

Hexagonal bolt with thread up to the head

ISO 4017, steel strength class 10.9, zinc-flake coating, silver (ZFSHL)

Zinc-flake coatings are chrome-(VI)-free corrosion protection coatings for commercial vehicle assembly, construction machinery, agricultural vehicles and equipment, and all other areas that have corrosion protection requirements at vehicle construction level.

Corrosion resistance for ZFSHL is:

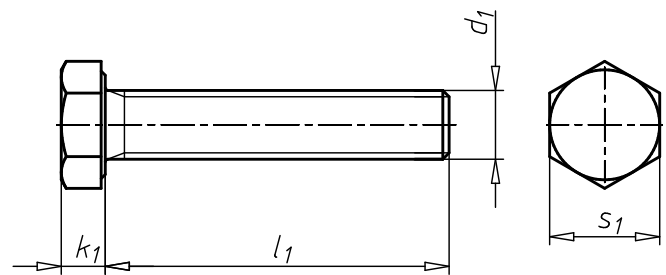
- Diameter $\geq$ M6 - 480h*
- Diameter $\geq$ M10 - 720h*
- * Guideline values: No base metal corrosion at points without thread in salt spray mist testing according to DIN EN ISO 9227 NSS.

The designation ZFSHL refers to the following corrosion coating:

- Zinc-flake coating, with top coat, silver colour, with friction value adjusted lubrication.
- Adjusted friction coefficient range from 0.09μ – 0.14μ due to top coat with integrated lubricating particles



Standards	ISO 4017
Material	Steel
Property class	10.9
Surface	Flake zinc silver
RoHS-compliant	Yes



Thread type x nominal diameter (d ₁)	Length (l ₁)	Head height (k ₁)	External drive (s ₁)	Corrosion protection period	Art. no.	P. Qty.
M6	10 mm	4 mm	WS10	480 h	4148 46 10	500
M6	12 mm	4 mm	WS10	480 h	4148 46 12	500
M6	16 mm	4 mm	WS10	480 h	4148 46 16	500
M6	20 mm	4 mm	WS10	480 h	4148 46 20	500
M6	25 mm	4 mm	WS10	480 h	4148 46 25	500
M6	30 mm	4 mm	WS10	480 h	4148 46 30	500
M6	35 mm	4 mm	WS10	480 h	4148 46 35	200
M6	40 mm	4 mm	WS10	480 h	4148 46 40	200
M6	45 mm	4 mm	WS10	480 h	4148 46 45	200
M6	50 mm	4 mm	WS10	480 h	4148 46 50	200
M6	55 mm	4 mm	WS10	480 h	4148 46 55	200
M6	60 mm	4 mm	WS10	480 h	4148 46 60	200

Thread type x nominal diameter (d ₁)	Length (l ₁)	Head height (k ₁)	External drive (s ₁)	Corrosion protection period	Art. no.	P. Qty.
M8	12 mm	5.3 mm	WS13	480 h	4148 48 12	200
M8	16 mm	5.3 mm	WS13	480 h	4148 48 16	200
M8	20 mm	5.3 mm	WS13	480 h	4148 48 20	200/1200
M8	25 mm	5.3 mm	WS13	480 h	4148 48 25	200
M8	30 mm	5.3 mm	WS13	480 h	4148 48 30	200
M8	35 mm	5.3 mm	WS13	480 h	4148 48 35	200
M8	40 mm	5.3 mm	WS13	480 h	4148 48 40	200
M8	45 mm	5.3 mm	WS13	480 h	4148 48 45	200
M8	50 mm	5.3 mm	WS13	480 h	4148 48 50	200
M8	55 mm	5.3 mm	WS13	480 h	4148 48 55	200
M8	60 mm	5.3 mm	WS13	480 h	4148 48 60	200
M8	65 mm	5.3 mm	WS13	480 h	4148 48 65	100/200
M8	70 mm	5.3 mm	WS13	480 h	4148 48 70	200
M8	80 mm	5.3 mm	WS13	480 h	4148 48 80	200
M10	12 mm	6.4 mm	WS16	720 h	4148 410 12	200
M10	16 mm	6.4 mm	WS16	720 h	4148 410 16	200
M10	20 mm	6.4 mm	WS16	720 h	4148 410 20	200
M10	25 mm	6.4 mm	WS16	720 h	4148 410 25	200
M10	30 mm	6.4 mm	WS16	720 h	4148 410 30	200
M10	35 mm	6.4 mm	WS16	720 h	4148 410 35	100
M10	40 mm	6.4 mm	WS16	720 h	4148 410 40	100
M10	45 mm	6.4 mm	WS16	720 h	4148 410 45	100
M10	50 mm	6.4 mm	WS16	720 h	4148 410 50	100
M10	55 mm	6.4 mm	WS16	720 h	4148 410 55	100
M10	60 mm	6.4 mm	WS16	720 h	4148 410 60	100
M10	65 mm	6.4 mm	WS16	720 h	4148 410 65	100
M10	70 mm	6.4 mm	WS16	720 h	4148 410 70	100
M10	75 mm	6.4 mm	WS16	720 h	4148 410 75	100
M10	80 mm	6.4 mm	WS16	720 h	4148 410 80	100
M10	85 mm	6.4 mm	WS16	720 h	4148 410 85	100
M10	90 mm	6.4 mm	WS16	720 h	4148 410 90	100
M10	100 mm	6.4 mm	WS16	720 h	4148 410 100	100
M10	110 mm	6.4 mm	WS16	720 h	4148 410 110	100
M10	120 mm	6.4 mm	WS16	720 h	4148 410 120	50
M12	16 mm	7.5 mm	WS18	720 h	4148 412 16	200
M12	20 mm	7.5 mm	WS18	720 h	4148 412 20	100
M12	25 mm	7.5 mm	WS18	720 h	4148 412 25	100
M12	30 mm	7.5 mm	WS18	720 h	4148 412 30	100
M12	35 mm	7.5 mm	WS18	720 h	4148 412 35	100
M12	40 mm	7.5 mm	WS18	720 h	4148 412 40	100
M12	45 mm	7.5 mm	WS18	720 h	4148 412 45	100
M12	50 mm	7.5 mm	WS18	720 h	4148 412 50	100
M12	55 mm	7.5 mm	WS18	720 h	4148 412 55	100
M12	60 mm	7.5 mm	WS18	720 h	4148 412 60	100
M12	65 mm	7.5 mm	WS18	720 h	4148 412 65	50
M12	70 mm	7.5 mm	WS18	720 h	4148 412 70	50
M12	75 mm	7.5 mm	WS18	720 h	4148 412 75	50
M12	80 mm	7.5 mm	WS18	720 h	4148 412 80	50
M12	85 mm	7.5 mm	WS18	720 h	4148 412 85	50
M12	90 mm	7.5 mm	WS18	720 h	4148 412 90	50
M12	100 mm	7.5 mm	WS18	720 h	4148 412 100	50
M12	120 mm	7.5 mm	WS18	720 h	4148 412 120	25
M14	20 mm	8.8 mm	WS21	720 h	4148 414 20	100

Thread type x nominal diameter (d ₁)	Length (l ₁)	Head height (k ₁)	External drive (s ₁)	Corrosion protection period	Art. no.	P. Qty.
M14	25 mm	8.8 mm	WS21	720 h	4148 414 25	100
M14	30 mm	8.8 mm	WS21	720 h	4148 414 30	100
M14	35 mm	8.8 mm	WS21	720 h	4148 414 35	100
M14	40 mm	8.8 mm	WS21	720 h	4148 414 40	100
M14	45 mm	8.8 mm	WS21	720 h	4148 414 45	50/60
M14	50 mm	8.8 mm	WS21	720 h	4148 414 50	50
M14	55 mm	8.8 mm	WS21	720 h	4148 414 55	50/100
M14	60 mm	8.8 mm	WS21	720 h	4148 414 60	50
M14	65 mm	8.8 mm	WS21	720 h	4148 414 65	50
M14	70 mm	8.8 mm	WS21	720 h	4148 414 70	50
M14	80 mm	8.8 mm	WS21	720 h	4148 414 80	50
M14	90 mm	8.8 mm	WS21	720 h	4148 414 90	50
M14	100 mm	8.8 mm	WS21	720 h	4148 414 100	50
M14	120 mm	8.8 mm	WS21	720 h	4148 414 120	50
M14	130 mm	8.8 mm	WS21	720 h	4148 414 130	50
M14	140 mm	8.8 mm	WS21	720 h	4148 414 140	50
M14	160 mm	8.8 mm	WS21	720 h	4148 414 160	50
M16	20 mm	10 mm	WS24	720 h	4148 416 20	50
M16	25 mm	10 mm	WS24	720 h	4148 416 25	50
M16	30 mm	10 mm	WS24	720 h	4148 416 30	50
M16	35 mm	10 mm	WS24	720 h	4148 416 35	50
M16	40 mm	10 mm	WS24	720 h	4148 416 40	50
M16	45 mm	10 mm	WS24	720 h	4148 416 45	50
M16	50 mm	10 mm	WS24	720 h	4148 416 50	50
M16	55 mm	10 mm	WS24	720 h	4148 416 55	50
M16	60 mm	10 mm	WS24	720 h	4148 416 60	50
M16	65 mm	10 mm	WS24	720 h	4148 416 65	25/50
M16	70 mm	10 mm	WS24	720 h	4148 416 70	25/50
M16	75 mm	10 mm	WS24	720 h	4148 416 75	25
M16	80 mm	10 mm	WS24	720 h	4148 416 80	25
M16	90 mm	10 mm	WS24	720 h	4148 416 90	25
M16	100 mm	10 mm	WS24	720 h	4148 416 100	25/50
M16	110 mm	10 mm	WS24	720 h	4148 416 110	25
M16	120 mm	10 mm	WS24	720 h	4148 416 120	25
M16	130 mm	10 mm	WS24	720 h	4148 416 130	25
M16	140 mm	10 mm	WS24	720 h	4148 416 140	25
M16	150 mm	10 mm	WS24	720 h	4148 416 150	25
M16	180 mm	10 mm	WS24	720 h	4148 416 180	25
M16	200 mm	10 mm	WS24	720 h	4148 416 200	10
M20	25 mm	12.5 mm	WS30	720 h	4148 420 25	25
M20	30 mm	12.5 mm	WS30	720 h	4148 420 30	25
M20	35 mm	12.5 mm	WS30	720 h	4148 420 35	25
M20	40 mm	12.5 mm	WS30	720 h	4148 420 40	25
M20	45 mm	12.5 mm	WS30	720 h	4148 420 45	25
M20	50 mm	12.5 mm	WS30	720 h	4148 420 50	25/50
M20	55 mm	12.5 mm	WS30	720 h	4148 420 55	25
M20	60 mm	12.5 mm	WS30	720 h	4148 420 60	25
M20	65 mm	12.5 mm	WS30	720 h	4148 420 65	25
M20	70 mm	12.5 mm	WS30	720 h	4148 420 70	25
M20	75 mm	12.5 mm	WS30	720 h	4148 420 75	25
M20	80 mm	12.5 mm	WS30	720 h	4148 420 80	25
M20	85 mm	12.5 mm	WS30	720 h	4148 420 85	25
M20	90 mm	12.5 mm	WS30	720 h	4148 420 90	25

Thread type x nominal diameter (d ₁)	Length (l ₁)	Head height (k ₁)	External drive (s ₁)	Corrosion protection period	Art. no.	P. Qty.
M20	100 mm	12.5 mm	WS30	720 h	4148 420 100	25
M20	110 mm	12.5 mm	WS30	720 h	4148 420 110	25
M20	120 mm	12.5 mm	WS30	720 h	4148 420 120	25
M20	130 mm	12.5 mm	WS30	720 h	4148 420 130	25
M20	140 mm	12.5 mm	WS30	720 h	4148 420 140	25
M20	160 mm	12.5 mm	WS30	720 h	4148 420 160	10
M20	180 mm	12.5 mm	WS30	720 h	4148 420 180	10
M24	40 mm	15 mm	WS36	720 h	4148 424 40	25
M24	45 mm	15 mm	WS36	720 h	4148 424 45	25
M24	50 mm	15 mm	WS36	720 h	4148 424 50	25
M24	55 mm	15 mm	WS36	720 h	4148 424 55	25
M24	60 mm	15 mm	WS36	720 h	4148 424 60	25
M24	65 mm	15 mm	WS36	720 h	4148 424 65	25
M24	70 mm	15 mm	WS36	720 h	4148 424 70	25
M24	75 mm	15 mm	WS36	720 h	4148 424 75	25
M24	80 mm	15 mm	WS36	720 h	4148 424 80	25
M24	85 mm	15 mm	WS36	720 h	4148 424 85	10
M24	90 mm	15 mm	WS36	720 h	4148 424 90	10
M24	100 mm	15 mm	WS36	720 h	4148 424 100	10
M24	110 mm	15 mm	WS36	720 h	4148 424 110	10
M24	120 mm	15 mm	WS36	720 h	4148 424 120	10
M24	130 mm	15 mm	WS36	720 h	4148 424 130	10
M24	140 mm	15 mm	WS36	720 h	4148 424 140	5
M24	180 mm	15 mm	WS36	720 h	4148 424 180	10
M24	200 mm	15 mm	WS36	720 h	4148 424 200	10
M30	50 mm	18.7 mm	WS46	720 h	4148 430 50	10
M30	55 mm	18.7 mm	WS46	720 h	4148 430 55	10
M30	60 mm	18.7 mm	WS46	720 h	4148 430 60	10
M30	65 mm	18.7 mm	WS46	720 h	4148 430 65	10
M30	70 mm	18.7 mm	WS46	720 h	4148 430 70	10
M30	75 mm	18.7 mm	WS46	720 h	4148 430 75	10
M30	80 mm	18.7 mm	WS46	720 h	4148 430 80	10
M30	90 mm	18.7 mm	WS46	720 h	4148 430 90	10
M30	100 mm	18.7 mm	WS46	720 h	4148 430 100	10
M30	120 mm	18.7 mm	WS46	720 h	4148 430 120	10
M30	140 mm	18.7 mm	WS46	720 h	4148 430 140	10
M30	150 mm	18.7 mm	WS46	720 h	4148 430 150	10
M30	160 mm	18.7 mm	WS46	720 h	4148 430 160	5
M30	200 mm	18.7 mm	WS46	720 h	4148 430 200	5

Notice

ISO 4017 replaces DIN 933 | There is some similarity | Nominal dimensions extended | Width across flats changed for M10, M12, M14 and M22.