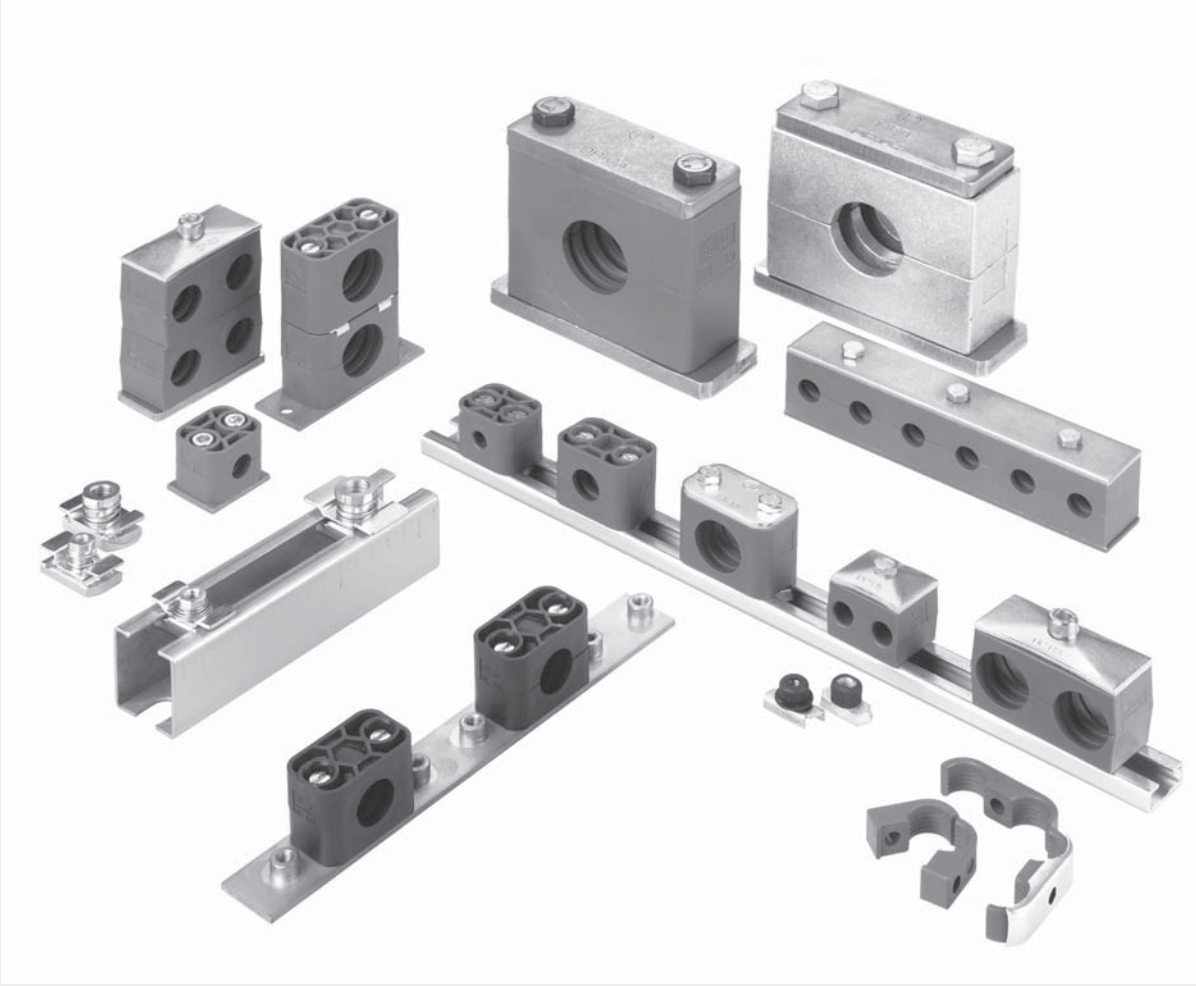
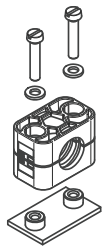
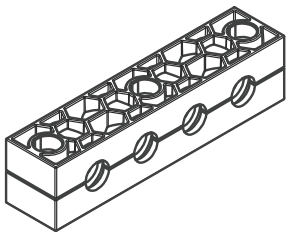
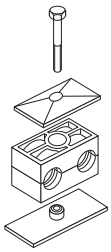
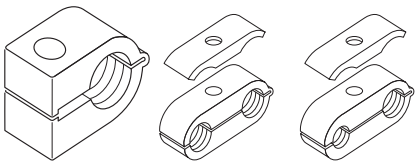
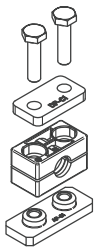
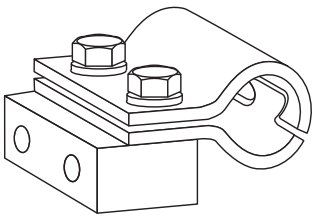
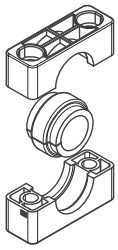
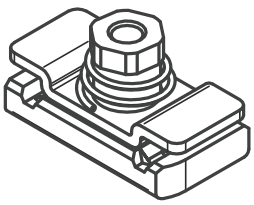
Ermeto Original
Tube clamps



Content

Series A Light series (DIN 3015-1)	 T8-T23	Multiclamps	 T38-T43
Series B Double series (DIN 3015-3)	 T24-T28	Series O	single double  T44-T45
Series C Heavy series (DIN 3015-2)	 T29-T37	Hydraulic steel clamps	 T46-T47
		Tube clamps with Elastomer inlay	 T48-T50
		Fixed adaptor	 T51-T54

Tube clamps

DIN 3015

Programme:

Tube clamps series A (according to DIN 3015 Part 1)
Available in nine standard sizes for normal mechanical requirements.
– Outer tube diameter for the metric series 4 to 101.8 mm
– Outer tube diameter for the inch-size series R 1/8″ to R 3½″
– Outer tube diameter for the imperial size series ¼″ to 4″
Accessories and construction types

Tube clamps series B (according to DIN 3015 Part 3)
Available as a twin tube clamp in five standard sizes for normal mechanical requirements.
– Outer tube diameter for the metric series 6 to 42 mm
– Outer tube diameter for the inch-size series R 1/8″ to R 1 1/4″
– Outer tube diameter for the imperial size series 1/4″ to 1 1/2″
Double tube clamps with different tube o.d. are available on request.
Accessories and construction types

Tube clamps series C (according to DIN 3015 Part 2)
Specially designed for high mechanical requirements, and available in ten standard sizes.
– Outer tube diameter for the metric series 6 to 406.4 mm
– Outer tube diameter for the inch-size series R 1/8″ to R 16″
– Outer tube diameter for the imperial size series 5/16″ to 12 3/4″
Accessories and construction types

Design:
According to DIN 3015:
Both upper and lower clamp-halves are identical.
Webs inside the bore of the clamps provide an impact and vibration deadening effect, and absorb the forces towards the direction of the tube axis.
For mounting hoses and cables it is recommended that clamps with a smooth interior surface and without prestress (block height C is reduced by gap height S) are used.

Clamp material:

Polypropylene	–30°C up to + 90° C	colour dark green
Polyamide	–40°C up to + 120° C	colour black
Rubber	–50°C up to + 120° C	colour black
Aluminium	–40°C up to + 300° C	

Stainless steel upon request.

Non standard colours upon request.

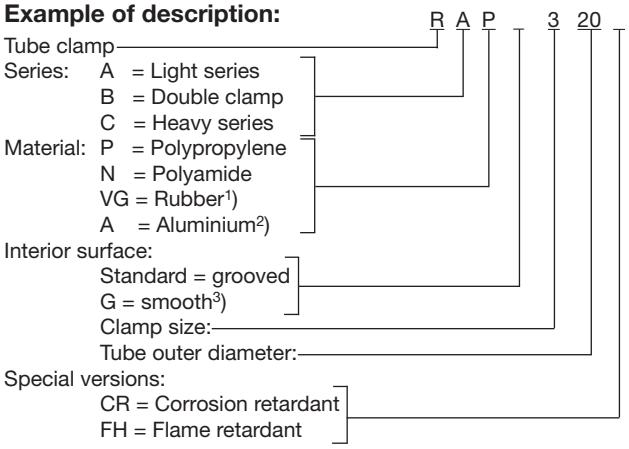
Special materials
Flame retardant.....p. T5
Corrosion retardant..... p. T5

Resistance to stress:
The remarkable features of **Tube Clamps** are their considerable re-set capability, high tensile strength, as well as their very high output strength and excellent resistance to cold. The choice of design and clamp material depends on the specific demands of the mechanical and thermal requirements.

Order code:
The order code for clamp halves as well as the reference No. for complete tube clamps incorporates the serial indication, material description and interior surface.

In accordance with DIN 3015, clamps always consist of two clamp halves. (1 clamp = 2 clamp halves)

Example of description:



1) Rubber only available for series A and B, inside smooth and series C grooved design (G).
2) Aluminium only available for series A size 0 to 6 and series C size 1 to 8. Aluminium clamps only available in a grooved design.
3) Inside smooth series A not for size 0.
Inside smooth series C only up to size 8.
Clamps with smooth interior surface and without prestress

Finish of the metal components:
All metal components are available in steel and stainless steel.

Stainless steel quality:
Stainless steel W5 (1.4401 or 1.4571) from stock, W4 (1.4301 or 1.4305) available on request.

Surfaces steel:
As is standard, the steel components have the following surfaces:

Metal part	Series A+B		Series C	
Bolt	Cr(VI)-free zinc plated		phosphated	Cr(VI)-free zinc plated
Cover plate	Cr(VI)-free zinc plated		phosphated	Cr(VI)-free zinc plated
Welding plate	phosphated		phosphated	
Mounting rail nut	Cr(VI)-free zinc plated		Cr(VI)-free zinc plated	
Mounting rail	plain & oiled	Cr(VI)-free zinc plated	plain & oiled	Cr(VI)-free zinc plated

Surfaces differing from this are available on request.

Registration:
On request.

T

Tube clamps material properties

DIN 3015

Mechanical properties	Polypropylene (PP)	Polyamide (PA)	Aluminium (Al)	Rubber (TPE)
Density	0.90 g/cm^3	1.10 g/cm^3	2.65 g/cm^3	0.97 g/cm^3
Impact value at 23 °C	7 kJ/m^2 (ISO 179/1eA)	8 kJ/mm^2 (ISO 179/1eA)	–	–
Impact value at -20 °C	3 kJ/m^2 (ISO 179/1eA)	–	–	–
Modulus of elasticity	1.400 N/mm^2 (ISO 527)	2.000 N/mm^2 (ISO 527)	72.000 N/mm^2	–
Yield stress. resp. tensile strength (Rm)	28 N/mm^2 (ISO 527)	50 N/mm^2 (ISO 527)	>240 N/mm^2	5.2 ... 8.8 N/mm^2 (ASTM D412)

Thermal properties				
Temp. resistance	–30 … +90°C	–40 … +120°C	-40 ... +300°C	–50 … +120°C

Chemical properties				
Weak acids	limited resistant	limited resistant	limited resistant	resistant
Weak alkalis	limited resistant	limited resistant	limited resistant	resistant
Alcohol	resistant	resistant	resistant	resistant
Petrol	limited resistant	resistant	resistant	limited resistant
Mineral oils	limited resistant	resistant	resistant	resistant
Other oils	resistant	resistant	resistant	resistant
Sea Water	resistant	resistant	limited resistant	resistant

The outlined particulars are approximate values and are only shown for reference, which are not binding, and with regard to possible protection of third parties. They do not exempt you from your own examination of suitability of the products delivered by us. Therefore, these values can only be used in a limited way for guidance only.

The application of the products is carried out outside of our control and, therefore, is exclusively subject to your own area of responsibility. Any claim however would be limited for all damages to the value of the goods supplied by us and in use by you.

It goes without saying, that we guarantee the perfect quality of our products according to our general sales and delivery conditions.

Special materials

Flame retardant clamps for railway vehicles EN 45545-2

Our flame retardant finish is the ideal solution for the transport and railway market.
This provides increased safety and efficiency for railway vehicles.

Material:	Polypropylene (PP-F)	Polyamide (PA-F)	Rubber (TPE-F)
T01 EN ISO 4589-2: Oxygen Index	OI = 38.7 %	OI = 35.5 %	OI = 33.4 %
T10.03 EN ISO 5659-2: 25 kW/m²	D_S max. = 48	D_S max. = 124	D_S max. = 79
T12 NF X 70 100-1 & -2: 600°C	CIT_{NLP} = 0.15	CIT_{NLP} = 0.51	CIT_{NLP} = 0.15
Compliance of the requirement set R22, 23, 24, 26 for the hazard level:	HL1 - HL2 - HL3	HL1 - HL2 - HL3	HL1 - HL2 - HL3

The advantages:
- Improved railway vehicle safety
- Flame retardant in accordance with DIN 45545-2, UL 94, DIN 3015, BS 6853, DIN 5510-2, NF F 16-101 NF F 16-101, BS 6853, UL 94
- 2+5 system. Only 2 sizes for tube diameters 6-42 mm
- Plates and rails in steel and stainless steel

Standard compliance:
Flame protected tube clamps DIN 3015 certification in line with:
- BS 6853
- DIN 5510-2
- DIN EN 45545
- UL 94
- NF F 16-101

For the original material polypropylene, the color of the clamp is white, black for polymid and solid rubber.

Example of description:

R A P 3 20 FH X

Tube clamp:
Series: A = Light series
B = Twin tube clamp
C = Heavy series
Material: P = Polypropylene
N = Polyamide
VG = Rubber[1])
Interiour surface:
Standard = grooved
G = smooth[2])
Clamp size:
Tube outer diameter:
Special versions:
FH = Flame retardant
Clamp body only

Corrosion retardant clamps

Our anti-corrosion finish is the ideal solution for areas at risk of corrosion.

Anticorrosion was developed on the basis of the approved polypropylene.

A specialised corrosion inhibitor effectively slows down the development of crevice corrosion between the clamp bodies and the tubework.

These corrosion-preventing properties were tested and recorded by salt spray tests in accordance with DIN EN ISO 9227.

Tube clamps made of PP-CR are available in the A+C series of our approved tube clamp range.

The source material is polypropylene, and the colour of the clamps is always slate grey.

Advantages:
- Enormous reduction of crevice corrosion
- Extension of maintenance intervals
- Cost reduction due to extended durability of the tubing

Example of description:

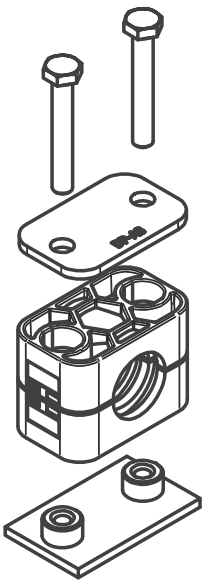
R A P G 3 20 CR X

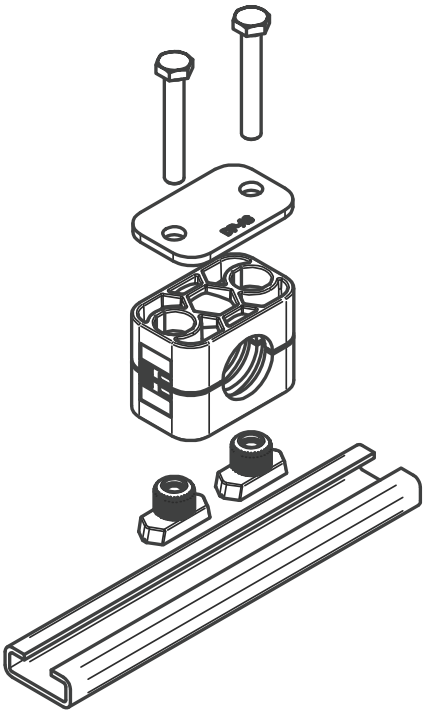
Tube clamp:
Series: A = Light series
C = Heavy series
Material: P = Polypropylene
Interiour surface:
G = smooth[2])
Clamp size:
Tube outer diameter:
Special versions:
CR = Corrosion retardant
Clamp body only

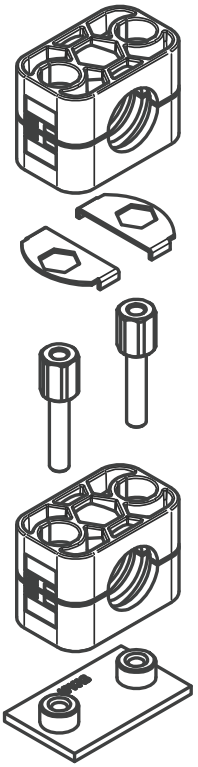
[1]) Rubber for series A and B only with smooth interiour surface (G).
[2]) Inside smooth series A not for size 0.
Inside smooth series C only up to size 8.
Clamps with smooth interior surface and without prestress.

T

Tube clamps assembly instruction







Assembly:

Assembly on to metal welding plates

Place welding plates on a base appropriate for the load. Make sure that the clamps are properly aligned. Clamp lower clamp halve onto welding plate, insert tube, place upper clamp halve onto lower halve and fasten with the screws. Attention must be paid to the bias (after completed assembly, clamp halves may not be in contact)! Do not weld with fitted plastic clamp! Extended welding plates may be screw-fastened to the base.

Assembly on support rails

Support rails are available in four different heights and come in pieces of 1 m or 2 m length, as required.
Weld on support rail or screw-fasten with fastening angle bracket. Insert support rail nuts in rail and turn until stoppage. For heavy duty construction series, nuts are simply pushed in. Clamp lower clamp half on support rail nuts, insert tube, place upper clamp halve onto lower halve and fasten with the screws. Before fastening the screws the clamp may still be positioned. Attention must be paid to the bias (after completed assembly, the clamp halves may not be in contact)!

Construction assembly

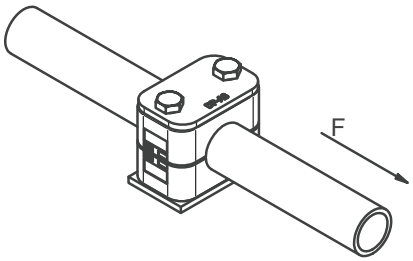
Clamps allow the assembly of multiple clamps of the same construction size and of different tube diameters one above the other. The construction assembly is carried out with special fixing screws that are secured against twisting by applying a locking plate. Clamp lower clamp halve on welding plate or support rail respectively, insert tube, place upper clamp halve on lower halve and fasten with fixing screws. The fixing screw juts out from the upper clamp halve. The application of a locking late scurely fastens the fixing screw and prevents twisting. Clamp on second clamp halve on to the fixing screws etc.

Tube clamps

DIN 3015

Screw tightening torque and axial pipe shearing forces

The indicated screw tightening torque and axial pipe shearing forces refer to the assembly with cover plates and outside hexagon bolts according to DIN 931/933.
The axial pipe shearing force (according to DIN 3015, part 10) is an average value, determined by three tests made with a steel pipe according to DIN 2448 of St. 37, for which static friction is assumed (temperature during tests: 23°C). When loading the clamp with the indicated test force (F) in axial pipe direction, the pipe must not slide in the clamp.



Series A - Light series (DIN 3015, part 1)

Size	Fixing screw DIN 931/933	Polypropylene		Polyamide		Aluminium	
		Screw tightening torque (Nm)	Pipe shearing force F (kN)	Screw tightening torque (Nm)	Pipe shearing force F (kN)	Screw tightening torque (Nm)	Pipe shearing force F (kN)
0	M6	8	0.6	10	0.6	–	–
1	M6	8	1.1	10	0.7	12	4.2
2	M6	8	1.2	10	0.8	12	4.3
3	M6	8	1.4	10	1.6	12	4.8
4	M6	8	1.5	10	1.7	12	5.0
5	M6	8	1.9	10	2.0	12	7.3
6	M6	8	2.0	10	2.5	12	8.9
7	M6	8	2.3	10	3.2	–	–
8	M6	8	2.6	10	3.5	–	–

Series B - Double series (DIN 3015, part 3)

Size	Fixing screw DIN 931/933	Polypropylene		Polyamide	
		Screw tightening torque (Nm,)	Pipe shearing force F (kN)	Screw tightening torque (Nm)	Pipe shearing force F (kN)
1	M6	5	0.9	6	0.9
2	M8	12	2.1	12	2.2
3	M8	12	1.9	12	2.0
4	M8	12	2.7	12	2.9
5	M8	8	1.7	8	2.5

Series C - Heavy series (DIN 3015, part 2)

Size	Fixing screw DIN 931/933	Polypropylene		Polyamide		Aluminium	
		Screw tightening torque (Nm)	Pipe shearing force F (kN)	Screw tightening torque (Nm)	Pipe shearing force F (kN)	Screw tightening torque (Nm)	Pipe shearing force F (kN)
1	M10	12	1.6	20	4.2	30	12.1
2	M10	12	2.9	20	4.5	30	15.1
3	M10	15	3.3	25	5.1	35	15.5
4	M12	30	8.2	40	9.3	55	29.4
5	M16	45	11.0	55	15.8	120	34.8
6	M20	80	14.0	150	21.0	220	50.0
7	M24	110	28.0	200	32.0	250	70.6
8	M30	180	40.0	350	48.0	500	84.5
9	M30	200	119.0	370	125.0	500	181.5
10	M30	270	168.0	450	180.0	600	244.5

For further information on clamp mouting, see page F14 following.

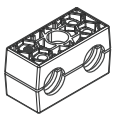
Tube clamps series B (Twin-tube clamps) – Components

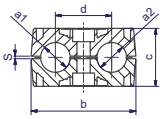
DIN 3015, part 3

Order codes for clamp halves:

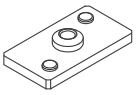
Material	Interior surface	Order code
Polypropylene	grooved	**RBP**
	smooth	**RBPG**
Polyamide	grooved	**RBN**
	smooth	**RBNG**
Rubber	smooth	**RBVG**[1)]

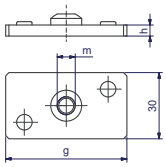
(Please exchange as required standard abbreviation RBP in column for "clamp halves")
For flame- or corrosion retardant materials, please refer to page T5.





Width: 30 mm





clamp size	Tube O.D. mm	Tube NB	Tube O.D.	1 part 2 clamp halves[2)] RBP… Order code	dimensions: b	c	d	s	weld plate with locking device APB… Order code	dimensions: g	m	h
1	6.0 6.4 8.0 9.5 10.0 12.0	G 1/8	1/4 5/16 3/8	**RBP106X** **RBP106.4X** **RBP108X** **RBP109.5X** **RBP110X** **RBP112X**	36	27.0	20	1.0	**APB1...***	37	M6	3
2	12.7 13.5 14.0 15.0 16.0 17.2 18.0	G 1/4 G 3/8	1/2 5/8	**RBP212.7X** **RBP213.5X** **RBP214X** **RBP215X** **RBP216X** **RBP217.2X** **RBP218X**	53	27.4	29	1.2	**APB2...***	55	M8	5
3	19.0 20.0 21.3 22.0 25.0 25.4	G 1/2	3/4 1	**RBP319X** **RBP320X** **RBP321.3X** **RBP322X** **RBP325X** **RBP325.4X**	67	37.0	36	1.6	**APB3...***	70	M8	5
4	26.9 28.0 30.0	G 3/4		**RBP426.9X** **RBP428X** **RBP430X**	82	42.0	45	2.0	**APB4...***	85	M8	5
5	32.0 33.7 35.0 38.0 40.0 42.0	G 1 G 1 1/4	1 1/4 1 1/2	**RBP532X** **RBP533.7X** **RBP535X** **RBP538X** **RBP540X** **RBP542X**	106	54.0	56	2.0	**APB5...***	110	M8	5

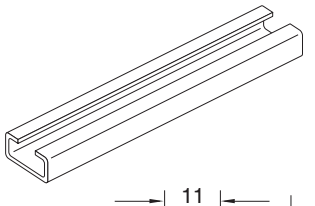
[1)] When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.
[2)] Twin-tube clamps with different outer tube diameters upon request.

*Please add the suffix below according to the surface/material required.

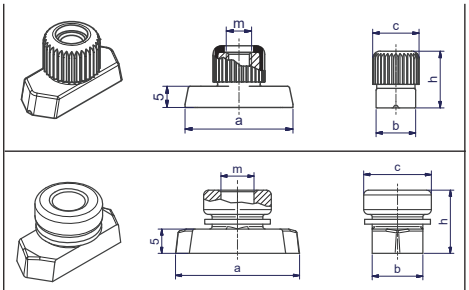
Order code suffixes		
Surface/material	**Suffix**	Example
Steel, phosphated	**X**	APB1X
Steel, zinc plated, Cr(VI)-free	**VZX**	APB1VZX
Stainless Steel 1.4571	**4571X**	APB14571X

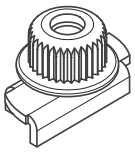
Tube clamps series B (Twin-tube clamps) – Components

DIN 3015, part 3

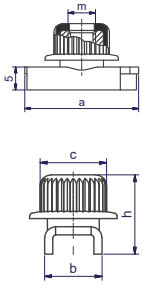


1 or 2 mtr





With loss protection
(See page T54).



clamp size	weld plate, angled		mounting rail nut						mounting rail nut					
	TS...A/B Order code	dimensions: h	**TM** Order code	dimensions: a	b	c	m	h	**TMA/TMB1...** Order code	dimensions: a	b	c	m	h
1	**TS11A/B1...*** **TS11A/B2...*** **TS14A/B1...*** **TS14B/B2...*** **TS30A/B1...*** **TS30B/B2...***	TS11: TS14: TS30:	**TMA/TMB1VERZX** **TMA/TMB1/4571X**	25.4	10.4	12	M6	14.5	**TMA/TMB1WLPVZX** **TMA/TMB1WLP71X**	25.4	10.4	12	M6	14.5
2			**TMB2VZX** **TMB24571X**	25.4	10.4	14	M8	13.0						
3														
4														
5														

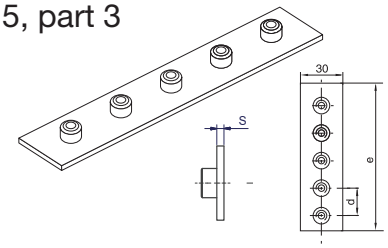
*Please add the suffix below according to the surface/material required.

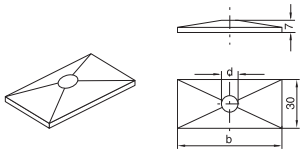
Order code suffixes		
Surface/material	**Suffix**	Example
Steel, phosphated	**X**	TS11A/B1X
Steel, zinc plated, Cr(VI)-free	**VZX**	TS11A/B1VZX
Stainless Steel 1.4571	**71X**	TS11A/B171X

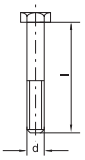
T

Tube clamps series B (Twin-tube clamps) – Components

DIN 3015, part 3

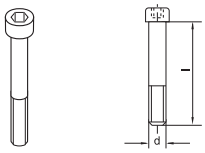




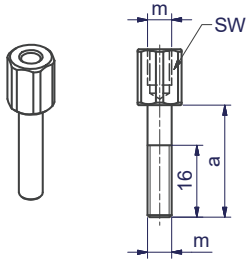


DIN 931/933

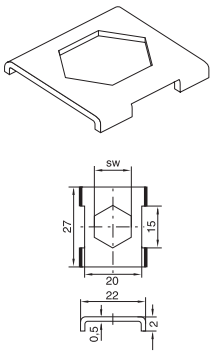
clamp size	weld plate angled (5 clamps)				cover plate			hexagonal screws	
	APR B... Order code	dimensions: d	e	s	**DP B...** Order code	dimensions: b	d	**SS B...** Order code	dimensions: d × L
1	**APRB1X APRB1VZX APRB4571X**	40	196	3	**DPB1...***	34	6.6	**SSLA2/SSB1...***	M 06×35
2	**APRB2X APRB2VZX APRB24571X**	58	288	5	**DPB2...***	51	8.6	**SSB2...***	M 08×35
3	**APRB3X APRB3VZX APRB34571X**	72	358	5	**DPB3...***	64	8.6	**SSB3...***	M 08×45
4	**APRB4X APRB4VZX APRB44571X**	90	446	5	**DPB4...***	78	8.6	**SSB4...***	M 08×50
5	**APRB5X APRBVZX APRB4571X**	112	558	5	**DPB5...***	102	8.6	**SSB5...***	M 08×60

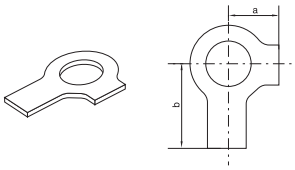


ISO 4762



DIN 938





clamp size	socket head		stacking				locking plate[1]		locking washer[2]		
	IS B... Order code	dimensions: d × L	**AS B...** Order code	dimensions: a	m	SW	**SB B...** Order code	dim.: SW	**US...** Order code	dimensions: a	b
1	**ISA4...* (ISB1...*)**	M 06×35	**ASA0...* (ASB1...*)**	20	M6	11	**SBB1...***	11	**USA/USB1X[3]**	9	18
2	**ISB2...***	M 08×35	**ASB2...***	22	M8	12	**SBB2...***	12	**USB2X USB271X**	11	20
3	**ISB3...***	M 08×45	**ASB3...***	30	M8	12					
4	**ISB4...***	M 08×50	**ASB4...***	35	M8	12					
5	**ISB5...***	M 08×60	**ASB5...***	47	M8	12					

[1]) The use of stacking screws necessitates the use of locking plates in the construction assembly!
[2]) When assemblying solid rubber clamps, covering plates, he×agon screws and locking washers must be used.
[3]) Material = Stainless steel 1.4571

*Please add the suffix below according to the surface/material required.

Order code suffixes		
Surface/material	**Suffix**	Example
Steel, zinc plated, Cr(VI)-free	**X**	DPB1X
Stainless Steel 1.4571	**71X**	DPB14571X

Tube clamps series B – Complete range

Order codes for clamp halves:

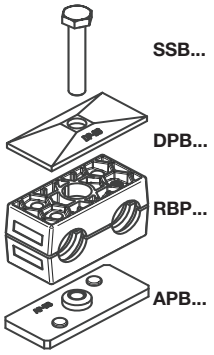
Material	Interior surface	Order code
Polypropylene	grooved	**RBP**
	smooth	**RBPG**
Polyamide	grooved	**RBN**
	smooth	**RBNG**
Rubber	smooth	**RBVG**[1)]

(Please exchange as required standard abbreviation RBP in column for "Order code")

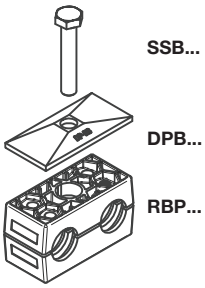
For flame- or corrosion retardant materials, please refer to page T5.

The steel parts of kits 1, 16 and 3 have the following surfaces:
Screws, bushes, cover plates = Cr(VI)-free galvanized
Welding plate = phosphated
Other compositions available on request.

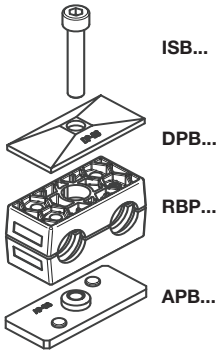
2 clamp halves, weld plate, cover plate, hex. head bolt



2 clamp halves, cover plate, hex. head bolt



2 clamp halves, weld plate, cover plate, socket head bolt



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
1	6.0			**RBP1–106**	**RBP16-106**	**RBP3–106**
	6.4		1/4	**RBP1–106.4**	**RBP16-106.4**	**RBP3–106.4**
	8.0		5/16	**RBP1–108**	**RBP16-108**	**RBP3–108**
	9.5		3/8	**RBP1–109.5**	**RBP16-109.5**	**RBP3–109.5**
	10.0	G 1/8		**RBP1–110**	**RBP16-110**	**RBP3–110**
	12.0			**RBP1–112**	**RBP16-112**	**RBP3–112**
2	12.7		1/2	**RBP1–212.7**	**RBP16-212.7**	**RBP3–212.7**
	13.5	G 1/4		**RBP1–213.5**	**RBP16-213.5**	**RBP3–213.5**
	14.0			**RBP1–214**	**RBP16-214**	**RBP3–214**
	15.0			**RBP1–215**	**RBP16-215**	**RBP3–215**
	16.0		5/8	**RBP1–216**	**RBP16-216**	**RBP3–216**
	17.2	G 3/8		**RBP1–217.2**	**RBP16-217.2**	**RBP3–217.2**
	18.0			**RBP1–218**	**RBP16-218**	**RBP3–218**
3	19.0		3/4	**RBP1–319**	**RBP16-319**	**RBP3–319**
	20.0			**RBP1–320**	**RBP16-320**	**RBP3–320**
	21.3	G 1/2		**RBP1–321.3**	**RBP16-321.3**	**RBP3–321.3**
	22.0			**RBP1–322**	**RBP16-322**	**RBP3–322**
	25.0			**RBP1–325**	**RBP16-325**	**RBP3–325**
	25.4		1	**RBP1–325.4**	**RBP16-325.4**	**RBP3–325.4**
4	26.9	G 3/4		**RBP1–426.9**	**RBP16-426.9**	**RBP3–426.9**
	28.0			**RBP1–428**	**RBP16-428**	**RBP3–428**
	30.0			**RBP1–430**	**RBP16-430**	**RBP3–430**
5	32.0		1 1/4	**RBP1–532**	**RBP16-532**	**RBP3–532**
	33.7	G 1		**RBP1–533.7**	**RBP16-533.7**	**RBP3–533.7**
	35.0			**RBP1–535**	**RBP16-535**	**RBP3–535**
	38.0		1 1/2	**RBP1–538**	**RBP16-538**	**RBP3–538**
	40.0			**RBP1–540**	**RBP16-540**	**RBP3–540**
	42.0	G 1 1/4		**RBP1–542**	**RBP16-542**	**RBP3–542**

Delivery in unassembled individual components.

[1)] When assemblying solid rubber clamps, covering plates, he×agon screws and locking washers must be used.

T

Tube clamps series B – Complete range

Order codes for clamp halves:

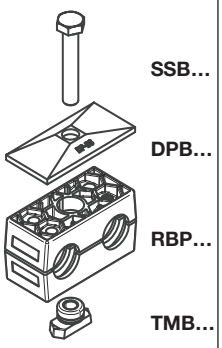
Material	Interior surface	Order code
Polypropylene	grooved	**RBP**
	smooth	**RBPG**
Polyamide	grooved	**RBN**
	smooth	**RBNG**
Rubber	smooth	**RBVG**[1)]

(Please exchange as required standard abbreviation RBP in column for "Order code")

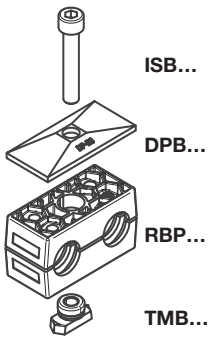
For flame- or corrosion retardant materials, please refer to page T5.

The steel parts of kits 4, 5 and 8 have the following surfaces:
Screws, bushes, cover plates = Cr(VI)-free galvanized
Welding plate = phosphated
Other compositions available on request.

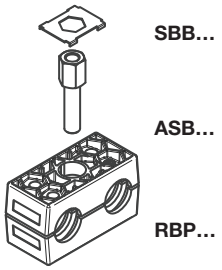
2 clamp halves, rail nut, cover plate, hex. head bolt



2 clamp halves, rail nut, cover plate, socket head bolt



2 clamp halves, locking plate, stacking bolt



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
1	6.0			**RBP4–106**	**RBP5–106**	**RBP8–106**
	6.4		1/4	**RBP4–106.4**	**RBP5–106.4**	**RBP8–106.4**
	8.0		5/16	**RBP4–108**	**RBP5–108**	**RBP8–108**
	9.5		3/8	**RBP4–109.5**	**RBP5–109.5**	**RBP8–109.5**
	10.0	G 1/8		**RBP4–110**	**RBP5–110**	**RBP8–110**
	12.0			**RBP4–112**	**RBP5–112**	**RBP8–112**
2	12.7		1/2	**RBP4–212.7**	**RBP5–212.7**	**RBP8–212.7**
	13.5	G 1/4		**RBP4–213.5**	**RBP5–213.5**	**RBP8–213.5**
	14.0			**RBP4–214**	**RBP5–214**	**RBP8–214**
	15.0			**RBP4–215**	**RBP5–215**	**RBP8–215**
	16.0		5/8	**RBP4–216**	**RBP5–216**	**RBP8–216**
	17.2	G 3/8		**RBP4–217.2**	**RBP5–217.2**	**RBP8–217.2**
	18.0			**RBP4–218**	**RBP5–218**	**RBP8–218**
3	19.0		3/4	**RBP4–319**	**RBP5–319**	**RBP8–319**
	20.0			**RBP4–320**	**RBP5–320**	**RBP8–320**
	21.3	G 1/2		**RBP4–321.3**	**RBP5–321.3**	**RBP8–321.3**
	22.0			**RBP4–322**	**RBP5–322**	**RBP8–322**
	25.0			**RBP4–325**	**RBP5–325**	**RBP8–325**
	25.4		1	**RBP4–325.4**	**RBP5–325.4**	**RBP8–325.4**
4	26.9	G 3/4		**RBP4–426.9**	**RBP5–426.9**	**RBP8–426.9**
	28.0			**RBP4–428**	**RBP5–428**	**RBP8–428**
	30.0			**RBP4–430**	**RBP5–430**	**RBP8–430**
5	32.0		1 1/4	**RBP4–532**	**RBP5–532**	**RBP8–532**
	33.7	G 1		**RBP4–533.7**	**RBP5–533.7**	**RBP8–533.7**
	35.0			**RBP4–535**	**RBP5–535**	**RBP8–535**
	38.0		1 1/2	**RBP4–538**	**RBP5–538**	**RBP8–538**
	40.0			**RBP4–540**	**RBP5–540**	**RBP8–540**
	42.0	G 1 1/4		**RBP4–542**	**RBP5–542**	**RBP8–542**

Delivery in unassembled individual components.

[1)] When assemblying solid rubber clamps, covering plates, he×agon screws and locking washers must be used.