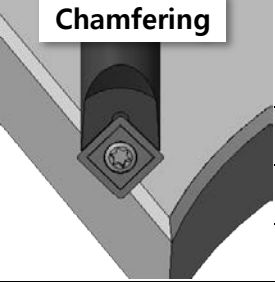
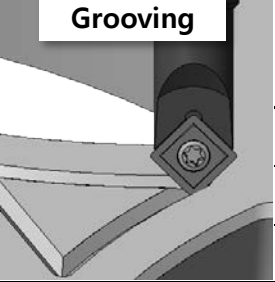
※Multi-Purpose (Steels, Stainless Steels, Cast irons, Heat resisting alloys)



● **MS-Package (Holder+Insert+Screw+Wrench)**

형번 Code No.	홀더 Holder (Quantity)	인서트 Insert (Quantity)	스크류 Screw (Quantity)	렌치 Wrench (Quantity)
MS90P-14100-S12	MS90-14100-S12 (1 pce.)	SKMX11T308-MS (5 pcs.)	TSB-35078 (2 pcs.)	TXL-15 (1 pce.)
MS90P-14100-S16	MS90-14100-S16 (1 pce.)	SKMX11T308-MS (5 pcs.)	TSB-35078 (2 pcs.)	TXL-15 (1 pce.)

**Recommended Cutting Values**

Application system	Workpiece	Vc		f	
		m/min	ft/min	mm/rev.	inch/rev.
 <b>Spotting</b>	<b>P</b> Carbon steel	130-230	430-750	0.05-0.10	0.002-0.004
		100-180	330-600	0.04-0.06	0.0015-0.002
	<b>M</b> Stainless steel	60-120	200-400	0.03-0.06	0.001-0.002
	<b>K</b> Casting iron	80-140	260-460	0.05-0.10	0.002-0.004
	<b>S</b> Ti, tl-alloy	40-80	130-260	0.03-0.06	0.001-0.002
 <b>Chamfering</b>	<b>P</b> Carbon steel	130-300	430-980	0.13-0.22	0.005-0.009
		100-230	330-750	0.12-0.20	0.004-0.008
	<b>M</b> Stainless steel	60-120	200-400	0.08-0.18	0.003-0.007
	<b>K</b> Casting iron	130-230	430-750	0.12-0.23	0.004-0.009
	<b>S</b> Ti, tl-alloy	40-80	130-260	0.03-0.08	0.001-0.003
 <b>Grooving</b>	<b>P</b> Carbon steel	130-230	430-750	0.05-0.10	0.002-0.004
		80-180	260-600	0.04-0.08	0.0015-0.003
	<b>M</b> Stainless steel	60-120	200-400	0.03-0.06	0.001-0.002
	<b>K</b> Casting iron	80-140	260-460	0.04-0.08	0.0015-0.003
	<b>S</b> Ti, tl-alloy	40-80	130-260	0.03-0.06	0.001-0.002

**Metric**

$$d = h \times \tan 45^\circ \times 2$$

$$S = \frac{Vc \times 1000}{\pi \times d}$$

$$F = S \times f$$

d = Diameter (mm)  
 h = Cutting Depth (mm)  
 S = Spindle Speed (r.p.m.)  
 Vc = Cutting Speed (m/min)  
 F = Feed Rate (mm/min)  
 f = Feed/Rev. (mm/rev)

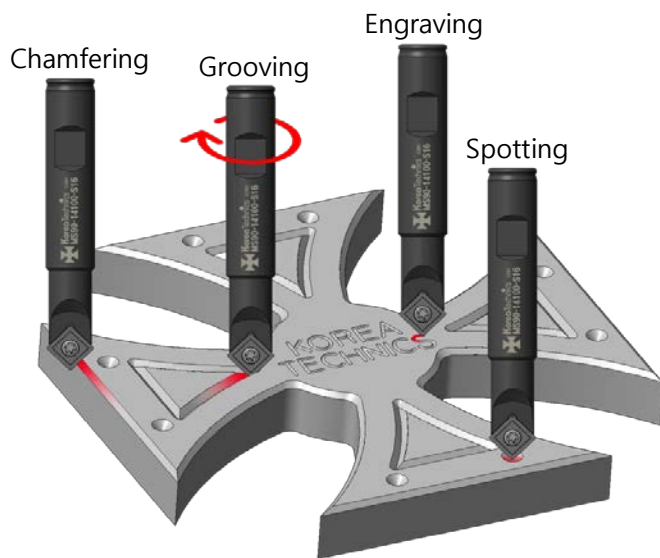
**Inch**

$$d = h \times \tan 45^\circ \times 2$$

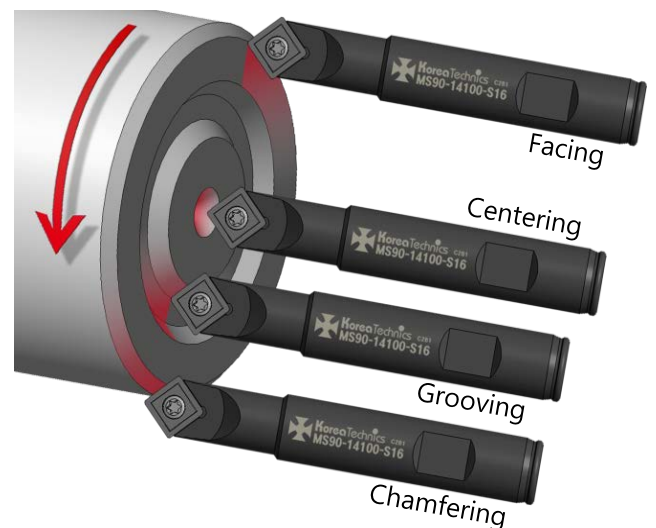
$$S = \frac{(3.82 \times \text{SFM})}{d}$$

$$F = f \times S$$

d = Diameter (Inch)  
 h = Cutting Depth (Inch)  
 S = Spindle Speed (r.p.m.)  
 SFM = Surface Speed (ft./min)  
 Vc (m/min) X 3.28  
 F = Feed Rate (Inch/min)  
 f = Inch/Rev. (IPR)



**Machining Center**



**CNC Lathes**