

CONICAL WASHERS SPERRKANT

The safety conical washers "SPERRKANT" produced by GROWERMETAL show a knurled ring on its contact surface with the screw's underhead which offers an high antiscrewing performance: these washers can be successfully used with bolts and screws of class 6.8, 8.8 and 10.9 in the following application fields:

- Electromechanical field
- Heavy mechanical sector
- Automotive
- General security connections

GROWERMETAL offers a complete range of Conical Washers "SPERRKANT" in order to solve different application problems:

- Medium Series "M" is meant for high performance connections with normal tightenings and screws of resistance class 8.8 and 10.9
- Large Series "L" is meant for very high performance connections with high tightenings and for screws of resistance class 10.9
- Small Series "S" is meant for supports having reduced spaces for screws of resistance class < 8.8
- Cylindric Series "C" is meant for cheese-head screws and socket head cap screws
- Toothed Series is meant for electrical connections of painted or coated surfaces for screws of resistance class 6.8, 8.8 and 10.9

Materials:

- Hardened spring steel C60 DIN EN 10132-4
- Hardness 420-510 Hv 10 after hardening and tempering-treatment
- Stainless Steel AISI 316 (Inox A4) DIN 17440 N° 1.4401 cold-rolled having high tensile strenght

Standard Surface Treatments:

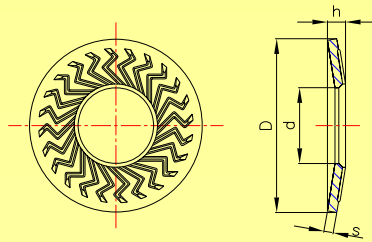
- Burnished and light oiled
- Phosphated
- Mechanical Zinc-plated Cr6 Free
- Geomet ®
- Delta Tone ®

Other surface treatments on special customer requests could be offered based on minimum invoicing amounts.

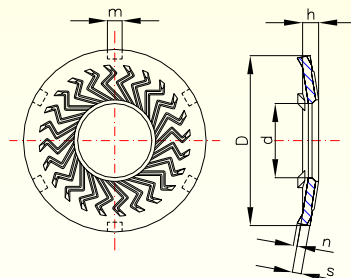


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For screws	d min-max	D min-max	s min-max	h min-max	Kg/1000 pieces	N° pieces standard packing	N. pieces bulk packing	N°pieces micro packing
MEDIUM Series "M"								
M 4.0	4,10 - 4,40	9,80 - 10,20	0,95 -1,05	1,25 - 1,50	0,470	2.000	25.000	500
M 5.0	5,10 - 5,40	11,80 - 12,20	1,16 -1,24	1,55 - 1,90	0,790	1.000	15.000	200
M 6.0	6,10 - 6,40	13,77 - 14,20	1,36 -1,44	1,85 - 2,20	1,240	1.000	10.000	200
M 8.0	8,20 - 8,56	17,68 - 18,20	1,36 -1,44	1,95 - 2,40	2,030	1.000	5.000	100
M 10.0	10,20 - 10,56	21,73 - 22,25	1,55 -1,65	2,25 - 2,75	3,490	1.000	3.000	100
M 12.0	12,40 - 12,83	26,73 - 27,25	1,75 -1,85	2,60 - 3,10	6,010	500	1.750	50
M 14.0	14,40 - 14,83	29,63 - 30,25	2,34 -2,46	3,20 - 3,70	9,370	250	1.000	
M 16.0	16,40 - 16,83	31,88 - 32,50	2,44 -2,56	3,45 - 3,95	10,650	250	900	
M 18.0	18,50 - 19,25	34,38 - 35,00	2,94 -3,06	4,00 - 4,50	15,200	250	750	
M 20.0	21,00 - 21,75	39,38 - 40,00	2,94 -3,06	4,20 - 4,70	20,400	100	500	
M 22.0	23,00 - 23,75	44,38 - 45,00	3,44 -3,56	4,80 - 5,30	30,400	100	400	
M 24.0	25,00 - 25,75	49,38 - 50,00	3,44 -3,56	5,10 - 5,60	38,200	100	350	
M 27.0	28,00 - 28,85	59,26 - 60,00	3,91 -4,09	6,10 - 6,60	69,000	50	200	
M 30.0	31,00 - 31,85	69,26 - 70,00	4,41 -4,59	7,30 - 7,80	109,000	50	125	
LARGE Series "L"								
M 6.0	6,10 - 6,40	17,68 - 18,20	1,36 -1,44	2,15 - 2,55	2,470	1.000	5.000	200
M 8.0	8,20 - 8,56	21,73 - 22,25	1,84 -1,96	2,60 - 3,00	4,880	1.000	2.500	100
M 10.0	10,20 - 10,56	26,73 - 27,25	2,34 -2,46	3,20 - 3,70	9,200	500	1.400	100
M 12.0	12,40 - 12,83	31,68 - 32,30	2,74 -2,86	4,10 - 4,60	14,620	250	1.000	50
SMALL Series "S"								
M 4.0	4,10 - 4,40	7,80 - 8,20	0,95 -1,05	1,15 - 1,40	0,270	2.000	50.000	500
M 5.0	5,10 - 5,40	9,80 - 10,20	0,95 -1,05	1,25 - 1,50	0,400	1.000	25.000	500
M 6.0	6,10 - 6,40	11,77 - 12,20	1,16 -1,24	1,55 - 1,85	0,707	1.000	12.500	500
M 8.0	8,20 - 8,56	15,77 - 16,20	1,36 -1,44	1,90 - 2,40	1,500	1.000	7.000	200
M 10.0	10,20 - 10,56	19,73 - 20,25	1,55 -1,65	2,10 - 2,60	2,640	1.000	3.500	200
M 12.0	12,40 - 12,83	23,73 - 24,25	1,55 - 1,65	2,20 - 2,70	3,870	500	2.750	100
CYLINDRIC Series "C"								
M 6.0	6,10 - 6,40	9,54 - 9,90	1,36 -1,44	1,50 - 1,80	0,500	1.000	25.000	500
M 8.0	8,20 - 8,56	12,34 - 12,70	1,36 -1,44	1,55 - 1,85	0,780	1.000	17.500	200
M 10.0	10,20 - 10,56	15,74 - 16,10	1,55 -1,65	1,85 - 2,20	1,420	1.000	8.000	200
M 12.0	12,40 - 12,83	17,78 - 18,30	1,75 -1,85	2,05 - 2,45	1,780	1.000	7.500	100
M 14.0	14,40 - 14,83	20,88 - 21,40	2,34 -2,46	2,70 - 3,10	3,190	1.000	3.750	100
M 16.0	16,40 - 16,83	24,08 - 24,60	2,44 -2,56	2,90 - 3,30	4,400	500	2.750	100



For screws	d min-max	D min-max	s min-max	h min-max	n min	m min-max	Kg/1000 Pieces	N° pieces standard packing	N. pieces bulk packing
TOOTHED Series									
M 4.0	4,10 - 4,40	7,80 - 8,20	0,97 -1,03	1,20 - 1,35	0,10	1,10 - 1,30	0,250	2.000	50.000
M 5.0	5,10 - 5,40	9,80 - 10,20	0,97 -1,03	1,25 - 1,50	0,30	1,90 - 2,10	0,410	1.000	22.000
M 6.0	6,10 - 6,40	11,80 - 12,20	1,16 -1,24	1,50 - 1,80	0,30	2,00 - 2,20	0,710	1.000	12.000
M 8.0	8,20 - 8,50	15,80 - 16,20	1,36 -1,44	1,95 - 2,40	0,30	2,00 - 2,20	1,500	1.000	6.500
M10.0	10,20 - 10,56	19,75 - 20,25	1,56 -1,64	2,15 - 2,60	0,30	2,00 - 2,20	2,680	1.000	3.500
M12.0	12,40 - 12,80	23,75 - 24,25	1,56 - 1,64	2,15 - 2,60	0,30	2,00 - 2,20	3,850	500	3.000