

<b>014.01</b>		<b>014.06</b>	
<b>014.02</b>		<b>014.07</b>	
<b>014.03</b>		<b>014.08</b>	
<b>014.04</b>		<b>014.09</b>	
<b>014.05</b>		<b>014.10</b>	

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- 049

(PN-M 82005)

DIN: 126

ZN: 981A

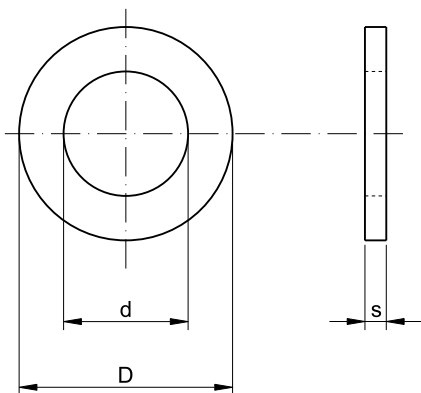
**014.01**

**PZ**

**Podkładka okrągła zgrubna**

**Шайба плоская черновая**

**Round washer**



M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M24	M30
●	●	●	●	●	●	●	●	●	●	●	●	●

	DIN 126			PN/M-82005		
	d	D	s	(d)	(D)	(s)
M3	3,2	7,0	0,5	3,2	7,0	0,5
M4	4,3	10,0	0,8	4,3	10,0	0,8
M5	5,5	10,0	1,0	5,3	10,0	1,0
M6	6,6	12,0	1,6	6,4	12,5	1,6
M8	9,0	16,0	1,6	8,4	17,0	1,6
M10	11,0	20,0	2,0	10,5	21,0	2,0
M12	13,5	24,0	2,5	13,0	24,0	2,5
M14	15,5	28,0	2,5	15,0	28,0	2,5
M16	17,5	30,0	3,0	17,0	30,0	3,0
M18	20,0	34,0	3,0	19,0	34,0	3,0
M20	22,0	37,0	3,0	21,0	37,0	3,0
M24	26,0	44,0	4,0	25,0	44,0	4,0
M30	33,0	56,0	4,0	33,0	56,0	4,0

014.01

**MARCOPOL**  
marka która łączy

# Podkładka okrągła do konstrukcji drewnianych

Шайба плоская для деревянных конструкций

Round washer for wooden constructions

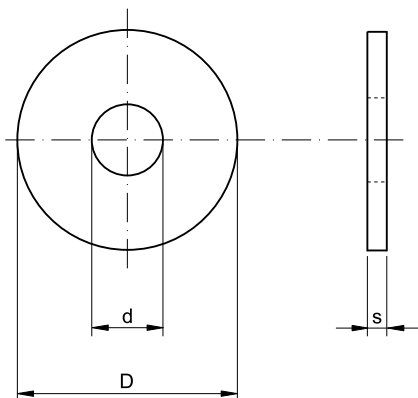
(PN-M 82019)

DIN: 440

ZN: 981B

014.02

PKD



M5	M6	M8	M10	M12	M14	M16	M20
●	●	●	●	●	●	●	●

	DIN 440			PN/M-82019		
	d	D	s	(d)	(D)	(s)
M5	5,5	18,0	2,0	5,5	18,0	2,0
M6	6,6	22,0	2,0	6,6	22,0	2,0
M8	9,0	28,0	3,0	9,0	28,0	3,0
M10	11,0	34,0	3,0	11,0	34,0	3,0
M12	13,5	44,0	4,0	14,0	45,0	4,0
M14	15,5	50,0	4,0	16,0	45,0	4,0
M16	17,5	56,0	5,0	18,0	58,0	5,0
M20	22,0	72,0	6,0	22,0	63,0	6,0



(PN-M 82030)

DIN: 9021

ZN: 981C

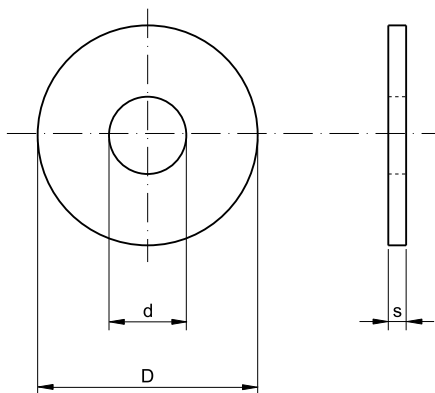
**014.03**

**PZP**

**Podkładka okrągła zgrubna powiększona**

**Шайба плоская черновая увеличенная**

**Enlarged round washer**



M3	M5	M6	M8	M10	M12	M14	M16	M20
●	●	●	●	●	●	●	●	●

	DIN 9021			PN/M-82030		
	d	D	s	(d)	(D)	(s)
M4	3,2	9,0	0,8	3,2	9,0	0,8
M4	4,3	12,0	1,0	4,3	12,0	1,2
M5	5,3	15,0	1,2	5,5	14,0	1,5
M6	6,4	18,0	1,6	6,5	18,0	1,5
M8	8,4	24,0	2,0	8,5	22,0	2,0
M10	10,5	30,0	2,5	10,5	28,0	2,3
M12	13,0	37,0	3,0	13,0	34,0	3,0
M14	15,0	44,0	3,0	15,0	38,0	4,0
M16	17,0	50,0	4,0	17,0	45,0	5,0
M20	22,0	60,0	4,0	21,0	52,0	6,0

014.03

**MARCOPOL**  
marka która łączy

**Podkładka sprężysta**  
**Шайба пружинная**  
**Spring washer**

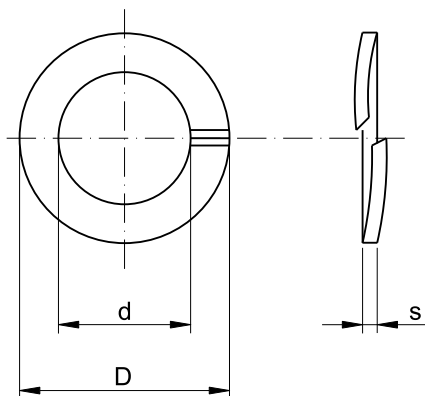
PN-78/M-82008

DIN: 127

ZN: 100A

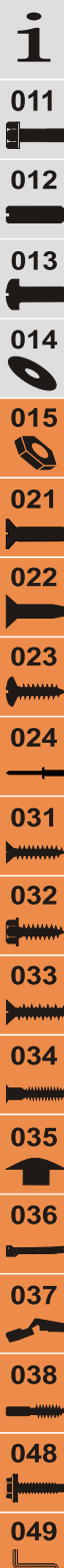
**014.04**

PS



M3	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24
●	●	●	●	●	●	●	●	●	●	●

	DIN 127			PN/M-82008			
	d	D	s		d	D	s
M3	3,1	5,38	0,8	M3	3,1	5,38	0,8
M4	4,1	6,88	1,0	M4	4,1	6,88	1,0
M5	5,1	8,28	1,2	M5	5,1	8,28	1,2
M6	6,1	9,78	1,4	M6	6,1	9,78	1,4
M8	8,2	13,08	2,0	M8	8,2	13,08	2,0
M10	10,2	16,02	2,5	M10	10,2	16,02	2,5
M12	12,2	19,2	3,0	M12	12,2	19,2	3,0
M14	14,2	21,7	3,2	M14	14,2	21,7	3,2
M16	16,3	24,4	3,5	M16	16,3	24,4	3,5
M20				M20	20,5	30,74	4,5
M24				M24	24,5	36,74	5,5



(PN-M 82023)

DIN: 6798J

ZN: 981F

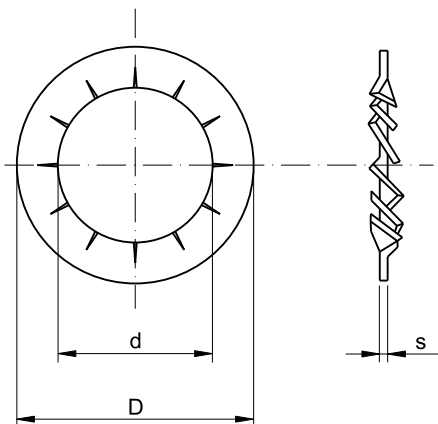
**014.05**

**PZW**

**Podkładka sprężysta ząbkowana wewnętrznie**

**Шайба пружинная с внутренним зубчатым венцом**

**Internally serrated spring washer**



M3	M4	M5	M6	M8	M10	M12
●	●	●	●	●	●	●

	d	D	s
M3	3,5	7,0	0,5
M4	4,3	8,0	0,5
M5	5,3	10,0	0,6
M6	6,4	11,0	0,7
M8	8,4	15,0	0,8
M10	10,5	18,0	0,9
M12	13,0	20,5	1,0

014.05

**MARCO POL**  
marka która łączy

# Podkładka sprężysta ząbkowana zewnętrznie

Шайба пружинная с внешним зубчатым венцом

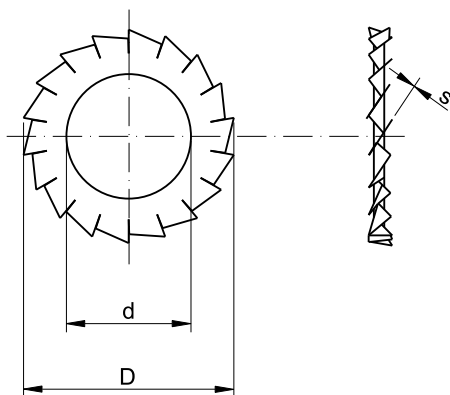
Externally serrated spring washer

DIN: 6798A

ZN: 981E

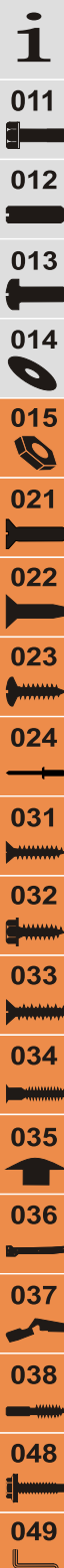
014.06

PZZ



M2	M2,5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
●	●	●	●	●	●	●	●	●	●	●	●	●

	d	D	s
M2	2,2	4,5	0,3
M2,5	2,7	5,1	0,4
M3	3,5	7,0	0,5
M4	4,3	8,0	0,5
M5	5,3	10,0	0,6
M6	6,4	11,0	0,7
M8	8,4	15,0	0,8
M10	10,5	19,0	0,9
M12	13,0	20,5	1,0
M14	15,0	24,0	1,0
M16	17,0	26,0	1,2
M18	19,0	30,0	1,4
M20	21,0	33,0	1,4



(PN-M 82025)

DIN: 6798V

ZN: 981G

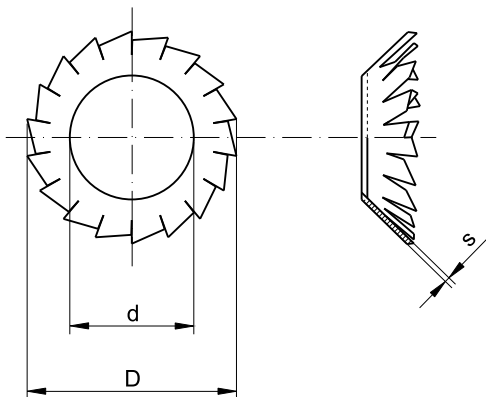
**014.07**

**PZS**

**Podkładka sprężysta stożkowa  
zabkowana zewnętrznie**

**Шайба пружинная коническая с внешним  
зубчатым венцом**

**Externally serrated countersunk spring washer**



M2,5	M3	M4	M5	M6	M8	M10	M12	M14	M16
●	●	●	●	●	●	●	●	●	●

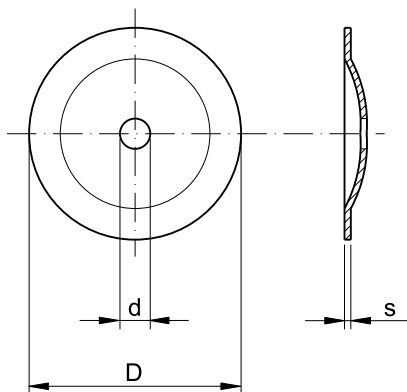
	d	D	s
M2,5	2,7	5,5	0,2
M3	3,2	6,0	0,2
M4	4,3	8,0	0,25
M5	5,3	10,0	0,3
M6	6,4	11,8	0,4
M8	8,4	15,3	0,4
M10	10,5	18,0	0,5
M12	13,0	20,5	0,5
M14	15,0	24,0	0,6
M16	17,0	26,0	0,6

**Podkładka papowa**  
**Шайба для толевых покрытий**  
Roofing washer

ZN: 981H

**014.08**

**PAP**



d	D	s
4,0	28,0	0,8

i

011



012



013



014



015



021



022



023



024



031



032



033



034



035



036



037



038



048



049



i

011



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048



049

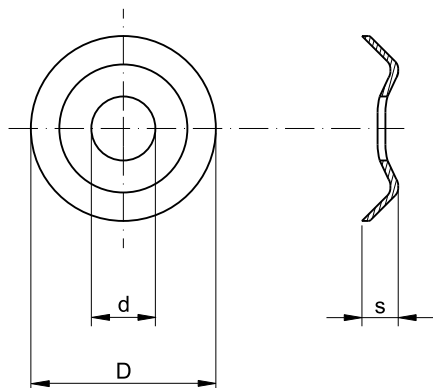


ZN: 9811	<b>014.09</b>
	PMI

**Podkładka miseczkowa**

**Шайба тарелчатая**

**Cup washer**



4,5	6,5

d	D	s
4,5	13,0	3,0
6,5	15,0	5,0

014.09

## Podkładka EPDM

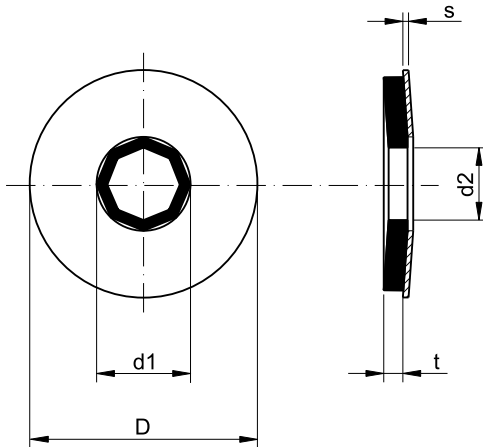
Шайба EPDM (с резиновой прокладкой)

EPDM washer

ZN: 893J

014.10

PEPDM



EPDM 12	EPDM 14	EPDM 16	EPDM 19
●	●	●	●

	d1	D	d2	s	t
EPDM 12	5,3	12,0	3,9	0,8	2,0
EPDM 14	5,5	14,0	3,9	0,8	2,0
EPDM 16	6,6	16,0	5,1	0,8	2,0
EPDM 19	6,6	19,0	5,1	0,8	2,0

i

011



012



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