kale


kale

If we start spinning today, we would get tomorrow's knots. That's how we thought while building Kale.

Our story that began by producing hose clamps for diverse, light and heavy duty manufacturing industries brought us today to the status of a global business associate generating engineering solutions in the field of connection technologies to the automotive industry.

Kale as a family-owned company combines its fast decision-making competence with the innovative solutions developed by its commercial and technical teams for customer loyalty and satisfaction. Under all the long-term relationships we create with our customers lie a sustainable foundation and a significant cost-benefit correlation focusing on conservation of natural resources.

Being a pioneering innovator, the only conservative feature at Kale is the fastidious concern for details.


kalle
kalle

Behind every Kale connector lie the intellectual accumulation for over 27 years, meticulous engineering, technological and economic production systems.

Thus Kale provides its customers;

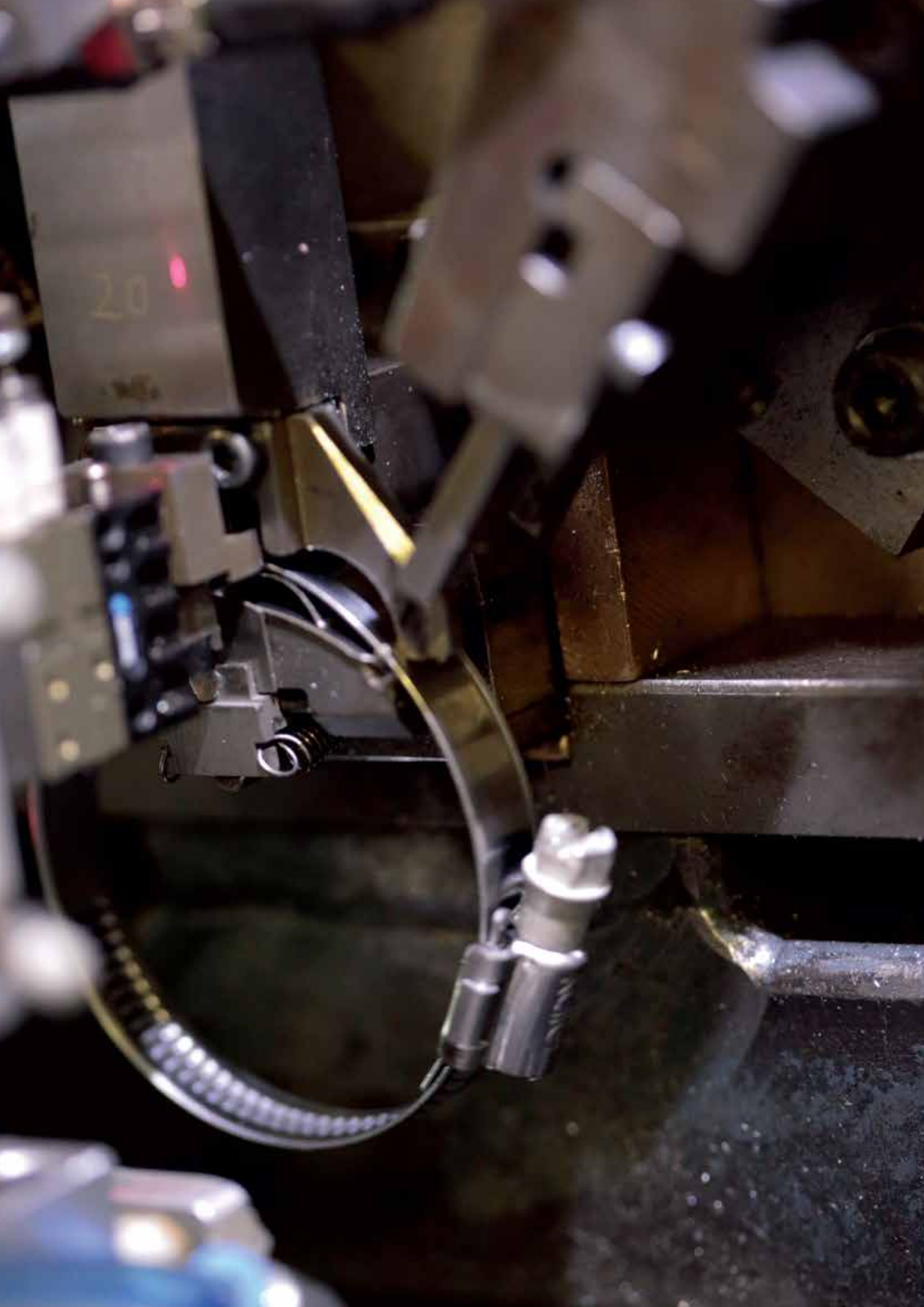
- innovative,
- competitive,
- quality,
- light,
- reliable, and environmental friendly products and values.

For Kale,
the term ***"quality"*** means ***"perfect"*** instead of ***"satisfactory"***. This philosophy covers a broad range including Kale's vendors, raw materials, teams, production technologies, quality system, laboratory, environmental conscience and social responsibility projects.

This philosophy is certified with ISO TS 16949, ISO 9001, ISO 14001 management systems as per the expectations of the global automotive industry.

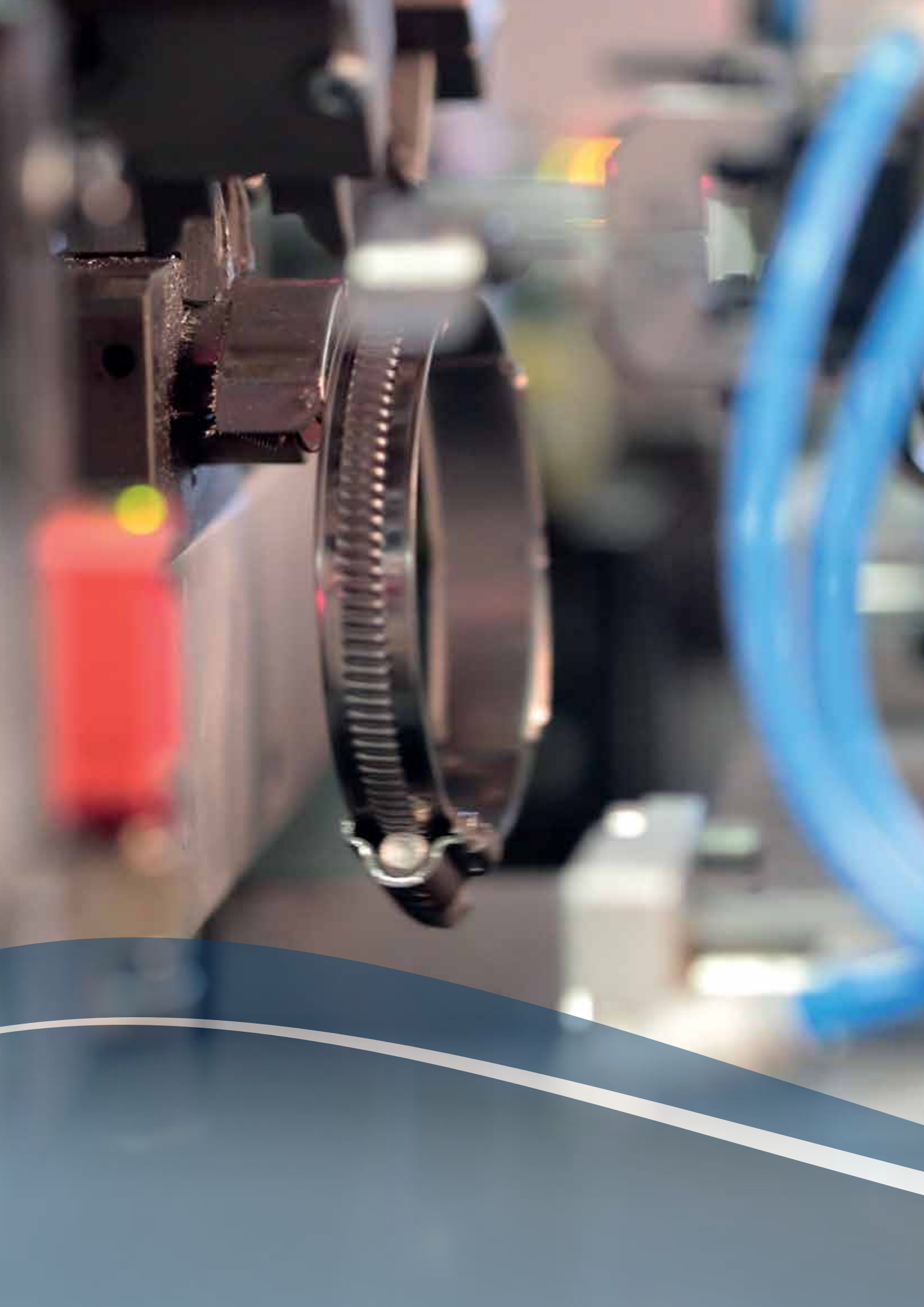
Kale manufactures the majority of its moulds and production lines inhouse.

These facilities are key to Kale's innovativeness and competitiveness.



With over 27 years of Intellectual Engineering Knowhow, Kale produces over 75% of its products with automation.

Most of the automation lines are designed and commissioned by Kale engineers.



The philosophy of Kale for the products produced with automated systems:
"The 1st part shall be identical with the 1000th part".

Kale ensures this with the control systems integrated into the automation lines.

"Top grade raw materials for top grade products"
Kale uses top grade steel to ensure and maintain the stability and reliability of the products.

Moreover, all steels are dimensionally ***"calibrated"*** before they are fed into the production lines.


BT reflex

Kale meets customer orders on-time with its SAP infrastructure and associated Logistics & Warehouse management system.

From its warehouse containing 25.000 seperate items; Kale delivers globally from Mexico to China, shipping to 60 different countries all around the world.


8200

Our Solutions

Cooling Systems

Approximately 33% of the heat generated due to combustion in the motors is balanced with cooling system. A high level of sealing is needed in the cooling systems, for the motor components to function robustly without any deformation.

Kale products provide top grade assurance with their sealing properties, homogenous clamping force and ergonomics.

Air Intake Systems

Kale products ensuring superior sealing and easy assembly with their unique design, allow to avoid leakages which may occur in the engine air intake systems and to maintain a high vehicle performance.

Due to the dynamic nature of the air temperatures of the turbocharge systems in the new generation engine technologies, Kale engineering team developed integrated spring systems that balances the changes in the dynamic loads and and the hose diameters.

Fuel Systems

Kale ensures sealing in fuel systems by means of stable products manufactured with lean production principles.

Cable and Pipe Systems

Fastening of installations that carry harnesses and fluids is vital for the robust performance of the systems and for servicing purposes.

Kale provides different solutions customized to the needs of the users thanks to its broad range of products.

Emission Systems

Kale products enable an eco-friendly drive as they provide high sealing property even at elevated temperatures of the emission systems, preventing harmful gas emissions.

Steering Systems

Fasteners are intensively used in steering systems and any potential fluid leakage jeopardizes safe driving.

Kale provides creative solutions against such issues with its broad product range, enabling safe driving for all drivers.

Our Products

WD9

WD9 IS

WD9 IS PP

WD12

WD12 IS

WD12 IS PP

WD12 C8

WD12 C8 IS

WD12 C8 IS PP

WD12 IS SW

ST

HD

CC

SE

SB

V- BAND

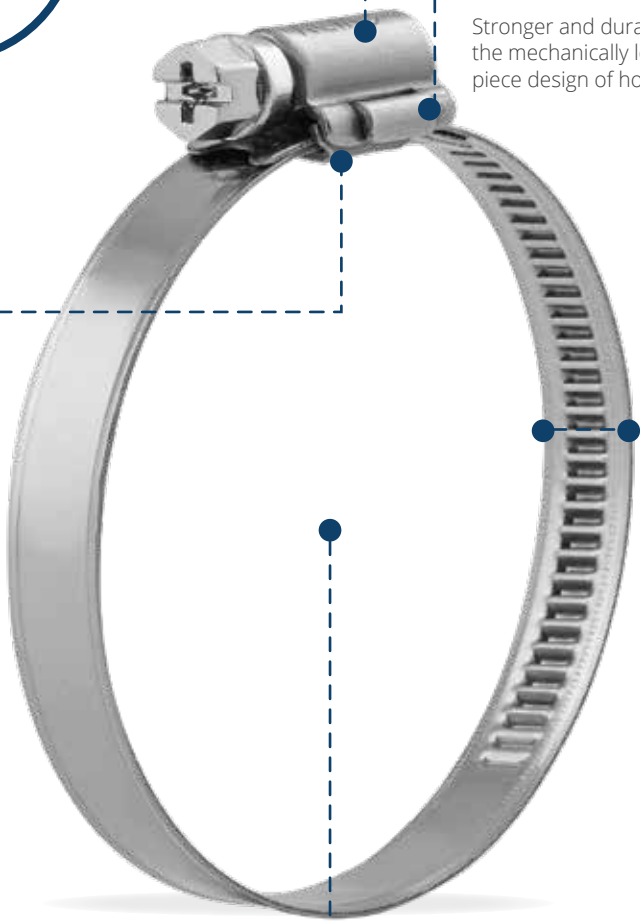
PRESS RING

WD9 - Worm Drive Clamps

Light product, easy assembly and space saving with compact housing and screw design

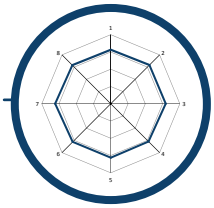
Stronger and durable with the mechanically locked single piece design of housing

100% traceability on the product

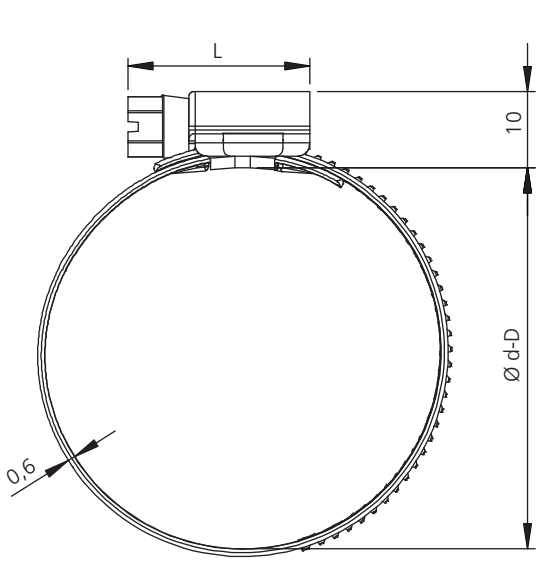


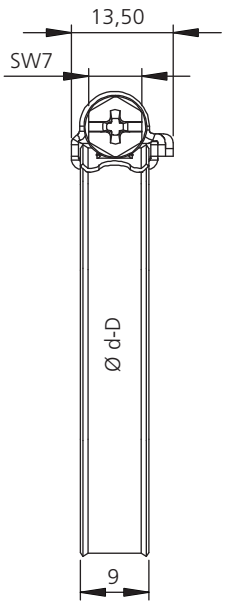
Burr-free and convex band edges

High clamping force with low tightening torque



WD9 - Technical Properties





	W1	W2	W3	W4	W5
Screw	** Mild steel	** Mild steel	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	** Mild steel	1.4016 DIN EN-10088-2 or equivalent	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	*** Mild steel	1.4016 DIN EN-10088-2 or equivalent	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	72	72	200*	240	400
Screw Head					

* : %10 red rust allowed on the total surface of W3 products, after salt spray test.
** : Zinc Plated
*** : Zinc-Aliminium Plated

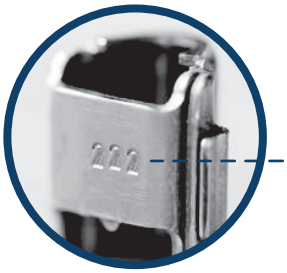
Ø d - D (mm) (min - max)	L (mm)	AD max. (Nm)
8-12	20	2,5
8-16	20	2,5
10-16	20	2,5
12-20	20	2,5
12-22	24	3,0
16-25	24	3,0
16-27	24	3,0
20-32	24	3,0
23-35	24	3,0
25-40	24	3,0
30-45	24	3,0
32-50	24	3,0
40-60	24	3,0
50-70	24	3,0
60-80	24	3,0
70-90	24	3,0
80-100	24	3,0
90-110	24	3,0
100-120	24	3,0
110-130	24	3,0
120-140	24	3,0
130-150	24	3,0
140-160	24	3,0
....	....	....

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

WD9 IS - Worm Drive Clamps with Spring Insert

Light product, easy assembly and space saving with compact housing and screw design

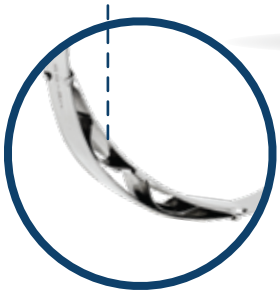
Stronger and durable with the mechanically locked single piece design of housing



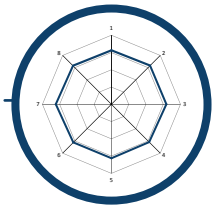
100% traceability on the product

Burr-free and convex band edges

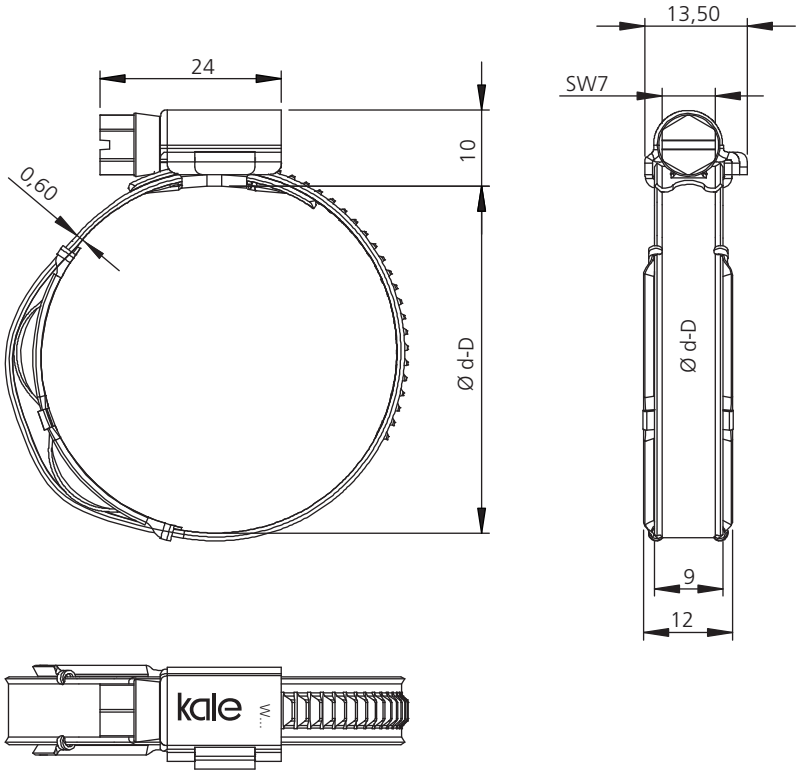
Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes



High clamping force with low tightening torque



WD9 IS - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

***** : %10 red rust allowed on the total surface of W3 products, after salt spray test

Ø d - D (mm) (min - max)	AD max. (Nm)
35-55	3,0
40-60	3,0
45-65	3,0
50-70	3,0
55-75	3,0
60-80	3,0
65-85	3,0
70-90	3,0
75-95	3,0
80-100	3,0
90-110	3,0
100-120	3,0
110-130	3,0
120-140	3,0
130-150	3,0
140-160	3,0

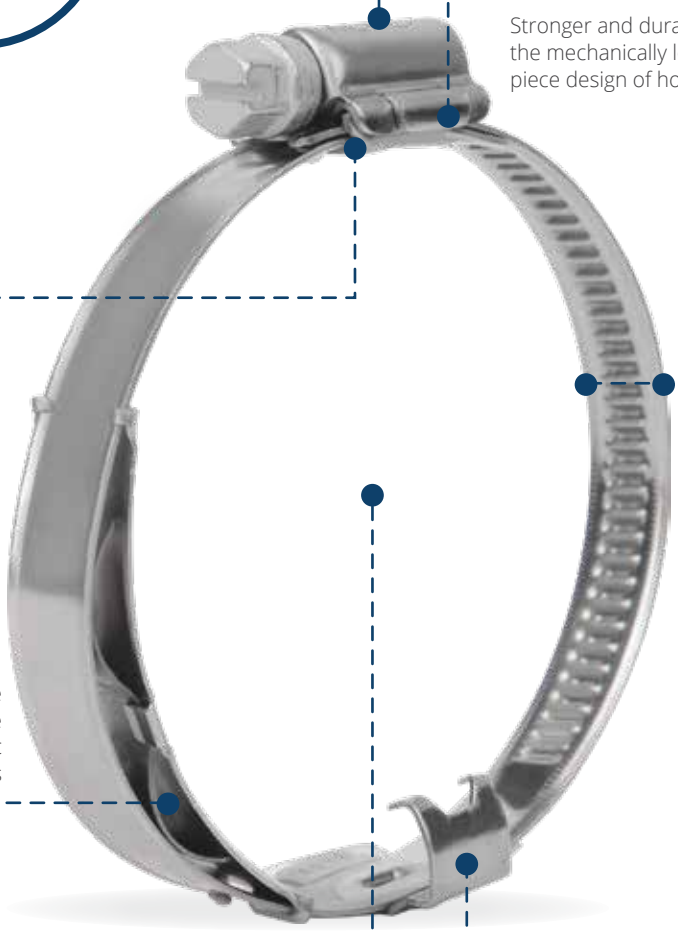
AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

WD9 IS PP - Worm Drive Clamps with Spring Insert and Prepositioning Clip

Light product, easy assembly and space saving with compact housing and screw design

Stronger and durable with the mechanically locked single piece design of housing

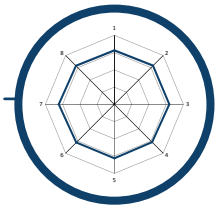
100% traceability on the product

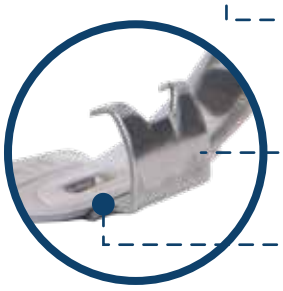


Burr-free and convex band edges

Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes

High clamping force with low tightening torque

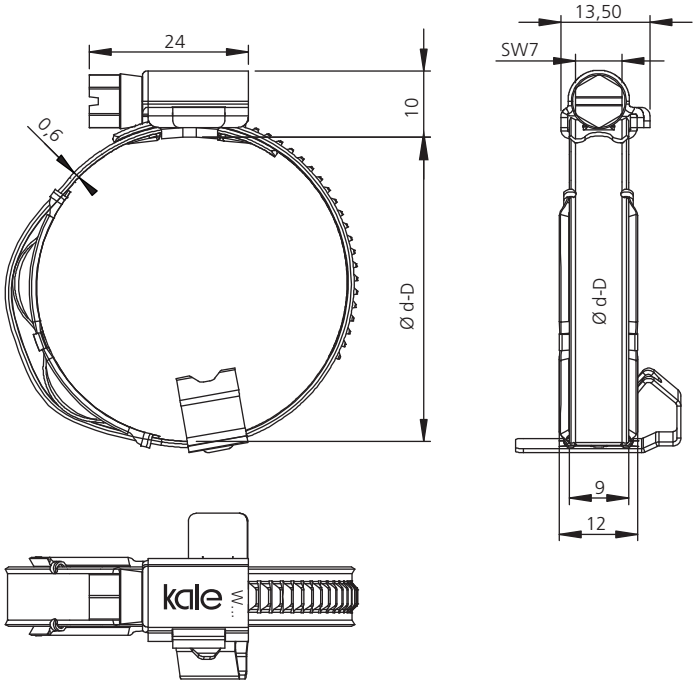




pre-positioned assembly of the clamp and hence easy final assembly enabled with clip

Patented seamless connection points

WD9 IS PP - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Clip	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

Ø d - D (mm) (min - max)	AD max. (Nm)
35-55	3,0
40-60	3,0
45-65	3,0
50-70	3,0
55-75	3,0
60-80	3,0
65-85	3,0
70-90	3,0
75-95	3,0
80-100	3,0
90-110	3,0
100-120	3,0
110-130	3,0
120-140	3,0
130-150	3,0
140-160	3,0

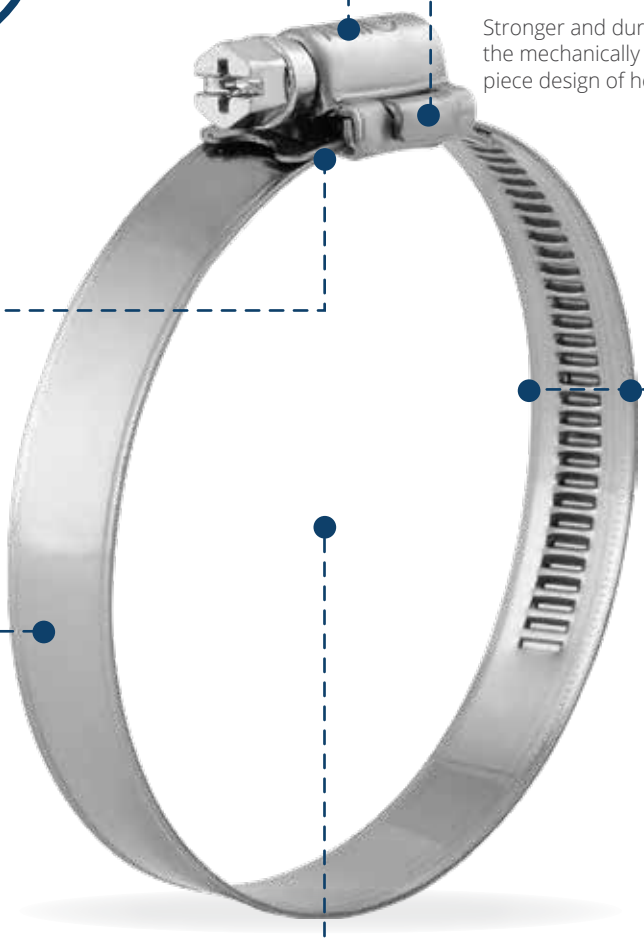
AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

WD12 - Worm Drive Clamps

Light product, easy assembly and space saving with compact housing and screw design

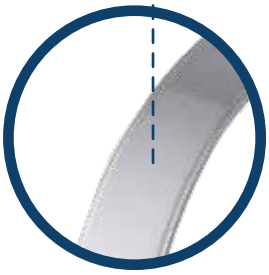
Stronger and durable with the mechanically locked single piece design of housing

100% traceability on the product



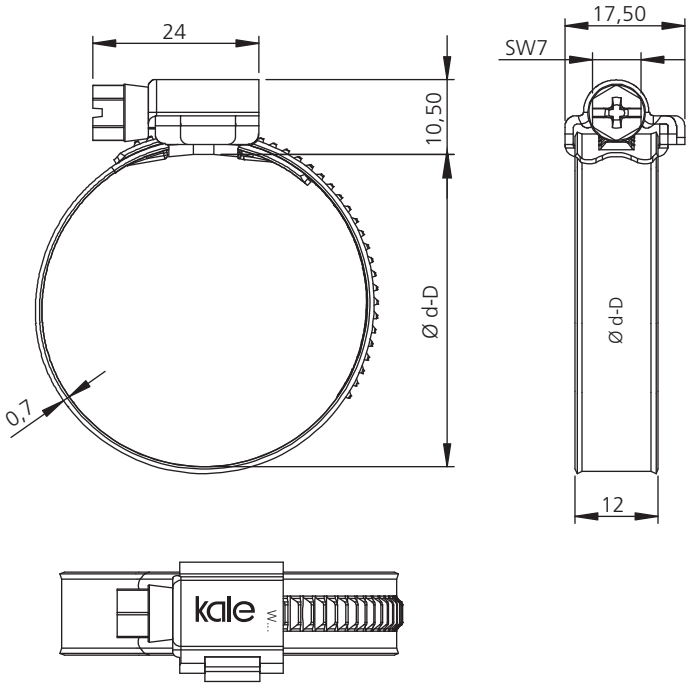
Burr-free and convex band edges

Higher tightening torque and clamping force with 12 mm band width



High clamping force with low tightening torque

WD12 - Technical Properties



	W1	W2	W3	W4	W5
Screv	** Mild Steel	** Mild Steel	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	** Mild Steel	1.4016 DIN EN-10088-2 or equivalent	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	*** Mild Steel	1.4016 DIN EN-10088-2 or equivalent	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	72	72	200*	240	400
Screw Head					

* : %10 red rust allowed on the total surface of W3 products, after salt spray test
** : Zinc Plated
*** : Zinc - Aluminium Plated

Ø d - D (mm) (min - max)	AD max. (Nm)
16-25	5,0
16-27	5,0
20-32	5,0
23-35	5,0
25-40	5,0
30-45	5,0
32-50	5,0
40-60	5,0
50-70	5,0
60-80	5,0
70-90	5,0
75-95	5,0
80-100	5,0
90-110	5,0
100-120	5,0
110-130	5,0
120-140	5,0
130-150	5,0
140-160	5,0
....	....
380-400	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

WD12 IS - Worm Drive Clamps with Spring Insert

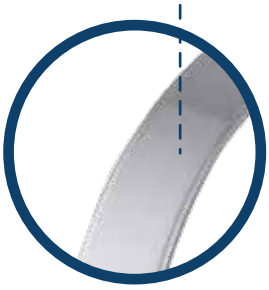
Light product, easy assembly and space saving with compact housing and screw design

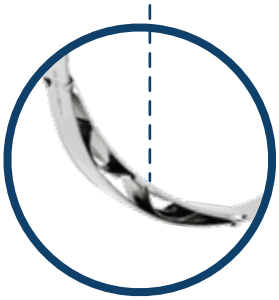
Stronger and durable with the mechanically locked single piece design of housing

100% traceability on the product

Burr-free and convex band edges

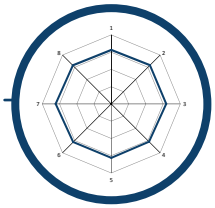
Higher tightening torque and clamping power with 12 mm band width



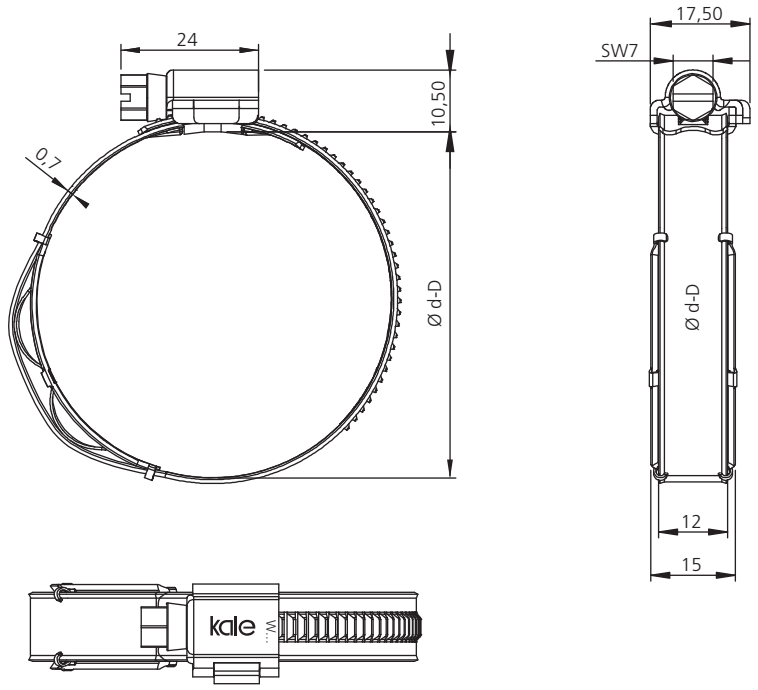


Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes

High clamping force with low tightening torque



WD12 IS - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

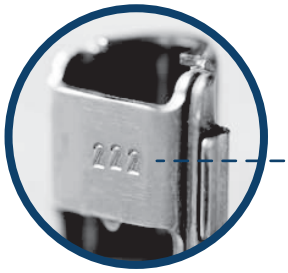
Ø d - D (mm) (min - max)	AD max. (Nm)
16-25	5,0
16-27	5,0
20-32	5,0
23-35	5,0
25-40	5,0
30-45	5,0
35-55	5,0
40-60	5,0
45-65	5,0
50-70	5,0
55-75	5,0
60-80	5,0
65-85	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

WD12 IS PP - Worm Drive Clamps with Spring Insert and Prepositioning Clip

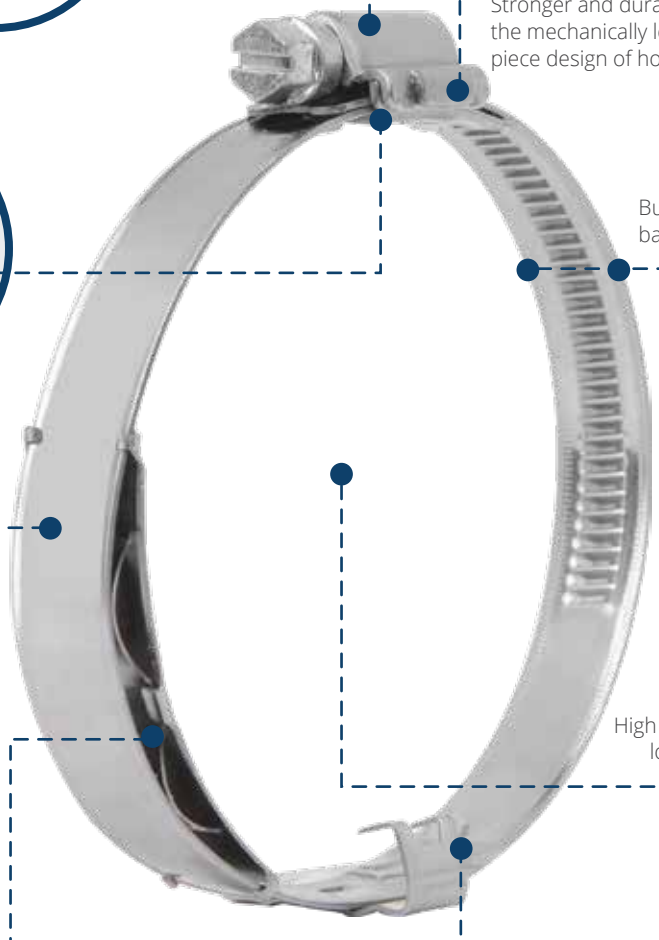
Light product, easy assembly and space saving with compact housing and screw design

Stronger and durable with the mechanically locked single piece design of housing

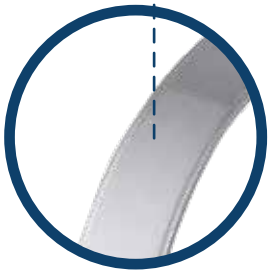


100% traceability on the product

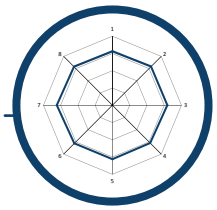
Burr-free and convex band edges



Higher tightening torque and clamping power with 12 mm band width

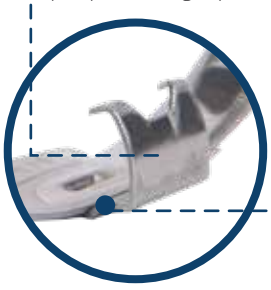


High clamping force with low tightening torque



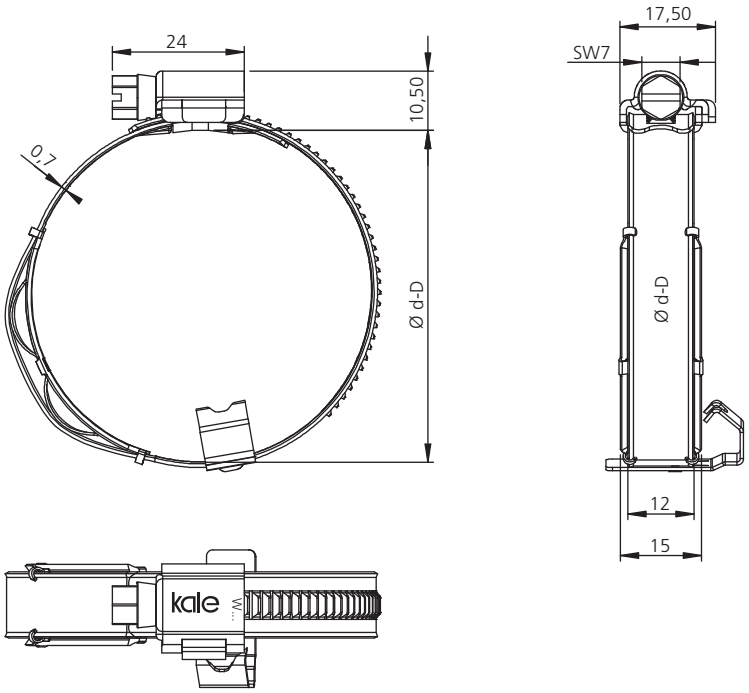
Easy final assembly with pre-positioning clip

Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes



Patented seamless connection points.

WD12 IS PP - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Clip	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

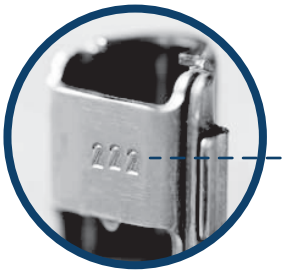
Ø d - D (mm) (min - max)	AD max. (Nm)
30-45	5,0
32-50	5,0
35-55	5,0
40-60	5,0
45-65	5,0
50-70	5,0
55-75	5,0
60-80	5,0
65-85	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

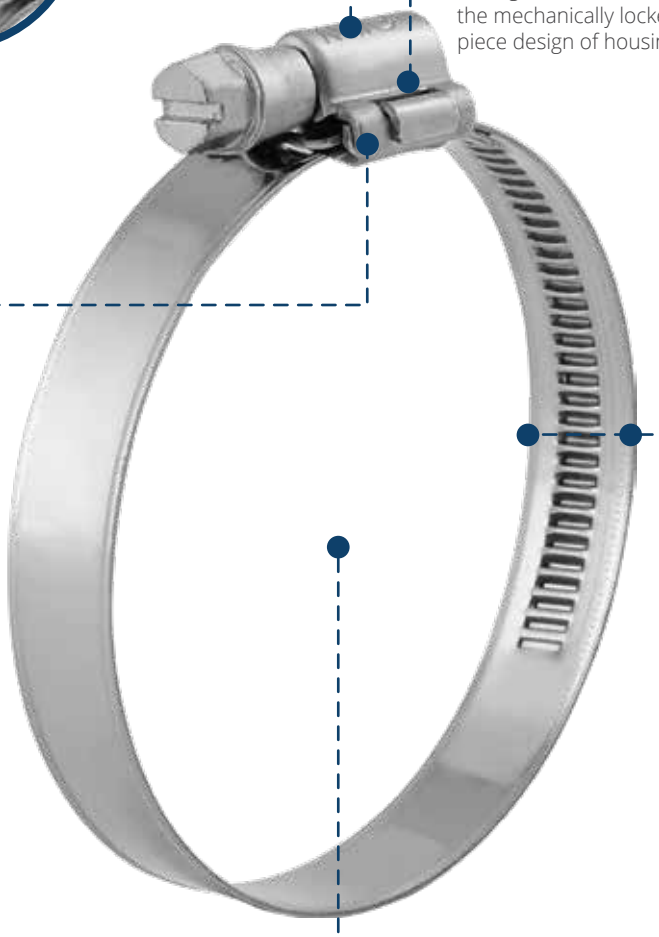
WD12 C8 - Worm Drive Clamps

Light product, easy assembly and space saving with compact housing and screw design

Stronger and durable with the mechanically locked single piece design of housing

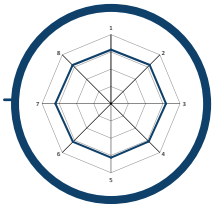


100% traceability on the product

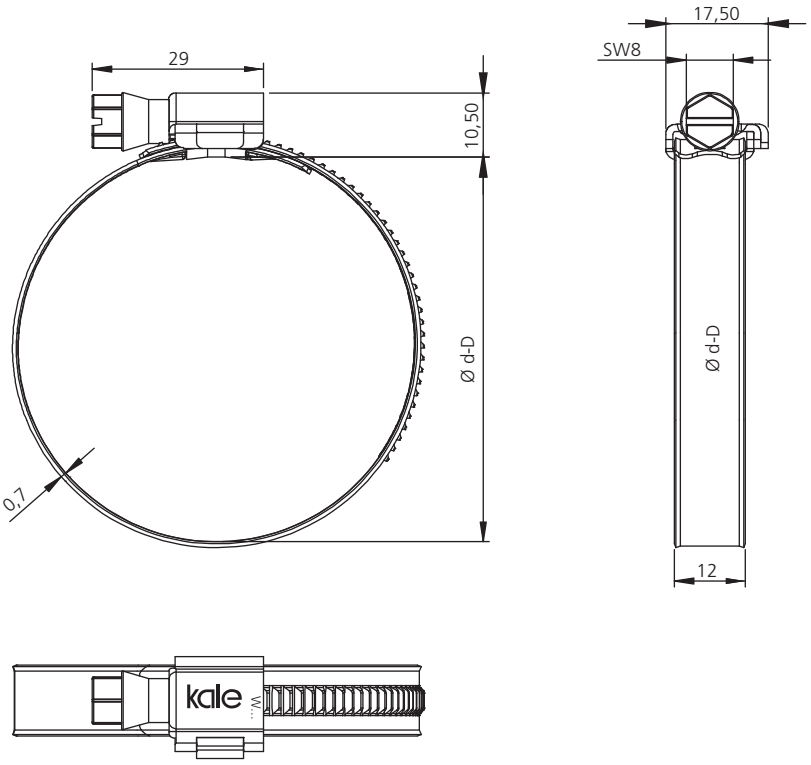


Burr-free and convex band edges

High clamping force with low tightening torque



WD12 C8 - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

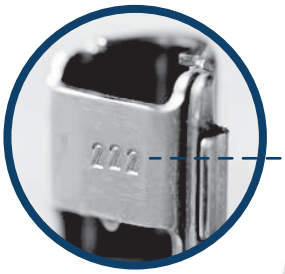
Ø d - D (mm) (min - max)	AD max. (Nm)
16-25	5,0
16-27	5,0
20-32	5,0
23-35	5,0
25-40	5,0
30-45	5,0
32-50	5,0
40-60	5,0
50-70	5,0
60-80	5,0
70-90	5,0
80-100	5,0
90-110	5,0
100-120	5,0
110-130	5,0
120-140	5,0
130-150	5,0
140-160	5,0
....	....
380-400	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

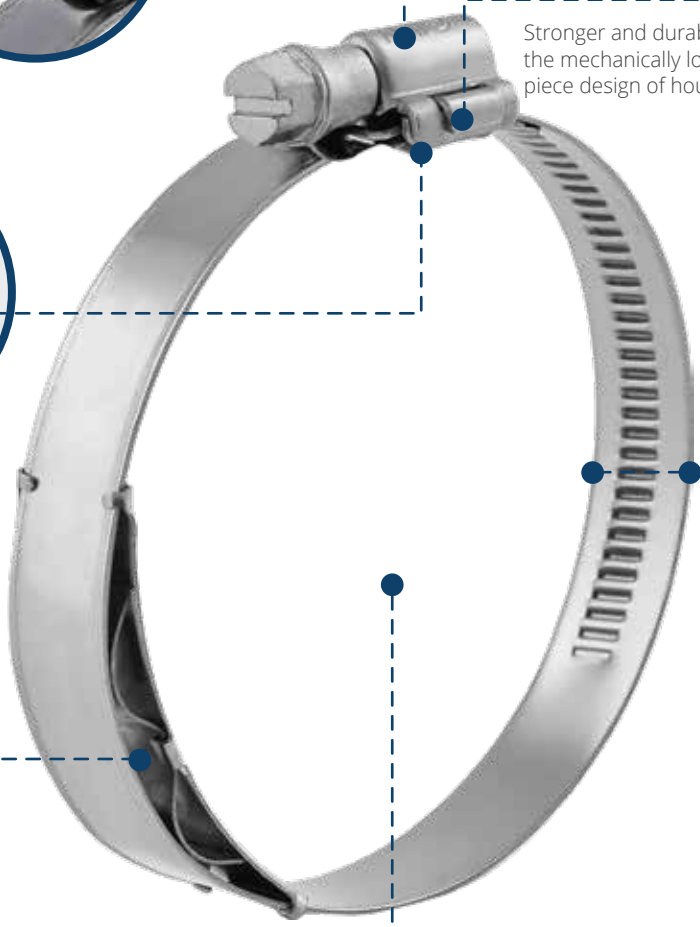
WD12 C8 IS - Worm Drive Clamps with Spring Insert

Light product, easy assembly and space saving with compact housing and screw design

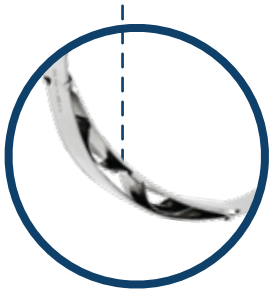
Stronger and durable with the mechanically locked single piece design of housing



100% traceability on the product

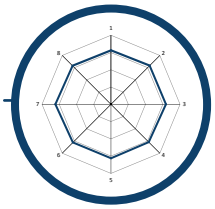


Burr-free and convex band edges

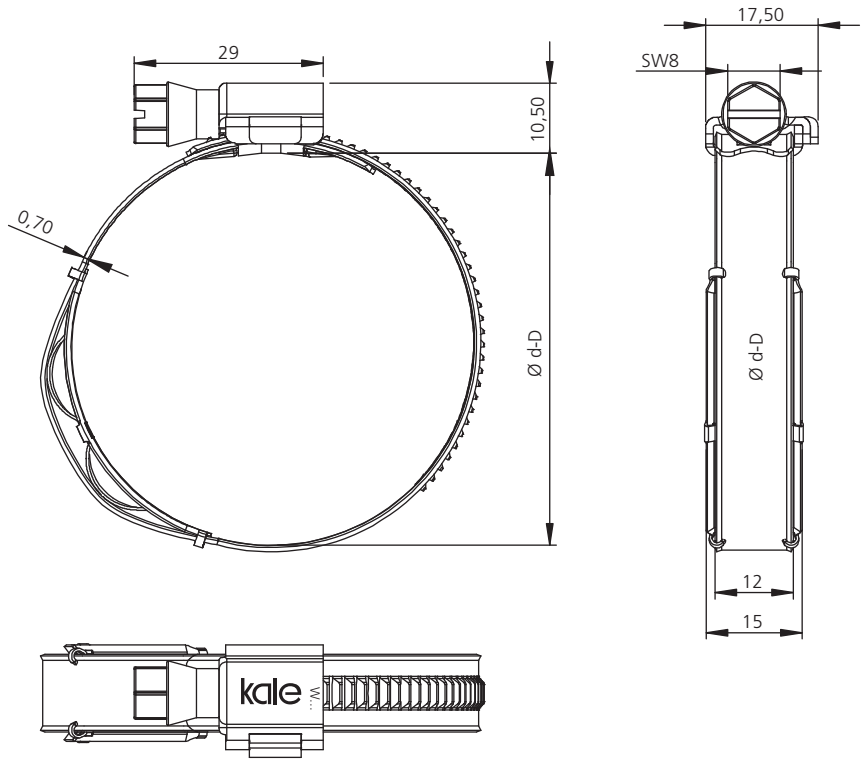


Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes

High clamping force with low tightening torque



WD12 C8 IS - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

Ø d - D (mm) (min - max)	AD max. (Nm)
16-25	5,0
16-27	5,0
20-32	5,0
23-35	5,0
25-40	5,0
30-45	5,0
35-55	5,0
40-60	5,0
45-65	5,0
50-70	5,0
55-75	5,0
60-80	5,0
65-85	5,0

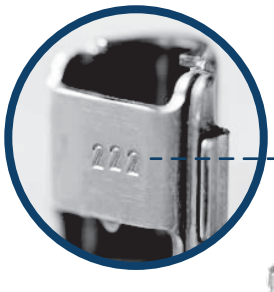
AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

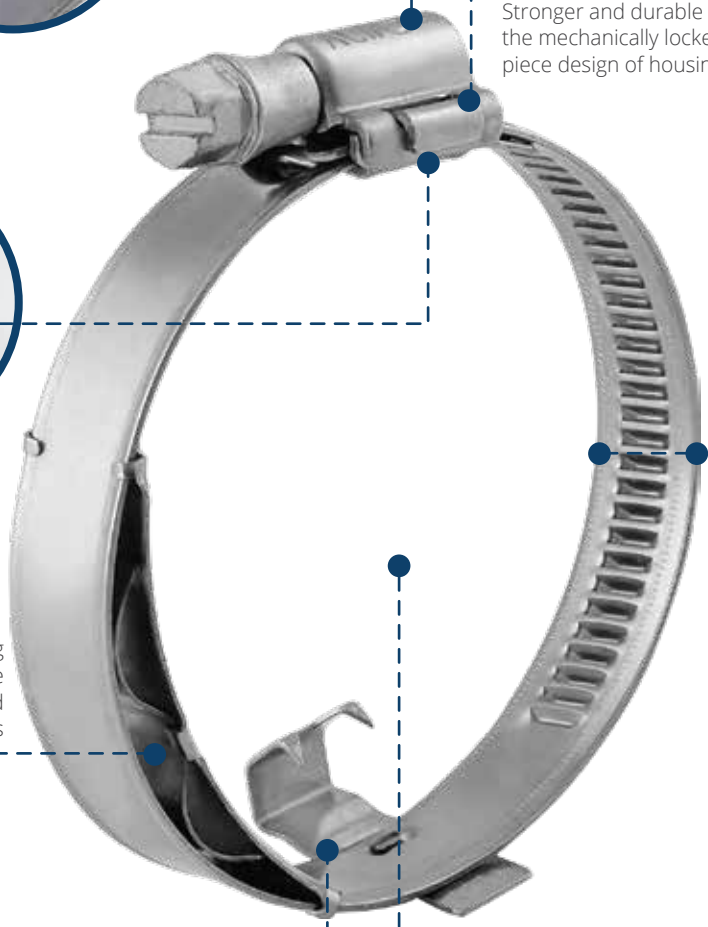
WD12 C8 IS PP - Worm Drive Clamps with Spring Insert and Prepositioning Clip

Light product, easy assembly and space saving with compact housing and screw design

Stronger and durable with the mechanically locked single piece design of housing

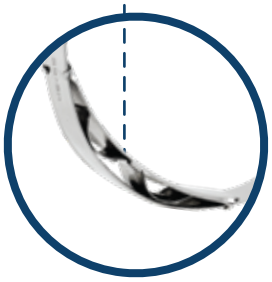
100% traceability on the product

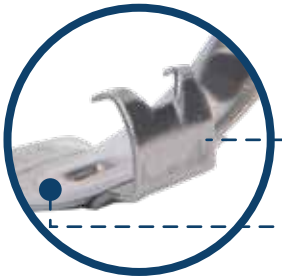




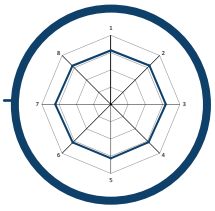
Burr-free and convex band edges

Spring system reserve clamping force balancing the temperature changes, dynamic loads and diameter changes





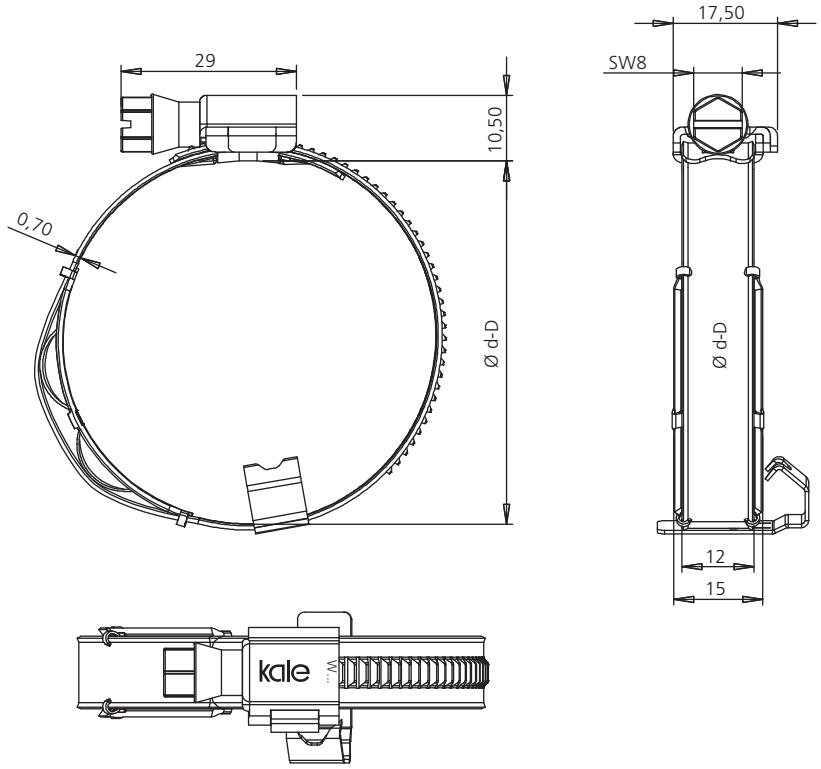
High clamping force with low tightening torque



Easy final assembly with pre-positioning clip

Patented seamless connection points

WD12 C8 IS PP - Technical Properties



	W3	W4	W5
Screw	1.4016 DIN EN-10088-3 or equivalent	1.4567 DIN EN-10088-3 or equivalent	1.4578 DIN EN-10088-3 or equivalent
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Clip	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min.Hour) ISO 9227	200*	240	400
Screw Head			

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

Ø d - D (mm) (min - max)	AD max. (Nm)
30-45	5,0
35-55	5,0
32-50	5,0
40-60	5,0
45-65	5,0
50-70	5,0
55-75	5,0
60-80	5,0
65-85	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

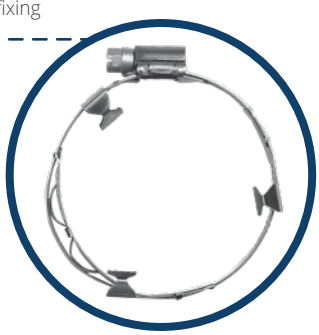
WD12 IS SW - Worm Drive Clamps with Integral Spring and Spring Wing Prepositioning Clips

Patented fixed clip close to clamp head that increases assembly robustness

Patented seamless connection points

Patented moving clip enabling effective diameter contraction

Increased rigidity by 3 points fixing

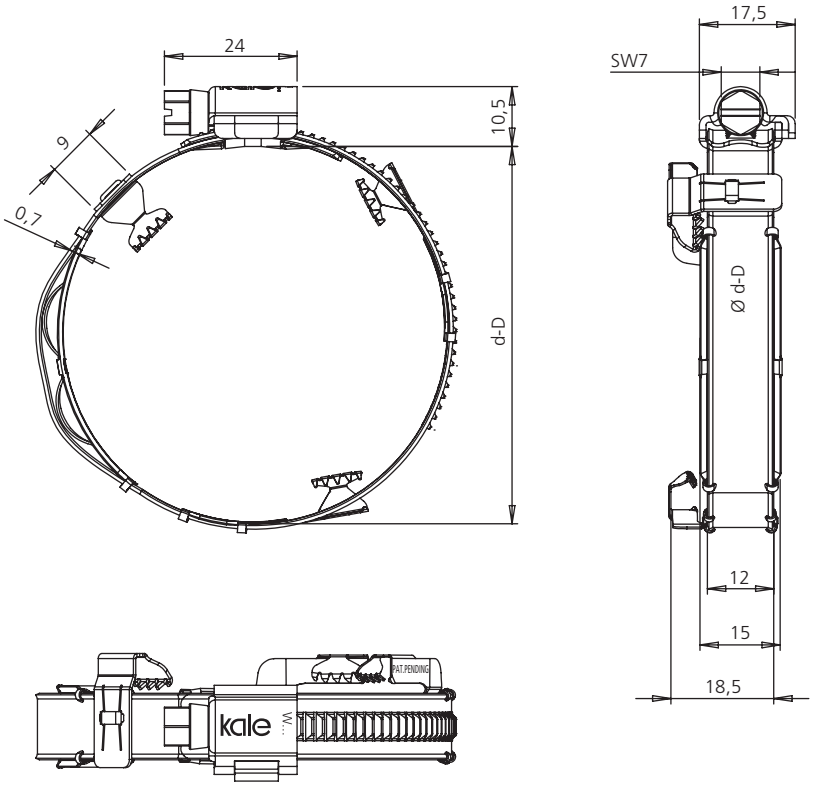


Flexible Wing enabling diameter compensation

Clip moves during the clamp tightening

Innovative Serrated Geometry which do not damage the hose

WD12 IS SW - Technical Properties



	W3	W4
Housing	1.4016 DIN EN-10088-2 or equivalent	1.4567 DIN EN-10088-2 or equivalent
Screw	1.4016 DIN EN-10088-4 or equivalent	1.4301 DIN EN-10088-4 or equivalent
Band	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent
Spring	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Fix Clip	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Moving Clip	1.4310 DIN EN-10088-2 or equivalent	1.4310 DIN EN-10088-2 or equivalent
Corrosion Resistance according to DIN EN ISO 9227	200*	240
Screw Head		

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

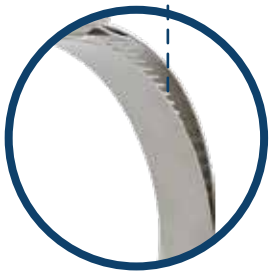
Ø d - D (mm) (min - max)	AD max. (Nm)
35-55	5,0
40-60	5,0
45-65	5,0
50-70	5,0
55-75	5,0
60-80	5,0
65-85	5,0

AD: Recommended tightening torque
Recommended tightening speed 300 - 350 rpm

ST - SpringTension Heavy Duty Clamps

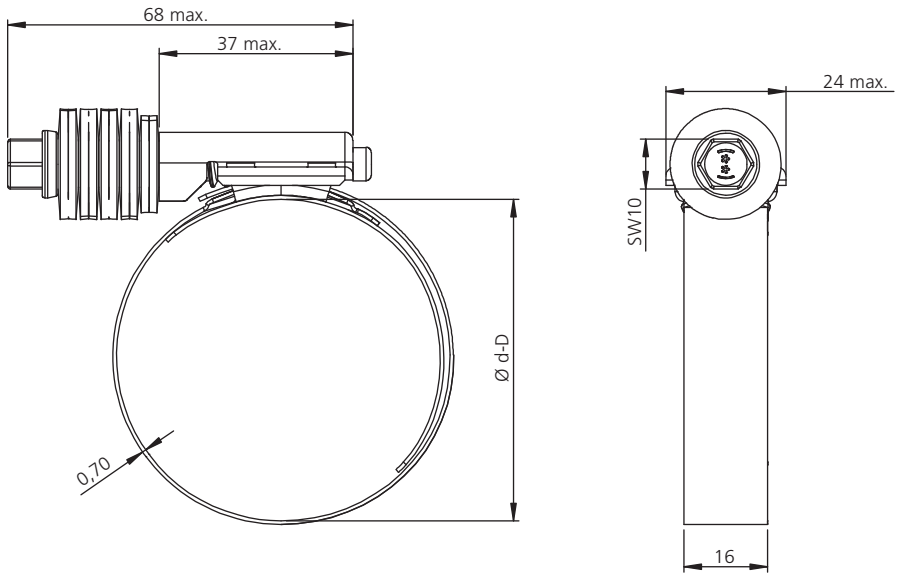
Easy mountability with Hexagon screw cap and forward positioning

Stable clamping force with spring washers



Additional band on the inner surface for 100% hose safety

ST - Technical Properties



	W2
Screw	carbon steel *
Housing	1.4301 DIN EN-10088-2 or equivalent
Band	1.4301 DIN EN-10088-2 or equivalent
Belleville Springs	1.4310 DIN EN-10088-2 or equivalent
Saddle	1.4301 DIN EN-10088-2 or equivalent

* : Zinc coated

Ø d - D (mm) (min - max)	AD max. (Nm)
25-45	8,5
32-54	8,5
45-67	8,5
57-79	8,5
70-92	8,5
83-105	8,5
95-117	8,5
108-130	8,5
121-143	8,5
133-155	8,5
146-168	8,5
159-181	8,5
172-193	8,5
184-206	8,5
197-219	8,5
210-232	8,5

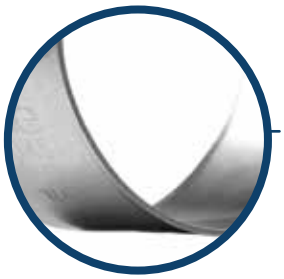
AD: Recommended tightening torque

HD - Heavy Duty Clamps

New specially designed bolt with integrated spacer and improved performance, no more loose bolts

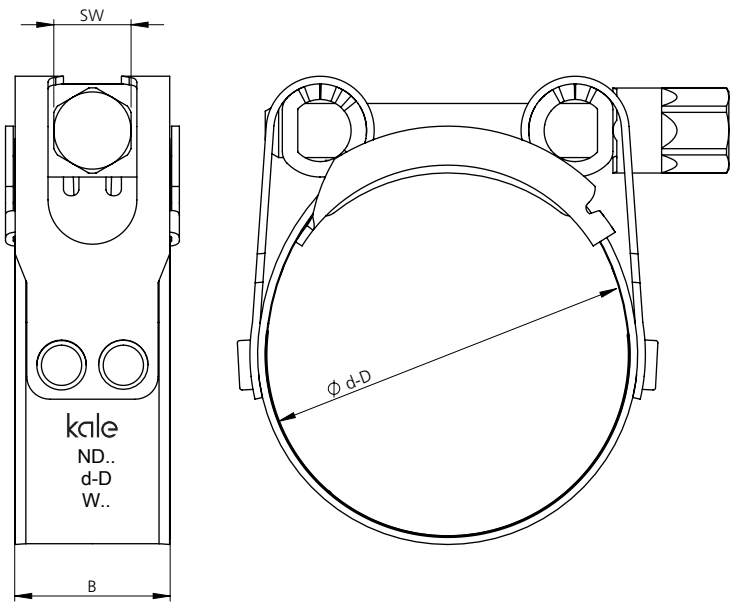
Hollowed Trunnions reduces the tensile forces on the bolt and the clinched joint

Clinched Joint Design
No welding spots and
No contact corrosion



Robust band with rounded edges

HD - Technical Properties



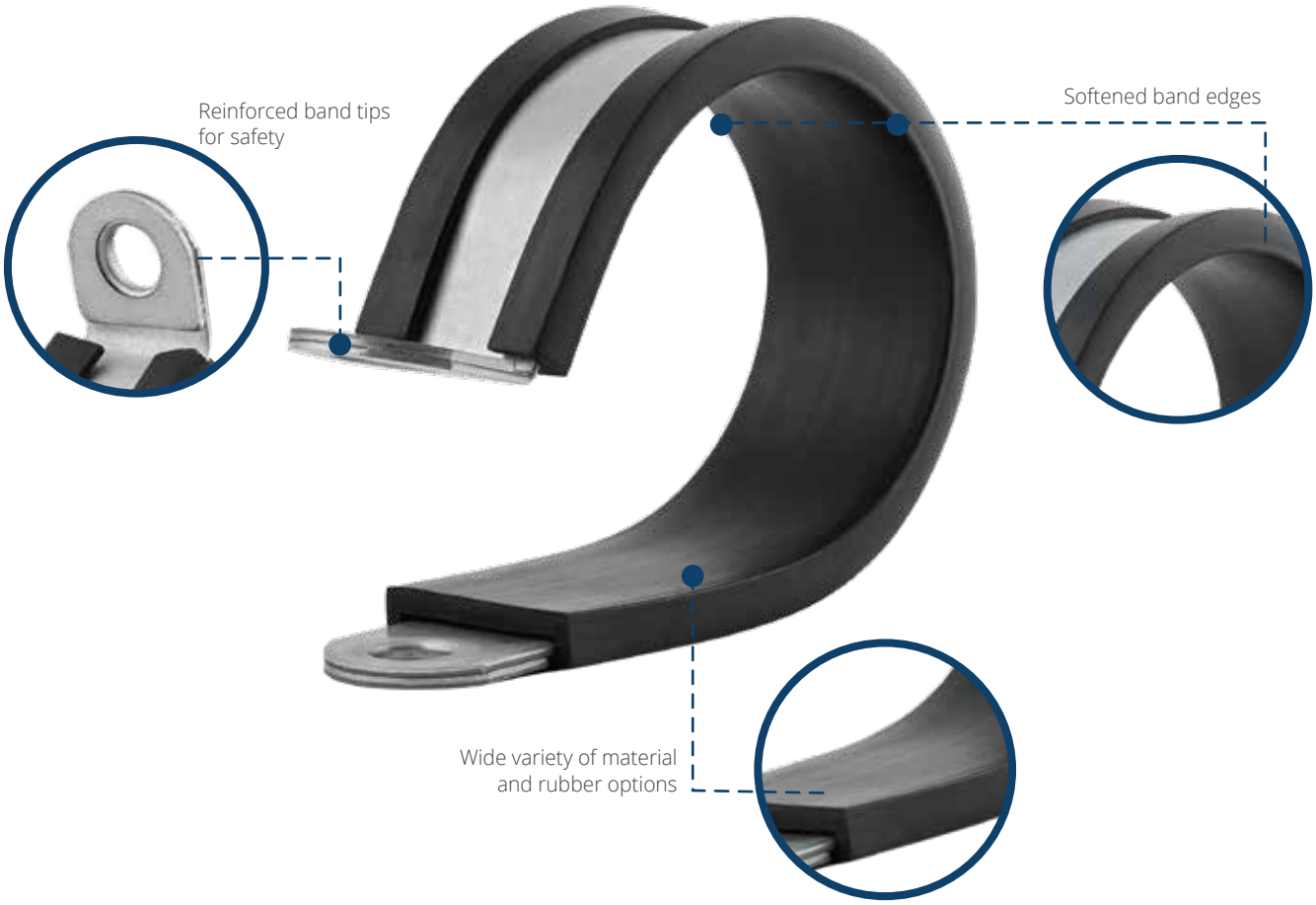
Ød-D (mm) (min - max)	ND (mm)	B (mm)	SW (mm)	AD (Nm)
17-19	18	18	8	8
19-21	20	18	8	8
21-23	22	18	8	8
23-25	24	18	8	8
25-27	26	18	8	8
27-29	28	18	8	8
29-31	30	18	8	8
31-34	33	20	10	10
34-37	36	20	10	10
37-40	39	20	10	10
40-43	42	20	10	10
43-47	45	20	10	10
47-51	49	20	10	10
51-55	53	20	10	10
55-59	57	20	10	10
59-63	61	20	10	10
63-68	66	20	10	10
68-73	71	25	13	20
73-79	76	25	13	20
79-85	82	25	13	20
85-91	88	25	13	20
91-97	94	25	13	20
97-104	101	25	13	20
104-112	108	25	13	20
112-121	117	25	13	20
121-130	126	25	13	20
130-140	135	25	13	20
140-150	145	25	13	20
150-162	156	25	13	20
162-174	168	25	13	20
174-187	181	25	13	20
187-200	194	25	13	20
200-213	207	25	13	20
213-226	220	25	13	20
226-239	233	25	13	20
239-252	246	25	13	20
130-140	135	25	13	20
140-150	145	25	13	20
150-162	156	25	13	20
162-174	168	25	13	20
174-187	181	25	13	20
187-200	194	25	13	20
200-213	207	25	13	20
213-226	220	25	13	20
226-239	233	25	13	20
239-252	246	25	13	20

AD: Recommended tightening torque

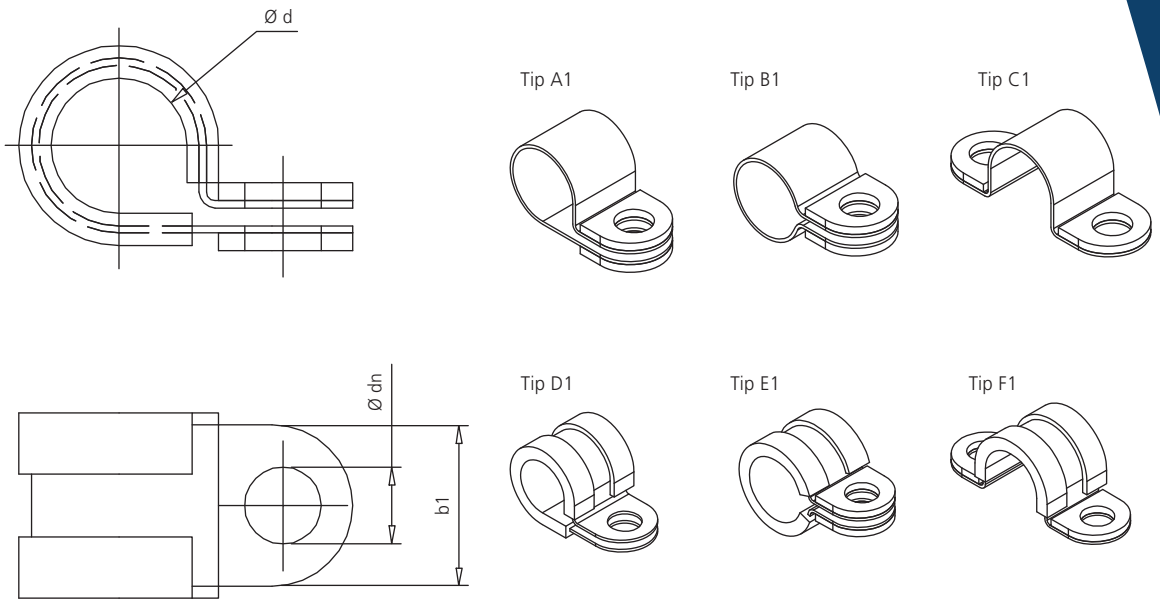
	W1	W2	W4	W5
Band	Carbon Steel*	Stainless Steel 1.4016	Stainless Steel 1.4301	Stainless Steel 1.4401
Bridge	Carbon Steel*	Stainless Steel 1.4016	Stainless Steel 1.4301	Stainless Steel 1.4401
Bolt	ISO 898-1 class 8.8*	ISO 898-1 class 8.8*	ISO 3506-1 (A2-70)	ISO 3506-1 (A4-70)
Bush	-	-	Stainless Steel 1.4301	Stainless Steel 1.4401
Trunnion	Carbon Steel*	Carbon Steel*	Stainless Steel 1.4301	Stainless Steel 1.4401
Corrosion Resistance (min. Hours) ISO 9227	72	72	240	400
Bolt Head				

* Zinc Coated

CC - Retaining Clamps



CC - Technical Properties



Rubber Type	CR	EPDM
Color	Black	Black
Temperature (C°)	- 35 - +100	- 40 - +120
Ozone Resistance	Very good	Very good
Light Resistance	Very good	Very good
Fuel Resistance	Sufficent	Insufficient
Oil Resistance	Good	Insufficient
Alcohol Resistance	Good	Good
Acid Resistance	Good	Good
Base Resistance	Good	Good

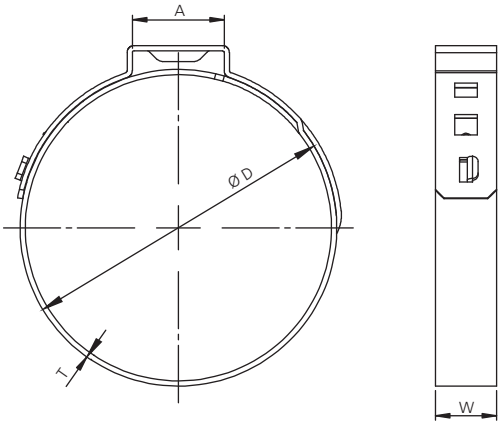
	W1	W3	W4	W5
Band	Mild Steel	1.4016 DIN EN-10088-2 or equivalent	1.4301 DIN EN-10088-2 or equivalent	1.4401 DIN EN-10088-2 or equivalent
Corrosion Resistance (min. Hour) ISO 9227	72	200*	240	400

* : %10 red rust allowed on the total surface of W3 products, after salt spray test

Ø D (mm)	b1= 12,0 mm dn= 5,3 mm	b1= 15,0 mm dn= 6,4 mm	b1= 20,0 mm dn= 8,4 mm	b1= 25,0 mm dn= 10,5 mm
4,0	-	-	-	-
5,0	●	●	-	-
6,0	●	●	-	-
7,0	●	●	-	-
8,0	●	●	-	-
9,0	●	●	-	-
10,0	●	●	●	-
11,0	●	●	●	-
12,0	●	●	●	-
13,0	●	●	●	-
14,0	●	●	●	-
15,0	●	●	●	●
16,0	●	●	●	●
17,0	●	●	●	●
18,0	●	●	●	●
19,0	●	●	●	●
20,0	●	●	●	●
.....	.....	.....	.....	.....
50,0	●	●	●	●

SE - Smooth Ear Clamps

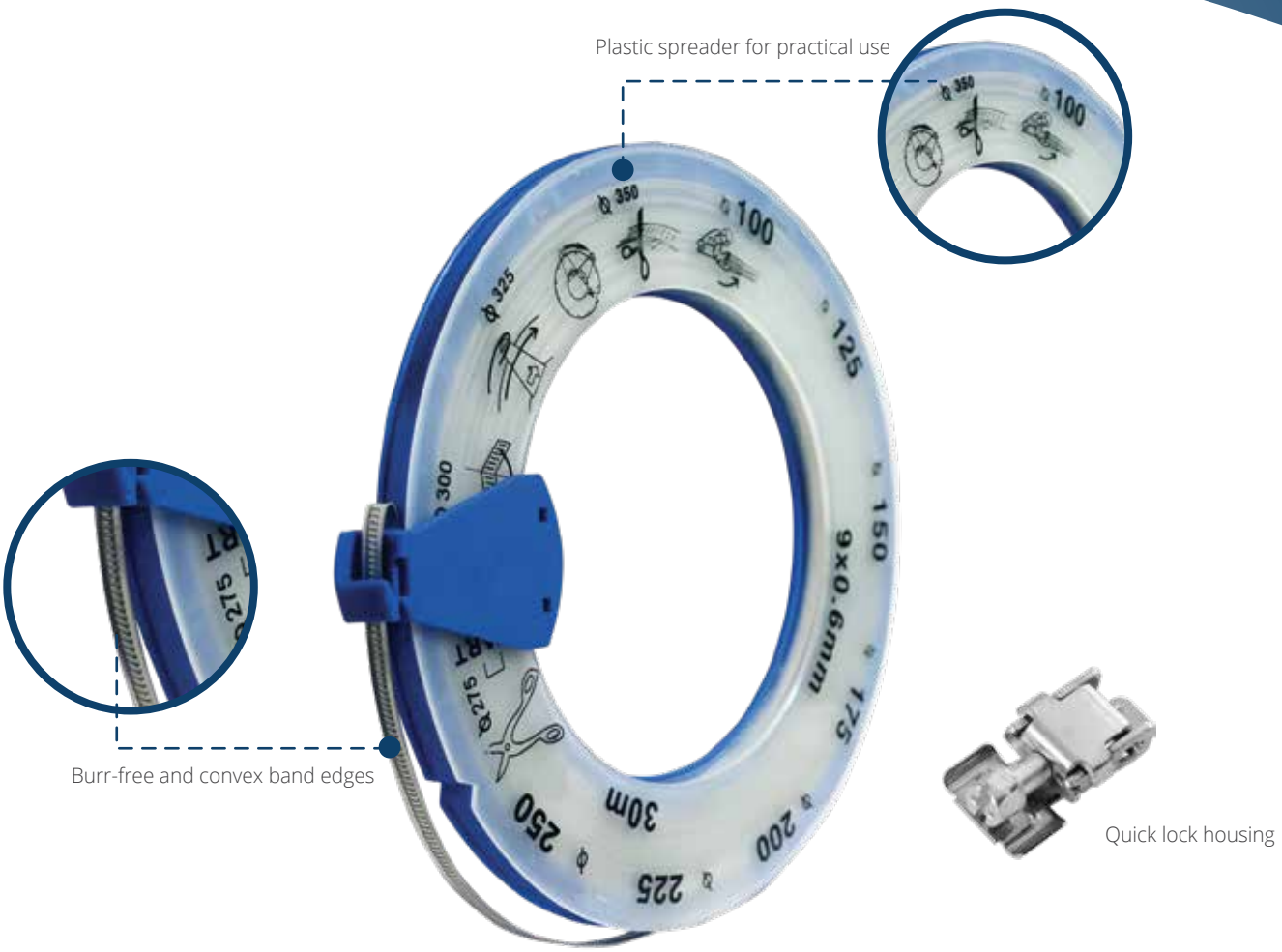
SE - Technical Properties



Description	Ø d - D(mm)	D(mm)	A(mm)	W(mm)	T(mm)
SE5 6,8 - 8,0 W4	6,8 - 8,0	8,0	6,0	5,0	0,5
SE5 7,0 - 8,7 W4	7,0 - 8,7	8,7	6,0	5,0	0,5
SE5 7,8 - 9,5 W4	7,8 - 9,5	9,5	6,0	5,0	0,5
SE5 8,8 - 10,5 W4	8,8 - 10,5	10,5	6,0	5,0	0,5
SE5 9,6 - 11,3 W4	9,6 - 11,3	11,3	6,0	5,0	0,5
SE5 10,1 - 11,8 W4	10,1 - 11,8	11,8	6,0	5,0	0,5
SE7 9,4 - 11,9 W4	9,4 - 11,9	11,9	8,5	7,0	0,6
SE7 9,8 - 12,3 W4	9,8 - 12,3	12,3	8,5	7,0	0,6
SE7 10,3 - 12,8 W4	10,3 - 12,8	12,8	8,5	7,0	0,6
SE7 10,8 - 13,3 W4	10,8 - 13,3	13,3	8,5	7,0	0,6
SE711,3 - 13,8 W4	11,3 - 13,8	13,8	8,5	7,0	0,6
SE7 11,5 - 14,0 W4	11,5 - 14,0	14,0	8,5	7,0	0,6
SE7 12,0 - 14,5 W4	12,0 - 14,5	14,5	8,5	7,0	0,6
SE7 12,8 - 15,3 W4	12,8 - 15,3	15,3	8,5	7,0	0,6
SE7 13,2 - 15,7 W4	13,2 - 15,7	15,7	8,5	7,0	0,6
SE7 13,7 - 16,2 W4	13,7 - 16,2	16,2	8,5	7,0	0,6
SE7 14,1 - 16,6 W4	14,1 - 16,6	16,6	8,5	7,0	0,6
SE7 14,3 - 16,8 W4	14,3 - 16,8	16,8	8,5	7,0	0,6
SE7 14,5 - 17,0 W4	14,5 - 17,0	17,0	8,5	7,0	0,6
SE7 15,0 - 17,5 W4	15,0 - 17,5	17,5	8,5	7,0	0,6
SE7 14,6 - 17,8 W4	14,6 - 17,8	17,8	10,5	7,0	0,6
SE7 15,3 - 18,5 W4	15,3 - 18,5	18,5	10,5	7,0	0,6
SE7 16,0 - 19,2 W4	16,0 - 19,2	19,2	10,5	7,0	0,6
SE7 16,6 - 19,8 W4	16,6 - 19,8	19,8	10,5	7,0	0,6
SE7 17,8 - 21,0 W4	17,8 - 21,0	21,0	10,5	7,0	0,6
SE7 19,4 - 22,6 W4	19,4 - 22,6	22,6	10,5	7,0	0,6
SE7 20,3 - 23,5 W4	20,3 - 23,5	23,5	10,5	7,0	0,6
SE7 20,9 - 24,1 W4	20,9 - 24,1	24,1	10,5	7,0	0,6
SE7 22,4 - 25,6 W4	22,4 - 25,6	25,6	10,5	7,0	0,6
SE7 23,9 - 27,1 W4	23,9 - 27,1	27,1	10,5	7,0	0,6
SE7 26,9 - 30,1 W4	26,9 - 30,1	30,1	10,5	7,0	0,6
SE7 31,4 - 34,6 W4	31,4 - 34,6	34,6	10,5	7,0	0,6
.....	.....	.....	.....	.....	.....
SE7 67,8 - 71,0 W4	67,8 - 71,0	71,0	10,5	7,0	0,6

	W4
Band	AISI 304 Stainless Steel

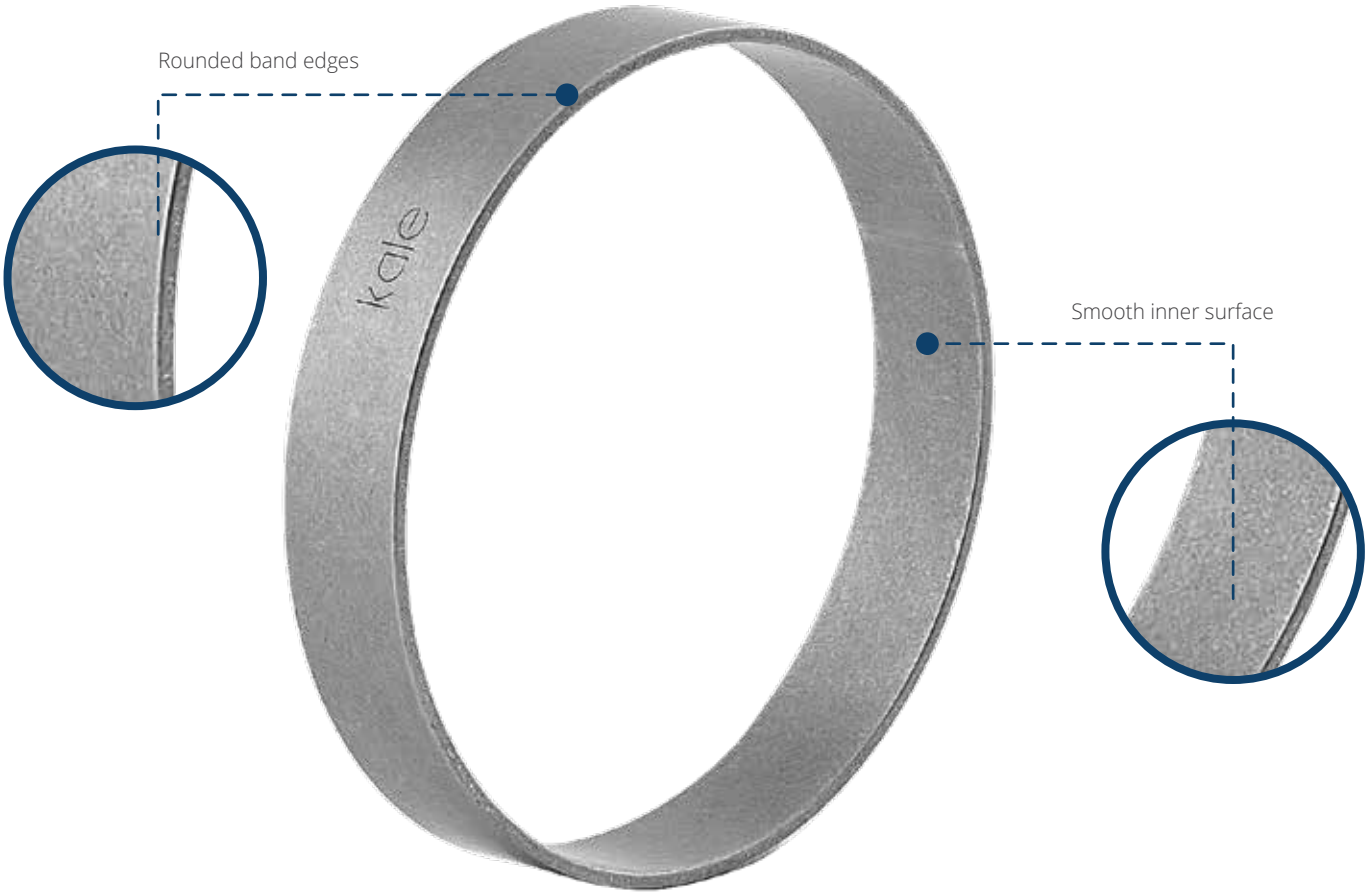
SB - Endless Band Clamps



Band Width	Band Thickness	Band Length	Material	Screw and Housing	Packaging
9 mm	0,6 mm	30m / rub	AISI 430 Stainless Steel	Galvanized Steel	50 units/ box

V - Band Clamps

Press Ring



Material	Size Range
1.4307 EN 10296-2 or equivalent	Ø15,0 - Ø 50,0 mm

The ring width can be customized.

Kale Bağlantı Teknolojileri San. ve Tic. A.Ş.
İAYOSB Gazi Bulvarı No:20 34953 Tuzla, İstanbul-TÜRKİYE
T : +90 216 625 16 25 | F : +90 216 593 05 09
www.kaleclamp.com

GC.01032023.EN.4C