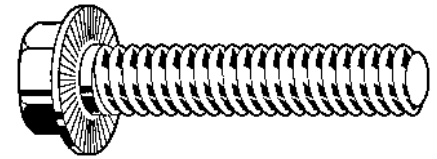
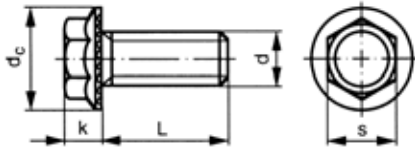


Self-locking hexagon bolt with flange

1



Technical data

d	P	k	s	d _c
M5	0,8	4,3	8	11,2
M6	1	5,5	10	14,2
M8	1,25	7	13	18,2
M10	1,5	8,5	15	21
M12	1,75	10	17	24
M16	2	14	22	31

Special features of RIPP self-locking hexagon bolts with flange:

- the serrated flange eliminates surface damage during assembly, prevents self-loosening and reduces relaxation
- the flange enables built up forces under the bolt head to be spread over a larger area, consequently resulting in lower surface pressure
- large holes (oversized) and/or tooling holes can be covered by the flange
- a washer and/or a locking element is not necessary

ASSEMBLY PRE-LOAD F_M in kN and TIGHTENING TORQUE M_A in Nm

Class	Mating material	M5		M6		M8		M10		M12		M16	
		F _M	M _A	F _M	M _A	F _M	M _A	F _M	M _A	F _M	M _A	F _M	M _A
100	Steel (Rm < 800 N/mm ²)	9	11	12,6	19	23,2	42	37	85	54	130	102	330
	Steel (Rm ≥ 800 N/mm ²)	9	10	12,6	18	23,2	37	37	80	54	120	102	310
	Malleable iron	9	9	12,6	16	23,2	35	37	75	54	115	102	300

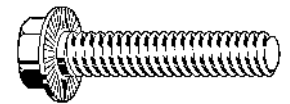
Article groups

Thread	Driving features	Material	Class	Surface treatment	Packaging	Code	Page
M	hexagon	St	100		Standard	04400	1-54
M	hexagon	St	100	Zipl	Standard	04410	1-55
M	hexagon	St	100	FLZNNC-NC6	Standard	04405	1-55

04400 RIPP Self-locking hexagon bolt with flange

A92A

Thread Metric thread
Material Steel
Class 100
Packaging Standard



d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M5X10	500	04400.050.010	M8X25	200	04400.080.025	M12X35	100	04400.120.035
M5X12	500	04400.050.012	M8X30	200	04400.080.030	M12X40	100	04400.120.040
M5X16	500	04400.050.016	M8X35	200	04400.080.035	M12X45	100	04400.120.045
M5X20	500	04400.050.020	M8X40	200	04400.080.040	M12X50	100	04400.120.050
M6X10	500	04400.060.010	M10X16	200	04400.100.016	M16X25	50	04400.160.025
M6X12	500	04400.060.012	M10X20	200	04400.100.020	M16X30	50	04400.160.030
M6X16	500	04400.060.016	M10X25	200	04400.100.025	M16X35	50	04400.160.035
M6X20	500	04400.060.020	M10X30	200	04400.100.030	M16X40	50	04400.160.040
M6X25	500	04400.060.025	M10X35	100	04400.100.035	M16X45	50	04400.160.045
M6X30	500	04400.060.030	M10X40	100	04400.100.040	M16X50	50	04400.160.050
M8X12	200	04400.080.012	M12X20	100	04400.120.020	M16X55	50	04400.160.055
M8X16	200	04400.080.016	M12X25	100	04400.120.025	M16X60	50	04400.160.060
M8X20	200	04400.080.020	M12X30	100	04400.120.030	M16X70	25	04400.160.070

- RIPP self-locking hexagon bolts with flange are designated with the property class 100 with a min. tensile strength of 1040 N/mm², they are case hardened and therefore cannot be classified in the usual class 10.9.
- WARNING: electro-galvanizing of these products may cause hydrogen embrittlement.

04410 RIPP Self-locking hexagon bolt with flange		A92A
Thread	Metric thread	
Material	Steel	
Class	100	
Surface treatment	Zinc plated	
Packaging	Standard	

d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M5X10	500	04410.050.010	M8X25	200	04410.080.025	M12X30	100	04410.120.030
M5X12	500	04410.050.012	M8X30	200	04410.080.030	M12X35	100	04410.120.035
M5X16	500	04410.050.016	M8X35	200	04410.080.035	M12X40	100	04410.120.040
			M8X40	200	04410.080.040	M12X45	100	04410.120.045
M6X10	500	04410.060.010				M12X50	100	04410.120.050
M6X12	500	04410.060.012	M10X16	200	04410.100.016	M16X30	50	04410.160.030
M6X14	500	04410.060.014	M10X20	200	04410.100.020	M16X35	50	04410.160.035
M6X16	500	04410.060.016	M10X22	200	04410.100.022	M16X40	50	04410.160.040
M6X20	500	04410.060.020	M10X25	200	04410.100.025	M16X45	50	04410.160.045
M6X25	500	04410.060.025	M10X30	200	04410.100.030	M16X50	50	04410.160.050
			M10X35	100	04410.100.035	M16X60	50	04410.160.060
M8X12	200	04410.080.012	M10X40	100	04410.100.040	M16X70	25	04410.160.070
M8X14	200	04410.080.014						
M8X16	200	04410.080.016	M12X20	100	04410.120.020			
M8X20	200	04410.080.020	M12X25	100	04410.120.025			

- RIPP self-locking hexagon bolts with flange are designated with the property class 100 with a min. tensile strength of 1040 N/mm², they are case hardened and therefore cannot be classified in the usual class 10.9.
- WARNING: electro-galvanizing of these products may cause hydrogen embrittlement.

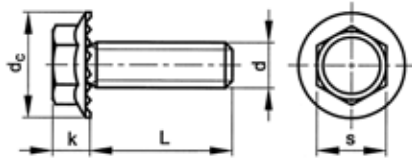
04405 RIPP Self-locking hexagon bolt with flange		A95A
Thread	Metric thread	
Material	Steel	
Class	100	
Surface treatment	Zinc flake Cr6+ free - ISO 10683 flZnnc	
Packaging	Standard	

d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M5X10	200	04405.050.010	M8X20	200	04405.080.020	M12X35	100	04405.120.035
M5X12	200	04405.050.012	M8X25	200	04405.080.025	M12X40	100	04405.120.040
M5X16	200	04405.050.016	M8X30	200	04405.080.030	M12X50	100	04405.120.050
M5X20	200	04405.050.020	M8X35	200	04405.080.035			
M6X10	200	04405.060.010				M16X30	50	04405.160.030
M6X12	200	04405.060.012	M10X20	200	04405.100.020	M16X35	50	04405.160.035
M6X16	200	04405.060.016	M10X25	200	04405.100.025	M16X40	50	04405.160.040
M6X20	200	04405.060.020	M10X30	200	04405.100.030	M16X45	50	04405.160.045
M6X25	200	04405.060.025	M10X35	100	04405.100.035	M16X50	50	04405.160.050
			M10X40	100	04405.100.040	M16X60	50	04405.160.060
M8X16	200	04405.080.016				M16X70	50	04405.160.070
			M12X30	100	04405.120.030			

- Technical brochure available on request.

Self-locking hexagon bolt with flange

1



Technical data

d	P	k	s	d _c
M5	0,8	4,3	8	11,2
M6	1	5,5	10	14,2
M8	1,25	7	13	18,2
M10	1,5	7,9	15	21
M12	1,75	8,7	17	24
M16	2	11,2	22	31

Special features of TENSILOCK self-locking hexagon nuts:

- the resilient serrated flange gives excellent self-locking properties
- inside of the resilient flange serration there is an optimal preloading of the construction with minimal settlement
- a washer and/or locking element is not necessary and is even not advisable

ASSEMBLY PRE-LOAD F_M in KN and TIGHTENING TORQUE M_A in Nm

Class	Mating material	M5		M6		M8		M10		M12		M16	
		F_M	M_A	F_M	M_A	F_M	M_A	F_M	M_A	F_M	M_A	F_M	M_A
90	Steel	6,35	9	9	16	16,5	34	26,2	58	--	--	--	--
	Malleable iron	6,35	7	9	13	16,5	28	26,2	49	--	--	--	--
100	Steel	--	--	--	--	--	--	--	--	54	120	102	280
	Malleable iron	--	--	--	--	--	--	--	--	54	105	102	260

Article groups

Thread	Driving features	Material	Class	Surface treatment	Packaging	Code	Page
M	hexagon	St	90/100		Standard	01050	1-56
M	hexagon	St	90/100	Zipl	Standard	01049	1-57
M	hexagon	St	90/100	FLZNNC-NC6	Standard	01055	1-57

01050 TENSILOCK Self-locking hexagon bolt with flange

A92A

Thread Metric thread
Material Steel
Class 90/100
Packaging Standard



d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M5X10	500	01050.050.010	M8X25	200	01050.080.025	M12X35	100	01050.120.035
M5X12	500	01050.050.012	M8X30	200	01050.080.030	M12X40	100	01050.120.040
M5X16	500	01050.050.016	M8X35	200	01050.080.035	M12X45	100	01050.120.045
M5X20	500	01050.050.020	M8X40	200	01050.080.040	M12X50	100	01050.120.050
M6X10	500	01050.060.010	M10X16	200	01050.100.016	M16X25	50	01050.160.025
M6X12	500	01050.060.012	M10X20	200	01050.100.020	M16X30	50	01050.160.030
M6X16	500	01050.060.016	M10X25	200	01050.100.025	M16X35	50	01050.160.035
M6X20	500	01050.060.020	M10X30	200	01050.100.030	M16X40	50	01050.160.040
M6X25	500	01050.060.025	M10X35	100	01050.100.035	M16X45	50	01050.160.045
M6X30	500	01050.060.030	M10X40	100	01050.100.040	M16X50	50	01050.160.050
M8X12	200	01050.080.012	M12X20	100	01050.120.020	M16X55	50	01050.160.055
M8X16	200	01050.080.016	M12X25	100	01050.120.025	M16X60	50	01050.160.060
M8X20	200	01050.080.020	M12X30	100	01050.120.030	M16X70	25	01050.160.070

01049 TENSILOCK Self-locking hexagon bolt with flange		A92A
Thread	Metric thread	
Material	Steel	
Class	90/100	
Surface treatment	Zinc plated	
Packaging	Standard	

d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M5X8	500	01049.050.008	M8X12	200	01049.080.012	M12X20	100	01049.120.020
M5X10	500	01049.050.010	M8X14	200	01049.080.014	M12X25	100	01049.120.025
M5X12	500	01049.050.012	M8X16	200	01049.080.016	M12X30	100	01049.120.030
M5X14	500	01049.050.014	M8X18	200	01049.080.018	M12X35	100	01049.120.035
M5X16	500	01049.050.016	M8X22	200	01049.080.022	M12X40	100	01049.120.040
M5X20	500	01049.050.020	M8X25	200	01049.080.025	M16X25	50	01049.160.025
M6X10	500	01049.060.010	M8X30	200	01049.080.030	M16X35	50	01049.160.035
M6X12	500	01049.060.012	M8X35	200	01049.080.035	M16X40	50	01049.160.040
M6X14	500	01049.060.014	M10X18	200	01049.100.018	M16X50	50	01049.160.050
M6X16	500	01049.060.016	M10X20	200	01049.100.020			
M6X20	500	01049.060.020	M10X25	200	01049.100.025			
M6X25	500	01049.060.025	M10X30	200	01049.100.030			
M6X30	500	01049.060.030						

01055 TENSILOCK Self-locking hexagon bolt with flange		A94A
Thread	Metric thread	
Material	Steel	
Class	90/100	
Surface treatment	Zinc flake Cr6+ free - ISO 10683 flZnnc	
Packaging	Standard	

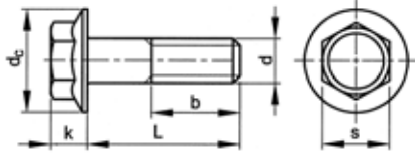
d x L	✉	Art.number	d x L	✉	Art.number	d x L	✉	Art.number
M6X10	500	01055.060.010	M8X20	200	01055.080.020	M12X30	100	01055.120.030
M6X12	500	01055.060.012	M8X25	200	01055.080.025	M12X40	100	01055.120.040
M6X16	500	01055.060.016	M8X30	200	01055.080.030	M12X50	100	01055.120.050
M6X20	500	01055.060.020	M10X25	200	01055.100.025	M16X40	50	01055.160.040
M6X25	500	01055.060.025	M10X30	200	01055.100.030	M16X50	50	01055.160.050
M8X12	200	01055.080.012	M10X40	200	01055.100.040			
M8X16	200	01055.080.016						

- A ISO 10683 Zinc Flake surface coating eliminates the possibilities of damage which can arise due to hydrogen embrittlement.

Hexagon bolt with flange

1

DIN 6921
ANSI B18.2.3.4M



Technical data

d	P	b (min.)	k (max.)	s	d _c (max.)
M5	0,8	16	5,4	8	11,8
M6	1	18	6,6	10	14,2
M8	1,25	22	8,1	13	18
M10	1,5	26	9,2	15	22,3
M12	1,75	30	11,5	16	26,6
M14	2	34	12,8	18	30,5
M16	2	38	14,4	21	35
M20	2,5	46	17,1	27	43

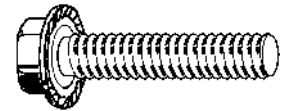
Article groups

Thread	Driving features	Material	Class	Surface treatment	Packaging	Code	Page
M	hexagon	St	8.8	Zipl	Standard	01258	1-58
M	hexagon	St	8.8	Zipl yell.p.	Standard	01256	1-58
M	hexagon	St	10.9		Standard	04132	1-59

01258 Hexagon bolt with toothed flange

A94A

Thread	Metric thread
Material	Steel
Class	8.8
Surface treatment	Zinc plated
Packaging	Standard
	DIN ≈6921



d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M6X12	200	01258.060.012	M8X25	200	01258.080.025	M12X20	100	01258.120.020
M6X16	200	01258.060.016	M8X30	200	01258.080.030	M12X25	100	01258.120.025
M6X20	200	01258.060.020				M12X30	100	01258.120.030
M6X25	200	01258.060.025	M10X20	200	01258.100.020	M12X35	100	01258.120.035
M6X30	200	01258.060.030	M10X25	200	01258.100.025	M12X40	100	01258.120.040
			M10X30	200	01258.100.030			
M8X16	200	01258.080.016	M10X35	100	01258.100.035			
M8X20	200	01258.080.020	M10X40	100	01258.100.040			

- Special features of hexagon bolts with toothed flange:
- The flange enables built up forces to be spread over a larger area, consequently resulting in lower surface pressure
- Large holes (oversized) and/or tooling holes can be covered by the flange
- A washer is not necessary
- Toothened flangebrim gives excellent self-locking properties

01256 Hexagon bolt with flange

A94A

Thread	Metric thread
Material	Steel
Class	8.8
Surface treatment	Zinc plated yellow passivated
Packaging	Standard



d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M6X12	200	01256.060.012	M8X25	200	01256.080.025	M10X25	200	01256.100.025
M6X16	200	01256.060.016	M8X30	200	01256.080.030	M10X30	200	01256.100.030
M6X20	200	01256.060.020	M8X35	200	01256.080.035	M10X35	200	01256.100.035
M6X25	200	01256.060.025	M8X40	200	01256.080.040	M10X40	100	01256.100.040
M6X30	200	01256.060.030	M8X45	200	01256.080.045	M10X45	100	01256.100.045
M6X40	200	01256.060.040	M8X50	200	01256.080.050	M10X50	100	01256.100.050
M6X45	200	01256.060.045	M8X60	200	01256.080.060	M10X60	100	01256.100.060
M6X50	200	01256.060.050	M8X70	200	01256.080.070	M10X70	100	01256.100.070
			M8X80	100	01256.080.080	M10X80	100	01256.100.080
M8X12	200	01256.080.012	M8X100	100	01256.080.100	M10X100	100	01256.100.100
M8X16	200	01256.080.016						
M8X20	200	01256.080.020	M10X20	200	01256.100.020	M12X25	100	01256.120.025

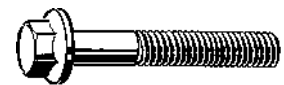
01256 Hexagon bolt with flange ←

d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M12X30	100	01256.120.030	M14X35	100	01256.140.035	M16X70	25	01256.160.070
M12X35	100	01256.120.035	M14X40	100	01256.140.040	M16X80	25	01256.160.080
M12X40	100	01256.120.040	M14X45	50	01256.140.045	M16X100	25	01256.160.100
M12X45	100	01256.120.045	M14X50	50	01256.140.050			
M12X50	100	01256.120.050	M14X60	50	01256.140.060	M20X50	25	01256.200.050
M12X60	100	01256.120.060	M14X80	50	01256.140.080	M20X60	25	01256.200.060
M12X70	50	01256.120.070				M20X70	25	01256.200.070
M12X80	50	01256.120.080	M16X35	50	01256.160.035	M20X80	10	01256.200.080
M12X90	50	01256.120.090	M16X40	50	01256.160.040	M20X90	10	01256.200.090
M12X100	50	01256.120.100	M16X45	50	01256.160.045	M20X100	10	01256.200.100
M12X120	50	01256.120.120	M16X50	50	01256.160.050	M20X120	10	01256.200.120
			M16X60	50	01256.160.060			

- Special features of hexagon bolts with flange:
- The flange enables built up forces to be spread over a larger area, consequently resulting in lower surface pressure.
- Large holes (oversized) and/or tooling holes can be covered by the flange.
- A washer is not necessary.

04132 Hexagon bolt with flange A92A

Thread	Metric thread
Material	Steel
Class	10.9
Packaging	Standard

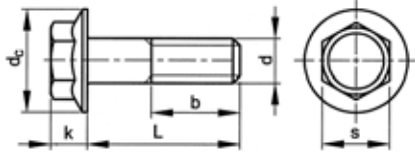


d x L	☒	Art.number	d x L	☒	Art.number	d x L	☒	Art.number
M6X20	200	04132.060.020	M10X40	100	04132.100.040	M14X35	50	04132.140.035
M6X25	200	04132.060.025	M10X50	100	04132.100.050	M14X40	50	04132.140.040
M6X30	200	04132.060.030	M10X60	100	04132.100.060	M14X45	50	04132.140.045
M6X40	200	04132.060.040	M10X70	100	04132.100.070	M14X50	50	04132.140.050
M6X50	200	04132.060.050						
			M12X25	100	04132.120.025	M16X35	50	04132.160.035
M8X20	200	04132.080.020	M12X30	100	04132.120.030	M16X40	50	04132.160.040
M8X25	200	04132.080.025	M12X35	100	04132.120.035	M16X45	50	04132.160.045
M8X30	200	04132.080.030	M12X40	100	04132.120.040	M16X50	50	04132.160.050
M8X40	200	04132.080.040	M12X45	100	04132.120.045	M16X60	50	04132.160.060
M8X50	200	04132.080.050	M12X50	100	04132.120.050	M16X70	25	04132.160.070
			M12X60	100	04132.120.060	M16X80	25	04132.160.080
M10X20	200	04132.100.020	M12X70	50	04132.120.070			
M10X25	200	04132.100.025	M12X80	50	04132.120.080			
M10X30	200	04132.100.030	M12X90	50	04132.120.090			

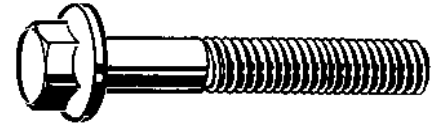
- Special features of hexagon bolts with flange:
- The flange enables built up forces to be spread over a larger area, consequently resulting in lower surface pressure.
- Large holes (oversized) and/or tooling holes can be covered by the flange.
- A washer is not necessary.
- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.

Hexagon bolt with flange MF

1



DIN 6921
ANSI B18.2.3.4M



Technical data

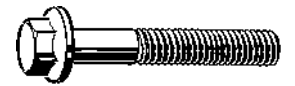
d	b (min.)	k (max.)	s	d _c (max.)
M8	22	8,1	13	18
M10	26	9,2	15	22,3
M12	30	11,5	16	26,6
M14	34	12,8	18	30,5
M16	38	14,4	21	35

- Special features of hexagon bolts with flange:
- The flange enables built up forces to be spread over a larger area, consequently resulting in lower surface pressure.
- Large holes (oversized) and/or tooling holes can be covered by the flange.
- A washer is not necessary.

04135 Hexagon bolt with flange MF

A92A

Thread Metric fine thread
Material Steel
Class 10.9
Packaging Standard



d x P x L	☒	Art.number	d x P x L	☒	Art.number	d x P x L	☒	Art.number
M8X1,00X25	200	04135.080.025	M12X1,50X25	100	04135.120.025	M16X1,50X35	50	04135.160.035
M8X1,00X30	200	04135.080.030	M12X1,50X30	100	04135.120.030	M16X1,50X40	50	04135.160.040
M10X1,25X20	200	04135.100.020	M12X1,50X40	100	04135.120.040	M16X1,50X45	50	04135.160.045
M10X1,25X30	200	04135.100.030	M12X1,50X45	100	04135.120.045	M16X1,50X50	50	04135.160.050
M10X1,25X40	100	04135.100.040	M12X1,50X50	100	04135.120.050	M16X1,50X60	50	04135.160.060
M10X1,25X50	100	04135.100.050	M14X1,50X35	50	04135.140.035			
M10X1,25X60	100	04135.100.060	M14X1,50X40	50	04135.140.040			
M10X1,25X70	100	04135.100.070	M14X1,50X50	50	04135.140.050			
			M14X1,50X60	50	04135.140.060			

- Warning: electro-galvanizing of these products may cause hydrogen embrittlement.