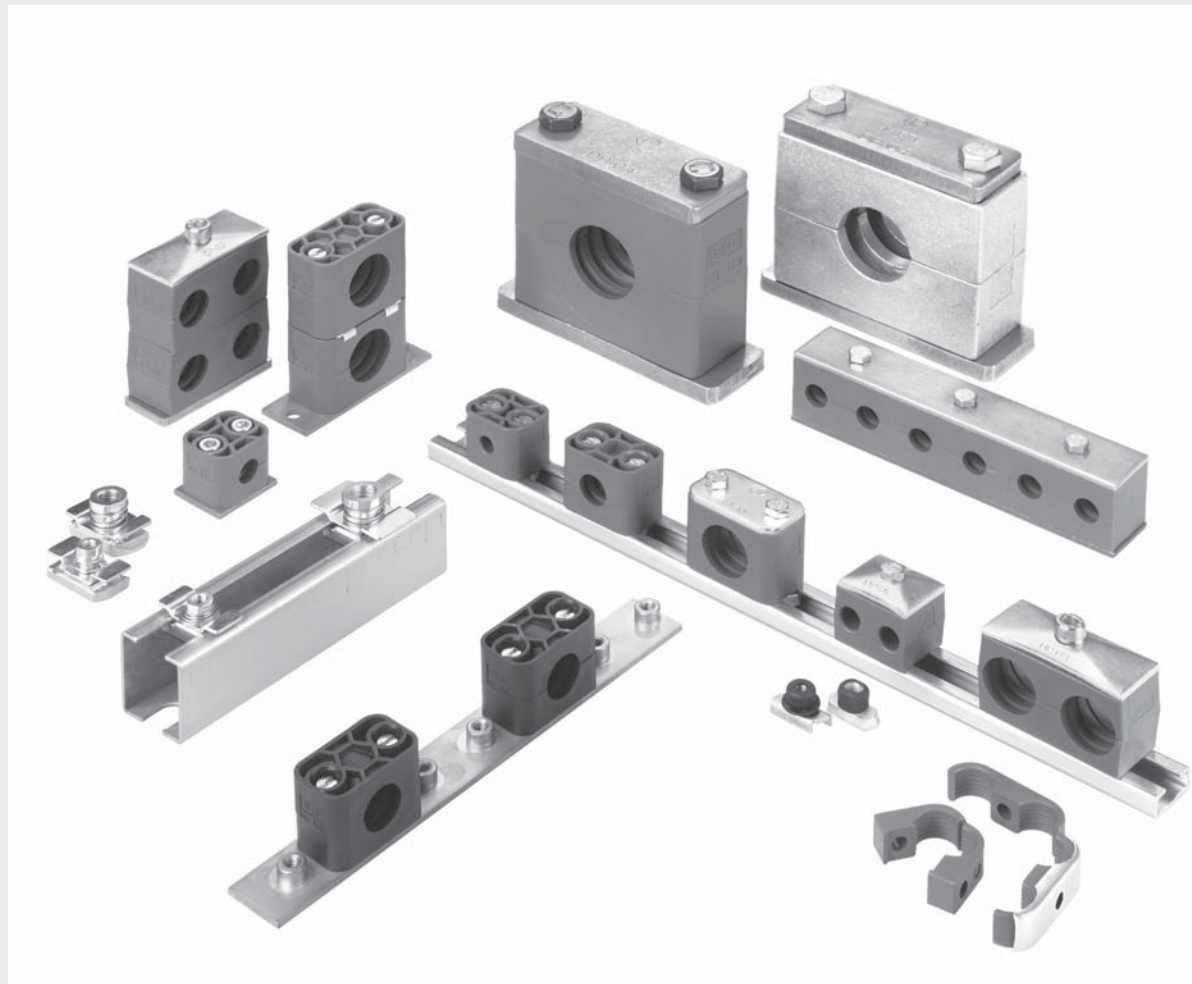



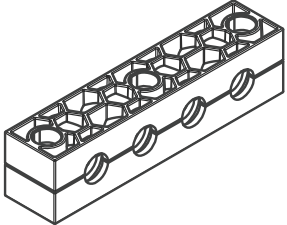
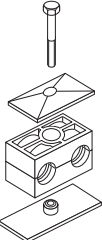
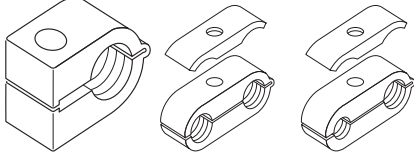
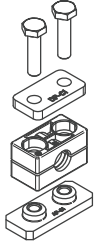
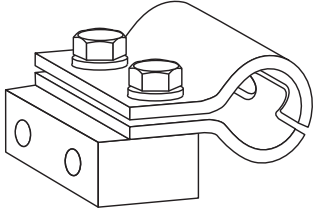
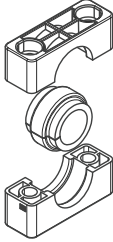
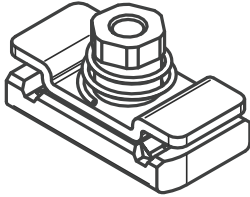


# EO<sup>®</sup> Ermeto Original *Tube clamps*



## Content

Technical data ..... T3  
 Material properties ..... T4  
 Special materials ..... T5  
 Assembly instruction ..... T6

<p>Series A Light series (DIN 3015-1)</p>	 <p>T8-T23</p>	<p>Multiclamps</p>	 <p>T38-T43</p>
<p>Series B Double series (DIN 3015-3)</p>	 <p>T24-T28</p>	<p>Series O</p>	<p>single      double</p>  <p>T44-T45</p>
<p>Series C Heavy series (DIN 3015-2)</p>	 <p>T29-T37</p>	<p>Hydraulic steel clamps</p>	 <p>T46-T47</p>
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## 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 3 1/2"
  - Outer tube diameter for the imperial size series 1/4" 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

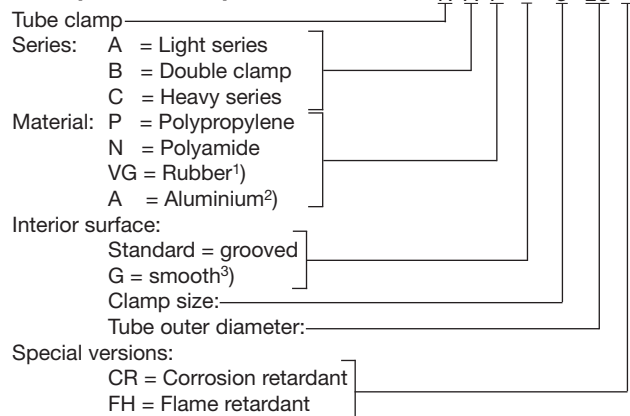
**Resistance to stress:**

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:**


<sup>1)</sup> Rubber only available for series A and B, inside smooth and series C grooved design (G).

<sup>2)</sup> 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.

<sup>3)</sup> 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	
	<b>Bolt</b>	Cr(VI)-free zinc plated		phosphated
<b>Cover plate</b>	Cr(VI)-free zinc plated		phosphated	Cr(VI)-free zinc plated
<b>Welding plate</b>	phosphated		phosphated	
<b>Mounting rail nut</b>	Cr(VI)-free zinc plated		Cr(VI)-free zinc plated	
<b>Mounting rail</b>	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.

## Tube clamps material properties

### DIN 3015

Mechanical properties	Polypropylene (PP)	Polyamide (PA)	Aluminium (Al)	Rubber (TPE)
Density	0.90 g/cm <sup>3</sup>	1.10 g/cm <sup>3</sup>	2.65 g/cm <sup>3</sup>	0.97 g/cm <sup>3</sup>
Impact value at 23 °C	7 kJ/m <sup>2</sup> (ISO 179/1eA)	8 kJ/mm <sup>2</sup> (ISO 179/1eA)	–	–
Impact value at -20 °C	3 kJ/m <sup>2</sup> (ISO 179/1eA)	–	–	–
Modulus of elasticity	1.400 N/mm <sup>2</sup> (ISO 527)	2.000 N/mm <sup>2</sup> (ISO 527)	72.000 N/mm <sup>2</sup>	–
Yield stress. resp. tensile strength (Rm)	28 N/mm <sup>2</sup> (ISO 527)	50 N/mm <sup>2</sup> (ISO 527)	>240 N/mm <sup>2</sup>	5.2 ... 8.8 N/mm <sup>2</sup> (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/m <sup>2</sup>	D <sub>S</sub> max. = 48	D <sub>S</sub> max. = 124	D <sub>S</sub> max. = 79
T12 NF X 70 100-1 & -2: 600°C	CIT <sub>NLP</sub> = 0.15	CIT <sub>NLP</sub> = 0.51	CIT <sub>NLP</sub> = 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

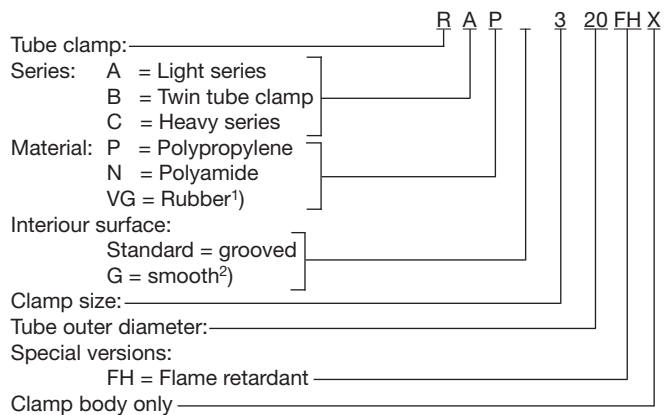
#### Standard compliance:

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 polyimid and solid rubber.

#### Example of description:



### 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.

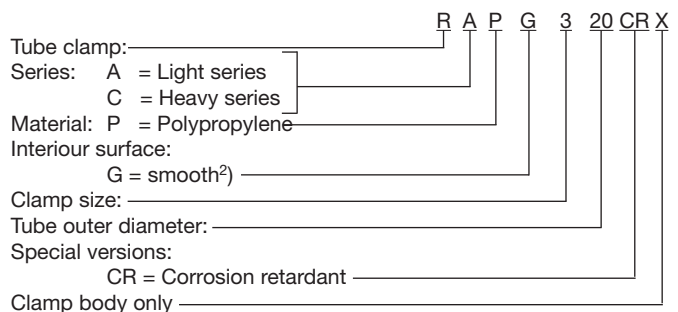
Tube clamps made of PP-CR are available in the A+C series of our approved tube clamp range.

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:



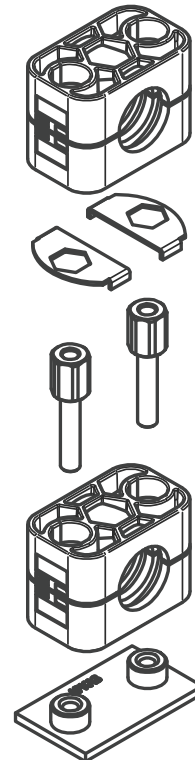
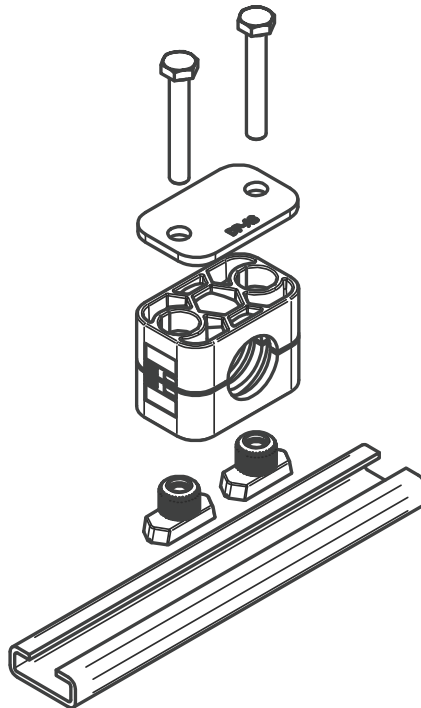
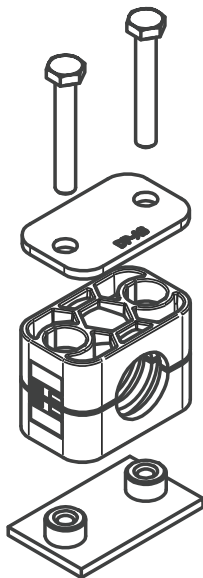
<sup>1)</sup> Rubber for series A and B only with smooth interior surface (G).

<sup>2)</sup> 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.

## 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 half onto welding plate, insert tube, place upper clamp half onto lower half 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 half onto lower half 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 half on welding plate or support rail respectively, insert tube, place upper clamp half on lower half and fasten with fixing screws. The fixing screw juts out from the upper clamp half. The application of a locking plate securely fastens the fixing screw and prevents twisting. Clamp on second clamp half on to the fixing screws etc.

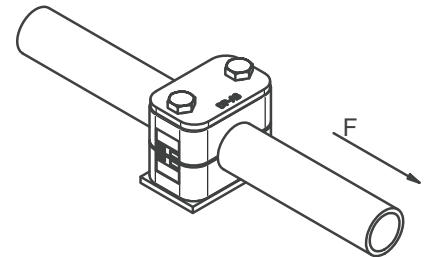
## Tube clamps

### 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 A (Light construction series) – Components

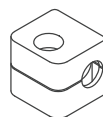
DIN 3015, part 1

Order codes for clamp halves:

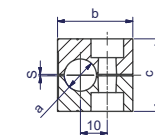
Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

(Please exchange as required standard abbreviation RAP in column for "clamp halves")

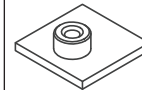
For flame- or corrosion retardant materials, please refer to page T5.



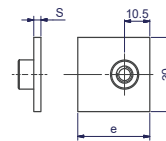
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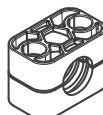
size 0



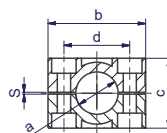
size 0



size 0

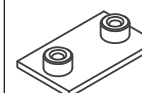


size 1-8

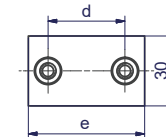


size 1-8

Width: 30 mm



size 1-8



size 1-8

clamp size	Tube O.D. mm a	Tube NB	Tube O.D.	1 part		welding plate, short	
				2 clamp halves	dimensions:	APK A...	dimensions:
				RAP... Order code	b c d s	APK A... Order code	d e s
0	4.0	G 1/8	1/4 5/16 3/8	RAP004X	28 27 - 0.6	APKA0...*	- 30 3
	6.0			RAP006X			
	6.4			RAP006.4X			
	8.0			RAP008X			
	9.5			RAP009.5X			
	10.0			RAP010X			
12.0	RAP012X						
1	4.0	G 1/8	1/4 5/16 3/8	RAP104X	34 27 20 0.6	APKA1...*	20 36 3
	6.0			RAP106X			
	6.4			RAP106.4X			
	8.0			RAP108X			
	9.5			RAP109.5X			
	10.0			RAP110X			
12.0	RAP112X						
2	12.7	G 1/4	1/2	RAP212.7X	42 33 26 0.8	APKA2...*	26 42 3
	13.5			RAP213.5X			
	14.0			RAP214X			
	15.0	G 3/8	5/8	RAP215X			
	16.0			RAP216X			
	17.2			RAP217.2X			
18.0	RAP218X						
3	19.0	G 1/2	3/4 1	RAP319X	49 35 33 1.0	APKA3...*	33 50 3
	20.0			RAP320X			
	21.3			RAP321.3X			
	22.0			RAP322X			
	23.0			RAP323X			
	25.0			RAP325X			
25.4	RAP325.4X						
4	26.9	G 3/4		RAP426.9X	59 42 40 1.2	APKA4...*	40 59 3
	28.0			RAP428X			
	30.0			RAP430X			
5	32.0	G 1	1 1/4	RAP532X	71 58 52 1.2	APKA5...*	52 72 3
	33.7			RAP533.7X			
	35.0			RAP535X			
	38.0	G 1 1/4	1 1/2	RAP538X			
	40.0			RAP540X			
	42.0			RAP542X			

Continuation see next page ...



## Tube clamps series A (Light construction series) – Components (Continued)

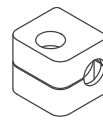
DIN 3015, part 1

Order codes for clamp halves:

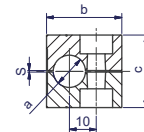
Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

(Please exchange as required standard abbreviation RAP in column for "clamp halves")

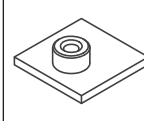
For flame- or corrosion retardant materials, please refer to page T5.



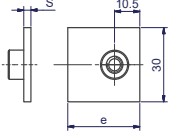
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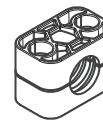
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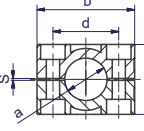
size 0



size 0

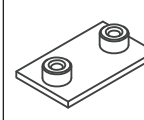


size 1-8

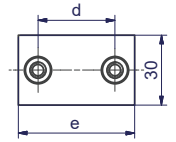


size 1-8

Width: 30 mm



size 1-8



size 1-8

clamp size	Tube O.D. mm a	Tube NB	Tube O.D.	1 part 2 clamp halves		welding plate, short			
				<b>RAP...</b> Order code	dimensions: b c d s	<b>APK A...</b> Order code	dimensions: d e s		
6	44.5	G 1 1/2	1 3/4	<b>RAP644.5X</b> <b>RAP645X</b> <b>RAP648X</b> <b>RAP650X</b> <b>RAP650.8X</b> <b>RAP652X</b> <b>RAP654X</b> <b>RAP655X</b> <b>RAP657X</b>	86 66 66 1.2	<b>APKA6...*</b>	66	88	3
	45.0		2						
	48.0		2 1/4						
	50.0								
	50.8								
	52.0								
	54.0								
55.0									
57.0									
7	57.2	G 2	2 1/4	<b>RAP757.2X</b> <b>RAP760.3X</b> <b>RAP763.5X</b> <b>RAP770X</b> <b>RAP773X</b> <b>RAP776.1X</b>	121 93.6 94 1.6	<b>APKA7...*</b>	94	122	5
	60.3		2 1/2						
	63.5		2 3/4						
	70.0								
	73.0								
	76.1		G 2 1/2						
8	88.9	G 3	4	<b>RAP888.9X</b> <b>RAP8101.8X</b>	147 117.6 120 1.6	<b>APKA8...*</b>	120	148	5
	101.8	G 3 1/2							

<sup>1)</sup> When assembling solid rubber clamps, covering plates, hexagon screws and locking washers must be used.

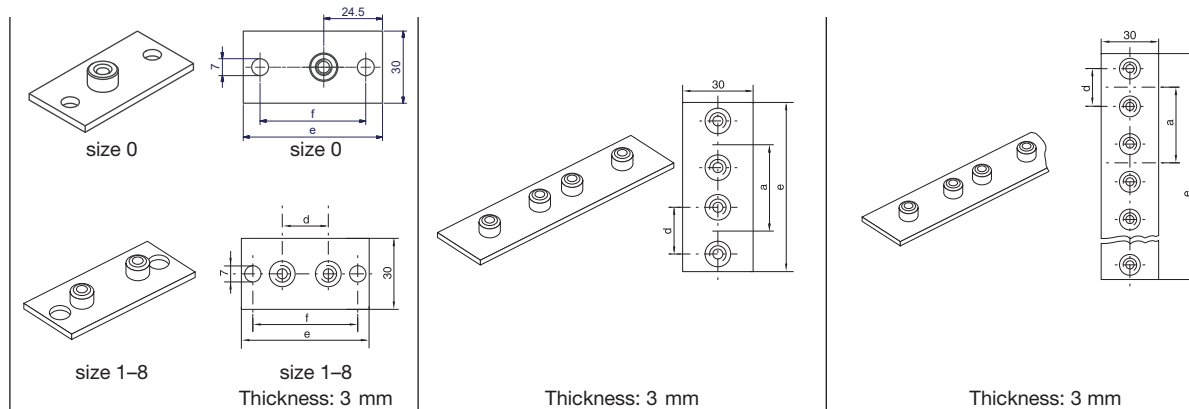
<sup>2)</sup> Aluminium sizes 0-6

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

Order code suffixes		
Surface/material	Suffix	Example
Steel, phosphated	<b>X</b>	APKA0X
Steel, zinc plated, Cr(VI)-free	<b>VZX</b>	APKA0VZX
Stainless Steel 1.4571	<b>4571X</b>	APKA04571X

**Tube clamps series A (Light construction series) – Components**

DIN 3015, part 1



clamp size	weld/screw plate, long			twin welding plate			multiple weld plate					
	APL A... Order code	dimensions:			APD A... Order code	dimensions:			APR A... Order code	dimensions:		
		d	e	f		d	a	e		d	a	e
0	APLA0...*	–	58	44	APDA0...*	–	30	61	APRA0...* (10 clamps)	–	30	298
1	APLA1...*	20	64	50	APDA1...*	20	35	69	APRA1...* (10 clamps)	20	35	349
2	APLA2...*	26	70	56	APDA2...*	26	43	86	APRA2...* (10 clamps)	26	43	427
3	APLA3...*	33	78	64	APDA3...*	33	52	104	APRA3...* (10 clamps)	33	52	516
4	APLA4...*	40	87	73	APDA4...*	40	60	117	APRA4...* (5 clamps)	40	60	297
5	APLA5...*	52	100	86	APDA5...*	52	75	145	APRA5...* (5 clamps)	52	75	370
6	APLA6...*	66	116	100	APDA6...*	66	90	176	APRA6...* (5 clamps)	66	90	446
7	APLA7...*	94	150	136								
8	APLA8...*	120	178	162								

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

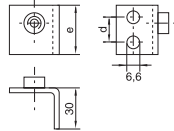
Order code suffixes		
Surface/material	Suffix	Example
Steel, phosphated	<b>X</b>	APLA0X
Steel, zinc plated, Cr(VI)-free	<b>VZX</b>	APLA0VZX
Stainless Steel 1.4571	<b>4571X</b>	APLA04571X

## Tube clamps series A (Light construction series) – Components

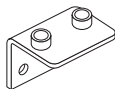
DIN 3015, part 1



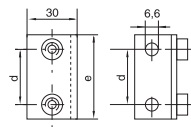
size 0



size 0

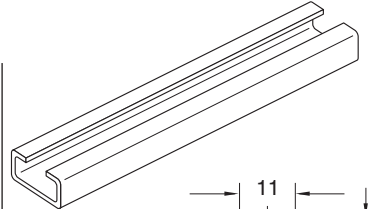


size 1-6

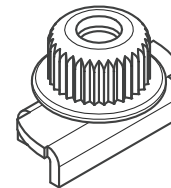
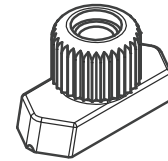
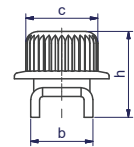
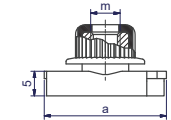
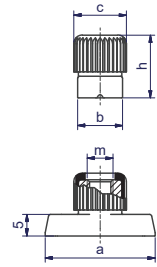


size 1-6

Thickness: 3 mm



1 or 2 mtr


 With loss protection  
(See page T54).


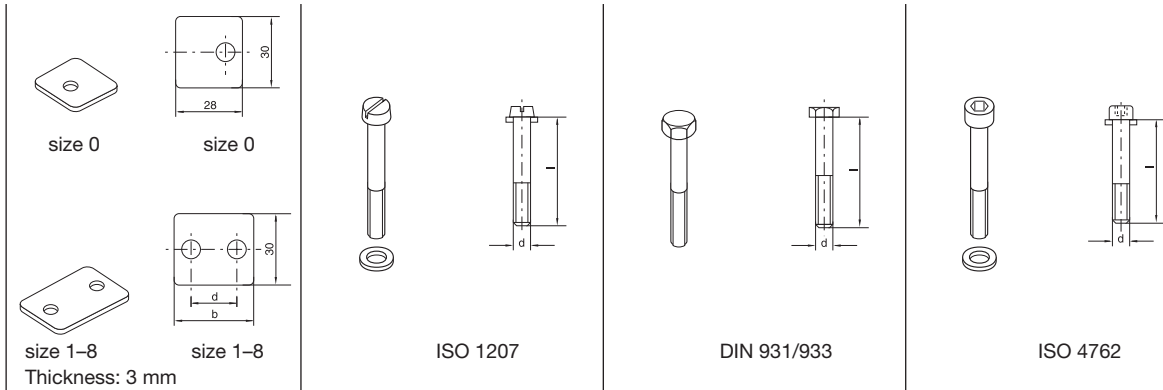
clamp size	weld plate, angled		mounting rail		rail nut	
	APWA A... Order code	dimensions: d e	TS...A/B Order code	dimensions: h	TM...A/B1 Order code	dimensions: a b c m h
0	APWA0X APWA04571X	14 30	TS11A/B1...* TS11A/B2...* TS14A/B1...* TS14A/B2...* TS30A/B1...* TS30A/B2...*	TS11: 11 TS14: 14 TS30: 30	TMA/TMB1VERZX TMA/TMB1/4571X	25.410.4 12 M6 14.5
1	APWA1X APWA14571X	20 36				
2	APWA2X APWA24571X	26 42				
3	APWA3X APWA34571X	33 50			TMA/TMB1WLPVZX TMA/TMB1WLP71X	24.910.5 12 M6 14.5
4	APWA4X APWA44571X	40 59				
5	APWA5X APWA54571X	52 72				
6	APWA6X APWA64571X	66 88				

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

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

## Tube clamps series A (Light construction series) – Components

DIN 3015, part 1



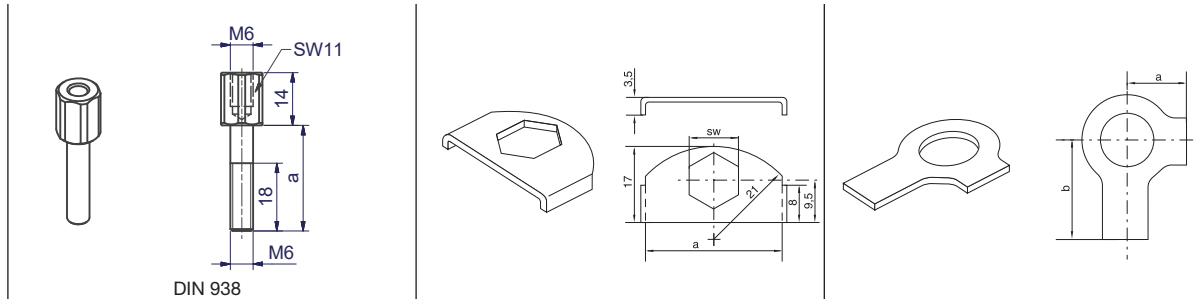
clamp size	cover plate		slot head		hexagon head		socket head	
	DP A... Order code	dimensions: b d	SL A... Order code	dimensions: d x L	SSL A... Order code	dimensions: d x L	IS A... Order code	dimensions: d x L
0	DPA0...*	- -	SLA0...*	M 06x20	SSLA0...*	M 06x30	ISA0...*	M 06x20
1	DPA1...*	34 20	SLA0...*	M 06x20	SSLA0...*	M 06x30	ISA0...*	M 06x20
2	DPA2...*	40 26	SLA2...*	M 06x25	SSLA2/SSB1...*	M 06x35	ISA2...*	M 06x25
3	DPA3...*	48 33	SLA3...*	M 06x30	SSLA3...*	M 06x40	ISA3...*	M 06x30
4	DPA4...*	57 40	SLA4...*	M 06x35	SSLA4...*	M 06x45	ISA4...*	M 06x35
5	DPA5...*	70 52	SLA5...*	M 06x50	SSLA5...*	M 06x60	ISA5...*	M 06x50
6	DPA6...*	86 66	SLA6...*	M 06x60	SSLA6...*	M 06x70	ISA6...*	M 06x60
7	DPA7...*	120 94	SLA7...*	M 06x90	SSLA7...*	M 06x100	ISA7...*	M 06x90
8	DPA8...*	146 120	SLA8...*	M 06x110	SSLA8...*	M 06x125	ISA8...*	M 06x110

\*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	DPA0X
Stainless Steel 1.4571	4571X	DPA04571X

## Tube clamps series A (Light construction series) – Components

DIN 3015, part 1



clamp size	stacking <sup>1)</sup>		locking plate <sup>1)</sup>		locking washer <sup>2)</sup>	
	AS A... Order code	dimensions: a	SB A Order code	dimensions: a SW	US A Order code	dimensions: a b
0	ASA0...* (ASB1...*)	20	SBA...*	30 11	USA/USB1X <sup>3)</sup>	9 18
1	ASA0...* (ASB1...*)	20				
2	ASA2...*	25				
3	ASA3...*	28				
4	ASA4...*	34				
5	ASA5...*	50				
6	ASA6...*	60				
7	ASA7...*	85				
8	ASA8...*	110				

<sup>1)</sup> The use of stacking bolts necessitates the use of locking plates in the construction assembly.

<sup>2)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>3)</sup> 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	DPA0X
Stainless Steel 1.4571	4571X	DPA04571X

## Tube clamps series A (Light construction series) – Complete range

### Order codes for clamp halves:

Material	Interior surface	Order code
Polypropylene	grooved	RAP
	smooth	RAPG
Polyamide	grooved	RAN
	smooth	RANG
Rubber	smooth	RAVG <sup>1)</sup>
Aluminium	grooved	RAA <sup>2)</sup>

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

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

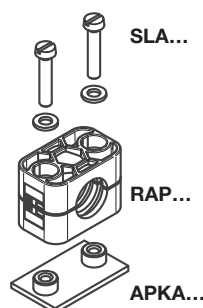
The steel parts of kits 1, 2 and 3 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

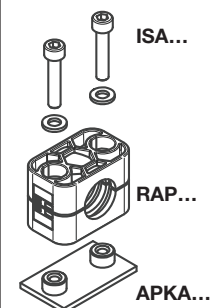
Welding plate = phosphated

Other compositions available on request.

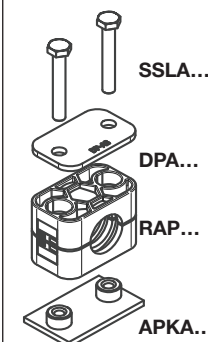
2 clamp halves, weld plate **short**, slot head bolts and bushes



2 clamp halves, weld plate **short**, socket head bolts and bushes



2 clamp halves, weld plate **short**, cover plate hex. head bolts



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
0 <sup>3)</sup>	4.0	G 1/8	1/4	RAP1-004	RAP2-004	RAP3-004
	6.0			RAP1-006	RAP2-006	RAP3-006
	6.4			RAP1-006.4	RAP2-006.4	RAP3-006.4
	8.0			RAP1-008	RAP2-008	RAP3-008
	9.5			RAP1-009.5	RAP2-009.5	RAP3-009.5
	10.0			RAP1-010	RAP2-010	RAP3-010
1	12.0	G 1/8	3/8	RAP1-012	RAP2-012	RAP3-012
	4.0			RAP1-104	RAP2-104	RAP3-104
	6.0			RAP1-106	RAP2-106	RAP3-106
	6.4			RAP1-106.4	RAP2-106.4	RAP3-106.4
	8.0			RAP1-108	RAP2-108	RAP3-108
	9.5			RAP1-109.5	RAP2-109.5	RAP3-109.5
2	10.0	G 3/8	5/8	RAP1-110	RAP2-110	RAP3-110
	12.0			RAP1-112	RAP2-112	RAP3-112
	12.7			RAP1-212.7	RAP2-212.7	RAP3-212.7
	13.5			RAP1-213.5	RAP2-213.5	RAP3-213.5
	14.0			RAP1-214	RAP2-214	RAP3-214
	15.0			RAP1-215	RAP2-215	RAP3-215
3	16.0	G 1/2	1	RAP1-216	RAP2-216	RAP3-216
	17.2			RAP1-217.2	RAP2-217.2	RAP3-217.2
	18.0			RAP1-218	RAP2-218	RAP3-218
	19.0			RAP1-319	RAP2-319	RAP3-319
	20.0			RAP1-320	RAP2-320	RAP3-320
	21.3			RAP1-321.3	RAP2-321.3	RAP3-321.3
4	22.0	G 3/4		RAP1-322	RAP2-322	RAP3-322
	23.0			RAP1-323	RAP2-323	RAP3-323
	25.0			RAP1-325	RAP2-325	RAP3-325
	25.4			RAP1-325.4	RAP2-325.4	RAP3-325.4
	26.9			RAP1-426.9	RAP2-426.9	RAP3-426.9
	28.0			RAP1-428	RAP2-428	RAP3-428
5	30.0	G 1	1 1/4	RAP1-430	RAP2-430	RAP3-430
	32.0			RAP1-532	RAP2-532	RAP3-532
	33.7			RAP1-533.7	RAP2-533.7	RAP3-533.7
	35.0			RAP1-535	RAP2-535	RAP3-535
	38.0			RAP1-538	RAP2-538	RAP3-538
	40.0			RAP1-540	RAP2-540	RAP3-540
6	42.0	G 1 1/4	2	RAP1-542	RAP2-542	RAP3-542
	44.5			RAP1-644.5	RAP2-644.5	RAP3-644.5
	45.0			RAP1-645	RAP2-645	RAP3-645
	48.0			RAP1-648	RAP2-648	RAP3-648
	50.0			RAP1-650	RAP2-650	RAP3-650
	50.8			RAP1-650.8	RAP2-650.8	RAP3-650.8
	52.0	G 1 1/2		RAP1-652	RAP2-652	RAP3-652
	54.0			RAP1-654	RAP2-654	RAP3-654
	55.0			RAP1-655	RAP2-655	RAP3-655
	57.0			RAP1-657	RAP2-657	RAP3-657

Continuation see next page ...

## Tube clamps series A (Light construction series) – Complete range

**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

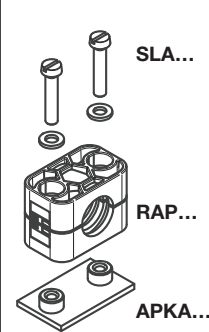
The steel parts of kits 1, 2 and 3 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

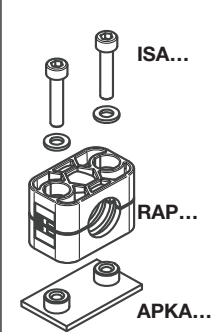
Welding plate = phosphated

Other compositions available on request.

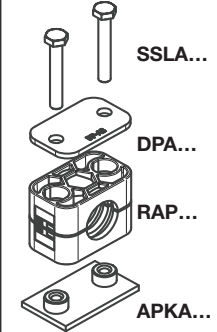
2 clamp halves, weld plate **short**, slot head bolts and bushes



2 clamp halves, weld plate **short**, socket head bolts and bushes



2 clamp halves, weld plate **short**, cover plate hex. head bolts



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
7	57.2	G 2	2 1/4	<b>RAP1-757.2</b>	<b>RAP2-757.2</b>	<b>RAP3-757.2</b>
	60.3		2 1/2	<b>RAP1-760.3</b>	<b>RAP2-760.3</b>	<b>RAP3-760.3</b>
	63.5		2 3/4	<b>RAP1-763.5</b>	<b>RAP2-763.5</b>	<b>RAP3-763.5</b>
	70.0	G 2 1/2	3	<b>RAP1-770</b>	<b>RAP2-770</b>	<b>RAP3-770</b>
	73.0			<b>RAP1-773</b>	<b>RAP2-773</b>	<b>RAP3-773</b>
	76.1			<b>RAP1-776.1</b>	<b>RAP2-776.1</b>	<b>RAP3-776.1</b>
8	88.9	G 3	4	<b>RAP1-888.9</b>	<b>RAP2-888.9</b>	<b>RAP3-888.9</b>
	101.8			<b>RAP1-8101.8</b>	<b>RAP2-8101.8</b>	<b>RAP3-8101.8</b>

**Delivery in unassembled individual components.**

<sup>1)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>2)</sup> Aluminium size 0-6.

<sup>3)</sup> Contrary to the illustration size 0 clamps are secured by only one screw.

## Tube clamps series A (Light construction series) – Complete range

### Order codes for clamp halves:

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

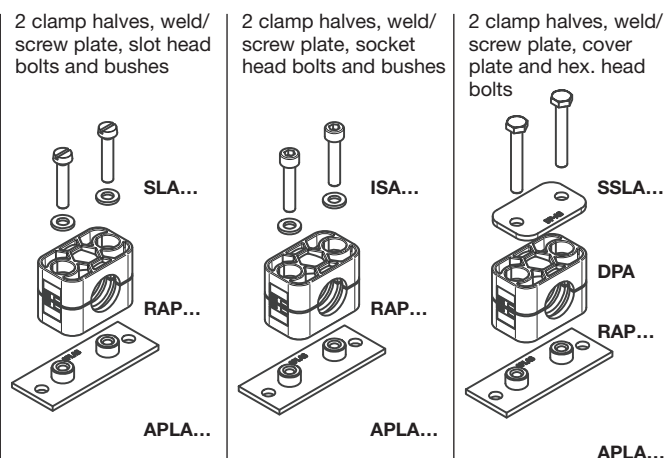
For flame- or corrosion retardant materials, please refer to page T5.

The steel parts of kits 4, 5 and 6 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

Welding plate = phosphated

Other compositions available on request.



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code		
0 <sup>3)</sup>	4.0	G 1/8	1/4	<b>RAP4-004</b>	<b>RAP5-004</b>	<b>RAP6-004</b>		
	6.0			<b>RAP4-006</b>	<b>RAP5-006</b>	<b>RAP6-006</b>		
	6.4			<b>RAP4-006.4</b>	<b>RAP5-006.4</b>	<b>RAP6-006.4</b>		
	8.0			<b>RAP4-008</b>	<b>RAP5-008</b>	<b>RAP6-008</b>		
	9.5			<b>RAP4-009.5</b>	<b>RAP5-009.5</b>	<b>RAP6-009.5</b>		
	10.0			<b>RAP4-010</b>	<b>RAP5-010</b>	<b>RAP6-010</b>		
1	12.0	G 1/8	3/8	<b>RAP4-012</b>	<b>RAP5-012</b>	<b>RAP6-012</b>		
	4.0			<b>RAP4-104</b>	<b>RAP5-104</b>	<b>RAP6-104</b>		
	6.0			<b>RAP4-106</b>	<b>RAP5-106</b>	<b>RAP6-106</b>		
	6.4			<b>RAP4-106.4</b>	<b>RAP5-106.4</b>	<b>RAP6-106.4</b>		
	8.0			<b>RAP4-108</b>	<b>RAP5-108</b>	<b>RAP6-108</b>		
	9.5			<b>RAP4-109.5</b>	<b>RAP5-109.5</b>	<b>RAP6-109.5</b>		
2	10.0	G 3/8	5/8	<b>RAP4-110</b>	<b>RAP5-110</b>	<b>RAP6-110</b>		
	12.0			<b>RAP4-112</b>	<b>RAP5-112</b>	<b>RAP6-112</b>		
	12.7			G 1/4	1/2	<b>RAP4-212.7</b>	<b>RAP5-212.7</b>	<b>RAP6-212.7</b>
	13.5					<b>RAP4-213.5</b>	<b>RAP5-213.5</b>	<b>RAP6-213.5</b>
	14.0					<b>RAP4-214</b>	<b>RAP5-214</b>	<b>RAP6-214</b>
	15.0					<b>RAP4-215</b>	<b>RAP5-215</b>	<b>RAP6-215</b>
16.0	<b>RAP4-216</b>	<b>RAP5-216</b>	<b>RAP6-216</b>					
17.2	<b>RAP4-217.2</b>	<b>RAP5-217.2</b>	<b>RAP6-217.2</b>					
3	18.0	G 1/2	1	<b>RAP4-218</b>	<b>RAP5-218</b>	<b>RAP6-218</b>		
	19.0			<b>RAP4-319</b>	<b>RAP5-319</b>	<b>RAP6-319</b>		
	20.0			<b>RAP4-320</b>	<b>RAP5-320</b>	<b>RAP6-320</b>		
	21.3			<b>RAP4-321.3</b>	<b>RAP5-321.3</b>	<b>RAP6-321.3</b>		
	22.0			<b>RAP4-322</b>	<b>RAP5-322</b>	<b>RAP6-322</b>		
	23.0			<b>RAP4-323</b>	<b>RAP5-323</b>	<b>RAP6-323</b>		
4	25.0	G 3/4	3/4	<b>RAP4-325</b>	<b>RAP5-325</b>	<b>RAP6-325</b>		
	25.4			<b>RAP4-325.4</b>	<b>RAP5-325.4</b>	<b>RAP6-325.4</b>		
	26.9			<b>RAP4-426.9</b>	<b>RAP5-426.9</b>	<b>RAP6-426.9</b>		
5	28.0	G 1	1 1/4	<b>RAP4-428</b>	<b>RAP5-428</b>	<b>RAP6-428</b>		
	30.0			<b>RAP4-430</b>	<b>RAP5-430</b>	<b>RAP6-430</b>		
	32.0			G 1 1/4	1 1/2	<b>RAP4-532</b>	<b>RAP5-532</b>	<b>RAP6-532</b>
	33.7					<b>RAP4-533.7</b>	<b>RAP5-533.7</b>	<b>RAP6-533.7</b>
	35.0					<b>RAP4-535</b>	<b>RAP5-535</b>	<b>RAP6-535</b>
38.0	<b>RAP4-538</b>	<b>RAP5-538</b>	<b>RAP6-538</b>					
40.0	<b>RAP4-540</b>	<b>RAP5-540</b>	<b>RAP6-540</b>					
6	42.0	G 1 1/2	2	<b>RAP4-542</b>	<b>RAP5-542</b>	<b>RAP6-542</b>		
	44.5			<b>RAP4-644.5</b>	<b>RAP5-644.5</b>	<b>RAP6-644.5</b>		
	45.0			<b>RAP4-645</b>	<b>RAP5-645</b>	<b>RAP6-645</b>		
	48.0			<b>RAP4-648</b>	<b>RAP5-648</b>	<b>RAP6-648</b>		
	50.0			<b>RAP4-650</b>	<b>RAP5-650</b>	<b>RAP6-650</b>		
	50.8			<b>RAP4-650.8</b>	<b>RAP5-650.8</b>	<b>RAP6-650.8</b>		
	52.0			<b>RAP4-652</b>	<b>RAP5-652</b>	<b>RAP6-652</b>		
	54.0			<b>RAP4-654</b>	<b>RAP5-654</b>	<b>RAP6-654</b>		
55.0	<b>RAP4-655</b>	<b>RAP5-655</b>	<b>RAP6-655</b>					
57.0	<b>RAP4-657</b>	<b>RAP5-657</b>	<b>RAP6-657</b>					

Continuation see next page ...



## Tube clamps series A (Light construction series) – Complete range

**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

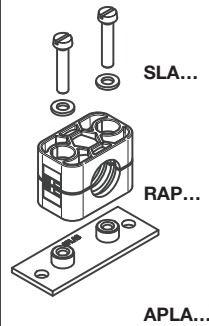
The steel parts of kits 4, 5 and 6 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

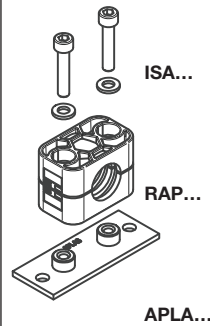
Welding plate = phosphated

Other compositions available on request.

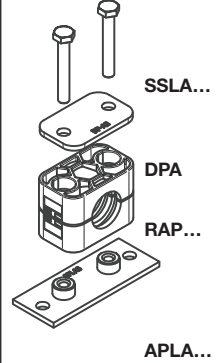
2 clamp halves, weld/  
screw plate, slot head  
bolts and bushes



2 clamp halves, weld/  
screw plate, socket  
head bolts and bushes



2 clamp halves, weld/  
screw plate, cover  
plate and hex. head  
bolts



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
7	57.2	G 2	2 1/4	<b>RAP4-757.2</b>	<b>RAP5-757.2</b>	<b>RAP6-757.2</b>
	60.3		2 1/2	<b>RAP4-760.3</b>	<b>RAP5-760.3</b>	<b>RAP6-760.3</b>
	63.5		2 3/4	<b>RAP4-763.5</b>	<b>RAP5-763.5</b>	<b>RAP6-763.5</b>
	70.0	G 2 1/2	3	<b>RAP4-770</b>	<b>RAP5-770</b>	<b>RAP6-770</b>
	73.0			<b>RAP4-773</b>	<b>RAP5-773</b>	<b>RAP6-773</b>
	76.1			<b>RAP4-776.1</b>	<b>RAP5-776.1</b>	<b>RAP6-776.1</b>
8	88.9	G 3	3 1/2	<b>RAP4-888.9</b>	<b>RAP5-888.9</b>	<b>RAP6-888.9</b>
	101.8		4	<b>RAP4-8101.8</b>	<b>RAP5-8101.8</b>	<b>RAP6-8101.8</b>

**Delivery in unassembled individual components.**

<sup>1)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>2)</sup> Aluminium size 0-6.

<sup>3)</sup> Contrary to the illustration size 0 clamps are secured by only one screw.

## Tube clamps

**Tube clamps series A (Light construction series) – Complete range**
**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

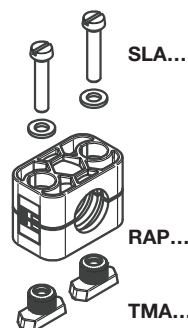
The steel parts of kits 9, 10 and 12 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

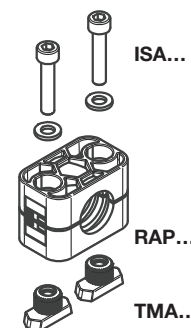
Welding plate = phosphated

Other compositions available on request.

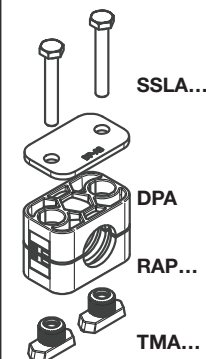
2 clamp halves, rail nuts, slot head bolts and bushes



2 clamp halves, rail nuts, socket head bolts and bushes



2 clamp halves, rail nuts, cover plate and hex. head bolts



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
0 <sup>3)</sup>	4.0	G 1/8	1/4	RAP9-004	RAP10-004	RAP12-004
	6.0			RAP9-006	RAP10-006	RAP12-006
	6.4			RAP9-006.4	RAP10-006.4	RAP12-006.4
	8.0			RAP9-008	RAP10-008	RAP12-008
	9.5			RAP9-009.5	RAP10-009.5	RAP12-009.5
	10.0			RAP9-010	RAP10-010	RAP12-010
	12.0			RAP9-012	RAP10-012	RAP12-012
1	4.0	G 1/8	1/4	RAP9-104	RAP10-104	RAP12-104
	6.0			RAP9-106	RAP10-106	RAP12-106
	6.4			RAP9-106.4	RAP10-106.4	RAP12-106.4
	8.0			RAP9-108	RAP10-108	RAP12-108
	9.5			RAP9-109.5	RAP10-109.5	RAP12-109.5
	10.0			RAP9-110	RAP10-110	RAP12-110
	12.0			RAP9-112	RAP10-112	RAP12-112
2	12.7	G 1/4	1/2	RAP9-212.7	RAP10-212.7	RAP12-212.7
	13.5			RAP9-213.5	RAP10-213.5	RAP12-213.5
	14.0			RAP9-214	RAP10-214	RAP12-214
	15.0	G 3/8	5/8	RAP9-215	RAP10-215	RAP12-215
	16.0			RAP9-216	RAP10-216	RAP12-216
	17.2			RAP9-217.2	RAP10-217.2	RAP12-217.2
	18.0			RAP9-218	RAP10-218	RAP12-218
3	19.0	G 1/2	3/4	RAP9-319	RAP10-319	RAP12-319
	20.0			RAP9-320	RAP10-320	RAP12-320
	21.3			RAP9-321.3	RAP10-321.3	RAP12-321.3
	22.0			RAP9-322	RAP10-322	RAP12-322
	23.0			RAP9-323	RAP10-323	RAP12-323
	25.0			RAP9-325	RAP10-325	RAP12-325
	25.4			RAP9-325.4	RAP10-325.4	RAP12-325.4
4	26.9	G 3/4	1	RAP9-426.9	RAP10-426.9	RAP12-426.9
	28.0			RAP9-428	RAP10-428	RAP12-428
	30.0			RAP9-430	RAP10-430	RAP12-430
5	32.0	G 1	1 1/4	RAP9-532	RAP10-532	RAP12-532
	33.7			RAP9-533.7	RAP10-533.7	RAP12-533.7
	35.0			RAP9-535	RAP10-535	RAP12-535
	38.0	G 1 1/4	1 1/2	RAP9-538	RAP10-538	RAP12-538
	40.0			RAP9-540	RAP10-540	RAP12-540
	42.0			RAP9-542	RAP10-542	RAP12-542
6	44.5	G 1 1/2	2	RAP9-644.5	RAP10-644.5	RAP12-644.5
	45.0			RAP9-645	RAP10-645	RAP12-645
	48.0			RAP9-648	RAP10-648	RAP12-648
	50.0			RAP9-650	RAP10-650	RAP12-650
	50.8			RAP9-650.8	RAP10-650.8	RAP12-650.8
	52.0			RAP9-652	RAP10-652	RAP12-652
	54.0			RAP9-654	RAP10-654	RAP12-654
	55.0			RAP9-655	RAP10-655	RAP12-655
	57.0			RAP9-657	RAP10-657	RAP12-657

Continuation see next page ...

## Tube clamps series A (Light construction series) – Complete range

**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

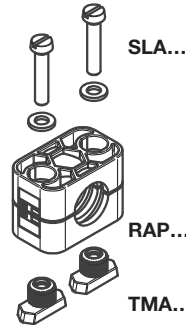
The steel parts of kits 9, 10 and 12 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

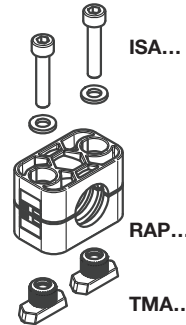
Welding plate = phosphated

Other compositions available on request.

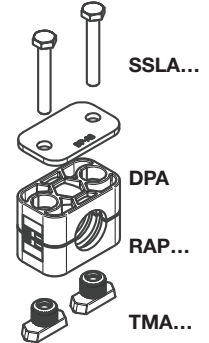
2 clamp halves, rail nuts, slot head bolts and bushes



2 clamp halves, rail nuts, socket head bolts and bushes



2 clamp halves, rail nuts, cover plate and hex. head bolts



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code	Order code
7	57.2	G 2	2 1/4	<b>RAP9-757.2</b>	<b>RAP10-757.2</b>	<b>RAP12-757.2</b>
	60.3		2 1/2	<b>RAP9-760.3</b>	<b>RAP10-760.3</b>	<b>RAP12-760.3</b>
	63.5		2 3/4	<b>RAP9-763.5</b>	<b>RAP10-763.5</b>	<b>RAP12-763.5</b>
	70.0	G 2 1/2	3	<b>RAP9-770</b>	<b>RAP10-770</b>	<b>RAP12-770</b>
	73.0			<b>RAP9-773</b>	<b>RAP10-773</b>	<b>RAP12-773</b>
	76.1			<b>RAP9-776.1</b>	<b>RAP10-776.1</b>	<b>RAP12-776.1</b>
8	88.9	G 3	3 1/2	<b>RAP9-888.9</b>	<b>RAP10-888.9</b>	<b>RAP12-888.9</b>
	101.8		4	<b>RAP9-8101.8</b>	<b>RAP10-8101.8</b>	<b>RAP12-8101.8</b>

**Delivery in unassembled individual components.**

<sup>1)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>2)</sup> Aluminium size 0-6.

<sup>3)</sup> Contrary to the illustration size 0 clamps are secured by only one screw.

## Tube clamps series A – Complete range

### Order codes for clamp halves:

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

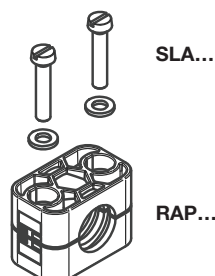
The steel parts of kits 13 and 14 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

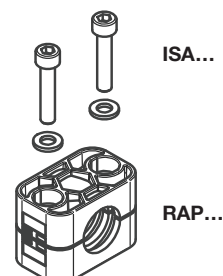
Welding plate = phosphated

Other compositions available on request.

2 clamp halves, slot heads and bushes



2 clamp halves, socket head bolts and bushes



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code
0 <sup>3)</sup>	4.0	G 1/8	1/4	<b>RAP13-004</b>	<b>RAP14-004</b>
	6.0			<b>RAP13-006</b>	<b>RAP14-006</b>
	6.4			<b>RAP13-006.4</b>	<b>RAP14-006.4</b>
	8.0			<b>RAP13-008</b>	<b>RAP14-008</b>
	9.5			<b>RAP13-009.5</b>	<b>RAP14-009.5</b>
	10.0			<b>RAP13-010</b>	<b>RAP14-010</b>
1	12.0	G 1/8	3/8	<b>RAP13-012</b>	<b>RAP14-012</b>
	4.0			<b>RAP13-104</b>	<b>RAP14-104</b>
	6.0			<b>RAP13-106</b>	<b>RAP14-106</b>
	6.4			<b>RAP13-106.4</b>	<b>RAP14-106.4</b>
	8.0			<b>RAP13-108</b>	<b>RAP14-108</b>
	9.5			<b>RAP13-109.5</b>	<b>RAP14-109.5</b>
2	10.0	G 3/8	5/8	<b>RAP13-110</b>	<b>RAP14-110</b>
	12.0			<b>RAP13-112</b>	<b>RAP14-112</b>
	12.7			<b>RAP13-212.7</b>	<b>RAP14-212.7</b>
	13.5			<b>RAP13-213.5</b>	<b>RAP14-213.5</b>
	14.0			<b>RAP13-214</b>	<b>RAP14-214</b>
	15.0			<b>RAP13-215</b>	<b>RAP14-215</b>
3	16.0	G 1/2	3/4	<b>RAP13-216</b>	<b>RAP14-216</b>
	17.2			<b>RAP13-217.2</b>	<b>RAP14-217.2</b>
	18.0			<b>RAP13-218</b>	<b>RAP14-218</b>
	19.0			<b>RAP13-319</b>	<b>RAP14-319</b>
	20.0			<b>RAP13-320</b>	<b>RAP14-320</b>
	21.3			<b>RAP13-321.3</b>	<b>RAP14-321.3</b>
4	22.0	G 3/4	1	<b>RAP13-322</b>	<b>RAP14-322</b>
	23.0			<b>RAP13-323</b>	<b>RAP14-323</b>
	25.0			<b>RAP13-325</b>	<b>RAP14-325</b>
	25.4			<b>RAP13-325.4</b>	<b>RAP14-325.4</b>
	26.9			<b>RAP13-426.9</b>	<b>RAP14-426.9</b>
	28.0			<b>RAP13-428</b>	<b>RAP14-428</b>
5	30.0	G 1 1/4	1 1/4	<b>RAP13-430</b>	<b>RAP14-430</b>
	32.0			<b>RAP13-532</b>	<b>RAP14-532</b>
	33.7			<b>RAP13-533.7</b>	<b>RAP14-533.7</b>
	35.0			<b>RAP13-535</b>	<b>RAP14-535</b>
	38.0			<b>RAP13-538</b>	<b>RAP14-538</b>
	40.0			<b>RAP13-540</b>	<b>RAP14-540</b>
6	42.0	G 1 1/2	2	<b>RAP13-542</b>	<b>RAP14-542</b>
	44.5			<b>RAP13-644.5</b>	<b>RAP14-644.5</b>
	45.0			<b>RAP13-645</b>	<b>RAP14-645</b>
	48.0			<b>RAP13-648</b>	<b>RAP14-648</b>
	50.0			<b>RAP13-650</b>	<b>RAP14-650</b>
	50.8			<b>RAP13-650.8</b>	<b>RAP14-650.8</b>
	52.0			<b>RAP13-652</b>	<b>RAP14-652</b>
	54.0			<b>RAP13-654</b>	<b>RAP14-654</b>
55.0	<b>RAP13-655</b>	<b>RAP14-655</b>			
57.0	<b>RAP13-657</b>	<b>RAP14-657</b>			

Continuation see next page ...

## Tube clamps series A – Complete range

**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

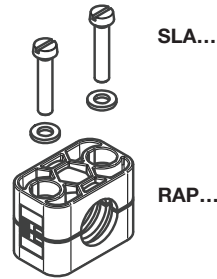
The steel parts of kits 13 and 14 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

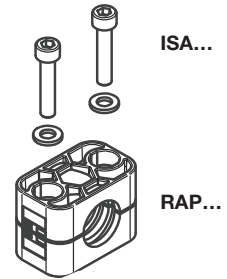
Welding plate = phosphated

Other compositions available on request.

2 clamp halves, slot heads and bushes



2 clamp halves, socket head bolts and bushes



clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code
7	57.2	G 2	2 1/4	<b>RAP13-757.2</b>	<b>RAP14-757.2</b>
	60.3		2 1/2	<b>RAP13-760.3</b>	<b>RAP14-760.3</b>
	63.5		2 3/4	<b>RAP13-763.5</b>	<b>RAP14-763.5</b>
	70.0	G 2 1/2	3	<b>RAP13-770</b>	<b>RAP14-770</b>
	73.0		<b>RAP13-773</b>	<b>RAP14-773</b>	
8	76.1	G3	3 1/2	<b>RAP13-776.1</b>	<b>RAP14-776.1</b>
	88.9		4	<b>RAP13-888.9</b>	<b>RAP14-888.9</b>
	101.8		<b>RAP13-8101.8</b>	<b>RAP14-8101.8</b>	

**Delivery in unassembled individual components.**

<sup>1)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>2)</sup> Aluminium size 0-6.

<sup>3)</sup> Contrary to the illustration size 0 clamps are secured by only one screw.

## Tube clamps series A – Complete range

### Order codes for clamp halves:

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

The steel parts of kits 16 and 18 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

Welding plate = phosphated

Other compositions available on request.

2 clamp halves, cover plate and hex. head bolts

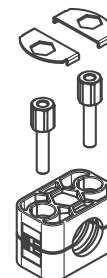


SSLA...

DPA...

RAP...

2 clamp halves, stacking bolts and locking plate



SBA...

ASA...

RAP...

clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code		
0 <sup>3)</sup>	4.0	G 1/8	1/4	<b>RAP16-004</b>	<b>RAP18-004</b>		
	6.0			<b>RAP16-006</b>	<b>RAP18-006</b>		
	6.4			<b>RAP16-006.4</b>	<b>RAP18-006.4</b>		
	8.0			<b>RAP16-008</b>	<b>RAP18-008</b>		
	9.5			<b>RAP16-009.5</b>	<b>RAP18-009.5</b>		
	10.0			<b>RAP16-010</b>	<b>RAP18-010</b>		
1	12.0	G 1/8	3/8	<b>RAP16-012</b>	<b>RAP18-012</b>		
	4.0			<b>RAP16-104</b>	<b>RAP18-104</b>		
	6.0			<b>RAP16-106</b>	<b>RAP18-106</b>		
	6.4			<b>RAP16-106.4</b>	<b>RAP18-106.4</b>		
	8.0			<b>RAP16-108</b>	<b>RAP18-108</b>		
	9.5			<b>RAP16-109.5</b>	<b>RAP18-109.5</b>		
2	10.0	G 3/8	5/8	<b>RAP16-110</b>	<b>RAP18-110</b>		
	12.0			<b>RAP16-112</b>	<b>RAP18-112</b>		
	12.7			G 1/4	1/2	<b>RAP16-212.7</b>	<b>RAP18-212.7</b>
	13.5					<b>RAP16-213.5</b>	<b>RAP18-213.5</b>
	14.0					<b>RAP16-214</b>	<b>RAP18-214</b>
	3			15.0	G 1/2	3/4	<b>RAP16-215</b>
16.0		<b>RAP16-216</b>	<b>RAP18-216</b>				
17.2		G 3/8	5/8	<b>RAP16-217.2</b>			<b>RAP18-217.2</b>
18.0				<b>RAP16-218</b>			<b>RAP18-218</b>
4	19.0	G 3/4	1	<b>RAP16-319</b>	<b>RAP18-319</b>		
	20.0			<b>RAP16-320</b>	<b>RAP18-320</b>		
	21.3			<b>RAP16-321.3</b>	<b>RAP18-321.3</b>		
	22.0			<b>RAP16-322</b>	<b>RAP18-322</b>		
	23.0			<b>RAP16-323</b>	<b>RAP18-323</b>		
	25.0			<b>RAP16-325</b>	<b>RAP18-325</b>		
5	25.4	G 1	1 1/4	<b>RAP16-325.4</b>	<b>RAP18-325.4</b>		
	26.9			<b>RAP16-426.9</b>	<b>RAP18-426.9</b>		
	28.0			<b>RAP16-428</b>	<b>RAP18-428</b>		
	30.0			<b>RAP16-430</b>	<b>RAP18-430</b>		
6	32.0	G 1 1/4	1 1/2	<b>RAP16-532</b>	<b>RAP18-532</b>		
	33.7			<b>RAP16-533.7</b>	<b>RAP18-533.7</b>		
	35.0			<b>RAP16-535</b>	<b>RAP18-535</b>		
	38.0	G 1 1/2	2	<b>RAP16-538</b>	<b>RAP18-538</b>		
	40.0			<b>RAP16-540</b>	<b>RAP18-540</b>		
	42.0			<b>RAP16-542</b>	<b>RAP18-542</b>		
6	44.5	G 1 1/2	2	<b>RAP16-644.5</b>	<b>RAP18-644.5</b>		
	45.0			<b>RAP16-645</b>	<b>RAP18-645</b>		
	48.0			<b>RAP16-648</b>	<b>RAP18-648</b>		
	50.0			<b>RAP16-650</b>	<b>RAP18-650</b>		
	50.8			<b>RAP16-650.8</b>	<b>RAP18-650.8</b>		
	52.0			<b>RAP16-652</b>	<b>RAP18-652</b>		
	54.0			<b>RAP16-654</b>	<b>RAP18-654</b>		
	55.0			<b>RAP16-655</b>	<b>RAP18-655</b>		
57.0	<b>RAP16-657</b>	<b>RAP18-657</b>					

Continuation see next page ...

## Tube clamps series A – Complete range

**Order codes for clamp halves:**

Material	Interior surface	Order code
Polypropylene	grooved	<b>RAP</b>
	smooth	<b>RAPG</b>
Polyamide	grooved	<b>RAN</b>
	smooth	<b>RANG</b>
Rubber	smooth	<b>RAVG<sup>1)</sup></b>
Aluminium	grooved	<b>RAA<sup>2)</sup></b>

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

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

The steel parts of kits 16 and 18 have the following surfaces:

Screws, bushes, cover plates = Cr(VI)-free galvanized

Welding plate = phosphated

Other compositions available on request.

2 clamp halves, cover plate and hex. head bolts



**SSLA**

**DPA...**

**RAP...**

2 clamp halves, stacking bolts and locking plate



**SBA...**

**ASA...**

**RAP...**

clamp size	Tube O.D. mm	Tube NB	Tube O.D.	Order code	Order code
7	57.2	G 2	2 1/4	<b>RAP16-757.2</b>	<b>RAP18-757.2</b>
	60.3		2 1/2	<b>RAP16-760.3</b>	<b>RAP18-760.3</b>
	63.5		2 3/4	<b>RAP16-763.5</b>	<b>RAP18-763.5</b>
	70.0	G 2 1/2	3	<b>RAP16-770</b>	<b>RAP18-770</b>
	73.0		<b>RAP16-773</b>	<b>RAP18-773</b>	
	76.1		<b>RAP16-776.1</b>	<b>RAP18-776.1</b>	
8	88.9	G 3	3 1/2	<b>RAP16-888.9</b>	<b>RAP18-888.9</b>
	101.8		4	<b>RAP16-8101.8</b>	<b>RAP18-8101.8</b>

**Delivery in unassembled individual components.**

<sup>1)</sup> When assembling solid rubber clamps, cover plates, hexagon screws and locking washers must be used.

<sup>2)</sup> Aluminium sizes 0-6.

<sup>3)</sup> Contrary to the illustration size 0 clamps are secured by only one screw.