



METRIC - ISO 7045 PAN PHIL EXTERNAL TOOTH SEMS											ISO 7045	
Machine Screw Dimensions							External Tooth Lockwasher Dimensions					Phillips Driver Size
Nominal Size	Thread Pitch	A		H1		M	D		T1		T2	
		Head Diameter		Height of Head		Recess Diameter	Outside Diameter		Material Thickness		Free Height	
		Max	Min	Max	Min	Ref	Max	Min	Max	Min	Min	
M3	0.5	5.6	5.3	2.40	2.26	3	6.0	5.82	0.44	0.36	0.80	1
M4	0.7	8.00	7.64	3.10	2.92	4.4						2
Tolerance on Length				over 3mm to 6mm			± 0.24					
				over 6mm to 10mm			± 0.29					
				over 10mm to 18 mm			±0.35					

Description	A cross-recessed, pan head machine screw with a free-spinning, external tooth captive lockwasher.	
Applications/ Advantages	The washer/screw assembly makes this a locking screw with the washer providing the locking action. Machine pre-assembly provides cost savings to the end user. The external tooth variety offers greater torsional resistance than an internal tooth Sems.	
Component	<i>Screw</i>	<i>External Tooth Lockwasher</i>
Material	C1008 or equivalent carbon steel	C1050 Carbon Steel
Hardness	Rockwell B 67 minimum	410 - 490 HV 5
Tensile Strength	400 N/mm ² (applies to screws with a minimum nominal length of 2.5d (where d is the nominal diameter of the screw))	
Plating	Sems are available in a clear zinc finish and baked after plating.	