



WT-screws, WT-nuts und WT-washers made out of plastic

Screws and fasteners made out of plastics have four common characteristics which they basically distinguish from metal screws and fasteners:

1. **resistance to corrosion**
2. **low selfweight**
3. **no electrical conductivity**
4. **fasteners out of plastic achieve**
less tensile forces and lower torques

Due to these conditions constructions, especially in the area of lightweight construction, can be redesigned. The variety in plastics allows a realization of many demanded chemical qualities like resistance to weathering, UV resistance, food safety or acid resistance. Another advantage is the individual coloring of our products.

To improve the mechanical qualities we modified the head geometry of our screws. These changes can be found at the product descriptions.

Not only the WT-screws, but also the WT-washers were adjusted. Inside and outside diameter have different heights. Thus the crawling expansion of the plastic are better compensated. This improves for example the seal on the contact surface.

With our basic injection molds we can produce WT-screws out of plastic with reinforced glass fiber materials like **hexagon head screws, flat head screws with TX-drive, cylinderhead screws, countersunk screws with TX-drive also nuts and washers** in thread sizes M3 to M10, lengths form 10 mm to 80 mm. Our WT-fasteners have metric threads, they were clear to the metric threads.

**A great variety of specific connection parts can be produced out of plastic.
Send us your request and we will create an individual offer.**

The possibilities in the area of plastic fasteners are enormous. Consider electric and electrical industry, tank engineering and plant constructions as well as robotics, gripper technology, vehicle construction, furniture industry, water and wastewater technology, medical technology, automation technology, measuring, operation and control technology and a lot more.

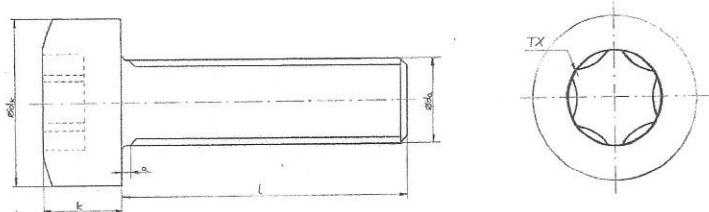
A lot is realizable – we will find the perfect innovative solution for you!



WT – flat head screws with TX-drive

according to WT-Norm WT-F-2017

made out of plastic (see material table below), with metrical thread to flat head



nominal size nominal thread-Ø d	l	a	Ø d _a	Ø d _k	TX	k
M3	10	0,6	2,9	6,0	10	2,5
	16	0,6	2,9	6,0	10	2,5
	20	0,6	2,9	6,0	10	2,5
M4	10	0,6	3,9	7,9	20	3,3
	12	0,6	3,9	7,9	20	3,3
	16	0,6	3,9	7,9	20	3,3
	20	0,6	3,0	7,9	20	3,3
M5	10	0,6	4,9	9,3	25	3,7
	16	0,6	4,9	9,3	25	3,7
	20	0,6	4,9	9,3	25	3,7
	25	0,6	4,9	9,3	25	3,7
	30	0,6	4,9	9,3	25	3,7
M6	25	2,6	5,8	11,9	30	4,9
	40	2,6	5,8	11,9	30	4,9
M8	40	2,6	7,6	15,8	40	6,45
	80	1,4	7,8	15,9	40	6,7

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

Detailed material properties can be found in our data sheet.

We produce screws out of PVDF, PEEK Pe, POM PVC, ABS ..., in short all current thermoplastics, can be dyed and produced as well.

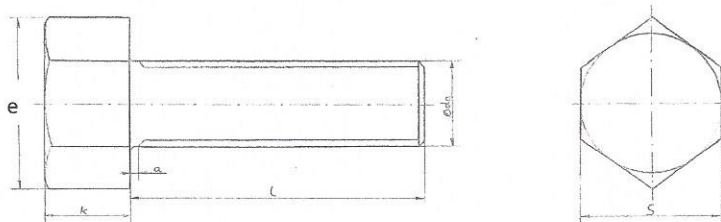
The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.

WT – hexagon head screws

according to WT-Norm WT-S-2017

made out of plastic (see material table below) with metrical thread to hexagonal head



nominal size nominal thread- $\varnothing d$	l	a	$\varnothing d_a$	e	s	k
M4	10	0,6	3,9	7,8	7,0	3,0
	12	0,6	3,9	7,8	7,0	3,0
	16	0,6	3,9	7,8	7,0	3,0
	20	0,6	3,9	7,8	7,0	3,0
M5	10	0,6	4,9	8,9	8,0	3,7
	16	0,6	4,9	8,9	8,0	3,7
	20	0,6	4,9	8,9	8,0	3,7
	25	0,6	4,9	8,9	8,0	3,7
	30	0,6	4,9	8,9	8,0	3,7
M6	25	2,6	5,8	11,3	10,0	4,2
	40	2,6	5,8	11,3	10,0	4,2
M8	40	2,6	7,6	14,7	13,0	5,5
	80	1,4	7,8	14,9	13,0	5,5
M10	80	2,2	10,0	18,3	16,0	6,5

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

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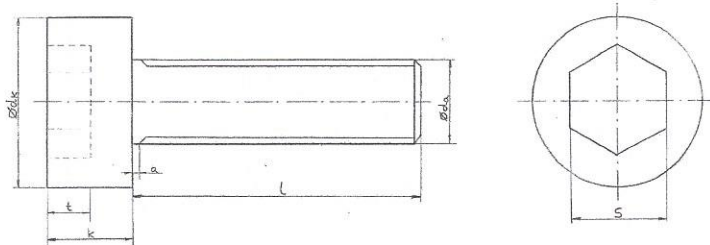
To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.



WT – cylinder head screw

according to WT-Norm WT-Z-2017

made out of plastic (see material table below), with metrical thread to hexagon socket head



nominal size nominal thread-Ø d	l	a	Ø da	Ø dk	s	k	t
M3	10	0,6	2,9	6,0	2,5	3,0	1,6
	16	0,6	2,9	6,0	2,5	3,0	1,6
	20	0,6	2,9	6,0	2,5	3,0	1,6
M4	10	0,6	3,9	7,0	3,0	4,0	2,0
	12	0,6	3,9	7,0	3,0	4,0	2,0
	16	0,6	3,9	7,0	3,0	4,0	2,0
	20	0,6	3,9	7,0	3,0	4,0	2,0
M5	10	0,6	4,9	8,5	4,0	5,0	2,5
	16	0,6	4,9	8,5	4,0	5,0	2,5
	20	0,6	4,9	8,5	4,0	5,0	2,5
	25	0,6	4,9	8,5	4,0	5,0	2,5
	30	0,6	4,9	8,5	4,0	5,0	2,5
M6	25	2,6	5,8	9,8	5,0	6,0	3,0
	40	2,6	5,8	9,8	5,0	6,0	3,0
M8	40	2,6	7,8	12,8	6,0	8,0	4,0
	80	1,4	7,8	12,8	6,0	8,0	4,0
M10	80	2,2	10,0	15,8	8,0	10,0	5,1

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

Detailed material properties can be found in our data sheet.

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The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

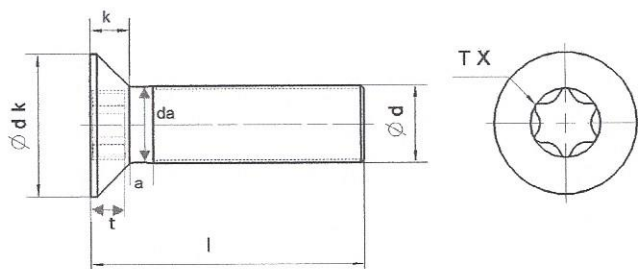
To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.



WT – Countersunk head screw with TX-drive

according to WT-Norm WT-SK-2016

made out of plastic (see material table below), with metrical thread to countersunk head



nominal size nominal thread- $\varnothing d$	nominal length l	a	$\varnothing da$	$\varnothing dk$	TX	t	k
M3	10	1,3	2,9	6,0	10	1,7	2,3
	16	1,3	2,9	6,0	10	1,7	2,3
	25	1,3	2,9	6,0	10	1,7	2,3
M4	10	1,3	3,85	8,3	20	1,5	2,85
	16	1,3	3,85	8,3	20	1,5	2,85
	20	1,3	3,85	8,3	20	1,5	2,85
M5	10	1,0	4,8	9,9	25	1,95	3,2
	16	1,0	4,8	9,9	25	1,95	3,2
	25	1,0	4,8	9,9	25	1,95	3,2

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

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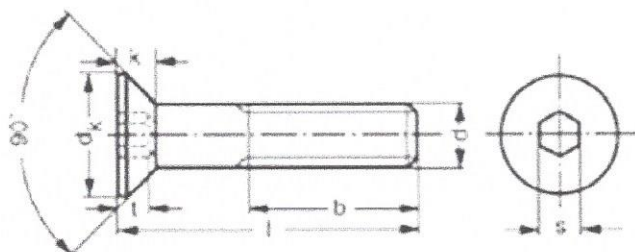
The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.

WT – Countersunk head screw with hex socket

according to WT-Norm WT-SKI-2017

made out of plastic (see material table below), with metrical thread



nominal size nominal thread- \varnothing d	nominal length l	d	\varnothing dk	k	t	b	s
M8	80	8,0	16,0	4,7	4,0	41,5	5,0

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

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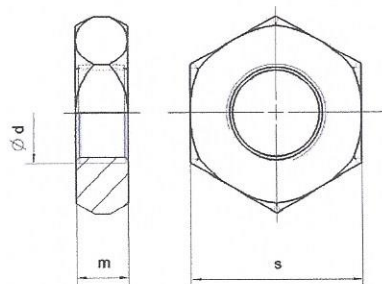
The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.

WT – hexagon nuts

according to WT-Norm WT-SM-2016

made out of plastic (see material table below), with metrical thread



nominal size			
nominal thread-Ø d	m	s	Ø d
M4	3,2	7,0	4,0
M5	4,7	8,0	5,0
M6	5,0	10,0	6,0
M8	6,5	13,0	6,9
M8 Longnuts	30,0	13,0	6,9
M10 extension in planning	8,4	16,0	

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
PAXGF50	02	nt	sw
PAGF60	05	nt	sw

Detailed material properties can be found in our data sheet.

We produce nuts out of PVDF, PEEK Pe, POM PVC, ABS ..., in short all current thermoplastics, can be dyed and produced as well.

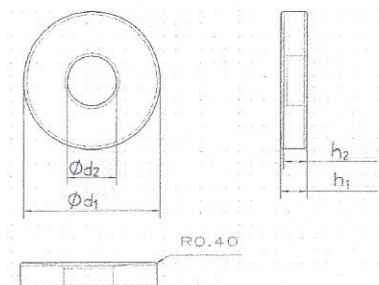
The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.

WT – washers

nach WT-Norm WT-U-2016

made out of plastic (see material table below)



nominal size nominal thread- $\varnothing d$	d_1	d_2	h_1	h_2
M4 extension in planning				
M5 extension in planning				
M6	18,0	6,5	3,2	2,9
M8	22,0	8,5	3,2	2,9
M10 extension in planning				
M12	24,0	13,0	2,7	

material table	shortname	natural-coloured = nt	black = sw
PA6GF30	01	nt	sw
ABS	06	nt	sw

Detailed material properties can be found in our data sheet.

We produce washers out of PVDF, PEEK Pe, POM PVC, ABS ..., in short all current thermoplastics, can be dyed and produced as well.

The mechanical and physical features, especially the tensile strength, are subject to the environmental conditions. We strongly recommend a practical test.

To tighten a screw, please use a torque key. We recommend a worth of 50 % of the breaking torque.