



**FASTENERS FOR
INDUSTRY**

Ferrometal Oy

Location: Nurmijärvi, Finland.

Active articles 55.000 pcs.

Part of Würth Group since 1989.

Modern logistics to guarantee superior service level.

Quick and prompt deliveries.

Founded in 1976.

In the Baltic region, Ferrometal Oy is known as the industry-leading supplier of fasteners and other small accessories required for the assembly and installation of our customers' end products. Having the widest product range in the field ensures that the products required are quickly found and delivered to the customers' production facilities or work sites in a timely manner.

For our industrial customers, we offer logistics solutions tailored to their needs and utilising the latest technology. We are known for our Rfid-Kanban solutions, as well as for our ability to streamline the customers' small accessories logistics.

With regard to our retailers, in addition to the products, we offer the training and the expert assistance required for serving specialised customers. Our retail solutions specially designed for retailers allow them to save space and to display the products in an excellently visible manner.

In the field of construction, we offer compliant, high-quality products – everything from fasteners used in foundations to roof installation works. In addition to the certificates required and up-to-date expertise, our training courses ensure distribution of the latest expertise in the field, all the way to the installation works.

Our success is based on satisfied customers relying on our industry and product-related skills.

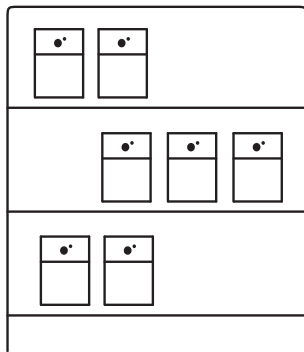
Ferrometal Oy. Fasteners For Professionals.



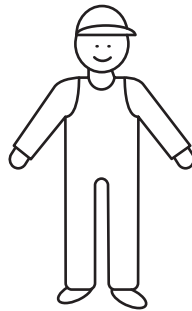


fm CLEVERBIN

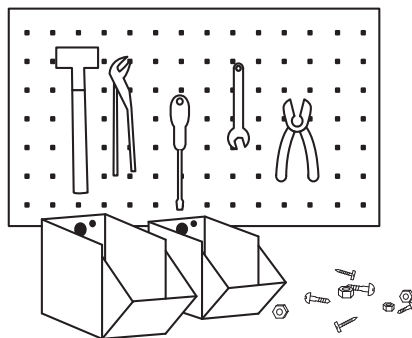
CLEVERBIN APPLICATIONS



SHELVES



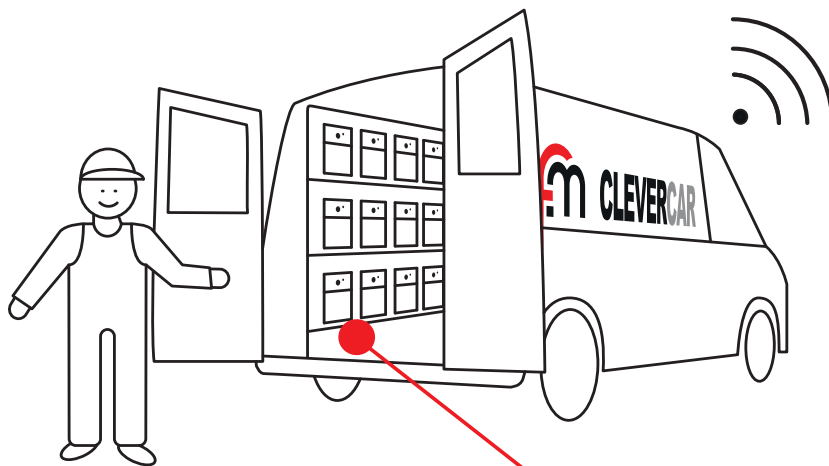
SERVICE CAR



WORKSTATION

CLEVERCAR

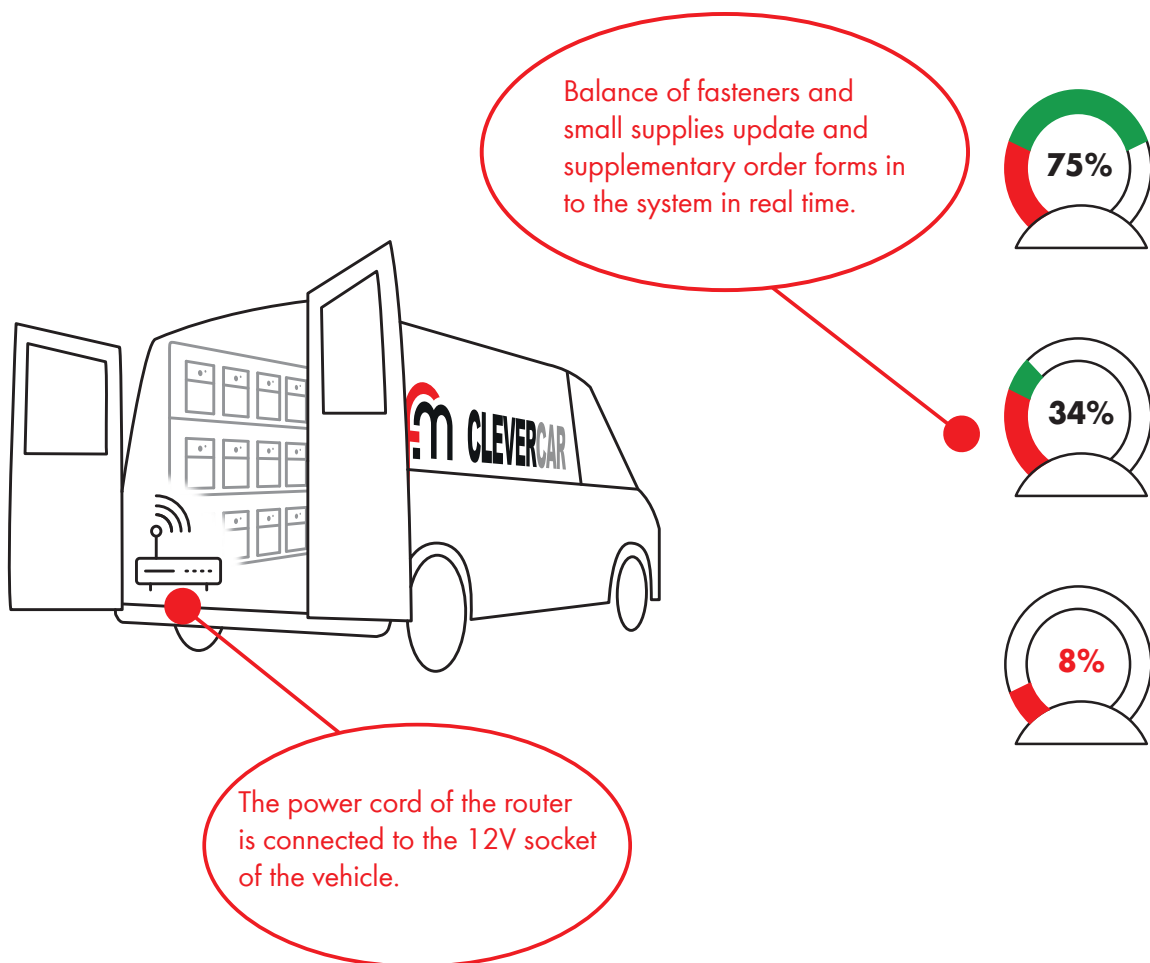
PRODUCT BINS IN A SERVICE CAR



Small supplies come with you conveniently to a job site in CleverBin bins.

CLEVERCAR

ORDERS IN REAL TIME



Wide range of hex screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon screw, full thread



DIN 933, stainless A2-70

- **Material :** Stainless steel A2
- **DIN :** 933
- **ISO :** 4017
- **Drive type :** Outer hexagon
- **Property class :** 70
- **Head type :** Hexagon head



DIN 933, acid proof A4-80

- **Material :** stainless steel A4
- **Coating :** Uncoated
- **DIN :** 933
- **ISO :** 4017
- **Drive type :** Outer hexagon
- **Property class :** 80
- **Head type :** Hexagon head



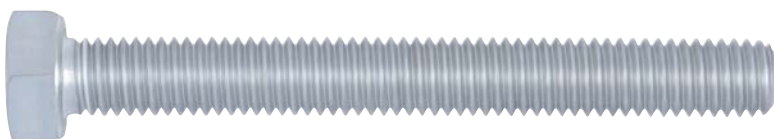
DIN 933, steel 8.8U, hot dip galvanised

- **Material :** Steel
- **Coating :** Hot dip galvanised
- **DIN :** 933
- **ISO :** 4017
- **Drive type :** Outer hexagon
- **Property class :** 8,8
- **Head type :** Hexagon head
- **Tensile strength :** 800 N/mm²



DIN 933, steel 10.9, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 933
- **ISO :** 4017
- **Drive type :** Outer hexagon
- **Property class :** 10,9
- **Head type :** Hexagon head
- **Tensile strength :** 1000 N/mm²



DIN 933, steel 8.8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 933
- **ISO :** 4017
- **Drive type :** Outer hexagon
- **Property class :** 8,8
- **Head type :** Hexagon head
- **Tensile strength :** 800 N/mm²

Wide range of hex screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon screw, partial thread



DIN 931, stainless A2-70

- **Material :** Stainless steel A2
- **Coating :** Uncoated
- **DIN :** 931
- **ISO :** 4014
- **Drive type :** Outer hexagon
- **Property class :** 70
- **Head type :** Hexagon head



DIN 931, acid proof A4-80

- **Material :** Stainless steel A4
- **Coating :** Uncoated
- **DIN :** 931
- **ISO :** 4014
- **Drive type :** Outer hexagon
- **Property class :** 80
- **Head type :** Hexagon head



DIN 931, steel 8.8U, hot dip galvanised

- **Material :** Steel
- **Coating :** Hot dip galvanised
- **DIN :** 931
- **ISO :** 4014
- **Drive type :** Outer hexagon
- **Property class :** 8,8
- **Head type :** Hexagon head
- **tensile strength :** 800 N/mm²



DIN 931, steel 10.9, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 931
- **ISO :** 4014
- **Drive type :** Outer hexagon
- **Property class :** 10,9
- **Head type :** Hexagon head
- **Tensile strength :** 1000 N/mm²



DIN 931, steel 8.8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 931
- **ISO :** 4014
- **Head type :** Hexagon
- **property class :** 8,8
- **Head type :** Hexagon head
- **Tensile strenght :** 800 N/mm²

Wide range of socket screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Socket screws, cylinder head



DIN 912, acid proof A4-80

- **Material :** Stainless steel A4
- **Coating :** Uncoated
- **DIN :** 912
- **ISO :** 4762
- **Drive type :** Hexagon socket
- **Head type :** Socket head
- **Property class :** 80



DIN 912, steel 12.9, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 912
- **ISO :** 4762
- **Drive type :** Hexagon socket
- **Head type :** Socket head
- **Property class :** 12,9



DIN 912, steel 8.8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 912
- **ISO :** 4762
- **Drive type :** Hexagon socket
- **Head type :** Socket head
- **Property class :** 8,8

Wide range of socket screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon socket screw, round pan head

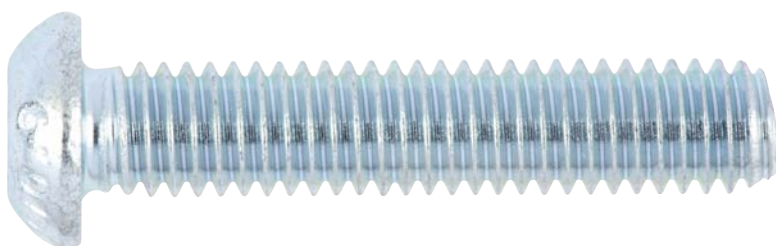
ISO 7380-1, stainless steel A2-070

- **Material :** Stainless steel A2
- **Coating :** Uncoated
- **Drive type :** Hexagon socket
- **Property class :** 070
- **Head type :** Button head



ISO 7380-1, steel 010.9, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **ISO :** 7380-1
- **Drive type :** Hexagon socket
- **Property class :** 010.9
- **Head type :** Button head



Wide range of socket screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon socket screw, countersunk head



DIN 7991, stainless A4

- **Head type** : Countersunk head
- **Material** : Stainless steel A4
- **DIN** : 7991
- **ISO** : 10642
- **Drive type** : Hexagon socket
- **Property class** : 070



DIN 7991, steel 010.9, uncoated

- **head type** : Countersunk head
- **Material** : Steel
- **DIN** : 7991
- **ISO** : 10642
- **Drive type** : Hexagon socket
- **Property class** : 010.9



DIN 7991, steel 010.9, zinc-electroplated

- **Head type** : Countersunk head
- **Material** : Steel
- **Coating** : Zinc plated
- **DIN** : 7991
- **ISO** : 10642
- **Drive type** : Hexagon socket
- **Property class** : 010.9

Wide range of square neck bolts directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Square neck bolts with round head



DIN 603, acid proof steel A4.

- **Material :** Stainless steel A4
- **Coating :** Uncoated
- **DIN :** 603
- **Head details :** With square neck
- **Property class :** 50
- **Head type :** Cup head square neck



DIN 603 property class 4.6/4.8, electro zinc plated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 603
- **Head details :** With square neck
- **Property class :** 4.6/4.8
- **Head type :** Cup head square neck



DIN 603, property class 8.8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 603
- **Head details :** With square neck
- **Property class :** 8,8
- **Head type :** Cup head square neck
- **Tensile strength :** 800 N/mm²

Wide range of hex screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon screw partial thread, fine thread

DIN 960, property class 10,9, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 960
- **ISO :** 8765
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **Property class :** 10,9
- **Head type :** hexagon head
- **Tensile strength :** 1000 N/mm²



DIN 960, property class 8,8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 960
- **ISO :** 8765
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **property class :** 8,8
- **Head type :** Hexagon head



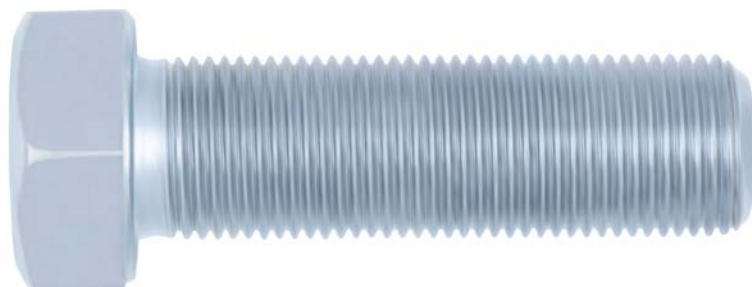
DIN 960, steel 10,9, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 960
- **ISO :** 8765
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **Property class :** 10,9
- **Head type :** Hexagon head
- **Tensile strength :** 1000 N/mm²



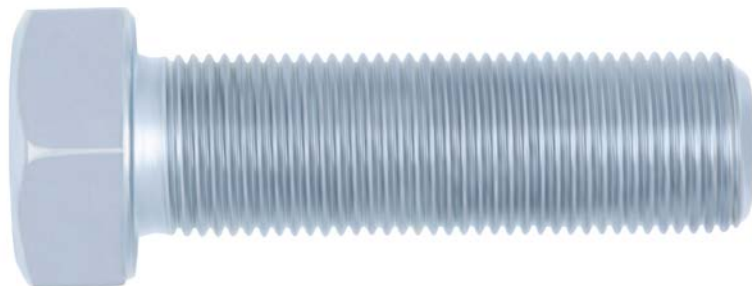
Wide range of hex screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon screw full thread, fine thread



DIN 961, property class 8,8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 961
- **ISO :** 8676
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **Property class :** 8,8
- **Head type :** hexagon head
- **Tensile strength :** 800 N/mm²



DIN 961, property class 10,9, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 961
- **ISO :** 8676
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **property class :** 10,9
- **Head type :** Hexagon head



DIN 961, steel 8,8, uncoated

- **Pitch :** 1,5 mm
- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 961
- **ISO :** 8676
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **Property class :** 8,8
- **Head type :** hexagon head
- **Tensile strength :** 800 N/mm²



DIN 961, steel 10,9, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 961
- **ISO :** 8676
- **Drive type :** Outer hexagon
- **Thread type :** Metric thread
- **Property class :** 10,9
- **head type :** Hexagon head
- **Tensile strength :** 1000 N/mm²

Wide range of hex screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

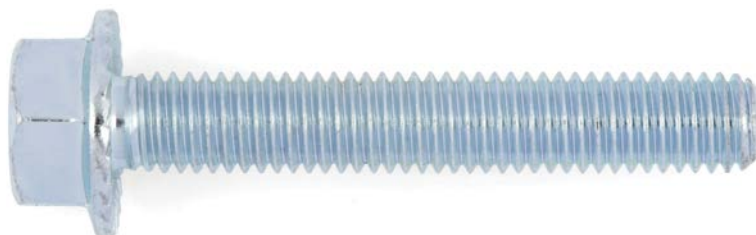
Hexagon screw with flange



DIN 6921, property class 8,8, zinc-electroplated.

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 6921
- **ISO :** 4162
- **Drive type :** Outer hexagon
- **Collar/flange :** Yes
- **Property class :** 8,8
- **Head type :** Hexagon head, flange

Hexagon screw with flange and teeth



DIN 6921, property class 8,8, zinc-electroplated.

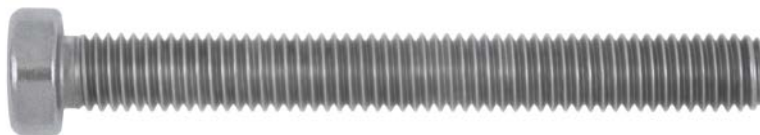
- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 6921
- **ISO :** 4162
- **Head type :** Outer hexagon
- **Collar/flange :** Yes
- **property class :** 8,8
- **Head type :** hexagon head, flange

Wide range of socket screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Hexagon socket screw, flat cylinder head

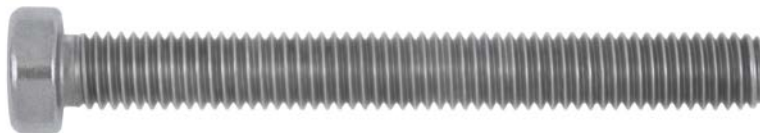
DIN 7984, acid proof A4.

- **Material :** Stainless steel A4
- **Coating :** Uncoated
- **DIN :** 7984
- **Drive type :** hexagon socket
- **Head type :** Socket low head



DIN 7984, stainless A2-070.

- **Material :** Stainless steel A2
- **Coating :** Uncoated
- **DIN :** 7984
- **Drive type :** Hexagon socket
- **Head type :** Socket low head



DIN 7984, steel 08,8, uncoated

- **Material :** Steel
- **Coating :** Uncoated
- **DIN :** 7984
- **Drive type :** hexagon socket
- **Property class :** 08,8
- **Head type :** Socket low head



DIN 7984, steel 08,8, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 7984
- **Drive type :** hexagon socket
- **property class :** 08,8
- **Head type :** Socket low head



Wide range of round head screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Pan head screw, Tx head



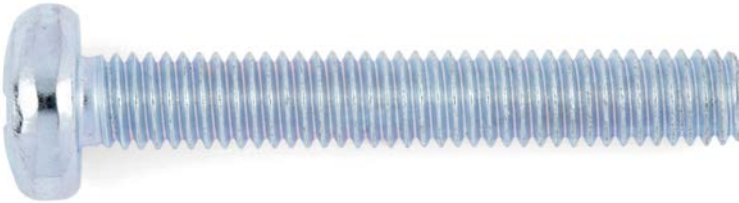
DIN 7985, stainless A2, Tx head.

- **Material :** Stainless steel A2
- **DIN :** 7985
- **ISO :** 14583



DIN 7985, acid proof A4, Tx head

- **Material :** Stainless steel A4
- **DIN :** 7985
- **ISO :** 14583



DIN 7985, zinc-electroplated, Tx head.

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 7985
- **ISO :** 14583

Wide range of round head screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Pan head screw, Pz head



DIN 7985, stainless A2, Pz head.

- **Material :** Stainless steel A2
- **DIN :** 7985
- **ISO :** 7045



DIN 7985, acid proof A4, Pz head

- **Material :** Stainless steel A4
- **DIN :** 7985
- **ISO :** 7045



DIN 7985, zinc-electroplated, Pz head

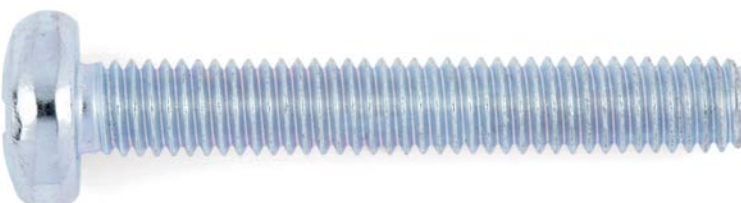
- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 7985
- **ISO :** 7045

Pan head screw, Ph head



DIN 7985, stainless A2, Ph head

- **Material :** Stainless steel A2
- **DIN :** 7985
- **ISO :** 7045



DIN 7985, zinc-electroplated, Ph head

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 7985
- **ISO :** 7045

Wide range of slotted head screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Slotted screw countersunk head, Tx head



DIN 965, steel 4,8, zinc plated, Tx head.

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 965
- **ISO :** 14581

Slotted screw countersunk head, Pz head



DIN 965, stainless A2, Pz head

- **Material :** Stainless steel A2
- **DIN :** 965
- **ISO :** 7046



DIN 965, stainless steel A4, Pz head

- **Material :** Stainless steel A4
- **DIN :** 965
- **ISO :** 7046

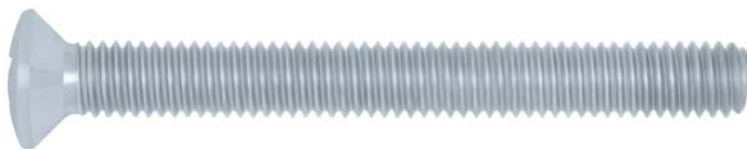


DIN 965, steel 4,8, zinc plated, Pz head

- **Material :** Steel
- **DIN :** 965
- **ISO :** 7046

Wide range of slotted head screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Slotted screw oval head, Pz head



DIN 966, acid proof A4, Pz head

- **Material:** Stainless steel A4
- **DIN:** 966
- **ISO:** 7047



DIN 966, zinc-electroplated, Pz head

- **Material:** Steel
- **DIN:** 966
- **ISO:** 7047

Slotted screw oval head, Ph head

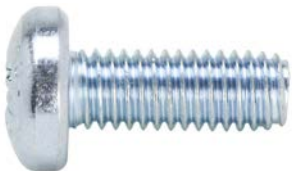


DIN 966, zinc-electroplated, Ph head

- **Material:** Steel
- **DIN:** 966
- **ISO:** 7047

Wide range of tapping screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

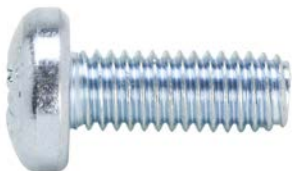
Tapping screw round pan head, Pz head



DIN 7500-C, steel, zinc-electroplated, Pz head

- **Materiali :** Steel
- **Coating :** Zinc plated
- **DIN :** 7500
- **Head type :** Pan head

Tapping screw round pan head, Tx head



DIN 7500-C, steel, zinc-electroplated, Tx head

- **Materiali :** Steel
- **Coating :** Zinc plated
- **DIN :** 7500
- **head type :** Pan head

Tapping screw, hexagon head with flange



DIN 7500-D, steel, zinc-electroplated

- **Material :** Steel
- **Coating :** Zinc plated
- **DIN :** 7500
- **Form :** DE
- **Head type :** Hexagon head with flange

Wide range of tapping screws directly from stock. Range and availability as well as technical information from the Fm Shop www.ferrometal.fi or from our sales tel. +358 10-308 4500/sales@ferrometal.fi

Tapping screw, countersunk head, Pz head



DIN 7500-M, steel, zinc-electroplated, Pz head

- **Material:** Steel
- **Coating:** Zinc plated
- **DIN:** 7500
- **Form:** ME
- **Head type:** Countersunk head

Tapping screw, countersunk head, Tx head



DIN 7500-M, steel, zinc-electroplated, Tx head

- **Material:** Steel
- **Coating:** Zinc plated
- **DIN:** 7500
- **Form:** ME
- **Head type:** Countersunk head





fix master

Hexagon nut, A2-70

DIN 934 (~ISO 4032), A2-70, stainless

- **Material :** Stainless steel A2
- **Surface :** Plain
- **DIN :** 934
- **Property class :** 70

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
60084	M4	M4	0.7 mm	WS7	3.2 mm	4032	0.81 g	7.66 mm
60085	M5	M5	0.8 mm	WS8	4 mm	4032	1.1 g	8.79 mm
60086	M6	M6	1 mm	WS10	5 mm	4032	2.2 g	11.05 mm
60088	M8	M8	1.25 mm	WS13	6.5 mm	4032	4.8 g	14.38 mm
600810	M10	M10	1.5 mm	WS17	8.4 mm		11 g	14.38 mm
600812	M12	M12	1.75 mm	WS19	10.8 mm		15 g	21.1 mm
600814	M14	M14	2 mm	WS22	12.8 mm		25 g	24.69 mm
600816	M16	M16	2 mm	WS24	14.8 mm	4032	29 g	26.75 mm
600820	M20	M20	2.5 mm	WS30	16 mm	4032	57 g	32.95 mm
600824	M24	M24	3 mm	WS36	19 mm	4032	110 g	39.55 mm
600830	M30	M30	3.5 mm	WS46	24 mm	4032	223 g	50.85 mm



fix master

Hexagon nut

DIN 934 (~ISO 4032), A4-80, acid-proof

- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** 934
- **Property class :** 80

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)
1008014		M14	2 mm		11 mm		22 g
100804	M4	M4	0.7 mm		3.2 mm	4032	0.67 g
100805	M5	M5	0.8 mm		4 mm	4032	1.1 g
100806	M6	M6	1 mm		5 mm	4032	2.2 g
100808	M8	M8	1.25 mm	WS13	6.5 mm	4032	4.8 g

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)
1008010	M10	M10	1.5 mm		8 mm		10.4 g
1008012	M12	M12	1.75 mm		10 mm		15.5 g
1008016	M16	M16	2 mm		13 mm	4032	30.29 g
1008020	M20	M20	2.5 mm		16 mm	4032	56.5 g
1008024	M24	M24	3 mm		19 mm	4032	110 g
1008030	M30	M30	3.5 mm		24 mm	4032	223 g
1008036	M36	M36	4 mm		29 mm	4032	371 g



fix master

Hexagon nut

DIN 934-8, strength class 8, hot dip galvanized

- **Material :** Steel
- **Surface :** Hot dip galvanized
- **DIN :** 934
- **Property class :** I8I

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
53176	M6	M6	1 mm	WS10	4.9 mm	4032	2.2 g	11.05 mm
53178	M8	M8	1.25 mm	WS13	6.5 mm	4032	4.8 g	14.38 mm
531710	M10	M10	1.5 mm	WS17	8 mm		11.6 g	18.9 mm
531712	M12	M12	1.75 mm	WS19	10 mm		17.3 g	21.1 mm
531716	M16	M16	2 mm	WS24	13 mm		33.3 g	26.75 mm
531720	M20	M20	2.5 mm	WS30	16 mm	4032	54.3 g	32.95 mm
531724	M24	M24	3 mm	WS36	19 mm	4032	110 g	39.55 mm
531727	M27	M27	3 mm	WS41	22 mm	4032	148 g	45.2 mm
531730	M30	M30	3.5 mm	WS46	24.3 mm	4032	223 g	50.85 mm
531733	M33	M33	3.5 mm	WS50	27.4 mm	4032	288 g	55.37 mm
531736	M36	M36	4 mm	WS55	29.4 mm	4032	393 g	60.79 mm
531739	M39	M39	4 mm	WS60	31.8 mm	4032	502 g	66.96 mm
531742	M42	M42	4.5 mm	WS65	32.4 mm	4032	584.2 g	72.09 mm
531745	M45	M45	4.5 mm	WS70	34.4 mm	4032	800 g	76.95 mm
531748	M48	M48	5 mm	WS75	36.4 mm	4032	977 g	82.6 mm



Hexagon nut

DIN 934 (~ISO4032), strength class 8, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 934

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
03172	M2	M2	0.4 mm	WS4	1.6 mm	4032	0.14 g	4.38 mm
031725	M2,5	M2.5	0.45 mm	WS5	2 mm	4032	0.28 g	5.45 mm
03173	M3	M3	0.5 mm	WS5.5	2.4 mm	4032	0.38 g	6.01 mm
031735	M3,5	M3.5	0.6 mm	WS6	2.8 mm	4032	0.51 g	6.58 mm
03174	M4	M4	0.7 mm	WS7	3.2 mm	4032	0.7 g	7.66 mm
03175	M5	M5	0.8 mm	WS8	4 mm	4032	1.23 g	8.79 mm
03176	M6	M6	1 mm	WS10	5 mm	4032	2.5 g	11.05 mm
03178	M8	M8	1.25 mm	WS13	6.5 mm	4032	4.8 g	14.38 mm
03178 1	M8/1,0	M8	1 mm	WS13	6.5 mm	4032	5.2 g	14.38 mm
031710	M10	M10	1.5 mm	WS17	8 mm		11.6 g	18.9 mm
031710 1	M10/1	M10	1 mm	WS17	8 mm		10.9 g	18.9 mm
031712	M12	M12	1.75 mm	WS19	10 mm		16 g	21.1 mm
031712 1	M12/1,0	M12	1 mm	WS19	10 mm		17.3 g	21.1 mm
031712 125	M12/1,25	M12	1.25 mm	WS19	10 mm		17.3 g	21.1 mm
031712 15	M12/1,5	M12	1.5 mm	WS19	10 mm		17.3 g	21.1 mm
031714	M14	M14	2 mm	WS22	11 mm		25 g	24.49 mm
031714 15	M14/1,5	M14	1.5 mm	WS22	11 mm		25 g	24.49 mm
031716	M16	M16	2 mm	WS24	13 mm	4032	33.3 g	26.75 mm
031716 15	M16/1,5	M16	1.5 mm	WS24	13 mm	4032	23.3 g	26.75 mm
031718	M18	M18	2.5 mm	WS27	15 mm	4032	49.4 g	29.56 mm
031718 15	M18/1,5	M18	1.5 mm	WS27	15 mm	4032	49.4 g	29.56 mm
031720	M20	M20	2.5 mm	WS30	16 mm	4032	56 g	32.95 mm
031720 15	M20/1,5	M20	1.5 mm	WS30	16 mm	4032	64.4 g	32.95 mm
031722	M22	M22	2.5 mm	WS32	18 mm		79 g	35.03 mm
031722 15	M22/1,5	M22	1.5 mm	WS32	18 mm		67 g	35.03 mm
031724	M24	M24	3 mm	WS36	19 mm	4032	110 g	39.55 mm
031724 15	M24/1,5	M24	1.5 mm	WS36	19 mm	4032	100 g	39.55 mm
031724 2	M24/2,0	M24	2 mm	WS36	19 mm	4032	89 g	39.55 mm
031727	M27	M27	3 mm	WS41	22 mm	4032	146.5 g	45.2 mm
031727 2	M27/2,0	M27	2 mm	WS41	22 mm	4032	165 g	45.2 mm
031730	M30	M30	3.5 mm	WS46	24 mm	4032	223 g	50.85 mm
031730 15	M30/1,5	M30	1.5 mm	WS46	24 mm	4032	190 g	50.85 mm
031730 2	M30/2	M30	2 mm	WS46	24 mm	4032	195.4 g	50.85 mm
031733	M33	M33	3.5 mm	WS50	26 mm	4032	288 g	55.37 mm
031736	M36	M36	4 mm	WS55	29 mm	4032	350 g	60.79 mm
031736 15	M36/1,5	M36	1.5 mm	WS55	29 mm	4032	334 g	60.79 mm
031736 3	M36/3	M36	3 mm	WS55	29 mm	4032	347 g	60.79 mm

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
031739	M39	M39	4 mm	WS60	31 mm	4032	455 g	66.96 mm
031742	M42	M42	4.5 mm	WS65	34 mm	4032	584.2 g	72.09 mm
031742 3	M42/3,0	M42	3 mm	WS65	34 mm	4032	584.2 g	72.09 mm
031745	M45	M45	4.5 mm	WS70	34.3 mm	4032	800 g	76.95 mm
031745 3	M45/3,0	M45	3 mm	WS70	34.3 mm	4032	739 g	76.95 mm
031748	M48	M48	5 mm	WS75	38 mm	4032	977 g	82.6 mm
031748 3	M48X3	M48	3 mm	WS75	38 mm	4032	977 g	82.6 mm



Hexagon nut

DIN 934-10 (~ISO 4032), strength class 10, uncoated

- **Material :** Steel
- **Surface :** Plain
- **DIN :** 934
- **Property class :** 10.10

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)
03206	M6	M6	1 mm	WS10	5 mm	4032	2 g
03208	M8	M8	1.25 mm	WS13	6.5 mm	4032	4.8 g
032010	M10	M10	1.5 mm	WS17	8 mm		11.6 g
032010 1	M10/1,0	M10	1 mm	WS17	8 mm		10.5 g
032012	M12	M12	1.75 mm	WS19	10 mm		15.2 g
032012 125	M12/1,25	M12	1.25 mm	WS19	10 mm		10 g
032014	M14	M14	2 mm	WS22	11 mm		22 g
032016	M16	M16	2 mm	WS24	13 mm	4032	33.3 g
032016 15	M16/1,5	M16	1.5 mm	WS24	13 mm	4032	28.6 g
032018 15	M18/1,5	M18	1.5 mm	WS27	15 mm	4032	1 g
032020	M20	M20	2.5 mm	WS30	16 mm	4032	57.1 g
032020 15	M20/1,5	M20	1.5 mm	WS30	16 mm	4032	54.1 g
032024	M24	M24	3 mm	WS36	19 mm	4032	100 g
032027	M27	M27	3 mm	WS41	22 mm	4032	165 g
032030	M30	M30	3.5 mm	WS46	24 mm	4032	206.6 g
032030 2	M30X2	M30	2 mm	WS46	24 mm	4032	198 g
032036	M36	M36	4 mm	WS55	29 mm	4032	379 g
032042	M42	M42	4.5 mm	WS65	34 mm	4032	584.2 g



Hexagon nut

DIN 934-12 (~ISO 4032), strength class 12, uncoated

- **Material :** Steel
- **Surface :** Plain
- **DIN :** 934
- **Property class :** 12

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
03218	M8 -12	M8	1.25 mm	WS13	6.5 mm	4032	5 g	14.3 mm
032110	M10 -12	M10	1.5 mm	WS17	8 mm		11.6 g	18.9 mm
032112	M12 -12	M12	1.75 mm	WS19	10 mm		17.3 g	26.5 mm
032116	M16 -12	M16	2 mm	WS24	13 mm	4032	31.04 g	26.8 mm
032118	M18 -12	M18	2.5 mm	WS27	15 mm	4032	44 g	29.5 mm
032120	M20 -12	M20	2.5 mm	WS30	16 mm	4032	55.2 g	33 mm
032124	M24 -12	M24	3 mm	WS36	19 mm	4032	98 g	39.5 mm
032130	M30 -12	M30	3.5 mm	WS46	24 mm	4032	223 g	50.85 mm
032136	M36 -12	M36	4 mm	WS55	39 mm	4032	393 g	60.79 mm



Hexagon nut

DIN 934-12 (~ISO 4032), strength class 8, uncoated

- **Material :** Steel
- **Surface :** Plain
- **DIN :** 934
- **Property class :** 8

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
03105	M5	M5	0.8 mm	WS8	4 mm	4032	1.23 g	8.79 mm
03106	M6	M6	1 mm	WS10	5 mm	4032	2.5 g	11.05 mm
03108	M8	M8	1.25 mm	WS13	6.5 mm	4032	5.2 g	14.38 mm
031010	M10	M10	1.5 mm	WS17	8 mm		11.6 g	18.9 mm
031012	M12	M12	1.75 mm	WS19	10 mm		15 g	21.1 mm
031016	M16	M16	2 mm	WS24	13 mm	4032	33.3 g	26.75 mm
031020	M20	M20	2.5 mm	WS30	16 mm	4032	64.4 g	32.95 mm

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	ISO	Product weight (per item)	Width across corners
031022	M22	M22	2.5 mm	WS32	18.1 mm		79 g	35.03 mm
031024	M24	M24	3 mm	WS36	19 mm	4032	110 g	39.55 mm
031027	M27	M27	3 mm	WS41	22 mm	4032	165 g	45.2 mm
031030	M30	M30	3.5 mm	WS46	24 mm	4032	206.2 g	50.85 mm
031033	M33	M33	3.5 mm	WS50	26 mm	4032	288 g	55.37 mm
031033 2	M33/2	M33	2 mm	WS50	26 mm	4032	279 g	55.37 mm
031036	M36	M36	4 mm	WS55	29 mm	4032	400 g	60.79 mm
031036 3	M36X3	M36	3 mm	WS55	29 mm	4032	200 g	60.79 mm
031039	M39	M39	4 mm	WS60	33.4 mm	4032	502 g	66.44 mm
031042	M42	M42	4.5 mm	WS65	34 mm	4032	584.2 g	71.3 mm
031045	M45	M45	4.5 mm	WS70	34.3 mm	4032	800 g	76.95 mm
031045 3	M45X3	M45	3 mm	WS70	34.3 mm	4032	800 g	76.95 mm
031048	M48	M48	5 mm	WS75	38 mm	4032	870 g	82.6 mm
031048 3	M48/3	M48	3 mm	WS75	38 mm	4032	862 g	82.6 mm



PAL locking nut

DIN 7967, zinc-electroplated

- **Material :** Spring steel
- **Surface :** Zinc plated
- **DIN :** 7967

Art. No.	Type description	Thread type x nominal diameter	External drive	Height	Product weight (per item)
03168	M8	M8	WS13	3.5 mm	0.9 g
031610	M10	M10	WS17	4 mm	1.4 g
031612	M12	M12	WS19	4.5 mm	1.9 g
031614	M14	M14	WS22	5 mm	0.1 g
031616	M16	M16	WS24	5 mm	3.4 g
031620	M20	M20	WS30	6 mm	5.8 g
031624	M24	M24	WS36	7 mm	9.5 g
031630	M30	M30	WS46	8 mm	17.5 g
031636	M36	M36	WS55	9 mm	28.75 g



Hexagon nut, nylon locking

DIN 985, A2, stainless steel

- **Material :** Stainless steel A2
- **Surface :** Plain
- **DIN :** 985
- **ISO :** 10511
- **Version**

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
20113		M3	0.5 mm	WS5.5	4 mm	17.8 g	6.01 mm	1.65 mm
20114	M4	M4	0.7 mm	WS7	5 mm	0.8 g	7.66 mm	2.2 mm
20115	M5	M5	0.8 mm	WS8	5 mm	1.4 g	8.79 mm	2.75 mm
20116	M6	M6	1 mm	WS10	6 mm	2.4 g	11.05 mm	3.3 mm
20118	M8	M8	1.25 mm	WS13	8 mm	4.8 g	14.38 mm	4.4 mm
201110	M10	M10	1.5 mm	WS17	10 mm	10 g	18.9 mm	5.5 mm
201112	M12	M12	1.75 mm	WS19	12 mm	15 g	21.1 mm	6.6 mm
201114	M14	M14	2 mm	WS22	14 mm	26 g	24.49 mm	7.7 mm
201116	M16	M16	2 mm	WS24	16 mm	36 g	26.75 mm	8.8 mm
201120	M20	M20	2.5 mm	WS30	20 mm	65 g	32.95 mm	11 mm
201122	M22	M22	2.5 mm	WS32	22 mm	107.3 g	35.03 mm	12.2 mm
201124	M24	M24	3 mm	WS36	24 mm	108.6 g	39.55 mm	13.2 mm



Hexagon nut, nylon locking

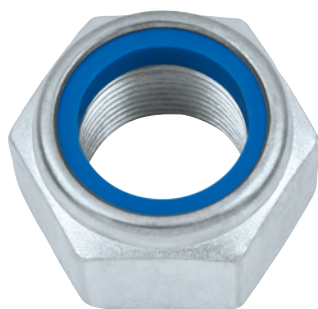
DIN 985, A4, acid-proof steel

- When connecting a screw and the nut, the thread in the screw tightens thanks to a plastic ring. The locking force between the thread profiles generates a tightening torque that maintains the pretension force thanks to a great friction grip.
- Does not harm the surface of the thread
- Can be used in the following temperatures : -70 °C...+120 °C

- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** 985
- **ISO :** 10511
- **Version**

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
10113	M3	M3	0.5 mm	WS5.5	4 mm	0.7 g	6.01 mm	1.65 mm
10114	M4	M4	0.7 mm	WS7	5 mm	21.6 g	7.66 mm	2.2 mm

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
10115	M5	M5	0.8 mm	WS8	5 mm	0.9 g	8.79 mm	2.75 mm
10116	M6	M6	1 mm	WS10	6 mm	2 g	11.05 mm	3.3 mm
10118	M8	M8	1.25 mm	WS13	8 mm	4.8 g	14.38 mm	4.4 mm
101110	M10	M10	1.5 mm	WS17	10 mm	10 g	18.9 mm	5.5 mm
101112	M12	M12	1.75 mm	WS19	12 mm	15 g	21.1 mm	6.6 mm
101114	M14	M14	2 mm	WS22	14 mm	23 g	24.49 mm	7.7 mm
101116	M16	M16	2 mm	WS24	16 mm	31 g	26.75 mm	8.8 mm
101120	M20	M20	2.5 mm	WS30	20 mm	65 g	32.95 mm	11 mm
101124	M24	M24	3 mm	WS36	24 mm	95 g	39.55 mm	13.2 mm
101130	M30	M30	3.5 mm	WS46	30 mm	155 g	50.85 mm	16.5 mm



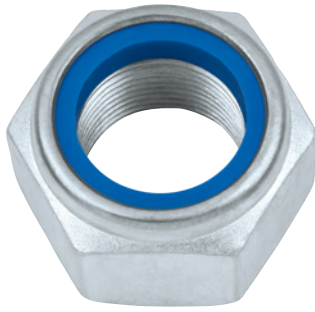
Hexagon nut, nylon locking

DIN 985, strength class 10, zinc-coated

- When connecting a screw and the nut, the thread in the screw tightens thanks to a plastic ring. The locking force between the thread profiles generates a tightening torque that maintains the pretension force thanks to a great friction grip.
- Does not harm the surface of the thread
- Can be used in the following temperatures : -70 °C...+120 °C

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 985
- **ISO :** 10511
- **Property class :** 1101
- **Version**

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
036808	M8	M8	1.25 mm	WS13	8 mm	4.95 g	14.38 mm	4.4 mm
0368010	M10	M10	1.5 mm	WS17	10 mm	11.08 g	18.9 mm	5.5 mm
0368010125	M10X1,25	M10	1.25 mm	WS17	10 mm	11 g	18.9 mm	5.5 mm
0368012	M12	M12	1.75 mm	WS19	12 mm	15 g	21.1 mm	6.6 mm
0368014	M14	M14	2 mm	WS22	14 mm	24 g	24.49 mm	7.7 mm
0368016	M16	M16	2 mm	WS24	16 mm	30 g	26.75 mm	8.8 mm
0368018	M18	M18	2.5 mm	WS27	18.5 mm	45 g	29.56 mm	9.9 mm
036801815	M18X1,5	M18	1.5 mm	WS27	18.5 mm	45 g	29.56 mm	9.9 mm
0368020	M20	M20	2.5 mm	WS30	20 mm	65 g	32.95 mm	11 mm
0368024	M24	M24	3 mm	WS36	24 mm	98 g	39.55 mm	13.2 mm
036802415	M24/1,5	M24	1.5 mm	WS36	24 mm	92 g	39.55 mm	13.2 mm
0368027	M27	M27	2 mm	WS41	27 mm	165 g	45.2 mm	14.8 mm
0368030	M30	M30	2.5 mm	WS46	30 mm	227.7 g	50.85 mm	16.5 mm
036803015	M30X1,5	M30	1.5 mm	WS46	30 mm	202.6 g	50.85 mm	16.5 mm



Hexagon nut, nylon locking

DIN 985, strength class 8, zinc-coated

- When connecting a screw and the nut, the thread in the screw tightens thanks to a plastic ring. The locking force between the thread profiles generates a tightening torque that maintains the pretension force thanks to a great friction grip.
- Does not harm the surface of the thread
- Can be used in the following temperatures : -70 °C...+120 °C

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 985
- **ISO :** 10511
- **Property class :** I8I
- **Version**

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
03683	M3	M3	0.5 mm	WS5,5	4 mm	0.42 g	6.01 mm	1.65 mm
03684	M4	M4	0.7 mm	WS7	5 mm	0.9 g	7.66 mm	2.2 mm
03685	M5	M5	0.8 mm	WS8	5 mm	1.4 g	8.79 mm	2.75 mm
03686	M6	M6	1 mm	WS10	6 mm	2.4 g	11.05 mm	3.3 mm
03688	M8	M8	1.25 mm	WS13	8 mm	4.7 g	14.38 mm	4.4 mm
03688 1	M8/1	M8	1 mm	WS13	8 mm	4.6 g	14.38 mm	4.4 mm
036810	M10	M10	1.5 mm	WS17	10 mm	10.6 g	18.9 mm	5.5 mm
036810 1	M10/1	M10	1 mm	WS17	10 mm	10.6 g	18.9 mm	5.5 mm
036810 125	M10/1,25	M10	1.25 mm	WS17	10 mm	10.6 g	18.9 mm	5.5 mm
036812	M12	M12	1.75 mm	WS19	12 mm	17.2 g	21.1 mm	6.6 mm
036812 125	M12/1,25	M12	1.25 mm	WS19	12 mm	17.2 g	21.1 mm	6.6 mm
036812 15	M12/1,5	M12	1.5 mm	WS19	12 mm	16 g	21.1 mm	6.6 mm
036814	M14	M14	2 mm	WS22	14 mm	26 g	24.49 mm	7.7 mm
036814 15	M14/1,5	M14	1.5 mm	WS22	14 mm	26 g	24.49 mm	7.7 mm
036816	M16	M16	2 mm	WS24	16 mm	34 g	26.75 mm	8.8 mm
036816 15	M16/1,5	M16	1.5 mm	WS24	16 mm	34 g	26.75 mm	8.8 mm
036818	M18	M18	2.5 mm	WS27	18.5 mm	46.5 g	29.56 mm	9.9 mm
036818 15	M18/1,5	M18	1.5 mm	WS27	18.5 mm	45 g	29.56 mm	9.9 mm
036820	M20	M20	2.5 mm	WS30	20 mm	60.4 g	32.95 mm	11 mm
036820 15	M20/1,5	M20	1.5 mm	WS30	20 mm	65 g	32.95 mm	11 mm
036822	M22	M22	2.5 mm	WS32	22 mm	71.7 g	35.03 mm	12.2 mm
036824	M24	M24	3 mm	WS36	24 mm	97.6 g	39.55 mm	13.2 mm
036824 15	M24/1,5	M24	1.5 mm	WS36	24 mm	101 g	39.55 mm	13.2 mm
036824 2	M24/2	M24	2 mm	WS36	24 mm	10 g	39.55 mm	13.2 mm
036827	M27	M27	2 mm	WS41	27 mm	162 g	45.2 mm	14.8 mm
036827 2	M27X2	M27	2 mm	WS41	27 mm	12.5 g	45.2 mm	14.8 mm
036830	M30	M30	3.5 mm	WS46	30 mm	212 g	50.85 mm	16.5 mm
036830 2	M30X2	M30	2 mm	WS46	30 mm	50 g	50.85 mm	16.5 mm
036833	M33	M33	3.5 mm	WS50	33 mm	317 g	55.37 mm	18.2 mm
036836	M36	M36	4 mm	WS55	36 mm	415 g	60.79 mm	19.8 mm
036839	M39	M39	4 mm	WS60	39 mm	499 g		
036842	M42	M42	4.5 mm	WS65	42 mm	628 g	72.09 mm	23.1 mm



Hexagon nut, low

DIN 936, zinc-coated steel

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 936
- **ISO :** 4035
- **Hardness category :** 17H
- **Property class :** 04

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners
03198	M8	M8	1.25 mm	WS13	5 mm	4 g	14.38 mm
031910	M10	M10	1.5 mm	WS17	6 mm	8.3 g	18.9 mm
031910 125	M10/1,25	M10	1.25 mm	WS17	6 mm	6.4 g	18.9 mm
031912	M12	M12	1.75 mm	WS19	7 mm	12.1 g	21.1 mm
031912 125	M12/1,25	M12	1.25 mm	WS19	7 mm	12 g	21.1 mm
031912 15	M12/1,5	M12	1.5 mm	WS19	7 mm	10 g	21.1 mm
031914	M14	M14	2 mm	WS22	8 mm	18.2 g	24.49 mm
031914 15	M14/1,5	M14	1.5 mm	WS22	8 mm	16 g	24.49 mm
031916	M16	M16	2 mm	WS24	8 mm	21 g	26.75 mm
031918	M18	M18	2.5 mm	WS27	9 mm	29.6 g	29.56 mm
031918 15	M18/1,5	M18	1.5 mm	WS27	9 mm	24.1 g	29.56 mm
031920	M20	M20	2.5 mm	WS30	9 mm	36.3 g	32.95 mm
031920 15	M20/1,5	M20	1.5 mm	WS30	9 mm	35 g	32.95 mm
031922 15	M22/1,5	M22	1.5 mm	WS32	10 mm	42 g	35.03 mm
031924	M24	M24	3 mm	WS36	10 mm	58 g	39.55 mm
031924 15	M24/1,5	M24	1.5 mm	WS36	10 mm	51.5 g	39.55 mm
031927	M27	M27	3 mm	WS41	12 mm	84 g	45.2 mm
031927 2	M27/2	M27	2 mm	WS41	12 mm	100 g	45.2 mm
031930	M30	M30	3.5 mm	WS46	12 mm	111 g	50.85 mm
031930 15	M30/1,5	M30	1.5 mm	WS46	12 mm	111 g	50.85 mm
031930 2	M30/2	M30	2 mm	WS46	12 mm	94 g	50.85 mm
031933 15	M33X1,5	M33	1.5 mm	WS50	14 mm	150 g	55.37 mm
031936 3	M36/3	M36	3 mm	WS55	14 mm	161 g	60.79 mm
031942	M42	M42	4.5 mm	WS65	16 mm	307 g	71.3 mm
031942 2	M42/2,0	M42	2 mm	WS65	16 mm	307 g	71.3 mm
031948 3	M48/3,0	M48	3 mm	WS75	22.7 mm	436 g	82.6 mm



Hexagon nut, low

DIN 439/936, A4, acid-proof steel

- **Material :** Stainless steel A4
- **Surface :** Plain
- **ISO :** 4035

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	DIN	Product weight (per item)	Width across corners
500810 125	M 10 X 1,25	M10	1.25 mm	WS17	4.7 mm	439	1 g	18.9 mm
50086	M6	M6	1 mm	WS10	5 mm	439	1.6 g	11.05 mm
50088	M8	M8	1.25 mm	WS75	3.7 mm	439	2.73 g	14.38 mm
500810	M10	M10	1.5 mm	WS17	4.7 mm	439	8.6 g	18.9 mm
500812	M12	M12	1.75 mm	WS19	5.7 mm	439	12.1 g	21.1 mm
500812 1	M12X1	M12	1 mm	WS19	5.7 mm	439	9 g	21.1 mm
500812 125	M12X1,25	M12	1.25 mm	WS19	5.7 mm	439	8.9 g	21.1 mm
500812 15	M12X1,5	M12	1.5 mm	WS19	5.7 mm	439	12.1 g	21.1 mm
500814	M14	M14	2 mm	WS22	6.42 mm	439	13.8 g	24.49 mm
500814 15	M14X1,5	M14	1.5 mm	WS22	6.42 mm	439	10 g	24.49 mm
500816	M16	M16	2 mm	WS24	7.42 mm	439	18.3 g	26.75 mm
500816 15	M16X1,5	M16	1.5 mm	WS24	7.42 mm	439	20.5 g	26.75 mm
500816 2	M16X2	M16	2 mm	WS24	7.42 mm	439	10 g	26.75 mm
500818 15	M18X1,5	M18	1.5 mm	WS27	8.42 mm	439	12 g	29.56 mm
500820	M20	M20	2.5 mm	WS30	9.1 mm	439	36.3 g	32.95 mm
500820 15	M20X1,5	M20	1.5 mm	WS30	9.1 mm	439	36.3 g	32.95 mm
500824	M24	M24	3 mm	WS36	10.9 mm	439	58 g	39.55 mm
500824 15	M24X1,5	M24	1.5 mm	WS36	10.9 mm	439	60 g	39.55 mm
500824 2	M24X2	M24	2 mm	WS36	10 mm	936	50 g	39.55 mm
500827 3	M27X3	M27	3 mm	WS41	12.4 mm	439	161 g	45.2 mm
500830	M30	M30	3.5 mm	WS46	13.9 mm	439	111 g	50.85 mm
500833 2	M33/2	M33	2 mm	WS50	16.5 mm	439	200 g	55.37 mm
500836	M36	M36	4 mm	WS55	16.9 mm	439	190 g	60.79 mm
500842	M42	M42	4.5 mm	WS65	19.7 mm	439	240 g	71.3 mm



Wing nut, American type, square wings

(~din315) American type, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** Similar to 315
- **Form :** American type

Art. No.	Type description	Thread type x nominal diameter	Product weight (per item)	Height	Width of wing on nut	Pitch	Wing height	Wing thickness
034214	M 14	M14	1 g		63 mm	2 mm	31 mm	6.5 mm
03424	M4	M4	1.7 g	3 mm	21 mm	0.7 mm	10 mm	2 mm
03425	M5	M5	2.9 g	4 mm	21 mm	0.8 mm	10 mm	2.5 mm
03426	M6	M6	5.9 g	5 mm	26 mm	1 mm	12 mm	3 mm
03428	M8	M8	7.36 g	5.5 mm	29 mm	1.25 mm	14.5 mm	3.5 mm
034210	M10	M10	12 g	6.5 mm	34 mm	1.5 mm	17.5 mm	4 mm
034212	M12	M12	27 g	8 mm	45 mm	1.75 mm	22 mm	5 mm
034216	M16	M16	63.5 g	10.5 mm	63 mm	2 mm	31 mm	6.5 mm



Wing nut, American type, square wings

(~din315) American type, A4, acid-proof steel

- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** Similar to 315
- **Form :** American type

Art. No.	Type description	Thread type x nominal diameter	Product weight (per item)	Height	Width of wing on nut	Pitch	Wing height	Wing thickness
30083	M3	M3	2.2 g		17 mm	0.5 mm	9 mm	2 mm
30084	M4	M4	1.7 g	3 mm	18 mm	0.7 mm	8.5 mm	1.5 mm
30085	M5	M5	3.4 g	4 mm	22 mm	0.8 mm	10 mm	2 mm
30086	M6	M6	6.6 g	5 mm	28 mm	1 mm	13 mm	2.5 mm
30088	M8	M8	7.2 g	5.5 mm	30 mm	1.25 mm	14.5 mm	3 mm
300810	M10	M10	14 g	6.5 mm	36 mm	1.5 mm	17.5 mm	3.5 mm
300812	M12	M12	35 g	9 mm	49 mm	1.75 mm	22 mm	4.5 mm
300816	M16	M16	90 g		70 mm	2 mm	35 mm	6.4 mm







Hexagon nut, locking, all-metal

DIN 980, strength class 10, zinc-coated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 980
- **ISO :** 7042
- **Property class :** 1101
- **Version**

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Product weight (per item)	Width across corners	Ward of key bit
036908	M8	M8	1.25 mm	WS13	8 mm	5.35 g	14.38 mm	4.4 mm
036901415	M14X15	M14	1.5 mm	WS22	14 mm	26 g	24.49 mm	7.7 mm
0369010	VM10	M10	1.5 mm	WS17	10 mm	13 g	18.9 mm	5.5 mm
0369012	VM12	M12	1.75 mm	WS19	12 mm	17.6 g	21.1 mm	6.6 mm
0369016	VM16	M16	2 mm	WS24	16 mm	48.7 g	26.75 mm	8.8 mm
0369018	VM18	M18	2.5 mm	WS27	18 mm	48.7 g	29.56 mm	9.9 mm
036901815	VM18/1,5	M18	1.5 mm	WS27	18 mm	46 g	29.56 mm	9.9 mm
0369030	VM30	M30	3.5 mm	WS46	30 mm	212 g	50.85 mm	16.5 mm



Hexagon nut, locking, all-metal All-metal nuts

DIN 980, strength class 8, zinc-coated

When connecting a screw and the nut, the thread in the screw tightens due to screw pitch and as the thread diameter of the nut narrows.

- The nut can be used in the following temperatures : -70 °C...+300 °C

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Material	Surface	DIN
03698 1								
03694	M4	M4	0.7 mm	WS7	4.2 mm	Steel	Zinc plated	980
03695	M5	M5	0.8 mm	WS8	5.1 mm	Steel	Zinc plated	980
03696	M6	M6	1 mm	WS10	6 mm	Steel	Zinc plated	980
03698	M8	M8	1.25 mm	WS13	8 mm	Steel	Zinc plated	980
036910	M10	M10	1.5 mm	WS17	10 mm	Steel	Zinc plated	980
036912	M12	M12	1.75 mm	WS19	12 mm	Steel	Zinc plated	980

Art. No.	Type description	Thread type x nominal diameter	Pitch	External drive	Height	Material	Surface	DIN
036916	M16	M16	2 mm	WS24	16 mm	Steel	Zinc plated	980
036920	M20	M20	2.5 mm	WS30	20 mm	Steel	Zinc plated	980
036924	M24	M24	3 mm	WS36	24 mm	Steel	Zinc plated	980
036930	M30	M30	3.5 mm	WS46	30 mm	Steel	Zinc plated	980
036936	M36	M36	4 mm	WS55	36 mm	Steel	Zinc plated	980
036914	VM14	M14	2 mm	WS22	14 mm	Steel	Zinc plated	980



Castle nut

DIN 935, strength class 8, zinc-electroplated

Art. No.	
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Hexagon weld nut

DIN 929, A2, stainless steel

- **Material :** Stainless steel A2
- **Surface :** Plain
- **DIN :** 929
- **Drive type :** Outer hexagon
- **Property class :** 50

Art. No.	Type description	Thread type x nominal diameter	Width across flats	Height	Product weight (per item)	Connection diameter	External drive
039923	M3	M3	7,5 mm	3 mm	0.8 g	4.5 mm	WS7.5
039924	M4	M4	9 mm	3.5 mm	1.2 g	6 mm	WS9
039925	M5	M5	10 mm	4 mm	1.8 g	7 mm	WS10
039926	M6	M6	11 mm	5 mm	2.4 g	8 mm	WS11
039928	M8	M8	14 mm	6.5 mm	5.2 g	10.5 mm	WS14
0399210	M10	M10	17 mm	8 mm	9.5 g	12.5 mm	WS17
0399212	M12	M12	19 mm	10 mm	14 g	14.8 mm	WS19



Hexagon weld nut

DIN 929, uncoated steel

- Carbon content max. 0.25 %

- **Material :** Steel
- **Surface :** Plain
- **DIN :** 929
- **Drive type :** Outer hexagon

Art. No.	Type description	Thread type x nominal diameter	Width across flats	Height	Product weight (per item)	Connection diameter	External drive
03994	M4	M4	9 mm	3.5 mm	1.13 g	6 mm	WS9
03995	M5	M5	10 mm	4 mm	1.74 g	7 mm	WS10
03996	M6	M6	11 mm	5 mm	2.5 g	8 mm	WS11
03998	M8	M8	14 mm	6.5 mm	5.27 g	10.5 mm	WS14
039910	M10	M10	17 mm	8 mm	9.58 g	12.5 mm	WS17
039912	M12	M12	19 mm	10 mm	14.33 g	14.8 mm	WS19
039914	M14	M14	22 mm	11 mm	21 g	16.8 mm	WS22
039916	M16	M16	24 mm	13 mm	28.5 g	18.8 mm	WS24



Hexagon weld nut

DIN 929, A4, acid-proof steel

- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** 929
- **Drive type :** Outer hexagon
- **Property class :** 50

Art. No.	Type description	Thread type x nominal diameter	Width across flats	Height	Product weight (per item)	Connection diameter	External drive
039905	M5	M5	10 mm	4 mm	1.73 g	7 mm	WS10
039908	M8	M8	14 mm	6.5 mm	5.27 g	10.5 mm	WS14
0399010	M10	M10	17 mm	8 mm	9.58 g	12.5 mm	WS17
0399012	M12	M12	19 mm	10 mm	14.5 g	14.8 mm	WS19

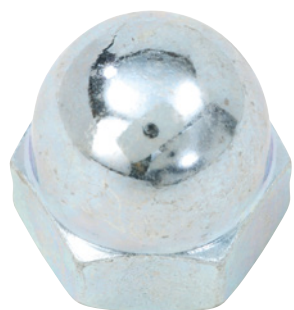


Cap nut, high profile

DIN 1587, A4, stainless steel

- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** 1587
- **Property class :** 50

Art. No.	Type description	Thread type x nominal diameter	External drive	Height	Product weight (per item)	Ward of key bit
40084	M4	M4	WS7	8 mm	1.5 g	2.3 mm
40085	M5	M5	WS8	10 mm	2.2 g	3 mm
40086	M6	M6	WS10	12 mm	4.6 g	3.8 mm
40088	M8	M8	WS13	15 mm	9.2 g	5 mm
400810	M10	M10	WS17	18 mm	19 g	6.1 mm
400812	M12	M12	WS19	22 mm	29 g	7.7 mm
400816	M16	M16	WS24	28 mm	54 g	9.8 mm
400820	M20	M20	WS30	34 mm	97 g	11.9 mm



Fix master

Cap nut, high profile

DIN 1587, zinc-coated steel, blue passivated (A2K)

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 1587
- **Property class :** 6

Art. No.	Type description	Thread type x nominal diameter	External drive	Height	Product weight (per item)	Ward of key bit
03564	M4	M4	WS7	8 mm	1.5 g	2.3 mm
03565	M5	M5	WS8	10 mm	2.2 g	3 mm
03566	M6	M6	WS10	12 mm	4.66 g	3.8 mm
03568	M8	M8	WS13	15 mm	9.3 g	5 mm
035610	M10	M10	WS17	18 mm	20.1 g	6.1 mm
035612	M12	M12	WS19	22 mm	29 g	7.7 mm
035616	M16	M16	WS24	28 mm	54.3 g	9.8 mm
035620	M20	M20	WS30	34 mm	104 g	11.9 mm



Flat washer for hexagonal screws and nuts

DIN 125, stainless steel A2

- **Material :** Stainless steel A2
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 140 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
30093	M3	0.11 g	M3	3.2 x 7 x 0.5 mm
30094	M4	0.28 g	M4	4.3 x 9 x 0.8 mm
30095	M5	0.44 g	M5	5.3 x 10 x 1 mm
30096	M6	1.14 g	M6	6.4 x 12 x 1.6 mm
30098	M8	2.14 g	M8	8.4 x 16 x 1.6 mm
300910	M10	4.08 g	M10	10.5 x 20 x 2 mm
300912	M12	6.27 g	M12	13 x 24 x 2.5 mm
300914	M14	7.74 g	M14	15 x 28 x 2.5 mm
300916	M16	11.3 g	M16	17 x 30 x 3 mm
300920	M20	17.2 g	M20	21 x 37 x 3 mm
300924	M24	32.3 g	M24	25 x 44 x 4 mm
300927	M27	30 g	M27	28 x 50 x 4 mm
300930	M30	53.6 g	M30	31 x 56 x 4 mm



Flat washer for hexagonal screws and nuts

DIN 125, acid-proof steel A4

- **Material :** Stainless steel A4
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 140 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
10092	M2	0.01 g	M2	2.2 x 5 x 0.3 mm
100925	M2,5	0.1 g	M2.5	2.7 x 6 x 0.5 mm
10093	M3	0.12 g	M3	3.2 x 7 x 0.5 mm
10094	M4	0.31 g	M4	4.3 x 9 x 0.8 mm

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
10095	M5	0.44 g	M5	5.3 x 10 x 1 mm
10096	M6	1.14 g	M6	6.4 x 12 x 1.6 mm
10098	M8	2.14 g	M8	8.4 x 16 x 1.6 mm
100910	M10	4.08 g	M10	10.5 x 20 x 2 mm
100912	M12	6.27 g	M12	13 x 24 x 2.5 mm
100914	M14	8.6 g	M14	15 x 28 x 2.5 mm
100916	M16	11.3 g	M16	17 x 30 x 3 mm
100918	M18	14.7 g	M18	19 x 34 x 3 mm
100920	M20	17.2 g	M20	21 x 37 x 3 mm
100922	M22	18.4 g	M22	23 x 39 x 3 mm
100924	M24	32.3 g	M24	25 x 44 x 4 mm
100927	M27	42.3 g	M27	28 x 50 x 4 mm
100930	M30	53.6 g	M30	31 x 56 x 4 mm
100936	M36	92 g	M36	37 x 66 x 5 mm



Flat washer for hexagonal screws and nuts

DIN 125, steel, zinc-electroplated

- **Material:** Steel
- **DIN:** 125
- **ISO:** 7089
- **Vickers hardness, HV:** 140 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
04072	M2	0.004 g	M2	2.2 x 5 x 0.3 mm
040723	M2,3	0.092 g	M2.3	2.5 x 6 x 0.5 mm
040725	M2,5	0.108 g	M2.3	2.7 x 6 x 0.5 mm
040726	M2,6	0.13 g	M2.6	2.8 x 7 x 0.5 mm
04073	M3	0.12 g	M3	3.2 x 7 x 0.5 mm
04074	M4	0.31 g	M4	4.3 x 9 x 0.8 mm
04075	M5	0.44 g	M5	5.3 x 10 x 1 mm
04076	M6	0.83 g	M6	6.4 x 12 x 1.6 mm
04077	M7	1.2 g	M7	7.4 x 14 x 1.6 mm
04078	M8	1.52 g	M8	8.4 x 16 x 1.6 mm
040710	M10	3.8 g	M10	10.5 x 20 x 2 mm
040712	M12	6.27 g	M12	13 x 24 x 2.5 mm
040714	M14	8.6 g	M14	15 x 28 x 2.5 mm
040716	M16	9.6 g	M16	17 x 30 x 3 mm
040718	M18	14.7 g	M18	19 x 34 x 3 mm
040720	M20	14.5 g	M20	21 x 37 x 3 mm
040722	M22	18.4 g	M22	23 x 39 x 3 mm
040724	M24	29 g	M24	25 x 44 x 4 mm
040727	M27	40.45 g	M27	27 x 50 x 4 mm
040730	M30	48 g	M30	31 x 56 x 4 mm

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
040733	M33	75.4 g	M33	34 x 60 x 5 mm
040736	M36	92 g	M36	37 x 66 x 5 mm
040739	M39	135 g	M39	40 x 72 x 6 mm
040742	M42	183 g	M42	43 x 78 x 7 mm
040745	M45	175 g	M45	46 x 85 x 7 mm
040748	M48	284 g	M48	50 x 92 x 8 mm



Flat washer for hexagonal screws and nuts

DIN 126, steel, hot dip galvanised

- **Material :** Steel
- **DIN :** 126
- **ISO :** 7091
- **Vickers hardness, HV :** 100 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
54076	M6	1.14 g	M6	6.6 x 12 x 1.6 mm
54078	M8	2.14 g	M8	9 x 16 x 1.6 mm
540710	M10	4.08 g	M10	11 x 20 x 2 mm
540712	M12	4.45 g	M12	13.5 x 24 x 2.5 mm
540714	M14	8.6 g	M14	15.5 x 28 x 2.5 mm
540716	M16	11.3 g	M16	17.5 x 30 x 3 mm
540720	M20	17.2 g	M20	22 x 37 x 3 mm
540722	M22	12.6 g	M22	24 x 39 x 3 mm
540724	M24	32.3 g	M24	28 x 44 x 4 mm
540727	M27	42.3 g	M27	30 x 50 x 4 mm
540730	M30	53.6 g	M30	33 x 56 x 4 mm
540733	M33	75.4 g	M33	36 x 60 x 5 mm
540736	M36	92 g	M36	39 x 66 x 5 mm
540739	M39	133 g	M39	42 x 72 x 5 mm
540742	M42	183 g	M42	43 x 78 x 7 mm
540745	M45	220 g	M45	48 x 85 x 7 mm
540748	M48	255 g	M48	52 x 92 x 8 mm





Flat washer for hexagonal screws and nuts

DIN 125 HV200, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 200 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
04066	M6	0.85 g	M6	6.4 x 12 x 1.6 mm
04068	M8	2.14 g	M8	8.4 x 16 x 2 mm
040610	M10	4.35 g	M10	10.5 x 21 x 2 mm
040612	M12	4.67 g	M12	13 x 24 x 2.5 mm
040616	M16	10.6 g	M16	17 x 30 x 3 mm
040620	M20	14.5 g	M20	21 x 37 x 3 mm
040622	M22	16.6 g	M22	23 x 39 x 3 mm
040624	M24	32.3 g	M24	25 x 44 x 4 mm
040630	M30	53 g	M30	31 x 56 x 4 mm
040636	M36	82 g	M36	37 x 66 x 5 mm



Flat washer for hexagonal screws and nuts

DIN 125, steel, hot dip galvanised, hardness HV200

- **Material :** Steel
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 200 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
54076 001	M6 (pack 200 pcs)	0.903 g	M6	6.4 x 12 x 1.6 mm
54078 001	M8 (pack 200 pcs)	1.87 g	M8	8.4 x 16 x 1.6 mm
540710 001	M10 (pack 200 pcs)	3.37 g	M10	10.5 x 20 x 2 mm
540712 001	M12 (pack 200 pcs)	5.85 g	M12	13 x 24 x 2.5 mm
540716 001	M16 (pack 200 pcs)	10.45 g	M16	17 x 30 x 3 mm
540718 001	M18 (pack 200 pcs)	14.7 g	M18	19 x 34 x 3 mm
540720 001	M20 (pack 100 pcs)	17 g	M20	21 x 37 x 3 mm

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
540724 001	M24 (pack 100 pcs)	32 g	M24	25 x 44 x 4 mm
540727 001	M27 (pack 100 pcs)	42 g	M27	28 x 50 x 4 mm
540730 001	M30 (pack 100 pcs)	53 g	M30	31 x 56 x 4 mm
540733 001	M33 (pack 100 pcs)	75 g	M33	34 x 60 x 5 mm
540736 001	M36 (pack 100 pcs)	92 g	M36	37 x 66 x 5 mm
540742 001	M42 (pack 50 pcs)	183 g	M42	45 x 78 x 8 mm



Flat washer for hexagonal screws and nuts

DIN 125 HV200, acid-proof steel A4

- **Material :** Stainless steel A4
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 200 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
20094	M4	0.28 g	M4	4.3 x 9 x 0.8 mm
20095	M5	0.45 g	M5	5.3 x 10 x 1 mm
20096	M6	0.9 g	M6	6.4 x 12 x 1.6 mm
20098	M8	2.14 g	M8	8.4 x 16 x 1.6 mm
200910	M10	2.97 g	M10	10.5 x 21 x 2 mm
200912	M12	4.7 g	M12	13 x 24 x 2.5 mm
200916	M16	11 g	M16	17 x 30 x 3 mm
200920	M20	15 g	M20	19 x 37 x 3 mm
200924	M24	34 g	M24	25 x 44 x 4 mm
200930	M30	54 g	M30	31 x 56 x 4 mm

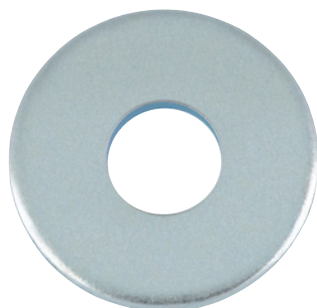


Flat washer for hexagonal screws and nuts

DIN 125 HV300, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 125
- **ISO :** 7089
- **Vickers hardness, HV :** 300 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
140610	M10	3 g	M10	10.5 x 20 x 2 mm
140612	M12	6.27 g	M12	13 x 24 x 2.5 mm
140616	M16	9.56 g	M16	17 x 30 x 3 mm
140620	M20	14.5 g	M20	21 x 37 x 3 mm
140624	M24	28.7 g	M24	25 x 44 x 4 mm
140627	M27	38.6 g	M27	28 x 50 x 4 mm
140630	M30	48.4 g	M30	31 x 56 x 4 mm
140633	M33	38.6 g	M33	34 x 60 x 5 mm
140636	M36	84.6 g	M36	37 x 66 x 5 mm



Wing repair washer

DIN 9021, zinc-electroplated steel

- **Material :** Steel
- **DIN :** 9021
- **ISO :** 7093

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
041625	M2,5	2.7 x 8 x 0.8 mm	M2.5	0.3 g
04163	M3	3.2 x 9 x 0.8 mm	M3	0.35 g
04164	M4	4.3 x 12 x 1 mm	M4	0.77 g
04165	M5	5.3 x 15 x 1.2 mm	M5	1.5 g
04166	M6	6.4 x 18 x 1.6 mm	M6	2.79 g
04167	M7	7.4 x 22 x 2 mm	M7	5.29 g
04168	M8	8.4 x 24 x 2 mm	M8	5.4 g
041610	M10	10.5 x 30 x 2.5 mm	M10	11.05 g
041612	M12	13 x 37 x 3 mm	M12	19.4 g

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
041614	M14	15 x 44 x 3 mm	M14	30 g
041616	M16	17 x 50 x 3 mm	M16	36 g
041618	M18	19 x 56 x 4 mm	M18	70 g
041620	M20	22 x 60 x 4 mm	M20	75.2 g
041624	M24	26 x 72 x 5 mm	M24	125 g
041630	M30	33 x 92 x 6 mm	M30	240 g



Wing repair washer

DIN 9021, acid-proof steel A4

- **Material :** Stainless steel A4
- **DIN :** 9021
- **ISO :** 7093

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
10153	M3	3.2 x 9 x 0.8 mm	M3	0.349 g
10154	M4	4.3 x 12 x 1 mm	M4	0.71 g
10155	M5	5.3 x 15 x 1.2 mm	M5	1.2 g
10156	M6	6.4 x 18 x 1.6 mm	M6	2.5 g
10158	M8	8.4 x 25 x 2 mm	M8	4.7 g
101510	M10	10.5 x 30 x 2.5 mm	M10	8.7 g
101512	M12	13 x 37 x 3 mm	M12	21.6 g
101514	M14	15 x 44 x 3 mm	M14	2 g
101516	M16	17 x 50 x 3 mm	M16	40.9 g
101520	M20	22 x 60 x 4 mm	M20	78.2 g
101524	M24	25 x 72 x 5 mm	M24	15 g
101526	M26	26 x 60 x 4 mm	M26	78000 g



Washer, primarily for wooden structures

DIN 440R, hot dip galvanised steel

- **Material :** Steel
- **DIN :** 440
- **ISO :** 7094

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
54596	M6	6.6 x 22 x 2 mm	M6	5.36 g
54598	M8	9 x 28 x 3 mm	M8	8.55 g
545910	M10	11 x 34 x 3 mm	M10	18.9 g
545912	M12	13.5 x 44 x 4 mm	M12	39.09 g
545914	M12	13.5 x 44 x 4 mm	M12	37.4 g
545916	M16	17.5 x 56 x 5 mm	M16	87.2 g
545920	M20	22 x 72 x 6 mm	M20	170 g
545924	M24	26 x 85 x 6 mm	M24	203 g



Washer, primarily for wooden structures

DIN 440R, zinc-electroplated steel

- **Material :** Steel
- **DIN :** 440
- **ISO :** 7094

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
04595	M5	5.5 x 18 x 2 mm	M5	4 g
04596	M6	6.6 x 22 x 2 mm	M6	5.36 g
04598	M8	9 x 28 x 3 mm	M8	10 g
045910	M10	11 x 34 x 3 mm	M10	15 g
045912	M12	13.5 x 44 x 4 mm	M12	36.9 g
045916	M16	17.5 x 56 x 5 mm	M16	70 g
045920	M20	22 x 72 x 6 mm	M20	126 g
045922	M22	24 x 80 x 6 mm	M22	10 g
045924	M24	26 x 85 x 6 mm	M24	204 g
045930	M30	33 x 105 x 6 mm	M30	367.6 g



Lock washer

DIN 127B, zinc-electroplated

- **Material :** Spring steel
- **DIN :** 127
- **Surface :** Zinc plated

Art. No.	Type description	Suitable for screw thread	Internal diameter	Outer diameter	Thickness	Height	Product weight (per item)
04412	M2	M2	2.2 mm	4.4 mm	0.5 mm	1.2 mm	0.04 g
044125	M2,5	M2.5	2.6 mm	5.1 mm	0.6 mm	1.2 mm	0.033 g
04413	M3	M3	3.1 mm	6.2 mm	0.8 mm	1.6 mm	0.11 g
04414	M4	M4	4.1 mm	7.6 mm	0.9 mm	1.8 mm	0.18 g
04415	M5	M5	5.1 mm	9.2 mm	1.2 mm	2.4 mm	0.36 g
04416	M6	M6	6.1 mm	11.8 mm	1.6 mm	3.2 mm	0.83 g
04418	M8	M8	8.1 mm	14.8 mm	2 mm	4 mm	1.6 g
0441010	M10	M10	10.2 mm	18.1 mm	2.2 mm	4.4 mm	2 g
044110	M10	M10	10.2 mm	18.1 mm	2.2 mm	4.4 mm	2.53 g
044112	M12	M12	12.2 mm	21.1 mm	2.5 mm	5 mm	3.82 g
044114	M14	M14	14.2 mm	24.1 mm	3 mm	6 mm	6.01 g
044116	M16	M16	16.2 mm	27.4 mm	3.5 mm	7 mm	8.91 g
044118	M18	M18	18.2 mm	29.4 mm	3.5 mm	7 mm	9.73 g
044120	M20	M20	20.2 mm	33.6 mm	4 mm	8 mm	15.2 g
044122	M22	M22	22.5 mm	35.9 mm	4 mm	8 mm	16.5 g
044124	M24	M24	24.5 mm	40 mm	5 mm	10 mm	26.2 g
044127	M27	M27	27.5 mm	43 mm	5 mm	10 mm	28.7 g
044130	M30	M30	30.5 mm	48.2 mm	6 mm	12 mm	44.3 g
044133	M33	M33	33.5 mm	55.2 mm	6 mm	12 mm	50 g
044136	M36	M36	36.5 mm	58.2 mm	6 mm	12 mm	67.3 g
044142	M42	M42	42.5 mm	68.2 mm	7 mm	14 mm	111 g
044148	M48	M48	49 mm	75 mm	7 mm	14 mm	124 g



Lock washer

DIN 127B, stainless A2

- **Material :** Stainless steel A2
- **DIN :** 127
- **Surface :** Plain

Art. No.	Type description	Suitable for screw thread	Internal diameter	Outer diameter	Thickness	Height	Product weight (per item)
20103	M3	M3	3.1 mm	6.2 mm	0.8 mm	1.6 mm	0.11 g
20104	M4	M4	4.1 mm	7.6 mm	0.9 mm	1.8 mm	0.18 g
20105	M5	M5	5.1 mm	9.2 mm	1.2 mm	2.4 mm	0.36 g
20106	M6	M6	6.1 mm	11.8 mm	1.6 mm	3.2 mm	0.83 g
20108	M8	M8	8.1 mm	14.8 mm	2 mm	4 mm	1.6 g
201010	M10	M10	10.2 mm	18.1 mm	2.2 mm	4.4 mm	2.53 g
201012	M12	M12	12.2 mm	21.1 mm	2.5 mm	5 mm	3.82 g
201016	M16	M16	16.2 mm	27.4 mm	3.5 mm	7 mm	8.91 g



Lock washer

DIN 127B, acid-proof A4

- **Material :** Stainless steel A4
- **DIN :** 127
- **Surface :** Plain
- **Version :** Smooth

Art. No.	Type description	Suitable for screw thread	Internal diameter	Outer diameter	Thickness	Height	Product weight (per item)
10103	M3	M3	3.1 mm	6.2 mm	0.8 mm	1.6 mm	0.12 g
10104	M4	M4	4.1 mm	7.6 mm	0.9 mm	1.8 mm	0.18 g
10105	M5	M5	5.1 mm	9.2 mm	1.2 mm	2.4 mm	0.36 g
10106	M6	M6	6.1 mm	11.8 mm	1.6 mm	3.2 mm	0.83 g
10108	M8	M8	8.1 mm	14.8 mm	2 mm	4 mm	1.6 g
101010	M10	M10	10.2 mm	18.1 mm	2.2 mm	4.4 mm	2.53 g
101012	M12	M12	12.2 mm	21.1 mm	2.5 mm	5 mm	3.82 g
101014	M14	M14	14.2 mm	24.1 mm	3 mm	6 mm	6.01 g
101016	M16	M16	16.2 mm	27.4 mm	3.5 mm	7 mm	8.91 g
101020	M20	M20	20.2 mm	33.6 mm	4 mm	8 mm	15.2 g

Art. No.	Type description	Suitable for screw thread	Internal diameter	Outer diameter	Thickness	Height	Product weight (per item)
101022	M22	M22	22.5 mm	35.9 mm	4 mm	8 mm	16.5 g
101024	M24	M24	24.5 mm	40 mm	5 mm	10 mm	26.2 g
101027	M27	M27	43 mm	43 mm	5 mm	10 mm	28.7 g
101030	M30	M30	30.5 mm	48.2 mm	6 mm	12 mm	44.3 g
101036	M36	M36	36.5 mm	58.2 mm	6 mm	12 mm	6.73 g

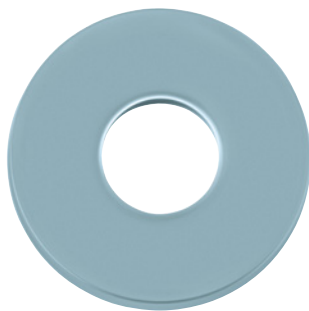


Washer for fasteners

DIN 6340, steel, uncoated

- **Material :** Steel
- **DIN :** 6340
- **Vickers hardness, HV :** 350 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
04956	M6	4 g	M6	6.4 x 17 x 3 mm
04958	M8	11.3 g	M8	8.4 x 23 x 4 mm
049510	M10	16.6 g	M10	10.5 x 28 x 4 mm
049512	M12	32.5 g	M12	13 x 35 x 5 mm
049516	M16	64.3 g	M16	17 x 45 x 6 mm
049520	M20	76 g	M20	21 x 50 x 6 mm
049524	M24	147 g	M24	25 x 60 x 8 mm
049527	M27	0.1 g	M27	28 x 68 x 10 mm
049530	M30	226 g	M30	31 x 68 x 10 mm
049542	M42	20 g	M42	44 x 100 x 15 mm
049548	M48	666.4 g	M48	50 x 100 x 15 mm



Washer for fasteners

DIN 6340, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 6340
- **Vickers hardness, HV :** 350 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
049506	M6	4 g	M6	6.4 x 17 x 3 mm
049508	M8	5 g	M8	8.4 x 23 x 4 mm
0495010	M10	16.6 g	M10	10.5 x 28 x 4 mm
0495012	M12	27 g	M12	13 x 35 x 5 mm
0495014	M14	38.4 g	M14	15 x 40 x 5 mm
0495016	M16	64.3 g	M16	17 x 45 x 6 mm
0495020	M20	76 g	M20	21 x 50 x 6 mm
0495024	M24	147 g	M24	25 x 60 x 8 mm
0495030	M30	226 g	M30	31 x 68 x 10 mm
0495036	M36	353.3 g	M36	37 x 80 x 12 mm



Washer

DIN 7349, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 7349
- **Vickers hardness, HV :** 100 HV

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
049704	M4	1.03 g	M4	4.3 x 12 x 1.6 mm
049705	M5	2.09 g	M5	5.3 x 15 x 2 mm
049706	M6	4.59 g	M6	6.4 x 17 x 3 mm
049708	M8	8 g	M8	8.4 x 21 x 4 mm
0497010	M10	11.43 g	M10	10.5 x 25 x 4 mm
0497012	M12	27.1 g	M12	13 x 30 x 6 mm
0497014	M14	33.3 g	M14	15 x 36 x 6 mm
0497016	M16	48.5 g	M16	17 x 40 x 6 mm
0497020	M20	60 g	M20	21 x 44 x 8 mm

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
0497024	M24	116 g	M24	25 x 50 x 10 mm
0497027	M27	150.3 g	M27	28 x 60 x 10 mm
0497030	M30	226 g	M30	31 x 68 x 10 mm
0497036	M36	300 g	M36	



Washer, SFS3738/ISO4759, zinc-electroplated

- **Material:** Steel
- **ISO:** 4759

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
24255	M5	1.61 g	M5	
24256	M6	1.52 g	M6	6.5 x 15 x 1.5 mm
24258	M8	4.4 g	M8	8.4 x 20 x 2.5 mm
242510	M10	6.92 g	M10	10.5 x 25 x 2.5 mm
242512	M12	14.95 g	M12	13 x 32 x 3 mm
242516	M16	33.5 g	M16	17 x 42 x 4 mm



Washer, SFS3738/ISO4759, hot dip galvanised

- **Material:** Steel
- **ISO:** 4759

Art. No.	Type description	Product weight (per item)	Suitable for screw thread	Internal diameter x external diameter x thickness
242508	M8	4.65 g	M8	8.4 x 20 x 2.5 mm
2425010	M10	7.5 g	M10	10.5 x 25 x 2.5 mm
2425012	M12	15.9 g	M12	13 x 32 x 3 mm
2425016	M16	35.15 g	M16	17 x 42 x 4 mm
2425020	M20	58.4 g	M20	21 x 52 x 4 mm



Elastic washer for screw joints

DIN 6796, spring steel, mechanically zinc-coated

- **Material :** Spring steel
- **DIN :** 6796
- **Surface :** Zinc plated

Art. No.	Type description	Suitable for screw thread	Internal diameter	Outer diameter	Thickness	Height	Product weight (per item)
14255	M5	M5	5.3 mm	11 mm	1.2 mm	1.55 mm	0.6 g
14256	M6	M6	6.4 mm	14 mm	1.5 mm	2 mm	1.4 g
14258	M8	M8	8.4 mm	18 mm	2 mm	2.6 mm	3.1 g
142510	M10	M10	10.5 mm	23 mm	2.5 mm	3.2 mm	6.1 g
142512	M12	M12	13 mm	29 mm	3 mm	3.95 mm	12 g
142514	M14	M14	15 mm	35 mm	3.5 mm	4.65 mm	10 g
142516	M16	M16	17 mm	39 mm	4 mm	5.25 mm	30 g
142520	M20	M20	21 mm	45 mm	5 mm	6.4 mm	49 g
142524	M24	M24	25 mm	56 mm	6 mm	7.75 mm	92.9 g
142527	M27	M27	28 mm	60 mm	6 mm	8.35 mm	80 g
142530	M30	M30	31 mm	70 mm	7 mm	9.2 mm	0.1 g



Lock plate

DIN 93, acid-proof A4

- **Material :** Stainless steel A4
- **DIN :** 93

Art. No.	Type description	Product weight (per item)
24265	M5	0.9 g
24266	M6	1.05 g
24268	M8	2.32 g
242610	M10	3.13 g
242612	M12	5 g
242615	M14	2 g
242616	M16	9.49 g
242620	M20	11.7 g
242622	M22	14.8 g
242624	M24	14.2 g

Art. No.	Type description	Product weight (per item)
242627	M27	28.8 g
242630	M30	34 g
242633	M33	10 g
242636	M36	48.2 g



Lock plate

DIN 93, steel, zinc-electroplated

- **Material:** Steel
- **DIN:** 93

Art. No.	Type description	Product weight (per item)
14266	M6	1.21 g
14268	M8	2 g
142610	M10	3.5 g
142612	M12	6 g
142616	M16	9.49 g
142620	M20	9.5 g
142624	M24	13.7 g
142627	M27	30.46 g
142630	M30	36.8 g
142643	M43	60 g





Pair of wedge toothed lock plates narrow

Steel, zinc flake coating. A lock washer tested in accordance with the standard DIN 25201 ; prevents screw joints from loosening when under lateral loads, vibration or oscillation.

Corrosion prevention :

720 hours without base metal corrosion in accordance with the standard DIN EN ISO 9227-NSS (DIN 50021-SS)

- **Material :** Steel
- **DIN :** 25201
- **Surface :** Flake zinc silver

Operation :

Two serrated lock plates are connected with a wedge-like joint to ensure extremely durable locking. The screw joint is locked by pretension instead of friction.

- Makes screw joints as secure as possible
- Screw joints will not loosen due to vibration or changes in load
- Easy to attach and remove
- Lubricants won't affect operation
- Secure connection both with high and low pretension
- Can be used in the same temperature range as screws
- Protects surfaces
- Reusable

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
042704	M4	4.4 x 7.6 x 1.7 mm	M4	0.7 g
042705	M5	5.4 x 9 x 1.7 mm	M5	1 g
042706	M6	6.5 x 10.8 x 1.7 mm	M6	0.8 g
042708	M8	8.7 x 13.5 x 2.7 mm	M8	1.4 g
0427010	M10	10.7 x 16.6 x 2.7 mm	M10	2 g
0427012	M12	13 x 19.5 x 2.7 mm	M12	2 g
0427014	M14	15.2 x 23 x 3.4 mm	M14	6.6 g
0427016	M16	17 x 25.4 x 3.7 mm	M16	3 g
0427018	M18	19.5 x 29 x 3.7 mm	M18	5 g
0427020	M20	21.4 x 30.7 x 3.7 mm	M20	10.36 g
0427022	M22	23.4 x 34.5 x 3.7 mm	M22	13.6 g
0427024	M24	25.3 x 39 x 3.7 mm	M24	50 g
0427027	M27	28.4 x 42 x 5.4 mm	M27	36.6 g
0427030	M30	31.4 x 47 x 5.7 mm	M30	35 g
042733	M33SP	34.4 x 48.5 x 5.5 mm	M33	29.9 g
0427036	M36	37.4 x 55 x 6.2 mm	M36	0.001 g



Pair of wedge toothed lock plates wide

Steel, zinc flake coating. A lock washer tested in accordance with the standard DIN 25201 ; prevents screw joints from loosening when under lateral loads, vibration or oscillation.

Corrosion prevention :

720 hours without base metal corrosion in accordance with the standard DIN EN ISO 9227-NSS (DIN 50021-SS)

- **Material :** Steel
- **DIN :** 25201
- **Surface :** Flake zinc silver

Operation :

Two serrated lock plates are connected with a wedge-like joint to ensure extremely durable locking. The screw joint is locked by pretension instead of friction.

- Makes screw joints as secure as possible
- Screw joints will not loosen due to vibration or changes in load
- Easy to attach and remove
- Lubricants won't affect operation
- Secure connection both with high and low pretension
- Can be used in the same temperature range as screws
- Protects surfaces
- Reusable

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
04273	M3	3.9 x 9 x 1.7 mm	M3	0.4 g
04274	M4SP	4.4 x 9 x 1.7 mm	M4	0.4 g
04275	M5SP	5.4 x 10.8 x 1.7 mm	M5	0.4 g
04276	M6SP	6.5 x 13.5 x 2.7 mm	M6	0.8 g
04278	M8SP	8.7 x 16.6 x 2.7 mm	M8	2.5 g
042710	M10SP	10.7 x 21 x 2.7 mm	M10	2.2 g
042712	M12SP	13 x 25.4 x 3.7 mm	M12	3.1 g
042714	M14SP	15.2 x 30.7 x 3.7 mm	M14	6.6 g
042716	M16SP	17 x 30.7 x 3.7 mm	M16	1 g
042718	M18SP	19.5 x 34.5 x 3.7 mm	M18	8.8 g
042720	M20SP	21.4 x 39 x 3.8 mm	M20	10 g
042722	M22SP	23.4 x 42 x 4.7 mm	M22	10.5 g
042724	M24SP	25.3 x 48.5 x 4.7 mm	M24	50 g
042727	M27SP	28.4 x 48.5 x 6.7 mm	M27	26 g
042730	M30SP	31.4 x 58.5 x 6.7 mm	M30	42.4 g
042736	M36SP	37.4 x 63 x 6.7 mm	M36	57.8 g



Pair of wedge toothed lock plates narrow

Acid-proof steel A4. A lock washer tested in accordance with the standard DIN 25201 ; prevents screw joints from loosening when under lateral loads, vibration or oscillation.

Operation :

Two serrated lock plates are connected with a wedge-like joint to ensure extremely durable locking. The screw joint is locked by pretension instead of friction.

- **Material :** Stainless steel A4
- **DIN :** 25201
- **Surface :** Plain

- Makes screw joints as secure as possible
- Screw joints will not loosen due to vibration or changes in load
- Easy to attach and remove
- Lubricants won't affect operation
- Secure connection both with high and low pretension
- Can be used in the same temperature range as screws
- Protects surfaces
- Reusable

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
14273	M3	3.4 x 7 x 1.7 mm	M3	0.3 g
14274	M4	4.4 x 7.6 x 1.6 mm	M4	0.4 g
14275	M5	5.4 x 9 x 1.6 mm	M5	0.54 g
14276	M6	6.5 x 10.8 x 1.6 mm	M6	0.8 g
14278	M8	8.7 x 13.5 x 2.6 mm	M8	1.25 g
142710	M10	10.6 x 16.6 x 2.6 mm	M10	1.5 g
142712	M12	13 x 19.5 x 2.6 mm	M12	2.67 g
142714	M14	15.2 x 23 x 3.4 mm	M14	6 g
142716	M16	17 x 25.4 x 3.6 mm	M16	6 g
142720	M20	21.4 x 30.7 x 3.6 mm	M20	8.8 g
142724	M24	25.3 x 39 x 3.6 mm	M24	18 g
142727	M27	28.4 x 42 x 5.4 mm	M27	0.1 g
142730	M30	31.4 x 47 x 5.7 mm	M30	25.5 g

Pair of wedge toothed lock plates wide

Acid-proof steel A4. A lock washer tested in accordance with the standard DIN 25201 ; prevents screw joints from loosening when under lateral loads, vibration or oscillation.

Operation :

Two serrated lock plates are connected with a wedge-like joint to ensure extremely durable locking. The screw joint is locked by pretension instead of friction.

- **Material :** Stainless steel A4
- **DIN :** 25201
- **Surface :** Plain

- Makes screw joints as secure as possible
- Screw joints will not loosen due to vibration or changes in load
- Easy to attach and remove
- Lubricants won't affect operation
- Secure connection both with high and low pretension
- Can be used in the same temperature range as screws
- Protects surfaces
- Reusable

Art. No.	Type description	Internal diameter x external diameter x thickness	Suitable for screw thread	Product weight (per item)
142741	M4 SP	4.4 x 9 x 1.7 mm	M4	0.7 g
142751	M5	5.4 x 10.8 x 1.7 mm	M5	0.8 g
142761	M6 WIDE	6.5 x 13.5 x 2.7 mm	M6	0.8 g
142781	M8 WIDE	8.7 x 16.6 x 2.7 mm	M8	8.4 g
1427101	M10 WIDE	10.7 x 21 x 2.7 mm	M10	1.5 g
1427121	M12 WIDE	13 x 25.4 x 3.7 mm	M12	10 g
1427161	M16 WIDE	17 x 30.7 x 3.7 mm	M16	15 g
142721	M20 SP	21.4 x 39 x 3.8 mm	M20	5 g
1427241	M24 WIDE	25.3 x 48.5 x 4.7 mm	M24	16.7 g



Shim

DIN 988, steel, uncoated

- **Material :** Steel
- **DIN :** 988

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425536202		53 mm	53 x 62 x 0.2 mm	1.2 g
0425556850		55 mm	88 x 68 x 5 mm	49 g
0425607502		60 mm	60 x 75 x 0.2 mm	2.28 g
0425726201		62 mm	62 x 72 x 0.1 mm	0.001 g
0425726215		62 mm	62 x 72 x 0.15 mm	0.001 g
0425726204		62 mm	62 x 72 x 0.4 mm	2 g
0425806601		66 mm	66 x 80 x 0.1 mm	0.001 g
0425806615		66 mm	66 x 80 x 0.15 mm	0.001 g
0425806604		66 mm	66 x 80 x 0.4 mm	4 g
0425709006		70 mm	70 x 90 x 0.05 mm	0.9 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425907602		76 mm	76 x 90 x 0.2 mm	0.01 g
0425907605		76 mm	76 x 90 x 0.5 mm	6 g
0425907612		76 mm	76 x 90 x 1.25 mm	20 g
0425907701		77 mm	77 x 90 x 0.1 mm	1.2 g
0425907715		77 mm	77 x 90 x 0.15 mm	1.6 g
0425907704		77 mm	77 x 90 x 0.4 mm	5 g
0425108202		85 mm	82 x 100 x 0.2 mm	3 g
0425108501		85 mm	85 x 100 x 0.1 mm	1.4 g
0425108515		85 mm	85 x 100 x 0.15 mm	2 g
0425108504		85 mm	85 x 100 x 0.4 mm	6 g
0425907610		90 mm	76 x 90 x 1 mm	13 g
0425119401		94 mm	94 x 110 x 0.1 mm	1.9 g
0425119415		94 mm	94 x 110 x 0.15 mm	2 g
0425119404		94 mm	94 x 110 x 0.4 mm	7 g
0425119405		94 mm	94 x 110 x 0.5 mm	0.01 g
0425119410		94 mm	94 x 110 x 1 mm	0.01 g
0425119412		94 mm	94 x 110 x 1.25 mm	0.01 g
0425951351		95 mm	95 x 135 x 0.1 mm	4.98 g
0425951355		95 mm	95 x 135 x 0.5 mm	26.98 g
0425121001		104 mm	104 x 120 x 0.1 mm	1.9 g
0425121015		104 mm	104 x 120 x 0.15 mm	2 g
0425121004		104 mm	104 x 120 x 0.4 mm	8 g
0425106122		106 mm	106 x 120 x 0.2 mm	3.5 g
0425131101		112 mm	112 x 130 x 0.1 mm	2 g
0425131115		112 mm	112 x 130 x 0.15 mm	3 g
0425131104		112 mm	112 x 130 x 0.4 mm	9.9 g
0425115301		115 mm	115 x 130 x 0.1 mm	2.2 g
0425115315		115 mm	115 x 130 x 0.15 mm	3.2 g
0425115303		115 mm	115 x 130 x 0.3 mm	6.4 g
0425115305		115 mm	115 x 130 x 0.5 mm	10.8 g
0425120141		120 mm	120 x 140 x 0.1 mm	2.6 g
0425141215		120 mm	120 x 140 x 0.15 mm	4 g
0425120142		120 mm	120 x 140 x 0.2 mm	5.5 g
0425141204		120 mm	120 x 140 x 0.4 mm	12.1 g
0425120145		120 mm	120 x 140 x 0.5 mm	15 g
0425151301		136 mm	136 x 150 x 0.1 mm	1.8 g
0425151315		136 mm	136 x 150 x 0.15 mm	3 g
0425151304		136 mm	136 x 150 x 0.4 mm	9 g
0425161401		140 mm	140 x 160 x 0.1 mm	27 g
0425161415		140 mm	140 x 160 x 0.15 mm	5 g
0425161404		140 mm	140 x 160 x 0.4 mm	13 g
0425161471		147 mm	147 x 160 x 0.1 mm	0.01 g
0425161475		147 mm	147 x 160 x 0.15 mm	0.01 g
0425161474		147 mm	147 x 160 x 0.4 mm	0.01 g
0425151015		150 mm	130 x 150 x 0.15 mm	5 g
0425150162		150 mm	150 x 165 x 0.2 mm	5.5 g
0425150171		150 mm	150 x 170 x 0.1 mm	1.2 g
0425150176		150 mm	150 x 170 x 0.15 mm	6 g
0425150173		150 mm	150 x 170 x 0.3 mm	13 g
0425171504		150 mm	150 x 170 x 0.4 mm	13 g
0425150175		150 mm	150 x 170 x 0.5 mm	20 g
0425160182		160 mm	160 x 180 x 0.2 mm	7.9 g
0425161902		160 mm	160 x 190 x 0.2 mm	12.4 g
0425161925		160 mm	160 x 190 x 0.25 mm	15.6 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425181601		162 mm	162 x 180 x 0.1 mm	3 g
0425181615		162 mm	162 x 180 x 0.15 mm	5 g
0425181604		162 mm	162 x 180 x 0.4 mm	13 g
0425170191		170 mm	170 x 190 x 0.1 mm	6.7 g
0425170196		170 mm	170 x 190 x 0.15 mm	10 g
0425170193		170 mm	170 x 190 x 0.3 mm	20 g
0425170195		170 mm	170 x 190 x 0.5 mm	34 g
0425201715		170 mm	170 x 200 x 0.15 mm	0.001 g
0425201704		170 mm	170 x 200 x 0.4 mm	25 g
0425191701		174 mm	174 x 190 x 0.1 mm	3 g
0425191715		174 mm	174 x 190 x 0.15 mm	4.8 g
0425191704		174 mm	174 x 190 x 0.4 mm	12 g
0425180211		180 mm	180 x 210 x 0.1 mm	6.35 g
0425201801		185 mm	185 x 200 x 0.1 mm	0.01 g
0425201815		185 mm	185 x 200 x 0.15 mm	4 g
0425201804		185 mm	185 x 200 x 0.4 mm	0.01 g
0425211801		185 mm	185 x 215 x 0.1 mm	6 g
0425211815		185 mm	185 x 215 x 0.15 mm	10 g
0425211804		185 mm	185 x 215 x 0.4 mm	27 g
0425211812		186 mm	185 x 215 x 1.25 mm	94.8 g
0425211805		186 mm	186 x 215 x 0.5 mm	0.01 g
0425211810		186 mm	186 x 215 x 1 mm	0.01 g
0425211915		192 mm	192 x 210 x 0.15 mm	5 g
0425211904		192 mm	192 x 210 x 0.4 mm	15 g
0425200232		200 mm	200 x 230 x 0.2 mm	14.6 g
0425282005		201 mm	201 x 280 x 0.5 mm	117.7 g
0425302115		210 mm	210 x 309 x 0.15 mm	43 g
0425302104		210 mm	210 x 309 x 0.4 mm	121 g
0425232101		213 mm	213 x 230 x 0.1 mm	0.01 g
0425232115		213 mm	213 x 230 x 0.15 mm	6 g
0425232104		213 mm	213 x 230 x 0.4 mm	16 g
0425242101		216 mm	216 x 240 x 0.1 mm	6 g
0425242115		216 mm	216 x 240 x 0.15 mm	9 g
0425242104		216 mm	216 x 240 x 0.4 mm	0.01 g
0425252301		230 mm	230 x 250 x 0.1 mm	0.001 g
0425252315		230 mm	230 x 250 x 0.15 mm	0.001 g
0425252304		230 mm	230 x 250 x 0.4 mm	22 g
0425262401		240 mm	240 x 260 x 0.1 mm	0.001 g
0425262415		240 mm	240 x 260 x 0.15 mm	8.4 g
0425262404		240 mm	240 x 260 x 0.4 mm	22.6 g
0425272401		240 mm	240 x 270 x 0.1 mm	0.01 g
0425272415		240 mm	240 x 270 x 0.15 mm	0.01 g
0425272404		240 mm	240 x 270 x 0.4 mm	0.01 g
0425282405		241 mm	241 x 280 x 0.5 mm	62.1 g
0425282412		241 mm	241 x 280 x 1.25 mm	155.2 g
0425282501		250 mm	250 x 280 x 0.1 mm	9 g
0425282515		250 mm	250 x 280 x 0.15 mm	13 g
0425282504		250 mm	250 x 280 x 0.4 mm	35 g
0425282601		260 mm	260 x 280 x 0.1 mm	0.01 g
0425282615		260 mm	260 x 280 x 0.15 mm	8 g
0425282604		260 mm	260 x 280 x 0.4 mm	24 g
0425292601		265 mm	265 x 290 x 0.1 mm	0.01 g
0425292615		265 mm	265 x 290 x 0.15 mm	0.01 g
0425282010		280 mm	201 x 280 x 1 mm	230 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425282410		280 mm	241 x 280 x 1 mm	125.88 g
0425302801		281 mm	281 x 309 x 0.1 mm	0.01 g
0425302815		281 mm	281 x 309 x 0.15 mm	15 g
0425302804		281 mm	281 x 309 x 0.4 mm	35 g
0425322901		297 mm	297 x 320 x 0.1 mm	0.01 g
0425363215		326 mm	326 x 360 x 0.15 mm	0.01 g
0425383404		340 mm	340 x 380 x 0.4 mm	67 g
0425423704		375 mm	375 x 420 x 0.4 mm	86 g
0425464104		415 mm	415 x 460 x 0.4 mm	0.01 g
0425030601	3-6-0,1	3 mm	3 x 6 x 0.1 mm	2 g
0425030605	3-6-0,5	3 mm	3 x 6 x 0.5 mm	1 g
0425040810	4-8-1	4 mm	4 x 8 x 1 mm	0.03 g
0425040801	4-8-0,1	4 mm	4 x 8 x 0.1 mm	0.01 g
0425040805	4-8-0,5	4 mm	4 x 8 x 0.5 mm	0.12 g
042551005	5-10-0,5	5 mm	5 x 10 x 0.5 mm	2 g
04256121	6-12-1,0	6 mm	6 x 12 x 1 mm	2.5 g
0425061212	6-12-1,2	6 mm	6 x 12 x 1.2 mm	0.8 g
0425061205	6-12-0,5	6 mm	6 x 12 x 0.5 mm	0.3 g
042571301	7-13-0,1	7 mm	7 x 13 x 0.1 mm	0.21 g
0425081410	8-14-1	8 mm	8 x 14 x 1 mm	0.7 g
0425081412	8-14-1,2	8 mm	8 x 14 x 1.2 mm	1 g
0425081402	8-14-0,2	8 mm	8 x 14 x 0.2 mm	0.2 g
0425081403	8-14-0,3	8 mm	8 x 14 x 0.3 mm	1 g
0425081405	8-14-0,5	8 mm	8 x 14 x 0.5 mm	0.39 g
0425091510	9-15-1,0	9 mm	9 x 15 x 1 mm	0.92 g
0425091501	9-15-0,1	9 mm	9 x 15 x 0.1 mm	0.09 g
0425091505	9-15-0,5	9 mm	9 x 15 x 0.5 mm	0.55 g
0425105130	10-130-3,5	10 mm	10 x 130 x 3.5 mm	5 g
0425102205	10-22-0,5	10 mm	10 x 22 x 0.5 mm	4.2 g
042510161	10-16-1	10 mm	10 x 16 x 1 mm	0.72 g
0425101612	10-16-1,2	10 mm	10 x 16 x 1.2 mm	2.75 g
0425101601	10-16-0,1	10 mm	10 x 16 x 0.1 mm	0.1 g
0425101602	10-16-0,2	10 mm	10 x 16 x 0.2 mm	0.15 g
0425101603	10-16-0,3	10 mm	10 x 16 x 0.3 mm	0.3 g
0425101605	10-16-0,5	10 mm	10 x 16 x 0.5 mm	0.5 g
0425121810	12-18-1,0	12 mm	12 x 18 x 1 mm	2.5 g
0425121801	12-18-0,1	12 mm	12 x 18 x 0.1 mm	1 g
0425121802	12X18X0,2	12 mm	12 x 18 x 0.2 mm	0.5 g
0425121805	12X18X0,5	12 mm	12 x 18 x 0.5 mm	0.55 g
0425121812	12X18X1,2	12 mm	12 x 18 x 1.2 mm	1.2 g
0425135355	13,5-35-0,5	13.5 mm	13.5 x 35 x 0.5 mm	3 g
0425131915	13-19-1,5	13 mm	13 x 19 x 1.5 mm	1.524 g
0425131903	13-19-0,3	13 mm	13 x 19 x 0.3 mm	1 g
0425142010	14-20-1	14 mm	14 x 20 x 1 mm	1.26 g
0425142015	14-20-1,5	14 mm	14 x 20 x 1.5 mm	1 g
0425142001	14-20-0,1	14 mm	14 x 20 x 0.1 mm	0.13 g
0425142003	14-20-0,3	14 mm	14 x 20 x 0.3 mm	0.38 g
0425142005	14-20-0,5	14 mm	14 x 20 x 0.5 mm	0.63 g
0425152110	15-21-1	15 mm	15 x 21 x 1 mm	1 g
0425152115	15-21-1,5	15 mm	15 x 21 x 1.5 mm	1.7 g
0425152101	15-21-0,1	15 mm	15 x 21 x 0.1 mm	0.12 g
0425152105	15-21-0,5	15 mm	15 x 21 x 0.5 mm	2 g
042516222	16-22-2	16 mm	16 x 22 x 2 mm	2.51 g
0425162210	16-22-1	16 mm	16 x 22 x 1 mm	1.2 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425162215	16-22-1,5	16 mm	16 x 22 x 1.5 mm	1.8 g
0425162203	16-22-0,25	16 mm	16 x 22 x 0.25 mm	0.25 g
0425162205	16-22-0,5	16 mm	16 x 22 x 0.5 mm	0.75 g
0425172410	17-24-1	17 mm	17 x 24 x 1 mm	1.62 g
0425172415	17-24-1,5	17 mm	17 x 24 x 1.5 mm	2 g
0425172401	17-24-0,1	17 mm	24 x 24 x 0.1 mm	0.18 g
0425172400	17-24-0,15	17 mm	17 x 24 x 0.15 mm	0.27 g
0425172402	17-24-0,2	17 mm	24 x 24 x 0.2 mm	0.31 g
0425172403	17-24-0,3	17 mm	17 x 24 x 0.3 mm	2 g
0425172405	17-24-0,5	17 mm	17 x 24 x 0.5 mm	0.88 g
0425182515	18-25-1,5	18 mm	18 x 25 x 1.5 mm	2.42 g
0425182505	18-25-0,5	18 mm	18 x 25 x 0.5 mm	5 g
0425192615	19-26-1,5	19 mm	19 x 26 x 1.5 mm	2.63 g
0425203202	20-32-0,2	20 mm	20 x 32 x 0.2 mm	0.7 g
042520282	20-28-2	20 mm	20 x 28 x 2 mm	4.35 g
042520281	20-28-1	20 mm	20 x 28 x 1 mm	2.2 g
0425202815	20-28-1,5	20 mm	20 x 28 x 1.5 mm	3.2 g
0425202801	20-28-0,1	20 mm	20 x 28 x 0.1 mm	2 g
0425202800	20-28-0,15	20 mm	20 x 28 x 0.15 mm	0.36 g
0425202802	20-28-0,2	20 mm	20 x 28 x 0.2 mm	3 g
0425202803	20-28-0,3	20 mm	20 x 28 x 0.3 mm	10 g
0425202805	20-28-0,5	20 mm	20 x 28 x 0.5 mm	1.18 g
042522322	22-32-2	22 mm	22 x 32 x 2 mm	6.7 g
042522321	22-32-1	22 mm	22 x 32 x 1 mm	3.33 g
0425223202	22-32-0,2	22 mm	22 x 32 x 0.2 mm	0.7 g
0425223203	22-32-0,3	22 mm	22 x 32 x 0.3 mm	1 g
0425223205	22-32-0,5	22 mm	22 x 32 x 0.5 mm	1.68 g
042522302	22-30-2	22 mm	22 x 30 x 2 mm	4.48 g
0425223010	22-30-1,0	22 mm	22 x 30 x 1 mm	2.57 g
0425223015	22-30-1,5	22 mm	22 x 30 x 1.5 mm	3.86 g
0425223003	22-30-0,3	22 mm	22 x 30 x 0.3 mm	4.4 g
0425223005	22-30-0,5	22 mm	22 x 30 x 0.5 mm	1.28 g
0425253221	25-35-2	25 mm	25 x 35 x 2 mm	7.5 g
042525352	25-35-2	25 mm	25 x 35 x 2 mm	6.95 g
0425253510	25-35-1	25 mm	25 x 35 x 1 mm	3.3 g
0425253501	25-35-0,1	25 mm	25 x 35 x 0.1 mm	0.3 g
0425253500	25-35-0,15	25 mm	25 x 35 x 0.15 mm	0.56 g
0425253502	25-35-0,2	25 mm	25 x 35 x 0.2 mm	1 g
0425253503	25-35-0,3	25 mm	25 x 35 x 0.3 mm	1.11 g
0425253505	25-35-0,5	25 mm	25 x 35 x 0.5 mm	3 g
042526372	26-37-2	26 mm	26 x 37 x 2 mm	2 g
0425263710	26-37-1,0	26 mm	26 x 37 x 1 mm	4.3 g
0425263701	26-37-0,1	26 mm	26 x 37 x 0.1 mm	0.09 g
0425263700	26-37-0,15	26 mm	26 x 37 x 0.15 mm	0.66 g
0425263703	26-37-0,3	26 mm	26 x 37 x 0.3 mm	1.29 g
0425263705	26-37-0,5	26 mm	26 x 37 x 0.5 mm	0.01 g
042528402	28-40-2	28 mm	28 x 40 x 2 mm	10.6 g
0425284010	28-40-1	28 mm	28 x 40 x 1 mm	4.68 g
0425284001	28-40-0,1	28 mm	28 x 40 x 0.1 mm	0.503 g
0425284000	28-40-0,15	28 mm	28 x 40 x 0.15 mm	0.76 g
0425284002	28-40-0,2	28 mm	28 x 40 x 0.2 mm	1 g
0425284003	28-40-0,3	28 mm	28 x 40 x 0.3 mm	1.51 g
0425284005	28-40-0,5	28 mm	28 x 40 x 0.5 mm	7 g
042530422	30-42-2,0	30 mm	30 x 42 x 2 mm	10.16 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425304225	30-42-2,5	30 mm	30 x 42 x 2.5 mm	13.4 g
042530421	30-42-1,0	30 mm	30 x 42 x 1 mm	5 g
0425304215	30-42-1,5	30 mm	30 x 42 x 1.5 mm	7.2 g
0425304201	30-42-0,1	30 mm	30 x 42 x 0.1 mm	0.45 g
0425304200	30-42-0,15	30 mm	30 x 42 x 0.15 mm	0.81 g
0425304202	30-42-0,2	30 mm	30 x 42 x 0.2 mm	1.3 g
0425304203	30-42-0,3	30 mm	30 x 42 x 0.3 mm	1.62 g
0425304205	30-42-0,5	30 mm	30 x 42 x 0.5 mm	2.46 g
0425304210	30X42X1	30 mm	30 x 42 x 1 mm	4.9 g
0425324520	32-45-2,0	32 mm	32 x 45 x 2 mm	13 g
0425324525	32-45-2,5	35 mm	35 x 45 x 2.5 mm	14.5 g
0425324510	32-45-1,0	32 mm	32 x 45 x 1 mm	2 g
0425354520	35-45-2	35 mm	35 x 45 x 2 mm	9.1 g
0425354525	35-45-2,5	35 mm	35 x 45 x 2.5 mm	11 g
042535451	35-45-1	35 mm	35 x 45 x 1 mm	15 g
0425354501	35-45-0,1	35 mm	35 x 45 x 0.1 mm	0.495 g
0425354500	35-45-0,15	35.000	35 x 45 x 0.15 mm	0.75 g
0425354502	35-45-0,2	35 mm	35 x 45 x 0.2 mm	0.9 g
0425354503	35-45-0,3	35 mm	35 x 45 x 0.3 mm	1.49 g
0425354505	35-45-0,5	35 mm	35 x 45 x 0.5 mm	2.2 g
0425354510	35X4X1	35 mm	35 x 45 x 1 mm	1 g
0425364510	36-45-1,0	36 mm	36 x 45 x 1 mm	2 g
0425374725	37-47-2,5	37 mm	37 x 47 x 2.5 mm	12.9 g
042537471	37-47-1	37 mm	37 x 47 x 1 mm	10 g
0425374701	37-47-0,1	37 mm	37 x 47 x 0.1 mm	0.516 g
0425374700	37-47-0,15	37.000	37 x 47 x 0.15 mm	0.78 g
0425374703	37-47-0,3	37 mm	37 x 47 x 0.3 mm	1.55 g
0425374705	37-47-0,5	37 mm	37 x 47 x 0.5 mm	2.58 g
0425406020	40-60-2	40 mm	40 x 60 x 2 mm	10.3 g
0425405020	40-50-2	40 mm	40 x 50 x 2 mm	10.5 g
0425405025	40-50-2,5	40 mm	40 x 50 x 2.5 mm	12 g
0425405010	40-50-1	40 mm	40 x 50 x 1 mm	5 g
0425405001	40-50-0,1	40 mm	40 x 50 x 0.1 mm	0.56 g
0425405000	40-50-0,15	40 mm	40 x 50 x 0.15 mm	0.84 g
0425405002	40-50-0,2	40 mm	40 x 50 x 0.2 mm	1 g
0425405003	40-50-0,3	40 mm	40 x 50 x 0.3 mm	1.68 g
0425405005	40-50-0,5	40 mm	40 x 50 x 0.5 mm	2.6 g
0425425225	42-52-2,5	42 mm	42 x 52 x 2.5 mm	12.74 g
042542521	42-52-1	42 mm	42 x 52 x 1 mm	5.78 g
0425425216	42-52-1,5	42 mm	42 x 52 x 1.5 mm	8.2 g
0425425201	42-52-0,1	42 mm	42 x 52 x 0.1 mm	12 g
0425425200	42-52-0,15	42 mm	42 x 52 x 0.15 mm	0.87 g
0425425215	42-52-0,15	42 mm	42 x 52 x 0.15 mm	0.87 g
0425425203	42-52-0,3	42 mm	42 x 52 x 0.3 mm	13 g
0425425205	42-52-0,5	42 mm	42 x 52 x 0.5 mm	11 g
042545553	45-55-3	45 mm	45 x 55 x 3 mm	17 g
0425455520	45-55-2	45 mm	45 x 55 x 2 mm	11 g
0425455510	45-55-1	45 mm	45 x 55 x 1 mm	6 g
0425455501	45-55-0,1	45 mm	45 x 55 x 0.1 mm	0.88 g
0425455500	45-55-0,15	45 mm	45 x 55 x 0.15 mm	0.93 g
0425455503	45-55-0,3	45 mm	45 x 55 x 0.3 mm	1.86 g
042545505	45-55-0,5	45 mm	45 x 55 x 0.5 mm	2 g
042550623	50-62-3	50 mm	50 x 62 x 3 mm	24.9 g
042550622	50-62-2	50 mm	50 x 62 x 2 mm	15 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
042550621	50-62-1	50 mm	50 x 62 x 1 mm	8 g
0425506201	50-62-0,1	50 mm	50 x 62 x 0.1 mm	1 g
0425506215	50-62-0,15	50 mm	50 x 62 x 0.15 mm	1.1 g
0425506202	50-62-0,2	50 mm	50 x 62 x 0.2 mm	1.7 g
0425506203	50-62-0,3	50 mm	50 x 62 x 0.3 mm	1 g
0425506205	50-62-0,5	50 mm	50 x 62 x 0.5 mm	4 g
0425526510	52-65-1	52 mm	52 x 65 x 1 mm	9.4 g
0425556830	55-68-3	55 mm	55 x 68 x 3 mm	27.2 g
0425556820	55-68-2	55 mm	55 x 68 x 2 mm	19.6 g
0425556810	55-68-1	55 mm	55 x 68 x 1 mm	9.8 g
0425556801	55-68-0,1	55 mm	55 x 68 x 0.1 mm	0.98 g
0425556800	55-68-0,15	55 mm	55 x 68 x 0.15 mm	1.47 g
0425556803	55-68-0,3	55 mm	55 x 68 x 0.3 mm	3 g
0425556805	55-68-0,5	55 mm	55 x 68 x 0.5 mm	4.9 g
0425567230	56-72-3	56 mm	56 x 72 x 3 mm	38.1 g
042556701	56-72-1	56 mm	56 x 70 x 1 mm	10.9 g
042556721	56-72-1	56 mm	56 x 72 x 1 mm	12.7 g
0425567201	56-72-0,1	56 mm	56 x 72 x 0.1 mm	1.3 g
0425567200	56-72-0,15	56 mm	56 x 72 x 0.15 mm	1.9 g
0425567202	56-72-0,2	56 mm	56 x 72 x 0.2 mm	2.5 g
0425567203	56-72-0,3	56 mm	56 x 72 x 0.3 mm	3.8 g
0425567205	56-72-0,5	56 mm	56 x 72 x 0.5 mm	6.35 g
0425567000	56-70-0,1	56 mm	56 x 70 x 0.1 mm	1.09 g
0425567001	56-70-0,15	56 mm	56 x 70 x 0.15 mm	1.64 g
0425567003	56-70-0,3	56 mm	56 x 70 x 0.3 mm	3.27 g
0425567005	56-70-0,5	56 mm	56 x 70 x 0.5 mm	5.45 g
042560753	60-75-3	60 mm	60 x 75 x 3 mm	37 g
042560751	60-75-1	60 mm	60 x 75 x 1 mm	12 g
0425607510	60-75-0,1	60 mm	60 x 75 x 0.1 mm	1.25 g
0425607501	60-75-0,15	60 mm	60 x 75 x 0.15 mm	1.87 g
0425607505	60-75-0,15	60 mm	60 x 75 x 0.5 mm	5.6 g
0425607503	60-75-0,3	60 mm	60 x 75 x 0.3 mm	10 g
0425628010	62-80-1	62 mm	62 x 80 x 1 mm	14.2 g
0425526530	62-65-3	52 mm	52 x 65 x 3 mm	10 g
0425658501	63-85-0,1	63 mm	63 x 85 x 0.1 mm	1.85 g
042563803	63-80-3	63 mm	63 x 80 x 3 mm	43 g
042563801	63-80-1	63 mm	63 x 80 x 1 mm	1.5 g
0425638001	63-80-0,1	63 mm	63 x 80 x 0.1 mm	15 g
0425638015	63-80-0,15	63 mm	63 x 80 x 0.15 mm	2.25 g
0425638002	63-80-0,2	63 mm	63 x 80 x 0.2 mm	3 g
0425638003	63-80-0,3	63 mm	63 x 80 x 0.3 mm	4.5 g
0425638005	63-80-0,5	63 mm	63 x 80 x 0.5 mm	7.5 g
0425639003	63X80X0,3	63 mm	63 x 80 x 0.3 mm	4.5 g
0425658530	65-85-3,0	65 mm	65 x 85 x 3 mm	54 g
0425658535	65-85-3,5	65 mm	65 x 85 x 3.5 mm	63 g
0425658510	65-85-1	65 mm	65 x 85 x 1 mm	18 g
0425658500	65-85-0,15	65 mm	65 x 85 x 0.15 mm	2.7 g
0425658503	65-85-0,3	65 mm	65 x 85 x 0.3 mm	5.4 g
0425658505	65-85-0,5	65 mm	65 x 85 x 0.5 mm	18.5 g
042570 903	70-90-3	70 mm	70 x 90 x 3 mm	55.64 g
0425709035	70-90-3,5	70 mm	70 x 90 x 3.5 mm	65.5 g
0425709020	70-90-2	70 mm	70 x 90 x 2 mm	37.46 g
0425709025	70-90-2,5	70 mm	70 x 90 x 2.5 mm	50 g
0425709010	70-90-1	70 mm	70 x 90 x 1 mm	18.96 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425709001	70-90-0,1	70 mm	70 x 90 x 0.1 mm	1.97 g
0425709000	70-90-0,15	70 mm	70 x 90 x 0.15 mm	2.96 g
0425709002	70-90-0,2	70 mm	70 x 90 x 0.2 mm	4 g
0425709003	70-90-0,3	70 mm	70 x 90 x 0.3 mm	5.9 g
0425709005	70-90-0,5	70 mm	70 x 90 x 0.5 mm	9.85 g
0425728010	72-80-1	72 mm	72 x 80 x 1 mm	19.42 g
0425728001	72-80-0,1	72 mm	72 x 80 x 0.1 mm	1.9 g
0425728000	72-80-0,15	72 mm	72 x 80 x 0.15 mm	2.92 g
0425728003	72-80-0,3	72 mm	72 x 80 x 0.3 mm	5.7 g
0425728005	72-80-0,5	72 mm	72 x 80 x 0.5 mm	10 g
0425759535	75-95-3,5	75 mm	75 x 95 x 3.5 mm	73.2 g
042575951	75-95-1	75 mm	75 x 95 x 1 mm	20.9 g
0425759501	75-95-0,1	75 mm	75 x 95 x 0.1 mm	2.09 g
0425759500	75-95-0,15	75 mm	75 x 95 x 0.15 mm	3.14 g
0425759503	75-95-0,3	75 mm	75 x 95 x 0.3 mm	6.28 g
0425759505	75-95-0,5	75 mm	75 x 95 x 0.5 mm	10.5 g
0425758501	75-85-0,1	75 mm	75 x 85 x 0.1 mm	1.9 g
0425758500	75-85-0,15	75 mm	75 x 85 x 0.15 mm	3 g
0425758503	75-85-0,3	75 mm	75 x 85 x 0.3 mm	5.7 g
0425758505	75-85-0,5	75 mm	75 x 85 x 0.5 mm	9.5 g
0425801003	80-100-3,5	80 mm	80 x 100 x 3.5 mm	0.072 g
0425801035	80-100-3,5	80 mm	80 x 100 x 3.5 mm	73.84 g
0425801002	80-100-2,0	80 mm	80 x 100 x 2 mm	42.2 g
0425801010	80-100-1,0	80 mm	80 x 100 x 1 mm	22.3 g
0425801000	80-100-0,1	80 mm	80 x 100 x 0.1 mm	2.22 g
0425801001	80-100-0,15	80 mm	80 x 100 x 0.15 mm	3.33 g
0425801020	80-100-0,2	80 mm	80 x 100 x 0.2 mm	4 g
0425810003	80-100-0,3	80 mm	80 x 100 x 0.3 mm	6.65 g
0425801005	80-100-0,5	80 mm	80 x 100 x 0.5 mm	11.1 g
0425851053	85-105-3,5	85 mm	85 x 105 x 3.5 mm	76.88 g
0425851051	85-105-1,0	85 mm	85 x 105 x 1 mm	22.1 g
0425851054	85-105-0,1	85 mm	85 x 105 x 0.1 mm	2.34 g
0425851050	85-105-0,3	85 mm	85 x 105 x 0.3 mm	7.032 g
0425851055	85-105-0,5	85 mm	85 x 105 x 0.5 mm	11.72 g
0425881000	88-100-0,05	88 mm	88 x 100 x 0.05 mm	0.7 g
0425881001	88-100-0,1	88 mm	88 x 100 x 0.1 mm	1 g
0425881002	88-100-0,2	88 mm	88 x 100 x 0.2 mm	2 g
0425881003	88-100-0,3	88 mm	88 x 100 x 0.3 mm	3 g
0425881005	88-100-0,5	88 mm	88 x 100 x 0.5 mm	6 g
0425951151	90-115-1,0	90 mm	95 x 115 x 1 mm	25.9 g
0425901135	90-110-3,5	90 mm	90 x 110 x 3.5 mm	79 g
0425901120	90-110-2	90 mm	90 x 110 x 2 mm	49.4 g
0425901101	90-110-1,0	90 mm	90 x 110 x 1 mm	2.47 g
0425901100	90-110-0,1	90 mm	90 x 110 x 0.1 mm	2.47 g
0425901115	90-110-0,15	90 mm	90 x 110 x 0.15 mm	3.7 g
0425901102	90-110-0,2	90 mm	90 x 110 x 0.2 mm	5 g
0425901103	90-110-0,3	90 mm	90 x 110 x 0.3 mm	7.4 g
0425901105	90-110-0,5	90 mm	90 x 110 x 0.5 mm	12.4 g
0425951153	95-115-3,5	95 mm	95 x 115 x 3.5 mm	90.7 g
0425951150	95-115-0,1	95 mm	95 x 115 x 0.1 mm	2.59 g
0425951152	95-115-0,15	95 mm	95 x 115 x 0.15 mm	3.89 g
0425951154	95-115-0,3	95 mm	95 x 115 x 0.3 mm	7.78 g
0425951155	95-115-0,5	95 mm	95 x 115 x 0.5 mm	14.5 g
0425100125	100-125-1	100 mm	100 x 125 x 1 mm	5 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425101250	100-125-0,1	100 mm	100 x 125 x 0.1 mm	3.49 g
0425101251	100-125-0,1	100 mm	100 x 125 x 1 mm	5 g
0425101255	100-125-0,15	100 mm	100 x 125 x 0.15 mm	5 g
0425101253	100-125-0,3	100 mm	100 x 125 x 0.3 mm	10.45 g
0425101205	100-125-0,5	100 mm	100 x 125 x 0.5 mm	13.6 g
0425100120	100-120-3,5	100 mm	100 x 120 x 3.5 mm	90.2 g
0425100121	100-120-1	100 mm	100 x 120 x 1 mm	25.1 g
0425100128	100-120-0,1	100 mm	100 x 120 x 0.1 mm	10 g
0425100126	100-120-0,15	100 mm	100 x 120 x 0.15 mm	3 g
0425101202	100-120-0,2	100 mm	100 x 120 x 0.2 mm	5.44 g
0425101203	100-120-0,3	100 mm	100 x 120 x 0.3 mm	8.15 g
0425100124	100-120-0,5	100 mm	100 x 120 x 0.5 mm	12.6 g
0425100130	105-130-1	105 mm	105 x 130 x 1 mm	36.2 g
0425105131	105-130-0,1	105 mm	105 x 130 x 0.1 mm	3.62 g
0425101301	105-130-0,15	105 mm	105 x 130 x 0.15 mm	5.43 g
0425101302	105-130-0,2	105 mm	105 x 130 x 0.2 mm	9.5 g
0425105132	105-130-0,2	105 mm	105 x 130 x 0.2 mm	7.7 g
0425101303	105-130-0,3	105 mm	105 x 130 x 0.3 mm	10.4 g
0425101305	105-130-0,5	105 mm	105 x 130 x 0.5 mm	18.1 g
0425106121	106-120-0,1	106 mm	106 x 120 x 0.1 mm	2 g
0425106123	106-120-0,3	106 mm	106 x 120 x 0.3 mm	6 g
0425111435	110-140-3,5	110 mm	110 x 140 x 3.5 mm	162 g
0425110140	110-140-2	110 mm	110 x 140 x 2 mm	86.8 g
0425110141	110-140-1	110 mm	110 x 140 x 1 mm	46.2 g
0425111401	110-140-0,1	110 mm	110 x 140 x 0.1 mm	4.63 g
0425111400	110-140-0,15	110 mm	110 x 140 x 0.15 mm	4.88 g
0425110142	110-140-0,2	110 mm	110 x 140 x 0.2 mm	5 g
0425111403	110-140-0,3	110 mm	110 x 140 x 0.3 mm	13.9 g
0425111405	110-140-0,5	110 mm	110 x 140 x 0.5 mm	23.1 g
0425110125	110-123-0,05	110 mm	110 x 123 x 0.05 mm	1 g
0425110121	110-123-0,1	110 mm	110 x 123 x 0.1 mm	2 g
0425121530	120-150-3,0	120 mm	120 x 150 x 3 mm	150 g
0425120153	120-150-3,5	120 mm	120 x 150 x 3.5 mm	175 g
0425120151	120-150-1	120 mm	120 x 150 x 1 mm	50 g
0425120150	120-150-0,1	120 mm	120 x 150 x 0.1 mm	5 g
0425121515	120-150-0,15	120 mm	120 x 150 x 0.15 mm	7.5 g
0425120154	120-150-0,2	120 mm	120 x 150 x 0.2 mm	10 g
0425120152	120-150-0,25	120 mm	120 x 150 x 0.25 mm	12 g
0425121503	120-150-0,3	120 mm	120 x 150 x 0.3 mm	15 g
0425121505	120-150-0,5	120 mm	120 x 150 x 0.5 mm	25 g
0425125405	125-140-0,05	125 mm	125 x 140 x 0.05 mm	1.4 g
0425125402	125-140-0,2	125 mm	125 x 140 x 0.2 mm	4 g
0425131700	130-170-0,15	130 mm	130 x 170 x 0.15 mm	8.6 g
0425131635	130-160-3,5	130 mm	130 x 160 x 3.5 mm	188 g
0425131610	130-160-1	130 mm	130 x 160 x 1 mm	53.6 g
0425131601	130-160-0,1	130 mm	130 x 160 x 0.1 mm	5.36 g
0425130160	130-160-0,15	130 mm	130 x 160 x 0.15 mm	8.04 g
0425130161	130-160-0,2	130 mm	130 x 160 x 0.2 mm	11 g
0425131603	130-160-0,3	130 mm	130 x 160 x 0.3 mm	16.1 g
0425131605	130-160-0,5	0130 mm	130 x 160 x 0.5 mm	26.8 g
0425130150	130-150-0,5	130 mm	130 x 150 x 0.5 mm	2 g
0425138163	138-160-3,5	138 mm	138 x 160 x 3.5 mm	195 g
0425140173	140-170-3,5	140 mm	140 x 170 x 3.5 mm	12 g
0425140171	140-170-1	140 mm	140 x 170 x 1 mm	57.3 g

Art. No.	Type description	Nominal diameter	Internal diameter x external diameter x thickness	Product weight (per item)
0425140172	140-170-1	140 mm	140 x 170 x 1 mm	90 g
0425141701	140-170-0,1	140 mm	140 x 170 x 0.1 mm	5.73 g
0425140176	140-170-0,15	140 mm	140 x 170 x 0.15 mm	12 g
0425140174	140-170-0,2	140 mm	140 x 170 x 0.2 mm	11 g
0425141703	140-170-0,3	140 mm	140 x 170 x 0.3 mm	17.2 g
0425140175	140-170-0,5	140 mm	140 x 170 x 0.5 mm	28.5 g
0425151835	150-180-3,5	150 mm	150 x 180 x 3.5 mm	214 g
0425150183	150-180-1,0	150 mm	150 x 180 x 0.3 mm	61.2 g
0425150180	150-180-0,1	150 mm	150 x 180 x 0.1 mm	6.1 g
0425151803	150-180-0,3	150 mm	150 x 180 x 0.3 mm	18.3 g
0425151805	150-180-0,5	150 mm	150 x 180 x 0.5 mm	18.3 g
0425151601	150-165-0,1	150 mm	150 x 165 x 0.1 mm	6 g
0425151600	150-165-0,15	150 mm	150 x 165 x 0.15 mm	6.3 g
0425150163	150-165-0,3	150 mm	150 x 165 x 0.3 mm	9 g
0425160190	160-190-3,5	160 mm	160 x 190 x 3.5 mm	15 g
0425161910	160-190-1	160 mm	160 x 190 x 1 mm	64.9 g
0425161901	160-190-0,10	160 mm	160 x 190 x 0.1 mm	6.48 g
0425161900	160-190-0,15	160 mm	160 x 190 x 0.15 mm	9.73 g
0425161903	160-190-0,30	160 mm	160 x 190 x 0.3 mm	19.54 g
0425161905	160-190-0,5	160 mm	160 x 190 x 0.5 mm	32.3 g
0425160181	160-180-0,1	160 mm	160 x 180 x 0.1 mm	4 g
0425160183	160-180-0,3	160 mm	160 x 180 x 0.3 mm	13 g
0425172010	170-200-1,0	170 mm	170 x 200 x 1 mm	68.6 g
0425170200	170-200-0,1	170 mm	170 x 200 x 0.1 mm	6.85 g
0425172000	170-200-0,15	170 mm	170 x 200 x 0.15 mm	10.29 g
0425172003	170-200-0,3	170 mm	170 x 200 x 0.3 mm	20.6 g
0425172005	170-200-0,5	170 mm	170 x 200 x 0.5 mm	34.3 g
0425172040	170X200X4,0	170 mm	170 x 200 x 4 mm	275 g
0425200230	200-230-0,1	200 mm	200 x 230 x 0.1 mm	8 g
0425361	37045	3 mm	3 x 6 x 1 mm	1 g
0425122405	M12X24X0,5	12 mm	12 x 24 x 0.5 mm	1.3 g



Taper plug WP 600

Polyethylene, red

Usage :

- Shield (external)
- Plug (internal)

- **Material :** LDPE - Low density polyethylene
- **Colour :** Red

Art. No.	Type description	Outer diameter	Min./max. taper external diameter	Insertion depth	Min./max. taper internal diameter
0597600060	5	5.9 mm	3.3-4 mm	8 mm	1.1-2.1 mm
0597600064	6	11.5 mm	6.8-7.4 mm	6.8 mm	5-5.6 mm
0597600082	10	13.2 mm	8.3-9.4 mm	9 mm	6.9-7.9 mm
0597600098	12	15 mm	10.1-11 mm	9.9 mm	8.2-9.5 mm
0597600108	15	16.2 mm	10.8-12.5 mm	9.6 mm	9.2-10.8 mm

Art. No.	Type description	Outer diameter	Min./max. taper external diameter	Insertion depth	Min./max. taper internal diameter
0597600131	18	19 mm	13.1-14.5 mm	11.1 mm	11.5-12.9 mm
0597600154	20	19.1 mm	13.9-15.4 mm	12 mm	12.4-14 mm
0597600142	25	18.9 mm	14.2-15.7 mm	12.8 mm	13-14.7 mm
0597600163	28	20.1 mm	16.3-18 mm	13.4 mm	14.40-16.3 mm
0597600172	30	23 mm	17.2-18.9 mm	14 mm	15.8-17.6 mm
0597600183	35	24.2 mm	18.2-20.2 mm	13.9 mm	16.4-18.8 mm
0597600193	36	25.3 mm	19.3-21.1 mm	13.7 mm	17.6-19.5 mm
0597600202	37	25.5 mm	20.4-22.2 mm	15 mm	18.9-20.9 mm
0597600211	38	27.5 mm	21.1-22.8 mm	15 mm	19.8-21.9 mm
0597600219	40	28.8 mm	21.9-25.5 mm	15.5 mm	20.2-23.3 mm
0597600242	41	29.5 mm	24.2-26 mm	13.7 mm	22.4-23.5 mm
0597600252	42	30.7 mm	25.2-26.8 mm	13.9 mm	23.7-25.4 mm
0597600272	44	34.6 mm	27.2-28.4 mm	13.7 mm	25.3-26.9 mm
0597600279	45	34.8 mm	27.9-30.6 mm	13.9 mm	26-28.8 mm
0597600297	50	36.2 mm	29.7-32 mm	17 mm	27.9-30.3 mm
0597600309	52	35.5 mm	30.9-32.7 mm	17.8 mm	29.5-31.9 mm
0597600331	55	39.5 mm	33.1-35.2 mm	16.7 mm	31.7-33.4 mm
0597600343	57	41.8 mm	34.3-37.5 mm	17.5 mm	33-36 mm
0597600356	58	41.1 mm	35.7-38.1 mm	16.8 mm	34.0-27.1 mm
0597600380	60	44.6 mm	37.7-40 mm	17.4 mm	36.4-38.9 mm
0597600469	75	53.8 mm	46.9-49.3 mm	18.9 mm	45.7-48.1 mm
0597600491	76	55.6 mm	49.1-50.7 mm	18.9 mm	47.6-50 mm
0597600519	79	58.7 mm	51.9-55.3 mm	20 mm	51.1-54.7 mm
0597600555	80	62.3 mm	55.5-57.6 mm	19.4 mm	54.0-56.6 mm
0597600569	82	65.2 mm	56.9-59.3 mm	19.7 mm	55.5-57.3 mm
0597600583	85	65.1 mm	58.3-60.7 mm	19.4 mm	57.4-60 mm
0597600593	86	69.9 mm	60.5-63.3 mm	20.1 mm	59.4-62.8 mm
0597600630	88	69 mm	63.0-66.5 mm	20 mm	61.4-64.9 mm
0597600701	90	78.1 mm	70.1-73.2 mm	20.9 mm	69.2-71.8 mm
0597600748	95	83 mm	74.8-77.1 mm	21.8 mm	73.0-75.6 mm
0597600779	97	85 mm	77.9-80.1 mm	21.8 mm	76.6-79.3 mm
0597600808	98	87.8 mm	80.8-83.3 mm	21.9 mm	78.9-81.6 mm
0597600834	100	91 mm	83.4-85.6 mm	21.4 mm	81.9-84.5 mm
0597600850	101	84.8 mm	77.9-80.3 mm	20.4 mm	76.1-78.1 mm
0597600877	106	95 mm	87.7-89.5 mm	21.8 mm	86.0-88.6 mm
0597600912	108	91 mm	83.4-86.3 mm	21.4 mm	81.0-83.7 mm
0597600989	115	104.6 mm	98.9-101.2 mm	21.9 mm	97.2-98.7 mm
0597601022	117	109.6 mm	102.3-105.5 mm	23.9 mm	99.6-102.8 mm
0597601123	120	117.2 mm	109.4-112.3 mm	24 mm	107.2-110.6 mm
0597601235	127	137 mm	123.5-126.1 mm	24.9 mm	121.5-124.5 mm
0597600129	130	138 mm	129.9-135 mm	32.5 mm	126.9-132.9 mm



Cable tie, normal, metal lug

Quick, trouble-free and reliable bundling of cables, wire harnesses, hoses, etc.

Corrosion resistant, antimagnetic metal locking

Greater tensile strength than in cable ties with plastic locking

• **Material:** PA - Polyamide

Effective fastening to cable bundles

Also in harsh conditions, e.g. vibration, moisture, cold or hot, etc.

No other installation tools needed

Can be handled by hand

Resistance to bases, oils, greases and motor vehicle fuels

Art. No.	Type description	Width	Length	Product weight (per item)
0502211	2,4 X 92	2.5 mm	100 mm	0.21 g
05022121	2,4 X 203	2.3 mm	203 mm	0.49 g
05022131	2,4 X 356	2.3 mm	356 mm	1.09 g
0502221	3,6 X 141	3.5 mm	140 mm	0.6 g
05022221	3,6 X 208	3.6 mm	208 mm	0.87 g
05022231	3,6 X 282	3.6 mm	284 mm	1.34 g
05022241	3,6 X 368	3.6 mm	368 mm	1.55 g
0502231	4,8 X 186	4.5 mm	186 mm	1.2 g
0502251	4,8 X 290	4.8 mm	290 mm	0.88 g
0502241	4,8 X 360	4.5 mm	290 mm	0.029 g
0502301	7,6 X 203	7.6 mm	203 mm	1 g
0502311	7 X 340	7 mm	340 mm	4 g
0502321	13,3 X 540	13.3 mm	540 mm	17 g



Cable tie, normal, plastic strip

Quick, easy and reliable bundling of cables, wire harnesses, hoses and the like

Easy to recycle

100 % plastic

Effective fastening to cable bundles

The inner surface of the cable tie is serrated

No other installation tools needed

Can be handled by hand

Resistance to bases, oils, greases and motor vehicle fuels

Art. No.	Type description	Width	Length	Material	Product weight (per item)
05021921					17 g
0502111	2,4 X 111	2.5 mm	100 mm	PA - Polyamide	0.32 g
0502121	3,6 X 141	3.6 mm	140 mm	PA - Polyamide	0.75 g
0502141	4,7 X 186	4.8 mm	178 mm	PA - Polyamide	1.35 g
0502151	4,7 X 291	4.8 mm	280 mm	PA - Polyamide	1.9 g
050228648	4,8 X 286	4.8 mm	286 mm	PA - Polyamide	2.24 g
050237148	4,8 X 371	4.8 mm	371 mm	PA - Polyamide	2.58 g

Art. No.	Type description	Width	Length	Material	Product weight (per item)
0502181	7,6 X 375	7.8 mm	360 mm	PA - Polyamide	5 g
0502176760	7,6 X 760	7.6 mm	760 mm	PA - Polyamide	12 g
0502161	7,8 X 616	4.8 mm	360 mm	PA - Polyamide	2.5 g
05021813	7,8 X 750	7.8 mm	750 mm	PA - Polyamide	10 g



Cable tie, black UV-protected

Polyamide 6.6, plastic lock

- Fire safety class UL94 V2. RoHS-compliant.
- Classifications : DNV, SAE.

• **Material :** PA - Polyamide

Art. No.	Type description	Width	Length	Product weight (per item)
0502725100	2,5 X 100	2.5 mm	100 mm	0.3 g
0502725140	2,5 X 140	2.5 mm	140 mm	0.44 g
0502725200	2,5 X 200	2.5 mm	200 mm	0.63 g
0502746200	4,6 X 200	4.6 mm	200 mm	1.4 g
0502746201	4,6 X 200	4.6 mm	200 mm	2 g
0502746300	4,6 X 300	4.6 mm	300 mm	2.1 g
0502746390	4,6 X 390	4.6 mm	390 mm	2.6 g
0502776385	7,6 X 385	7.6 mm	385 mm	5.8 g
0502732535	13,2 X 535	13.2 mm	535 mm	15.27 g



Cable tie, normal, metal lug

Quick, trouble-free and reliable bundling of cables, wire harnesses, hoses, etc.

Corrosion resistant, antimagnetic metal locking

Greater tensile strength than in cable ties with plastic locking

• **Material :** PA - Polyamide

Effective fastening to cable bundles

Also in harsh conditions, e.g. vibration, moisture, cold or hot, etc.

No other installation tools needed

Can be handled by hand

Resistance to bases, oils, greases and motor vehicle fuels

Art. No.	Type description	Width	Length	Product weight (per item)
050221	2,4 X 92	2.5 mm	100 mm	0.21 g
050222	3,6 X 140	3.5 mm	140 mm	0.666 g
050223	4,8 X 186	4.5 mm	186 mm	1.2 g
050225	4,8 X 290	4.5 mm	290 mm	2 g
050224	4,8 X 361	4.5 mm	360 mm	2.5 g
050230	7,6 X 223	7.6 mm	223 mm	3.1 g
050231	7,6 X 338	7 mm	340 mm	4.26 g



Cable tie, normal, plastic strip

Quick, easy and reliable bundling of cables, wire harnesses, hoses and the like

Easy to recycle

100 % plastic

• **Material:** PA - Polyamide

Effective fastening to cable bundles

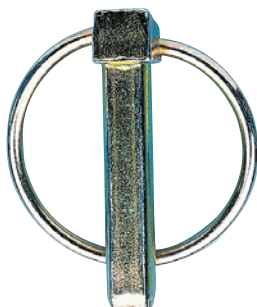
The inner surface of the cable tie is serrated

No other installation tools needed

Can be handled by hand

Resistance to bases, oils, greases and motor vehicle fuels

Art. No.	Type description	Width	Length	Product weight (per item)
050211	2,4 X 111	2.5 mm	100 mm	0.32 g
0502250102	2,5 X 102	2.5 mm	102 mm	0.27 g
050212	3,6 X 141	3.6 mm	140 mm	0.75 g
050214	4,7 X 186	4.8 mm	178 mm	1.35 g
050214 001	4,7 X 186	4.8 mm	186 mm	1.35 g
050215	4,7 X 291	4.8 mm	280 mm	1.85 g
050216	4,7 X 363	4.8 mm	360 mm	2.6 g
050248286	4,8 X 286	4.8 mm	286 mm	1.91 g
050248371	4,8 X 371	4.8 mm	371 mm	2.6 g
050218	7,8 X 616	7.8 mm	360 mm	10.4 g



Ring cotter pin

DIN 11023, zinc-electroplated

• **Material:** Steel

• **DIN:** 11023

Art. No.	Type description	Product weight (per item)
147245	4,5	19.8 g
1472045	4,5	20.8 g
14726	6,5	24.23 g
14728	8	29.8 g
1472010	10	14.8 g
147210	10	41.87 g



MarVision MM 420

Mahr

Stage Position
X: -136.759
Y: -14.050
Z: 150.959

max. 200 kg





Spring cotter pin

ISO 8752 (DIN 1481) stainless steel A2

- Used for fixing parts just like with grooved cotter pins
- Oversize of 0.2-0.5 mm when compared to nominal diameter ensures secure and tight installation
- The tapering end of the part makes it easy to push into the hole
- Pins can be removed again without damaging the parts

- **Material:** Stainless steel A2
- **DIN:** 1481
- **ISO:** 8752

Art. No.	Type description	Product weight (per item)
547515 10	1,5X10	1 g
547525 10	2,5X10	0.2 g
547525 12	2,5X12	1 g
547525 16	2,5X16	0.377 g
547525 20	2,5X20	0.471 g
547525 25	2,5X25	0.613 g
54752 5	2X5	0.1 g
54752 6	2X6	0.092 g
54752 8	2X8	0.122 g
54752 10	2X10	0.153 g
54752 12	2X12	0.18 g
54752 20	2X20	0.305 g
54752 30	2X30	1.1 g
54753 6	3X6	1 g
54753 8	3X8	0.272 g
54753 10	3X10	0.34 g
54753 12	3X12	0.407 g
54753 14	3X14	0.1 g
54753 16	3X16	0.543 g
54753 18	3X18	1 g
54753 20	3X20	0.679 g
54753 22	3X22	1 g
54753 25	3X24	0.882 g
54753 30	3X30	1 g
54753 40	3X40	1.2 g
54754 6	4X6	0.3 g
54754 8	4X8	0.478 g
54754 10	4X10	0.597 g
54754 12	4X12	0.716 g
54754 16	4X16	0.01 g
54754 18	4X18	11.8 g
54754 20	4X20	1.19 g
54754 24	4X24	5 g
54754 30	4X30	1.81 g
54754 36	4X36	21.8 g
54754 40	4X40	2.39 g
54754 50	4X50	2.98 g

Art. No.	Type description	Product weight (per item)
54754 55	4X55	2 g
54755 10	5X10	0.942 g
54755 12	5X12	1.13 g
54755 16	5X16	1.51 g
54755 20	5X20	1.88 g
54755 20	5X20	5 g
54755 28	5X28	2.64 g
54755 30	5X30	2.83 g
54755 25	5X35	2.45 g
54755 36	5X36	3 g
54755 40	5X40	3.77 g
54755 50	5X50	4.71 g
54755 60	5X60	5.6 g
54756 10	6X10	5 g
54756 12	6X12	1.5 g
54756 16	6X16	2.21 g
54756 20	6X20	2.77 g
54756 24	6X24	3 g
54756 25	6X25	3.6 g
54756 28	6X28	3.87 g
54756 30	6X30	4 g
54756 36	6X36	4.98 g
54756 40	6X40	5.54 g
54756 50	6X50	6.92 g
54756 60	6X60	8.3 g
54756 70	6X70	10 g
54756 80	6X80	15 g
54758 20	8X20	4.4 g
54758 24	8X24	5.37 g
54758 30	8X30	7.5 g
54758 36	8X36	8.06 g
54758 40	8X40	8.95 g
54758 50	8X50	11.2 g
54758 60	8X60	1 g
54758 65	8X65	15 g
54758 70	8X70	15.7 g
54758 80	8X80	18 g
547510 30	10X30	7 g
547510 40	10X40	0.01 g
547510 50	10X50	18.4 g
547510 60	10X60	2.1 g
547510 70	10X70	25.8 g
547512 20	12X20	11.1 g
547512 30	12X30	16.7 g



Spring cotter pin

ISO 8752 (DIN 1481), plain spring steel

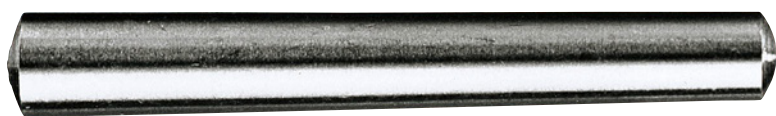
- Used for fixing parts just like with grooved cotter pins
- Can be used as screw bushings in conditions where the parts are subjected to significant shearing force
- Oversize of 0.2-0.5 mm when compared to nominal diameter ensures secure and tight installation
- The tapering end of the part makes it easy to push into the hole
- Pins can be removed again without damaging the parts

Art. No.	Type description	Material	DIN	ISO	Product weight (per item)
04758 14					2.9 g
047516 18		Spring steel	1481	8752	16.4 g
04752 28	2,0X28	Spring steel	1481	8752	0.42 g
047525 16	2,5X16	Spring steel	1481	8752	0.37 g
047525 20	2,5X20	Spring steel	1481	8752	0.3 g
04752 6	2X6	Spring steel	1481	8752	0.09 g
04752 8	2X8	Spring steel	1481	8752	0.11 g
04752 10	2X10	Spring steel	1481	8752	0.13 g
04752 12	2X12	Spring steel	1481	8752	0.18 g
04752 14	2X14	Spring steel	1481	8752	0.19 g
04752 16	2X16	Spring steel	1481	8752	0.25 g
04752 18	2X18	Spring steel	1481	8752	0.28 g
04752 20	2X20	Spring steel	1481	8752	0.31 g
04752 30	2X30	Spring steel	1481	8752	0.46 g
04752 40	2X40	Spring steel	1481	8752	0.8 g
04753 5	3X5	Spring steel	1481	8752	1 g
04753 8	3X8	Spring steel	1481	8752	0.3 g
04753 10	3X10	Spring steel	1481	8752	0.3 g
04753 12	3X12	Spring steel	1481	8752	0.41 g
04753 14	3X14	Spring steel	1481	8752	0.47 g
04753 16	3X16	Spring steel	1481	8752	0.54 g
04753 18	3X18	Spring steel	1481	8752	1 g
04753 20	3X20	Spring steel	1481	8752	0.72 g
04753 22	3X22	Spring steel	1481	8752	0.746 g
04753 24	3X24	Spring steel	1481	8752	0.84 g
04753 26	3X26	Spring steel	1481	8752	0.88 g
04753 28	3X28	Spring steel	1481	8752	1 g
04753 30	3X30	Spring steel	1481	8752	1.02 g
04753 32	3X32	Spring steel	1481	8752	1.1 g
04753 40	3X40	Spring steel	1481	8752	1.36 g
04754 10	4X10	Spring steel	1481	8752	0.6 g
04754 12	4X12	Spring steel	1481	8752	0.72 g
04754 14	4X14	Spring steel	1481	8752	0.8 g
04754 16	4X16	Spring steel	1481	8752	0.96 g
04754 18	4X18	Spring steel	1481	8752	1.1 g
04754 20	4X20	Spring steel	1481	8752	1.19 g
04754 22	4X22	Spring steel	1481	8752	1.31 g
04754 24	4X24	Spring steel	1481	8752	1.43 g
04754 26	4X26	Spring steel	1481	8752	1.6 g
04754 28	4X28	Spring steel	1481	8752	1.67 g
04754 30	4X30	Spring steel	1481	8752	1.79 g

Art. No.	Type description	Material	DIN	ISO	Product weight (per item)
04754 36	4X36	Spring steel	1481	8752	2 g
04754 40	4X40	Spring steel	1481	8752	2.39 g
04754 45	4X45	Spring steel	1481	8752	2.68 g
04754 50	4X50	Spring steel	1481	8752	2.98 g
04754 60	4X60	Spring steel	1481	8752	3.58 g
04755 8	5X8	Spring steel	1481	8752	1 g
04755 10	5X10	Spring steel	1481	8752	0.9 g
04755 12	5X12	Spring steel	1481	8752	1.2 g
04755 14	5X14	Spring steel	1481	8752	1.3 g
04755 16	5X16	Spring steel	1481	8752	1.51 g
04755 20	5X20	Spring steel	1481	8752	2.83 g
04755 22	5X22	Spring steel	1481	8752	2 g
04755 24	5X24	Spring steel	1481	8752	2.26 g
04755 26	5X26	Spring steel	1481	8752	2.45 g
04755 28	5X28	Spring steel	1481	8752	2.64 g
04755 30	5X30	Spring steel	1481	8752	2.83 g
04755 32	5X32	Spring steel	1481	8752	3.02 g
04755 36	5X36	Spring steel	1481	8752	3.39 g
04755 40	5X40	Spring steel	1481	8752	3.77 g
04755 45	5X45	Spring steel	1481	8752	4.24 g
04755 50	5X50	Spring steel	1481	8752	4.8 g
04755 60	5X60	Spring steel	1481	8752	5.65 g
04755 80	5X80	Spring steel	1481	8752	0.011 g
04756 12	6X12	Spring steel	1481	8752	1.66 g
04756 14	6X14	Spring steel	1481	8752	1.94 g
04756 16	6X16	Spring steel	1481	8752	2.21 g
04756 18	6X18	Spring steel	1481	8752	2.49 g
04756 20	6X20	Spring steel	1481	8752	2.77 g
04756 24	6X24	Spring steel	1481	8752	3.33 g
04756 26	6X26	Spring steel	1481	8752	3.6 g
04756 28	6X28	Spring steel	1481	8752	3.8 g
04756 30	6X30	Spring steel	1481	8752	4 g
04756 32	6X32	Spring steel	1481	8752	4.43 g
04756 36	6X36	Spring steel	1481	8752	4.98 g
04756 40	6X40	Spring steel	1481	8752	5.54 g
04756 45	6X45	Spring steel	1481	8752	6 g
04756 50	6X50	Spring steel	1481	8752	6.92 g
04756 55	6X55	Spring steel	1481	8752	7.61 g
04756 60	6X60	Spring steel	1481	8752	8.3 g
04756 65	6X65	Spring steel	1481	8752	9 g
04756 70	6X70	Spring steel	1481	8752	9.4 g
04756 80	6X80	Spring steel	1481	8752	11.1 g
04756 90	6X90	Spring steel	1481	8752	13 g
04758 16	8X16	Spring steel	1481	8752	3.4 g
04758 20	8X20	Spring steel	1481	8752	4.48 g
04758 22	8X22	Spring steel	1481	8752	4.92 g
04758 24	8X24	Spring steel	1481	8752	5.37 g
04758 30	8X30	Spring steel	1481	8752	6.91 g
04758 32	8X32	Spring steel	1481	8752	7.16 g
04758 36	8X36	Spring steel	1481	8752	8.06 g
04758 40	8X40	Spring steel	1481	8752	9 g
04758 45	8X45	Spring steel	1481	8752	9.7 g
04758 50	8X50	Spring steel	1481	8752	11.2 g
04758 55	8X55	Spring steel	1481	8752	12.3 g

Art. No.	Type description	Material	DIN	ISO	Product weight (per item)
04758 60	8X60	Spring steel	1481	8752	13.4 g
04758 65	8X65	Spring steel	1481	8752	14.5 g
04758 70	8X70	Spring steel	1481	8752	15.7 g
04758 75	8X75	Spring steel	1481	8752	16.8 g
04758 80	8X80	Spring steel	1481	8752	18 g
04758 90	8X90	Spring steel	1481	8752	20.1 g
04758 100	8X100	Spring steel	1481	8752	22.4 g
047510 16	10X16	Spring steel	1481	8752	5.9 g
047510 20	10X20	Spring steel	1481	8752	7.38 g
047510 24	10X24	Spring steel	1481	8752	8.7 g
047510 28	10X28	Spring steel	1481	8752	10.3 g
047510 30	10X30	Spring steel	1481	8752	10.4 g
047510 32	10X32	Spring steel	1481	8752	11.8 g
047510 36	10X36	Spring steel	1481	8752	13.3 g
047510 40	10X40	Spring steel	1481	8752	14.8 g
047510 45	10X45	Spring steel	1481	8752	16.6 g
047510 50	10X50	Spring steel	1481	8752	18.4 g
047510 55	10X55	Spring steel	1481	8752	10 g
047510 60	10X60	Spring steel	1481	8752	22.1 g
047510 65	10X65	Spring steel	1481	8752	24 g
047510 70	10X70	Spring steel	1481	8752	12 g
047510 80	10X80	Spring steel	1481	8752	29.5 g
047510 85	10X85	Spring steel	1481	8752	5 g
047510 90	10X90	Spring steel	1481	8752	33.2 g
047510 100	10X100	Spring steel	1481	8752	36.9 g
047510 120	10X120	Spring steel	1481	8752	38 g
047512 16	12X16	Spring steel	1481	8752	9 g
047512 24	12X24	Spring steel	1481	8752	138 g
047512 26	12X26	Spring steel	1481	8752	14.4 g
047512 28	12X28	Spring steel	1481	8752	15.6 g
047512 32	12X32	Spring steel	1481	8752	17 g
047512 40	12X40	Spring steel	1481	8752	21 g
047512 45	12X45	Spring steel	1481	8752	24 g
047512 50	12X50	Spring steel	1481	8752	25 g
047512 60	12X60	Spring steel	1481	8752	31.9 g
047512 63	12X60	Spring steel	1481	8752	40 g
047512 70	12X70	Spring steel	1481	8752	10 g
047512 80	12X80	Spring steel	1481	8752	45 g
047512 100	12X100	Spring steel	1481	8752	55.5 g
047513 80	13X80	Spring steel	1481	8752	277 g
047514 50	14X50	Spring steel	1481	8752	39 g
047514 100	14X100	Spring steel	1481	8752	10 g
047514 120	14X120	Spring steel	1481	8752	1 g
047514 160	14X160	Spring steel	1481	8752	1 g
047516 30	16X30	Spring steel	1481	8752	28 g
047516 40	16X40	Spring steel	1481	8752	35.44 g
047516 45	16X45	Spring steel	1481	8752	40 g
047516 50	16X50	Spring steel	1481	8752	45 g
047516 60	16X60	Spring steel	1481	8752	55.1 g
047516 65	16X65	Spring steel	1481	8752	58.4 g
047516 80	16X80	Spring steel	1481	8752	73.5 g
047516 100	16X100	Spring steel	1481	8752	90 g
047516 110	16X110	Spring steel	1481	8752	99.9 g
047516 120	16X120	Spring steel	1481	8752	110 g

Art. No.	Type description	Material	DIN	ISO	Product weight (per item)
047516 180	16X180	Spring steel	1481	8752	165 g
047520 40	20X40	Spring steel	1481	8752	65 g
047520 50	20X50	Spring steel	1481	8752	68.8 g
047520 60	20X60	Spring steel	1481	8752	88 g
047520 80	20X80	Spring steel	1481	8752	122 g
047520 120	20X120	Spring steel	1481	8752	99 g
047525 40	25X40	Spring steel	1481	8752	907 g
047525 80	25X80	Spring steel	1481	8752	1814 g



Tapered pin

DIN 1-B, uncoated

- **Material:** Steel
- **DIN:** 1
- **ISO:** 2339

Art. No.	Type description	Product weight (per item)
024903 70	3X70	1 g
024903 30	3X130	2.04 g
024904 50	4X50	6.31 g
024904 70	4X70	1 g
024905 30	5X30	5.5 g
024905 32	5X32	5.5 g
024905 50	5X50	9.45 g
024905 60	5X60	11.8 g
024906 24	6X24	6.02 g
024906 26	6X26	6.59 g
024906 28	6X28	7.17 g
024906 30	6X30	5.31 g
024906 32	6X32	8.35 g
024906 40	6X40	10 g
024906 50	6X50	13.4 g
024906 55	6X55	14.7 g
024906 60	6X60	16.3 g
024906 80	6X80	24.3 g
024908 28	8X28	12.3 g
024908 30	8X30	13.1 g
024908 32	8X32	14 g
024908 36	8X36	16 g
024908 40	8X40	17.8 g
024908 50	8X50	22.7 g
024908 55	8X55	25.3 g
024908 60	8X60	27.8 g
024908 80	8X80	38 g
024908 90	8X90	44.5 g
024908 100	8X100	50 g
024908 120	8X120	63.5 g
024901032	10X32	21.9 g
024901035	10X36	24.8 g
024901040	10X40	28.9 g
024901050	10X50	34.9 g

Art. No.	Type description	Product weight (per item)
024901055	10X55	38.8 g
024901060	10X60	42.5 g
024901065	10X65	46.5 g
024901070	10X70	50.4 g
024901080	10X80	58.5 g
024901090	10X90	67 g
0249010120	10X120	94 g
024901240	12X40	1 g
024901250	12X50	49.8 g
024901260	12X60	60.2 g
024901270	12X70	71.8 g
024901280	12X80	1 g
024901290	12X90	96 g
0249012100	12X100	106 g
0249012160	12X160	0.01 g
0249012165	12X165	1 g
024901460	14X60	81.2 g
024901470	14X70	95.9 g
024901490	14X90	126 g
0249014100	14X100	141 g
024901630	16X30	52 g
024901650	16X50	87.4 g
024901670	16X70	123 g
024901680	16X80	142 g
0249016100	16X100	181 g



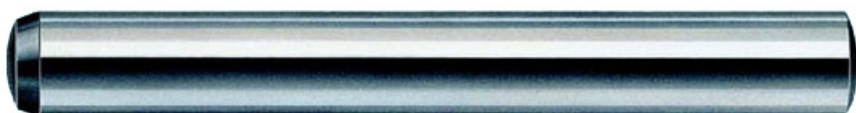
Tapered pin, male thread

DIN 7977, uncoated

- **Material :** Steel
- **DIN :** 7977
- **ISO :** 8737

Art. No.	Type description	Product weight (per item)
024705 40	5X40	5.9 g
024706 30	6X30	0.01 g
024706 50	6X50	10.9 g
024706 60	6X60	13.44 g
024708 30	8X30	10.6 g
024708 45	8X45	14.6 g
024708 50	8X50	17.2 g
024708 55	8X55	0.01 g
024708 60	8X60	22.7 g
024701050	10X50	26.98 g
024701055	10X55	30.6 g
024701060	10X60	34 g
024701065	10X65	36.8 g
024701075	10X75	44.04 g
024701080	10X80	47.42 g
024701085	10X85	51.24 g

Art. No.	Type description	Product weight (per item)
0247010100	10X100	63 g
024701270	12X70	0.01 g
024701275	12X75	61.22 g
024701285	12X85	1 g
0247012100	12X100	90.7 g
0247012120	12X120	10 g
0247012140	12X140	134 g
024701660	16X60	80 g
024701675	16X75	20 g
024701680	16X80	0.01 g
024701685	16X85	0.01 g
024701690	16X90	0.01 g
0247016100	16X100	154 g
0247016120	16X120	191 g
0247016130	16X130	200 g
0247016140	16X140	0.29 g
0247016160	16X160	265 g
0247020100	20X100	206 g
0247020110	20X110	228 g
0247020120	20X120	262 g
0247020140	20X140	1 g
0247020160	20X160	1 g
0247020190	20X190	474 g
0247025120	25X120	1 g
0247025190	25X190	1 g



Cylinder pin

DIN 7 stainless A2, tolerance m6

- **Material:** Stainless steel A2
- **DIN:** 7
- **ISO:** 2338

Art. No.	Type description	Product weight (per item)
22522 8	2X8	1 g
22522 12	2X12	1.8 g
22522 14	2X14	1 g
22522 20	2X20	2 g
22523 6	3X6	0.38 g
22523 10	3X10	0.6 g
22523 12	3X12	0.7 g
22523 16	3X16	0.49 g
22523 20	3X20	1.2 g
22523 28	3X28	1 g
22523 32	3X32	2.3 g

Art. No.	Type description	Product weight (per item)
22524 8	4X8	0.84 g
22524 12	4X12	1.6 g
22524 16	4X16	1 g
22524 24	4X24	2.564 g
22526 26	4X26	1 g
22524 32	4X32	3 g
22524 40	4X40	5 g
22525 40	5X40	6.27 g
22526 16	6X16	1 g
22526 18	6X18	1 g
22526 30	6X30	15 g
22526 45	6X45	1.039 g
22526 50	6X50	11.3 g
22528 24	8X24	2 g
22528 45	8X45	36.34 g
225210 32	10X32	7 g
225210 50	10X50	20 g
225210 55	10X55	3.48 g
225212 45	12X45	10 g
225216 60	16X60	1 g



Cylinder pin

DIN 7 uncoated, tolerance m6

- **Material :** Steel
- **DIN :** 7
- **ISO :** 2338

Art. No.	Type description	Product weight (per item)
02523 16	3X16	1.03 g
02523 20	3X20	0.113 g
02523 32	3X32	1.79 g
02524 16	4X16	1 g
02525 12	5X12	1.95 g
02525 16	5X16	2.88 g
02525 20	5X20	3.19 g
02525 40	5X40	7.6 g
02525 50	5X50	7.8 g
02526 20	6X20	4.4 g
02526 24	6X24	5.5 g
02523 30	6X30	1.788 g
02526 32	6X32	8 g
02526 36	6X36	8.19 g
02526 50	6X50	11.3 g
02526 60	6X60	13.93 g
02528 16	8X16	6.74 g
02528 18	8X18	7.53 g
02528 20	8X20	0.83 g
02528 24	8X24	9.89 g
02528 28	8X28	12 g
02528 36	8X36	14.6 g

Art. No.	Type description	Product weight (per item)
02528 40	8X40	16.2 g
02528 50	8X50	20.1 g
02528 60	8X60	24.06 g
02528 65	8X65	26.2 g
025210 16	10X16	11 g
025210 20	10X20	14 g
025210 24	10X24	15.6 g
025210 30	10X30	18.75 g
025210 40	10X40	26 g
025210 45	10X45	5 g
025210 50	10X50	31.9 g
025210 60	10X60	38 g
025210 70	10X70	10 g
025210 80	10X80	50 g
025210 90	10X90	5 g
025212 25	12X25	23 g
025212 32	12X32	32 g
025212 36	12X36	33.6 g
025212 45	12X45	1 g
025213 40	13X40	0.01 g
025213 50	13X50	0.01 g
025213 60	13X60	64.3 g
025213 100	13X100	0.01 g
025216 20	16X20	36 g
025216 24	16X24	42.05 g
025216 30	16X30	53.9 g
025216 36	16X36	60.3 g
025216 40	16X40	66.6 g
025216 45	16X45	10 g
025216 55	16X55	81 g
025216 60	16X60	98.4 g
025216 70	16X70	117 g
025216 100	16X100	162.4 g
025216 110	16X110	2 g
025220 28	20X28	76 g
025220 32	20X32	85.8 g
025220 36	20X36	96 g
025225 32	25X32	136 g
025225 40	25X40	167 g
025225 45	25X45	209 g
025225 70	25X70	290 g
025230 60	30X60	355.6 g
025230 80	30X80	0.01 g



Cylinder pin with female thread

DIN 7979-D, hardened, uncoated

- **Material:** Steel
- **DIN:** 7979
- **ISO:** 8733

Art. No.	Type description	Product weight (per item)
124710 30	10X30	14.6 g
124725 50	25m6X50	28 g
124725 100	25X100	380 g
124730 60	30m6X60	237 g
124730 100	30m6X100	487 g
124730 120	30m6X120	598 g
124740 60	40X60m6	50 g
12478 24	M8X24	7.98 g
12478 40	M8X40	13.6 g
124710 40	M10X40	21 g
124712 32	M12X32	23.1 g
124712 40	M12X40	32 g
124712 45	M12X45	35 g
124712 50	M12X50	39.46 g
124714 50	M14X50	54.7 g
124716 40	M16X40	52 g
124716 50	M16X50	67.8 g
124716 55	M16X55	5 g
124716 60	M16X60	82.8 g
124720 40	M20X40	80.2 g
124720 50	M20X50	105 g
124720 55	M20X55	125 g
124720 60	M20X60	130 g



Cylinder pin

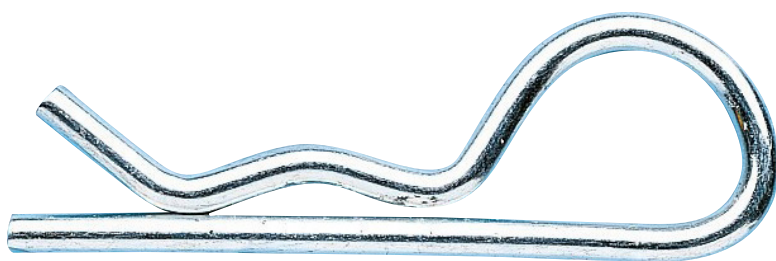
DIN 6325, hardened, uncoated

- **Material:** Steel
- **DIN:** 6325
- **ISO:** 8734

Art. No.	Type description	Product weight (per item)
12523 8	3X8	1 g
12523 10	3X10	0.53 g
12523 12	3X12	0.54 g
12523 14	3X14	0.8 g
12523 20	3X20	1 g
12523 24	3X24	1.45 g
12523 28	3X28	0.9 g
12524 10	4X10	0.9 g

Art. No.	Type description	Product weight (per item)
12524 12	4X12	1.18 g
12524 14	4X14	1.38 g
12524 16	4X16	1.5 g
12524 20	4X20	2 g
12524 24	4X24	2.37 g
12524 40	4X40	10 g
12525 12	5X12	1.85 g
12525 14	5X14	1 g
12525 18	5X18	1 g
12525 20	5X20	2.9 g
12525 24	5X24	3.7 g
12525 30	5X30	4.4 g
12525 32	5X32	16 g
12525 36	5X36	5 g
12525 40	5X40	6.15 g
12525 60	5X60	9 g
12526 16	6X16	3.55 g
12526 18	6X18	3.7 g
12526 20	6X20	4.2 g
12526 24	6X24	5.32 g
12526 28	6X28	6.5 g
12526 30	6X30	4 g
12526 32	6X32	7 g
12526 36	6X36	8 g
12526 40	6X40	8.86 g
12528 40	6X40	15.7 g
12526 45	6X45	10 g
12526 60	6X60	13.3 g
12526 70	6X70	18 g
12528 14	8X14	27.2 g
12528 16	8X16	6 g
12528 20	8X20	8 g
12528 24	8X24	9.46 g
12528 28	8X28	10.4 g
12528 32	8X32	12 g
12528 36	8X36	14.2 g
12528 50	8X50	20 g
12528 55	8X55	21.6 g
12528 60	8X60	23 g
12528 70	8X70	24 g
12528 80	8X80	31.1 g
125210 16	10X16	10 g
125210 20	10X20	20 g
125210 24	10X24	14.36 g
125210 26	10X26	1 g
125210 28	10X28	18 g
125210 32	10X32	19.7 g
125210 40	10X40	25 g
125210 50	10X50	30.8 g
125210 70	10X70	43.2 g
125210 80	10X80	49.4 g
125212 24	12X24	20 g
125212 28	12X28	23.5 g
125212 36	12X36	30 g

Art. No.	Type description	Product weight (per item)
125212 40	12X40	36 g
125212 50	12X50	42.41 g
125212 60	12X60	51.8 g
125212 80	12X80	71 g
125212 100	12X100	88.88 g
125214 50	14X50	57.7 g
125214 90	14X90	109 g
125216 32	16X32	45.6 g
125216 40	16X40	63.1 g
125216 50	16X50	75 g
125216 60	16X60	90 g
125216 120	16X120	170 g
125220 40	20X40	91 g
125220 50	20X50	118 g
125220 60	20X60	139 g
125220 80	20X80	188.5 g



Spring cotter pin

DIN11024, single eyelet. Zinc-coated steel, blue passivated (A2K).

- For fixing bolts, pipes, racks, etc.
- Fast and easy installation and removal
- Reusable
- No burrs

- **Material:** Steel
- **DIN:** 11024

Art. No.	Type description	Product weight (per item)
04732 1	B2	2.2 g
04733 1	B3	8.3 g
04734 1	B4	16.2 g
04735 1	B5	34.8 g
04736 1	B6	57.8 g
04738 1	B8	134 g



Split cotter pin

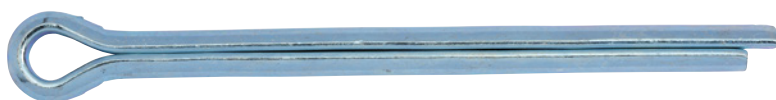
DIN 94, acid-proof A4

- **Material:** Stainless steel A4
- **DIN:** 94
- **ISO:** 1234

Art. No.	Type description	Product weight (per item)
047416 10	1,6X10	0.165 g
047416 12	1,6X12	0.188 g
047416 16	1,6X16	0.234 g

Art. No.	Type description	Product weight (per item)
047416 20	1,6X20	0.279 g
047416 25	1,6X25	0.336 g
047416 32	1,6X32	0.416 g
047416 36	1,6X36	0.45 g
047416 40	1,6X40	0.507 g
047425 16	2,5X16	0.704 g
047425 20	2,5X20	0.98 g
047425 25	2,5X25	0.992 g
047425 32	2,5X32	1.216 g
047425 36	2,5X36	1.344 g
047425 40	2,5X40	1.472 g
047425 50	2,5X50	1.792 g
04742 10	2X10	0.284 g
04742 12	2X12	0.324 g
04742 16	2X16	0.4 g
04742 20	2X20	0.477 g
04742 25	2X25	0.572 g
04742 32	2X32	0.706 g
04742 36	2X36	0.782 g
04742 40	2X40	0.852 g
047432 16	3,2X16	1.18 g
047432 20	3,2X20	1.5 g
047432 25	3,2X25	1.61 g
047432 32	3,2X32	1.95 g
047432 36	3,2X36	1.8 g
047432 40	3,2X40	2.33 g
047432 63	3,2X63	3.43 g
047432 50	3,5X50	2.81 g
04744 20	4X20	2.52 g
04744 25	4X25	2.93 g
04744 32	4X32	3.51 g
04744 36	4X36	3.96 g
04744 40	4X40	4.17 g
04744 50	4X50	5.01 g
04744 63	4X63	6.07 g
04744 71	4X71	6.5 g
04744 80	4X80	7.47 g
04745 25	5X25	4.76 g
04745 32	5X32	5.67 g
04745 36	5X36	6.19 g
04745 40	5X40	6.71 g
04745 50	5X50	8.02 g
04745 63	5X63	9.71 g
04745 100	5X100	10 g
047463 36	6,3X36	10.33 g
047463 40	6,3X40	11.2 g
047463 50	6,3X50	13.3 g
047463 63	6,3X63	16 g
047463 71	6,3X71	17.6 g
047463 80	6,3X80	19 g
047463 90	6,3X90	21.4 g
047463 100	6,3X100	50 g
04748 20	8X20	12.5 g
04748 25	8X25	14.2 g

Art. No.	Type description	Product weight (per item)
04748 35	8X35	17.5 g
04748 40	8X40	19.1 g
04748 50	8X50	22.4 g
04748 63	8X63	28.58 g
04748 71	8X71	29.5 g
04748 80	8X80	0.03 g
04748 90	8X90	35.9 g
047410 90	10X90	65.5 g
047410 100	10X100	67 g
047410 125	10X125	1 g
047410 140	10X140	1 g



Split cotter pin

DIN 94, zinc-electroplated

- **Material:** Steel
- **DIN:** 94
- **ISO:** 1234

Art. No.	Type description	Product weight (per item)
047016 12	1,6X12	0.18 g
047016 14	1,6X14	0.2 g
047016 20	1,6X20	0.28 g
047016 25	1,6X25	0.27 g
047016 32	1,6X32	0.42 g
047025 14	2,5X14	0.6 g
047025 16	2,5X16	0.4 g
047025 20	2,5X20	0.87 g
047025 25	2,5X25	0.9 g
047025 32	2,5X32	1.36 g
047025 40	2,5X40	1.47 g
047025 50	2,5X50	1.8 g
04702 10	2X10	3 g
04702 16	2X16	0.4 g
04702 20	2X20	0.5 g
04702 22	2X22	0.5 g
04702 25	2X25	0.73 g
04702 32	2X32	0.71 g
04702 36	2X36	1 g
04702 40	2X40	0.852 g
04702 50	2X50	0.99 g
047032 20	3,2X20	1.37 g
047032 25	3,2X25	1.61 g
047032 28	3,2X28	1.74 g
047032 32	3,2X32	1.95 g
047032 36	3,2X36	1.82 g
047032 40	3,2X40	2.33 g
047032 45	3,2X45	2.17 g
047032 50	3,2X50	2.5 g
047032 63	3,2X63	3.4 g
047035 50	3,5X50	2.98 g
047035 60	3,5X60	4.77 g

Art. No.	Type description	Product weight (per item)
04704 20	4X20	2.16 g
04704 25	4X25	2.93 g
04704 32	4X32	3.51 g
04704 36	4X36	3.84 g
04704 40	4X40	4.17 g
04704 45	4X45	5 g
04704 50	4X50	5.01 g
04704 63	4X63	5.6 g
04704 71	4X72	6.73 g
04704 80	4X80	1 g
04705 25	5X25	5 g
04705 28	5X28	4.85 g
04705 32	5X32	5.67 g
04705 36	5X36	6.9 g
04705 40	5X40	6.71 g
04705 45	5X45	7.36 g
04705 50	5X50	8.02 g
04705 63	5X63	9.71 g
04705 71	5X71	10.2 g
04705 80	5X80	12 g
04705 100	5X100	13.5 g
047063 32	6,3X32	9.98 g
047063 36	6,3X36	10.6 g
047063 40	6,3X40	11.2 g
047063 45	6,3X45	11.4 g
047063 50	6,3X50	13.8 g
047063 56	6,3X56	15 g
047063 63	6,3X63	16 g
047063 71	6,3X71	17.6 g
047063 80	6,3X80	19.5 g
047063 100	6,3X100	25.6 g
04708 100	8,0X100	39.3 g
04708 40	8X40	19.68 g
04708 45	8X45	20.8 g
04708 50	8X50	22.4 g
04708 63	8X63	26.8 g
04708 71	8X71	29.5 g
04708 80	8X80	32.6 g
04708 90	8X90	35.6 g
04708 112	8X112	44.5 g
04708 125	8X125	52.5 g
04708 140	8X140	1 g
047010 56	10X56	10 g
047010 63	10X63	49 g
047010 71	10X71	50 g
047010 80	10X80	54.8 g
047010 90	10X90	0.62 g
047010 100	10X100	65.6 g
047013 112	13X112	135 g
047013 125	13X125	156 g
047013 160	13X160	178 g



Wedge

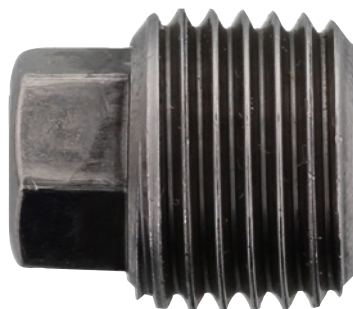
DIN 6885-A, uncoated

- **Material:** Steel
- **DIN:** 6885

Art. No.	Type description	Product weight (per item)
04103 8	3X3X8	1 g
04103 10	3X3X10	0.6 g
04103 14	3X3X14	0.94 g
04104 14	4X4X14	1.78 g
04104 20	4X4X20	2.4 g
04104 36	4X4X36	4.8 g
04105 10	5X5X10	0.02 g
04105 16	5X5X16	5 g
04105 18	5X5X18	10 g
04105 20	5X5X20	10 g
04105 25	5X5X25	4.75 g
04105 5	5X5X36	5 g
04105 50	5X5X50	10 g
04106 12	6X6X12	3.6 g
04106 14	6X6X14	3 g
04106 16	6X6X16	4.8 g
04106 20	6X6X20	5 g
04106 25	6X6X25	8 g
04106 30	6X6X30	7.9 g
04106 32	6X6X32	9 g
04106 36	6X6X36	9.6 g
04106 40	6X6X40	10.7 g
04106 50	6X6X50	10 g
04106 70	6X6X70	15 g
04106 80	6X6X80	11 g
04108 22	8X5X22	1 g
041085 25	8X5X25	0.01 g
04108 16	8X7X16	6 g
04108 18	8X7X18	6.8 g
04108 20	8X7X20	7.8 g
04108 25	8X7X25	15 g
04108 28	8X7X28	11.6 g
04108 30	8X7X30	10 g
04108 32	8X7X32	12.99 g
04108 35	8X7X35	8.1 g
04108 36	8X7X36	14 g
04108 40	8X7X40	16.3 g
04108 50	8X7X50	21 g
04108 63	8X7X63	23 g

Art. No.	Type description	Product weight (per item)
04108 70	8X7X70	29.4 g
04108 80	8X7X80	35 g
04108 90	8X7X90	15 g
0410100825	10X8X25	15.5 g
0410100828	10X8X28	16.9 g
041010 32	10X8X32	18.2 g
041010 36	10X8X36	30 g
041010 40	10X8X40	23 g
041010 45	10X8X45	27 g
041010 50	10X8X50	28.3 g
041010 56	10X8X56	15 g
041010 63	10X8X63	39 g
041010 80	10X8X80	48 g
041010 90	10X8X90	54.3 g
041012 20	12X8X20	10 g
041012 28	12X8X28	19 g
041012 32	12X8X32	21.6 g
041012 40	12X8X40	27 g
041012 50	12X8X50	35.44 g
041012 63	12X8X63	45.6 g
041012 70	12X8X70	50.9 g
041012 75	12X8X75	53 g
041012 80	12X8X80	57.2 g
041012 160	12X8X160	1 g
041012 280	12X8X280	1 g
041014 50	14X9X50	45 g
041014 40	14X9X40	36 g
041014 56	14X9X56	25 g
041014 60	14X9X60	58 g
041014 63	14X9X63	58 g
041014 80	14X9X80	75 g
041014 100	14X9X100	95.9 g
041014 110	14X9X110	104 g
041014 160	14X9X160	155 g
041014 200	14X9X200	195 g
041016 50	16X10X50	59 g
041016 63	16X10X63	74 g
041016 80	16X10X80	95 g
041016 100	16X10X100	190 g
041018 40	18X11X40	54.4 g
041018 50	18X11X50	71.4 g
041018 63	18X11X63	92.6 g
041018 70	18X11X70	100 g
041018 80	18X11X80	116 g
041018 100	18X11X100	149 g
041018 110	18X11X110	188 g
041018 120	18X11X120	178.9 g
041018 125	18X11X125	69.4 g
041018 160	18X11X160	238.6 g
041018 300	18X11X300	1 g
041020 56	20X12X56	94.8 g
041020 63	20X12X63	0.1 g
041020 70	20X12X70	121.6 g
041020 80	20X12X80	141 g

Art. No.	Type description	Product weight (per item)
041020 100	20X12X100	189 g
041020 125	20X12X125	227 g
041020 160	20X12X160	0.29 g
041022 80	22X14X80	180 g
041022 100	22X14X100	231 g
041022 125	22X14X125	291.3 g
041025 80	25X14X80	205 g
041025 100	25X14X100	256 g
041025 125	25X14X125	328 g
041025 160	25X14X160	416 g
041028 70	28X16X70	15 g
041028 100	28X16X100	334 g
041028 110	28X16X110	106 g
041028 125	28X16X125	410 g
041028 160	28X16X160	327 g
041028 200	28X16X200	673 g
041032 150	32X18X150	10 g
041036 200	36X20X200	1500 g
041040 180	40X22X180	10 g

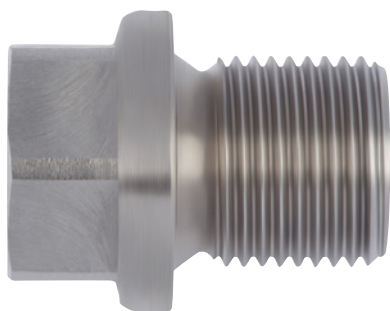


Hexagon head plug with flange

DIN 909, steel, uncoated

- **Material :** Steel
- **DIN :** 909

Art. No.	Type description	Product weight (per item)
224112	R1/2"	25.6 g
224114	R1/4"	12 g
22411	R1"	76.2 g
224134	R3/4"	51.8 g
224138	R3/8"	19.4 g



Hexagon head plug

DIN 910, steel, uncoated

- **Material:** Steel
- **DIN:** 910

Art. No.	Type description	Product weight (per item)
0241712	1/2"	40.8 g
0241938	3/8.	38.1 g
0241121	G1/2"	65 g
0241512	G1/2"	69.4 g
0241714	G1/4"	14.6 g
0241514	G1/4"	20.1 g
024171	G1"	111 g
024151	G1"	140 g
02411	G1"	195 g
0241112	G1 1/2	375 g
02415112	G1 1/2"	250 g
02415114	G1 1/4"	352 g
024152	G2"	455 g
0241734	G3/4"	73.5 g
0241534	G3/4"	76 g
0241738	G3/8"	21.4 g
0241538	G3/8"	30.2 g
024110 1	M10X1	11.9 g
024112 15	M12X1,5	20 g
024116 15	M16X1,5	35 g
024118 15	M18X1,5	48.8 g
224122 15	M22X1,5	73.3 g
024124 15	M24X1,5	92 g
024127 2	M27X2,0	127 g
224130 15	M30X1,5	151.16 g
024130 15	M30 X 1,5	10 g
024130 2	M30X2,0	146 g
024136 2	M36X2,0	220 g
02412	R 2"	445 g
0241114	R1 1/4	15 g



Hexagon head plug

DIN 910, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 910

Art. No.	Type description	Product weight (per item)
024101615	16 X 1,5	11 g
024102015	20 X 1,5	64.5 g
024102415	24 X 1,5	93.5 g
024103015	30 X 1,5	148 g
0241058	G 5/8"	6000 g
0241012	G1/2"	66.6 g
0241014	G1/4"	20 g
024101	G1"	195 g
024102	G2"	445 g
0241034	G3/4"	127 g
0241038	G3/8"	38.1 g
0241380	G3/8"	40 g
0241381	G3/8"	40 g
02410112	G11/2"	375 g
024101415	M14 X 1,5	25.8 g
024116 151	M16X1,5	36.4 g
024101815	M18X1,5	48.6 g



Hexagon head plug

DIN 910, acid-proof A4

Art. No.	
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Hexagon socket plug

DIN 906, acid-proof

- **Material :** Stainless steel A4
- **DIN :** 906
- **Thread type :** Tapered external pipe thread, Whitworth

Art. No.	Type description	Product weight (per item)
9092912	1/2"	19 g
9092914	1/4"	7 g
9092918	1/8"	3 g
90921	1"	0.058 g
909291	1"	58 g
90929114	1 1/4"	135 g
9092934	3/4"	40 g
9092938	3/8"	12 g
909210 1	M10X1	3.48 g
909230 35	M30X3,5	10 g
909236 15	M36X1,5	90.4 g
909212	R1/2"	19 g
909214	R1/4"	7.13 g
909218	R1/8"	3.38 g
9092112	R1 1/2"	214 g
9092114	R1 1/4"	135 g
909234	R3/4"	40.2 g
909238	R3/8"	12.2 g



Hexagon socket plug

DIN 906, steel, uncoated

- **Material :** Steel
- **DIN :** 906

Art. No.	Type description	Thread type	Product weight (per item)
124112 15	12X1,5	Metric thread	11.3 g
124116 15	16X1,5	Metric thread	10.66 g

Art. No.	Type description	Thread type	Product weight (per item)
12416 1	M6/1	Metric thread	0.7 g
12416 103	M6X1	Metric thread	0.7 g
12416 105	M6X1	Metric thread	0.8 g
12416 108	M6X1	Metric thread	0.8 g
12418 1	M8/1	Metric thread	2.07 g
124110 1	M10X1	Metric thread	3.38 g
124114 15	M14X1,5	Metric thread	14 g
124118 15	M18	Metric thread	53 g
124130 15	M30/1,5	Tapered external pipe thread, Whitworth	44 g
124112	R1/2	Tapered external pipe thread, Whitworth	18 g
124114	R1/4	Tapered external pipe thread, Whitworth	7 g
124118 25	R1/8	Tapered external pipe thread, Whitworth	3 g
124118	R1/8	Tapered external pipe thread, Whitworth	3.38 g
12411	R1"	Tapered external pipe thread, Whitworth	57.5 g
12412	R2"	Tapered external pipe thread, Whitworth	387 g
124134	R3/4"	Tapered external pipe thread, Whitworth	40.2 g
124138	R3/8	Tapered external pipe thread, Whitworth	12.4 g
1241112	R1 1/2"	Tapered external pipe thread, Whitworth	214 g
1241114	R1 1/4"	Tapered external pipe thread, Whitworth	135 g



Hexagon socket plug

DIN 906, steel, zinc-electroplated

- **Material:** Steel
- **DIN:** 906

Art. No.	Type description	Thread type	Product weight (per item)
1241912	1/2 NPT	National pipe tapered thread	19 g
1241914	1/4 NPT	National pipe tapered thread	7 g
1241918	1/8 NPT	National pipe tapered thread	3 g
124191	1 NPT	National pipe tapered thread	58 g
1241934	3/4 NPT	National pipe tapered thread	40 g
1241938	3/8 NPT	National pipe tapered thread	12 g
12419114	1 1/4 NPT	National pipe tapered thread	135 g
12410014	G1/4"	Pipe thread	7 g
124108 1	M8X1	Metric thread	2.07 g
12410101	M10X1	Metric thread	3.38 g
124101215	M12X1,5	Metric thread	6.1 g
124101415	M14X1,5	Metric thread	8.1 g
124101615	M16X1,5	Metric thread	11 g
124102015	M20X1,5	Metric thread	17.6 g
124102415	M24X1,5	Metric thread	30.8 g
12410362	M36X2	Metric thread	85.2 g
1241012	R1/2	Tapered external pipe thread, Whitworth	19 g
1241014	R1/4	Tapered external pipe thread, Whitworth	6.94 g

Art. No.	Type description	Thread type	Product weight (per item)
1241018	R1/8	Tapered external pipe thread, Whitworth	3.38 g
1241019	R1/8"	Pipe thread	3.38 g
124101	R1"	Tapered external pipe thread, Whitworth	57.5 g
124102	R2"	Tapered external pipe thread, Whitworth	387 g
124192	R2"	Tapered external pipe thread, Whitworth	387 g
1241034	R3/4	Tapered external pipe thread, Whitworth	40.2 g
12410380	R3/8"	Pipe thread	11.46 g
1241038	R3/8"	Tapered external pipe thread, Whitworth	12.2 g
12410112	R11/2	Tapered external pipe thread, Whitworth	214 g
12410114	R11/4	Tapered external pipe thread, Whitworth	135 g



Hexagon socket plug

DIN 908, steel, uncoated

- **Material:** Steel
- **DIN:** 908

Art. No.	Type description	Thread type	Product weight (per item)
12401121	G 11/2	Pipe thread	260 g
124012	G1/2"	Pipe thread	40.8 g
124014	G1/4"	Pipe thread	14.6 g
124018	G1/8"	Pipe thread	11 g
12401	G1"	Pipe thread	116 g
12402	G2"	Pipe thread	461.5 g
124034	G3/4"	Pipe thread	73.5 g
124038	G3/8"	Pipe thread	24 g
12400114	G11/4"	Pipe thread	187 g
12408 1	M8/1	Metric thread	1 g
124012 15	M12X1,5	Metric thread	11.3 g
124014 15	M14X1,5	Metric thread	16 g
124016 15	M16X1,5	Metric thread	20 g
124018 15	M18/1,5	Metric thread	30 g
124020 15	M20X1,5	Metric thread	37.5 g
124022	M22	Metric thread	10 g
124030 15	M30X1,5	Metric thread	87.4 g
124033 2	M33X2	Metric thread	122 g
124039 2	M39X2	Metric thread	163 g



Hexagon socket plug

DIN 908, steel, zinc-electroplated

- **Material :** Steel
- **DIN :** 908

Art. No.	Type description	Thread type	Product weight (per item)
1240012	G1/2"	Pipe thread	40.8 g
124012 2	G1/2"	Pipe thread	42.4 g
1240142	G1/4"	Pipe thread	7 g
1240014	G1/4"	Pipe thread	14.6 g
1240141	G1/4"	Pipe thread	18 g
1240018	G1/8	Pipe thread	10 g
1240181	G1/8"	Pipe thread	12 g
124001	G1"	Pipe thread	111 g
12401 1	G1"	Pipe thread	111 g
124021	G2"	Pipe thread	388.6 g
124002	G2"	Pipe thread	445 g
12400341	G3/4"	Pipe thread	73.5 g
124034 1	G3/4"	Pipe thread	74 g
124038 1	G3/8"	Pipe thread	21.4 g
1240112	G11/2"	Pipe thread	260 g
1240114	G11/4	Pipe thread	15 g
124010 1	M10X1	Metric thread	6.34 g
124001415	M14X1,5	Metric thread	16 g
1240020151	M20X1,5	Metric thread	42 g
12400272	M27X2	Metric thread	77.8 g
124003615	M36X1,5	Metric thread	131.2 g



Grease nipple

DIN71412A, straight, stainless

- **Material :** Stainless steel A2
- **Surface :** Plain
- **DIN :** 71412

Art. No.	Type description	Thread type	Thread type x nominal diameter	Pitch	Product weight (per item)
0986240	6 X 1	Metric thread	M6	1 mm	2.51 g
0986242	10 X 1	Metric thread	M10	1 mm	6 g
0986441	R1/4"	Tapered external pipe thread, Whitworth	R1/4	19 in	11.7 g
098673	R1/8	Tapered external pipe thread, Whitworth	R1/8	28 in	5.2 g



Grease nipple

DIN71412A, straight, acid-proof

- **Thread type :** Tapered external pipe thread, Whitworth
- **Material :** Stainless steel A4
- **Surface :** Plain
- **DIN :** 71412

Art. No.	Type description	Thread type x nominal diameter	Pitch	Product weight (per item)
0986145	R1/4"	R1/4	19 in	9.4 g
0986143	R1/8"	R1/8	28 in	5.6 g



Grease nipple

DIN 71412A, straight, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 71412

Art. No.	Type description	Thread type	Thread type x nominal diameter	Pitch	Product weight (per item)
0986442	1/4	National pipe tapered thread	NPT1/4	18 in	9 g
0986075	6 X 0,75	Metric thread	M6	1 mm	2.68 g
098640	6 X 1	Metric thread	M6	1 mm	2.6 g
098641	8 X 1	Metric thread	M8	1 mm	3.8 g
0986135	8 X 1,25	Metric thread	M8	1.25 mm	3.75 g
098642	10 X 1	Metric thread	M10	1 mm	5.5 g
098675	PTF 1/8"	NPTF	NPTF1/8	27 in	6.5 g
098644	R1/4"	Tapered external pipe thread, Whitworth	R1/4	19 in	9.4 g
098643	R1/8"	Tapered external pipe thread, Whitworth	R1/8	28 in	5.2 g

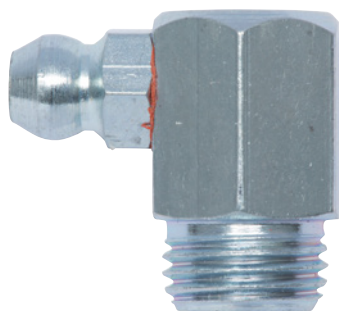


Grease nipple

DIN 71412B, 45 degr., zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 71412

Art. No.	Type description	Thread type	Thread type x nominal diameter	Pitch	Product weight (per item)
098650	6 X 1	Metric thread	M6	1 mm	6.66 g
098651	8 X 1	Metric thread	M8	1 mm	7 g
098652	10 X 1	Metric thread	M10	1 mm	10.45 g
098653	R1/8"	Tapered external pipe thread, Whitworth	R1/8	28 in	1.92 g



Grease nipple

DIN 71412C, 90 degr., zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 71412

Art. No.	Type description	Thread type	Thread type x nominal diameter	Pitch	Product weight (per item)
098660	6 X 1	Metric thread	M6	1 mm	7.4 g
098661	8 X 1	Metric thread	M8	1 mm	7 g
0986613	8 X 1,25	Metric thread	M8	1.25 mm	9.81 g
098662	10 X 1	Metric thread	M10	1 mm	14 g
098676	PTF 1/8"	Tapered external pipe thread, Whitworth	R1/8	28 in	10 g
098663	R1/8"	Tapered external pipe thread, Whitworth	R1/8	28 in	14 g



Sealing ring, aluminium, type A

Type A

- Thanks to its corrosion resistance, the aluminium ring can be used almost anywhere, except together with some strong acids.
- Special preheating softens the surface of the metal ring so that it adapts to any uneven areas in the parts that are screwed together.

- **Material :** Aluminium
- **DIN :** 7603

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
04636 10	6X10	6 mm	10 mm	1 mm	0.1 g
046381215	8/12/1,5	8 mm	12 mm	1.5 mm	0.2 g
04638 12	8X12	8 mm	12 mm	1 mm	1 g
04638 14	8X14X1	8 mm	14 mm	1 mm	1 g
0463101415	10/14/1,5	10 mm	14 mm	1.5 mm	0.001 g
046312 16	12X16	12 mm	16 mm	1.5 mm	0.4 g
046312 18	12X18	12 mm	18 mm	1.5 mm	0.56 g
046314 18	14/18	14 mm	18 mm	1.5 mm	0.3 g
046314 20	14X20X1,5	14 mm	20 mm	1.5 mm	0.62 g
046316 20	16/20	16 mm	20 mm	1.5 mm	1 g
046310 16	16X10X1	10 mm	16 mm	1 mm	1 g
046316 22	16X22	16 mm	22 mm	1.5 mm	0.8 g

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
046318 22	18/22	18 mm	22 mm	1.5 mm	1 g
046318 24	18/24	18 mm	24 mm	1.5 mm	0.6 g
046320 26	20/26	20 mm	26 mm	1.5 mm	0.8 g
046322 27	22/27	22 mm	27 mm	1.5 mm	1 g
046324 30	24/30	24 mm	30 mm	2 mm	2 g
046326 32	26/32	26 mm	32 mm	2 mm	1.5 g
046330 36	30/36	30 mm	36 mm	2 mm	2 g
046310 14	41913	10 mm	14 mm	1 mm	0.6 g



Sealing ring, copper, type A

Type A

- Thanks to its corrosion resistance, the copper ring can be used almost anywhere, except together with some strong acids. Special preheating softens the surface of the metal ring so that it adapts to any uneven areas in the parts that are screwed together.

- **Material:** Copper
- **DIN:** 7603

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
04604 8		4.2 mm	7.9 mm	1 mm	0.01 g
046015 21		15.2 mm	20.9 mm	1.5 mm	2 g
04606 10	6X10X1	6.2 mm	9.9 mm	1 mm	0.4 g
04606 102	6X10X2	6.2 mm	9.9 mm	2 mm	0.7 g
04606 12	6X12	6.2 mm	11.9 mm	1 mm	0.6 g
04608 115	8/11,5/1	8.2 mm	11.4 mm	1 mm	0.2 g
04608 12	8X12	8.2 mm	11.9 mm	1 mm	0.42 g
04608 14	8X14X1	8.2 mm	13.9 mm	1 mm	6 g
046010 16	10/16/1	10.2 mm	15.9 mm	1 mm	0.96 g
0460101615	10/16/1,5	10.2 mm	15.9 mm	1.5 mm	1.2 g
046010 182	10/18/2	10.2 mm	17.9 mm	2 mm	2 g
046010 14	10X14	10.2 mm	13.9 mm	1 mm	0.62 g
046012 155	12/15,5/1,5	12.2 mm	15.4 mm	1.5 mm	0.6 g
046012 18	12/18/1,5	12.2 mm	17.9 mm	1.5 mm	1.4 g
046012 16	12X16	12.2 mm	15.9 mm	1.5 mm	0.9 g
046013 17	13/17/1,5	13.2 mm	15.9 mm	1.5 mm	0.9 g
046013 18	13/18	13.2 mm	17.9 mm	1.5 mm	1.2 g
046013 20	13X20X1,5	13.2 mm	19.9 mm	1.5 mm	1.9 g
046014 18	14/18	14.2 mm	17.9 mm	1.5 mm	2 g
046014 20	14/20	14.2 mm	19.9 mm	1.5 mm	1.67 g
046014 22	14 X 22	14.2 mm	21.9 mm	1.5 mm	1 g
046015 19	15X19X1,5	15.2 mm	18.9 mm	1.5 mm	1 g
046016 20	16/20	16.2 mm	19.9 mm	1.5 mm	1 g
046016 22	16/22	16.2 mm	21.9 mm	1.5 mm	1.96 g
046017 21	17/21	17.2 mm	20.9 mm	1.5 mm	1.21 g
046017 23	17/23	17.2 mm	22.9 mm	1.5 mm	1 g
046018 22	18/22	18.2 mm	21.9 mm	1.5 mm	1.24 g
046018 24	18/24	18.2 mm	23.9 mm	1.5 mm	2 g

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
046018 27	18/27/1,5	18.2 mm	26.9 mm	1.5 mm	3.4 g
046020 24	20/24	20.2 mm	23.9 mm	1.5 mm	1.8 g
046020 26	20/26	20.2 mm	25.9 mm	1.5 mm	2.2 g
046021 26	21/26	21.2 mm	25.9 mm	1.5 mm	1.83 g
046022 27	22/27	22.2 mm	26.9 mm	1.5 mm	2.06 g
046023 28	23/28/2	23.3 mm	27.9 mm	2 mm	3 g
046024 29	24/29/2	24.3 mm	28.9 mm	2 mm	2.83 g
046024 30	24/30/2	24.3 mm	29.9 mm	2 mm	0.1 g
046024 32	24/32	24.3 mm	31.9 mm	2 mm	5.2 g
046026 31	26/31/2	26.3 mm	30.9 mm	2 mm	3.2 g
046026 32	26/32	26.3 mm	31.9 mm	2 mm	3.8 g
046026 34	26/34	26.3 mm	33.9 mm	2 mm	6 g
046027 32	27/32	27.3 mm	31.9 mm	2 mm	3.2 g
046028 34	28/34	28.3 mm	33.9 mm	2 mm	4.2 g
04602834	28 X 34	28.3 mm	33.9 mm	2 mm	4.2 g
046030 36	30/36/2	30.3 mm	35.9 mm	2 mm	4.2 g
046030036	30 X 36	30.3 mm	35.9 mm	2 mm	4.4 g
046032 38	32/38	32.3 mm	37.9 mm	2 mm	46 g
046033 39	33/39	33.3 mm	38.9 mm	2 mm	15 g
046033 45	33/45/2	33.3 mm	44.9 mm	2 mm	11 g
046036 42	36/42	36.3 mm	41.9 mm	2 mm	5.2 g
046039 46	39/46/2	39.3 mm	44.9 mm	2 mm	6.9 g
046042 49	42/49/2	42.3 mm	48.9 mm	2 mm	8.4 g
046048 55	48/55	48.3 mm	54.9 mm	2 mm	8.8 g
046060 68	60/68	60.5 mm	67.8 mm	2.5 mm	14.4 g
046064 72	64/72	64.3 mm	71.9 mm	2.5 mm	25 g
046010 135	M10X13,5X1	10.2 mm	13.4 mm	1 mm	0.2 g



fix master

EPDM seal washer, A2 stainless

- **Material :** Stainless steel A2
- **Material of the sealing ring :** Ethylene propylene diene terpolymer rubber EPDM

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
020011796	9,6/5,7/1,7	5.7 mm	9.6 mm	2.8 mm	1.15 g
020012012	12/5,1/2,0	5.1 mm	12 mm	2.8 mm	0.85 g
020011714	14/5,7	5.7 mm	14 mm	2.8 mm	1.27 g
020011516	16X6,8X0,8	6.8 mm	16 mm	3.8 mm	1.65 g
02001197	19/7,0	7 mm	19 mm	2.8 mm	2.41 g
020013817	38/7,0/1,7	7 mm	38 mm	2.8 mm	9.98 g



EPDM seal washer, aluminium

- **Material :** Aluminium
- **Material of the sealing ring :** Ethylene propylene diene terpolymer rubber EPDM

Art. No.	Type description	Internal diameter	Outer diameter	Thickness	Product weight (per item)
020020 12	12/5,1	5.1 mm	12 mm	2.8 mm	0.91 g
020030 14	14/5,2	5.2 mm	14 mm	3.3 mm	0.77 g
020015 16	16/6,8	6.8 mm	16 mm	3.8 mm	1.52 g



Carbine hook

DIN 5299 C, sinkitty teräs, sinipassivoitu (A2K)

- Elastinen muodonmuuttuminen estää haka aukeamasta, kun hakaan kohdistuu määritetty kuormitus.

- **Material :** Steel
- **Surface :** Zinc plated
- **DIN :** 5299

Art. No.	Type description	Thickness	Length	Product weight (per item)
052450 5	50/5	5 mm	50 mm	15 g
052460 6	60/6	6 mm	60 mm	28 g
052470 7	70/7	7 mm	70 mm	40 g
052480 8	80/8	8 mm	80 mm	68 g
052490 9	90/9	9 mm	90 mm	84 g
052410010	100/10	10 mm	100 mm	129 g
052412011	120/11	11 mm	120 mm	167 g



Wire rope grip Duplex

Steel, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated

Art. No.	Type description
152002	2
152003	3
152004	4
152005	5
152006	6



Cable ferrule DIN 3093

aluminium

- **DIN :** 3093
- **Material :** Aluminium

Art. No.	Type description	Suitable for rope diameter
1520915	1,5MM	1.5 mm
152091	1MM	1 mm
1520925	2,5MM	2.5 mm
152092	2MM	2 mm
1520935	3,5MM	3.5 mm
152093	3MM	3 mm
1520096	6MM	6 mm
152098	8MM	8 mm
1520910	10MM	10 mm







Wire rope grip DIN 741

Steel, zinc-electroplated

- **DIN :** 741
- **Material :** Steel
- **Surface :** Zinc plated

Art. No.	Type description	Suitable for rope diameter
152012	1/2"-13MM	13 mm
152014	1/4"-6MM	6.5 mm
152018	1/8"-3MM	3 mm
15201	1"-25MM	26 mm
152034	3/4"-19MM	19 mm
152038	3/8"-10MM	9.5 mm
1520316	3/16"-5MM	5 mm
152058	5/8"-16MM	16 mm
1520516	5/16"-8MM	8 mm
152078	7/8"-22MM	22 mm
1520716	7/16"-11MM	11 mm



Wire rope thimble DIN 6899

Pressed profile steel, zinc-electroplated

Art. No.	Type description	Suitable for wire diameter
152225	2,5	2.5 mm
152235	3,5	3.5 mm
15224	4	4 mm
15225	5	5 mm
15226	6	6 mm
15228	8	8 mm
152210	10	10 mm
152212	12	12 mm
152215	15	15 mm
152216	16	16 mm



Shackle

Steel, zinc-electroplated

Art. No.	Type description	Shackle-bolt diameter	Shackle diameter	Internal shackle height	Internal shackle height (centre bolt)	Shackle internal width
152312	1/2"-13MM	12 mm	12 mm	48 mm	54 mm	25 mm
152314	1/4"-6MM	6 mm	6 mm	24 mm	27 mm	12 mm
152334	3/4"-19MM	19 mm	19 mm	80 mm	89 mm	38 mm
152338	3/8"-10MM	10 mm	10 mm	40 mm	45 mm	20 mm
1523316	3/16"-5MM	5 mm	5 mm	20 mm	22 mm	10 mm
152358	5/8"-16MM	16 mm	16 mm	64 mm	72 mm	32 mm
1523516	5/16"-8MM	8 mm	8 mm	32 mm	36 mm	16 mm
152378	7/8 1,5	22 mm	22 mm	85 mm	96 mm	44 mm

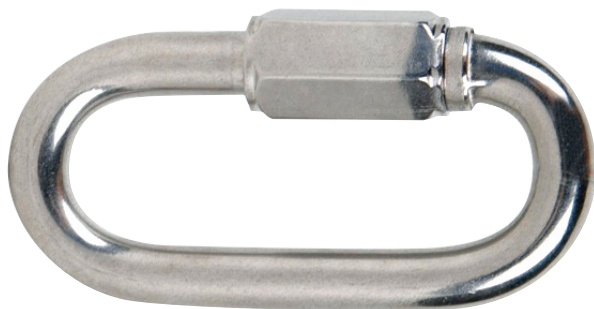


Chain connecting link

Steel, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated

Art. No.	Type description	Thickness	Length of link (internal)	Width of link (internal)
15243	3MM	3 mm	16.5 mm	6.5 mm
15244	4MM	4 mm	20 mm	8 mm
15245	5MM	5 mm	23 mm	9.5 mm
15246	6MM	6 mm	29 mm	10.5 mm
15248	8MM	8 mm	37 mm	15 mm
152410	10MM	10 mm	37.5 mm	17 mm

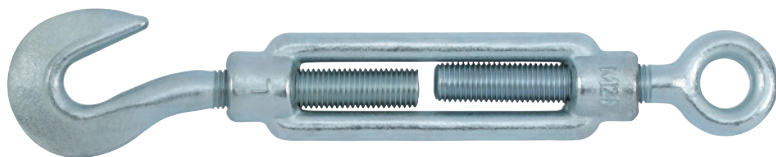


Express connecting link

Steel, zinc-electroplated

- **Material :** Steel
- **Surface :** Zinc plated

Art. No.	Type description	Thickness	Length of link (internal)	Width of link (internal)
252435	3,5	3.5 mm	29 mm	10 mm
25245	5MM	5 mm	39 mm	13 mm
25246	6MM	6 mm	45 mm	14 mm
25248	8MM	8 mm	60 mm	18 mm
252410	10	10 mm	69 mm	20 mm



Turnbuckle DIN 1480, eye/hook

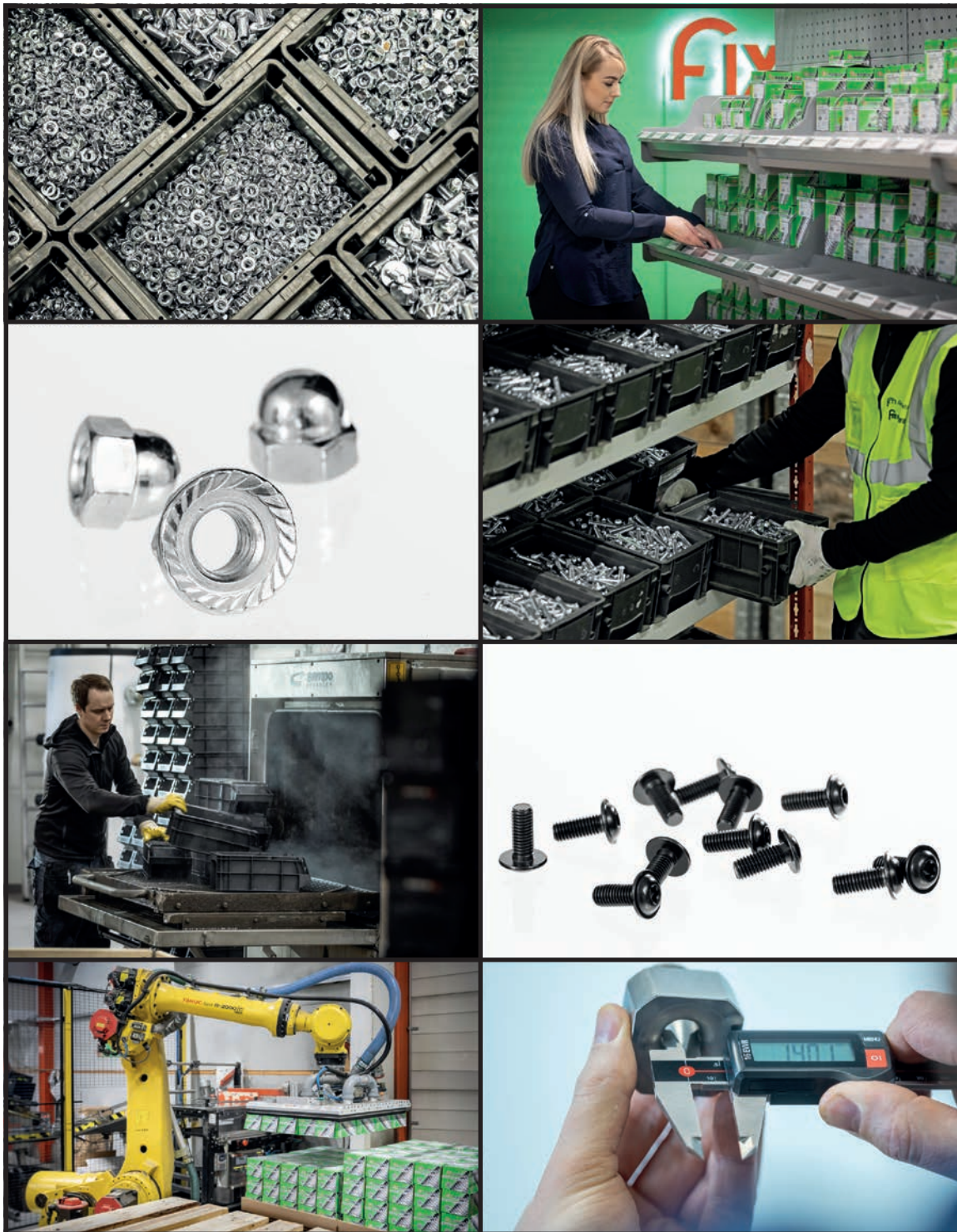
Steel, zinc-electroplated

Art. No.	Type description
15255 50	M5X50
15256 60	M6X60
15256 100	M6X110
15258 70	M8X70
15258 125	M8X110
152510 125	M10X125
152512 125	M12X125
152516 160	M16X160
152520 200	M20X200



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