

# OK-VISE®

THE ONLY ORIGINAL WEDGE-CLAMP



AND A GLOBAL FIXTURING SOLUTION



Founded in 1984, OK-VISE Oy is located in natural surroundings in the lake district of the central Finland, in a Muurame Business Park, a center of the mechatronics industry in the northern European Union.

OK-VISE low-profile clamp was originally designed to solve a specific workholding need in a flowmeter production process of our parent company. This clamping method attracted the interest of other companies due to the obvious benefits it offers. Benefits like the possibility of three-directional machining, extreme clamping force and ultimate efficiency are just a few of the many features OK-VISE clamping method is known for.

Our products are available through a global distribution network and can reach even the most distant places within a few working days. A wide selection of information along with the latest updates about our products are easily obtained from our website at: [www.ok-vise.com](http://www.ok-vise.com)!

This unique workholding solution is designed to meet the demands of the modern metalworking, plastic, aerospace and electronics industries. As a result of constant product development and dedicated customer service, our name stands for quality in every respect and today OK-VISE® is a well recognized trademark around the globe.



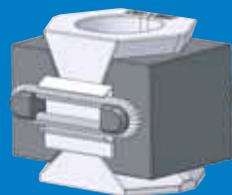
## OPERATING PRINCIPLE

OK-VISE low-profile clamps function on the principle that when tightened down they expand, simultaneously thrusting the pieces to be machined against the guide and preventing any possibility of play. These clamps are designed to fit between the pieces to be machined and take very little space on the fastening base. Small in size, yet possessing an excellent clamping force up to 150 kN these clamps guarantee a holding capacity which clearly exceeds the load imposed by machining forces.

Our low-profile clamps can be used on single machines just as successfully as in large Flexible Manufacturing Systems. No additional investments other than fixed stoppers are required.

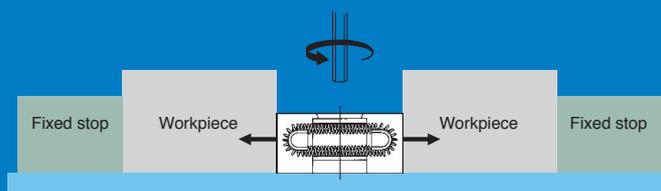
Standard models come with a hardness of 48-52 HRC and the jaws are serrated. Smooth jaws are also available on request. Both the wedge and the jaws are made of tool steel and are through hardened. A fastening operation involving one bolt (M8-M16) ensures quick set up times.

OK-VISE low-profile clamps come in two basic models, one with a single-wedge construction and the other with a double-wedge construction creating a pull-down action. We also offer a line of machinable jaw models for workpieces of irregular shape and a special model for castings and wire EDM applications.



**3D**

CAD files available on-line at [www.ok-vise.com](http://www.ok-vise.com)!



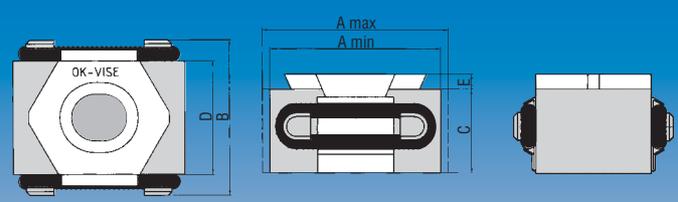
## THE COST EFFICIENT CHOISE !

Accuracy of the fixture comes normally from the precision of the fixed stoppers, guideframes and location pins (so called 0-points) not from the clamp itself which job is to generate the clamping force to hold the workpiece towards the 0-points.

We have designed three models on this page to meet the demands of regular workholding when ultra precision is not a necessity.

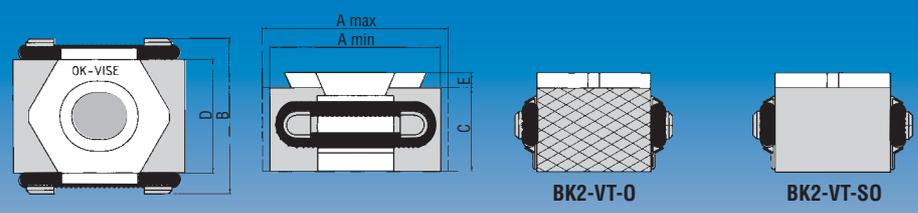
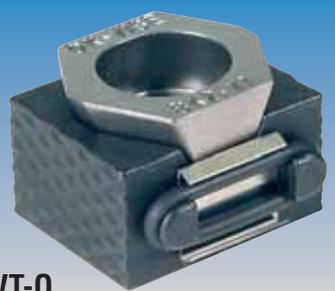
Although not ground as precise as standard models these clamps are just as effective when it comes to clamping force. Same raw material is being used and bottom of the jaws are ground for precise locating on the fixture base.

AK2-VT-SO always comes with Viton o-rings but B-series clamps are also available with regular springs on request.



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>AK2-VT-SO</b>	20	<b>23</b>	25	22	11	15	4.2	M5x025	10	10	0.022	48-52

**AK2-VT-SO**



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT-0</b>	27	<b>29</b>	31	29	15	21	2.5	M8x020	25	44	0.055	48-52

**BK2-VT-0**



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT-SO</b>	27	<b>29</b>	31	29	15	21	2.5	M8x020	25	44	0.055	48-52

**BK2-VT-SO**

# B

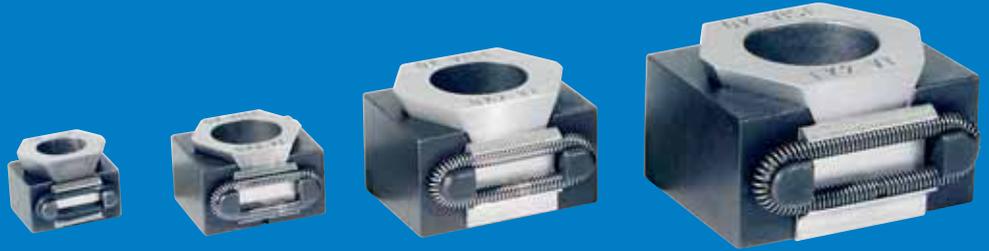
## SERIES

### ULTIMATE EFFICIENCY

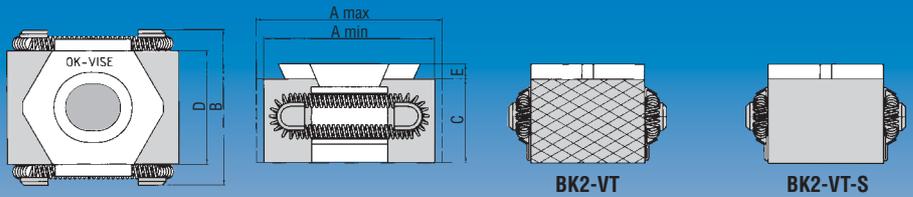
Today's sophisticated machines make tool changes in fractions of a second and are cutting at speeds we once thought nearly impossible. However, the effectiveness of a machining center does not lie in the number of pallets, but in the extent to which the capacity of each pallet can be utilized, in other words, how many pieces can be machined at the same time. With OK-VISE low-profile clamps it is possible to achieve the highest level of this effectiveness.

### ABSOLUTE STABILITY

The key feature of the OK-VISE low-profile clamp is its cross-wedge construction in both the horizontal and the vertical plane, which means that the clamp is locked firmly in every direction as it is tightened down. This cuts out all possibilities of measurement error due to sliding.



**BK2-VT**



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT</b>	27	<b>29</b>	31	29	15	21	2.5	M8x020	25	44	0.055	48-52



**BK2-VT-S**

Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT-S</b>	27	<b>29</b>	31	29	15	21	2.5	M8x020	25	44	0.055	48-52

### BK2-VT-SS STAINLESS STEEL

BK2-VT-SS is designed to meet the demands of wire EDM applications. This model contains only parts made of high quality stainless steel. Available only with smooth end of jaws!



**BK2-VT-SS**  
Stainless Steel

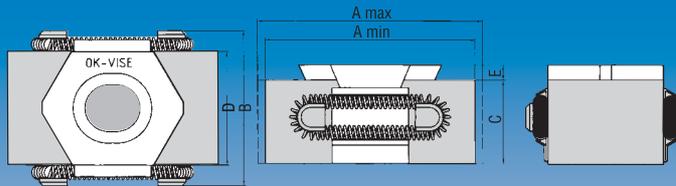
Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT-SS</b>	27	<b>29</b>	31	29	15	21	2.5	M8x020	25	44	0.055	48-52

**SMALL IN SIZE – GIANT IN PERFORMANCE**

Thanks to a small size these light-weight clamps are easy to lift and install.  
Moving around from one application or machine to another is virtually effortless.  
Universal design makes easy using a reality both in manual as well as in CNC machines.  
With excellent clamping force up to 150 kN OK-VISE low-profile clamps guarantee a holding capacity which clearly exceeds the load imposed by machining forces.



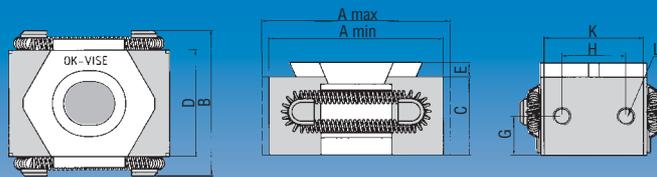
**BK2-VT+3**



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>BK2-VT+3</b>	33	<b>35</b>	37	29	15	21	2.5	M8x020	22	43	0.070	30-34



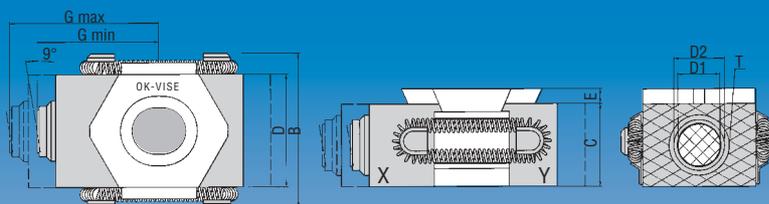
**BK2-VT-T**



Type	A			B	C	D	E	G	H	K	L	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max													
<b>BK2-VT-T</b>	33	<b>35</b>	37	29	15	21	2.5	7.5	12	-	4xM5	M8x020	22	43	0.060	30-34



**BK2-VT-B**



Type	Thread (T)	Diameter of ball (D2)	Diameter of serration (D1)	G min	G opt	G max
<b>BK2-VT-B</b>	M12	8.5	7.2	19.5	20.5	21.5

Serrated ball made of steel.

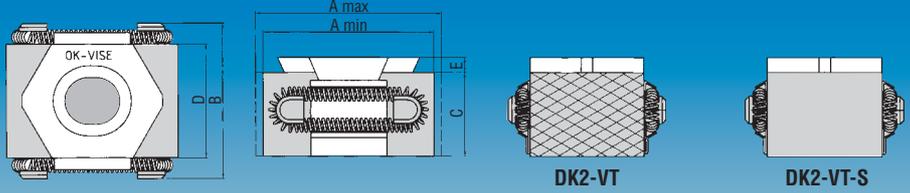
Type	A			B	C	D	E	G	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC X	Hardness of jaws HRC Y
	min	optimum	max											
<b>BK2-VT-B</b>	33	<b>35</b>	37	29	15	21	2.5	3	M8x020	22	43	0.064	30-34	48-52

THREE-DIRECTIONAL MACHINING

Due to a low-profile design of OK-VISE clamps, it is possible to execute flexible three-directional machining of workpieces with one fastening. This ability to machine a workpiece in three planes means improved accuracy, reduces the need for quality control measures and increases opportunities for further processing.



DK2-VT



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
DK2-VT	42	45	49	41	22	30	4	M12x030	65	145	0.180	48-52

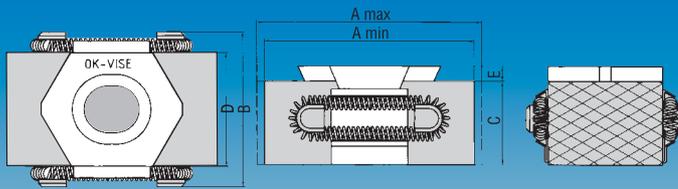


DK2-VT-S

Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
DK2-VT-S	42	45	49	41	22	30	4	M12x030	65	145	0.180	48-52



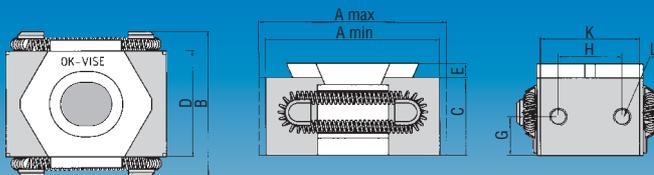
DK2-VT+5



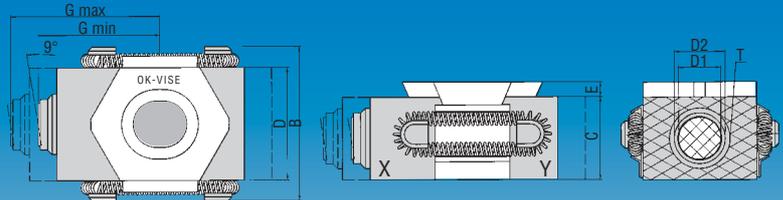
Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
DK2-VT+5	52	55	59	41	22	30	4	M12x030	55	145	0.235	30-34



DK2-VT-T



Type	A			B	C	D	E	G	H	K	L	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max													
DK2-VT-T	46	49	53	41	22	30	4	11	18	28	4xM5	M12x030	55	145	0.200	30-34



Type	Thread (T)	Diameter of ball (D2)	Diameter of serration (D1)	G min	G opt	G max
DK2-VT-B	M16	12.0	10.7	31	32.5	34.5

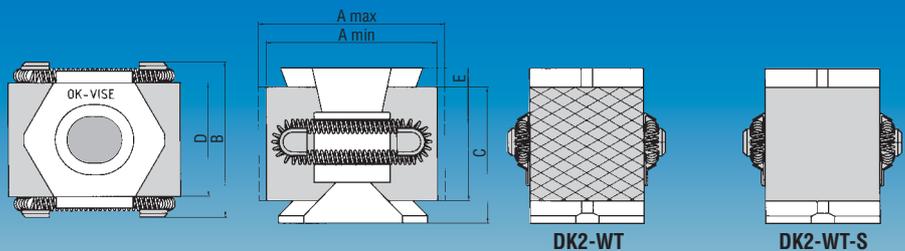
Serrated ball made of steel.

Type	A			B	C	D	E	G	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC X	Hardness of jaws HRC Y
	min	optimum	max											
DK2-VT-B	52	55	59	41	22	30	4	5	M12x030	55	145	0.212	30-34	48-52

DK2-VT-B

## PULL-DOWN ACTION

When the single-wedge clamps keep the workpieces steadily in place, not allowing upward or downward movement, the double-wedge clamps generate a pull-down action pressing the workpieces also towards the fixture base.



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
DK2-WT	42	46	49	41	36	30	5	M12x040	90	145	0.275	48-52

DK2-WT



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
DK2-WT-S	41	45	48	41	36	30	5	M12x040	90	145	0.275	48-52

DK2-WT-S

# D

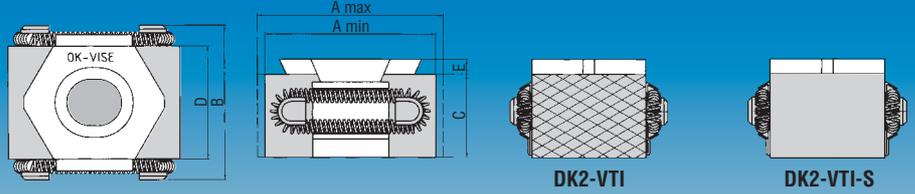
## SERIES

## D - SERIES INCH MODELS

D-series clamps are also designed for the half-inch bolt. The center hole in d-series wedge is wider in order to fit the half-inch socket head screw and is available on request! Measures given in inches and ounces.



**DK2-VTI**

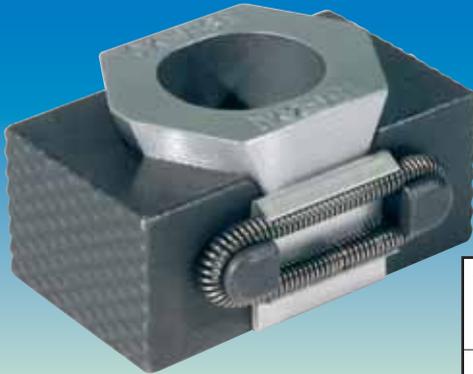


Type	A			B	C	D	E	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max									
<b>DK2-VTI</b>	1.65	<b>1.77</b>	1.92	1.61	0.86	1.18	0.15	1/2 - 1 1/4	65	145	6.34	48-52

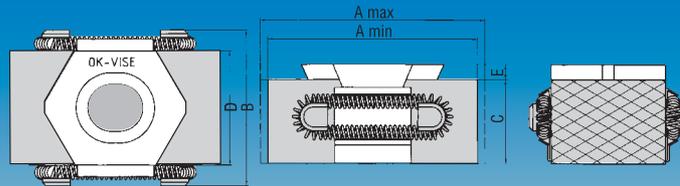


**DK2-VTI-S**

Type	A			B	C	D	E	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max									
<b>DK2-VTI-S</b>	1.65	<b>1.77</b>	1.92	1.61	0.86	1.18	0.15	1/2 - 1 1/4	65	145	6.34	48-52



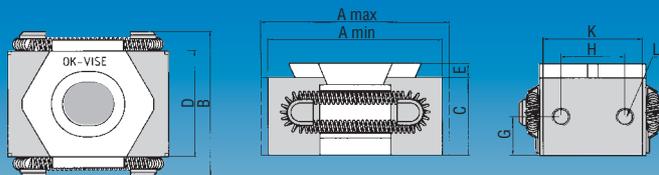
**DK2-VTI+5**



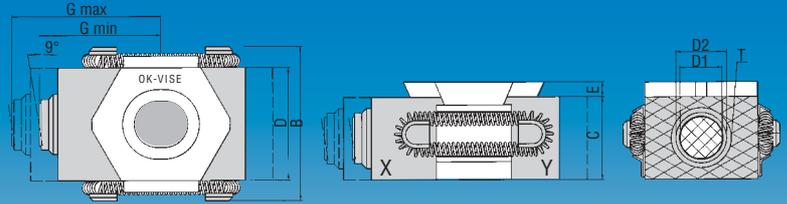
Type	A			B	C	D	E	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max									
<b>DK2-VTI+5</b>	2.04	<b>2.16</b>	2.32	1.61	0.86	1.18	0.15	1/2 - 1 1/4	65	145	8.28	48-52



**DK2-VTI-T**



Type	A			B	C	D	E	G	H	K	L	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max													
<b>DK2-VTI-T</b>	1.81	<b>1.92</b>	2.08	1.61	0.86	1.18	0.15	0.43	0.7	1.1	4xM5	1/2 - 1 1/4	55	145	7.05	30-34



Type	Thread (T)	Diameter of ball (D2)	Diameter of serration (D1)	G min	G opt	G max
<b>DK2-VTI-B</b>	M16	0.47	0.42	1.22	1.27	1.35

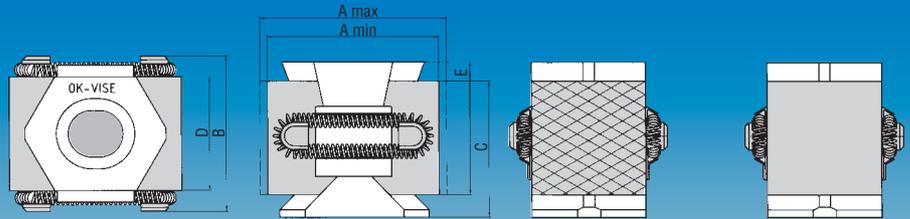
Serrated ball made of steel.

Type	A			B	C	D	E	G	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC X	Hardness of jaws HRC Y
	min	optimum	max											
<b>DK2-VTI-B</b>	2.04	<b>2.16</b>	2.32	1.61	0.86	1.18	0.15	0.19	1/2 - 1 1/4	65	145	7.40	30-34	48-52

**DK2-VTI-B**

**PULL-DOWN ACTION**

When the single-wedge clamps keep the workpieces steadily in place, not allowing upward or downward movement, the double-wedge clamps generate a pull-down action pressing the workpieces also towards the fixture base.



**DK2-WTI**

**DK2-WTI-S**

Type	A			B	C	D	E	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max									
<b>DK2-WTI</b>	1.65	<b>1.81</b>	1.92	1.61	1.41	1.18	0.19	1/2 - 1 3/4	65	145	9.70	48-52

**DK2-WTI**



Type	A			B	C	D	E	Socket Head Screw UNC	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in ounce approx.	Hardness of jaws HRC
	min	optimum	max									
<b>DK2-WTI-S</b>	1.61	<b>1.77</b>	1.88	1.61	1.41	1.18	0.19	1/2 - 1 3/4	65	145	9.70	48-52

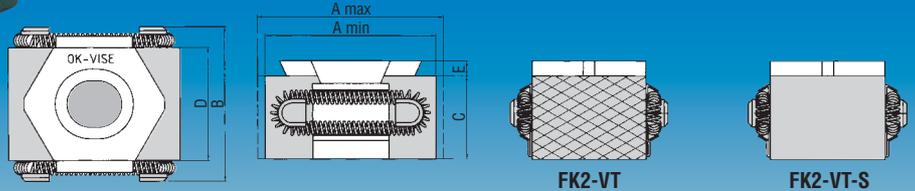
**DK2-WTI-S**

# F

## SERIES

## EXTREME CLAMPING FORCE

F-series clamps are designed for heavy duty machining when extreme clamping force is required. Yet, small in size they possess an amazing clamping force up to 150 kN.



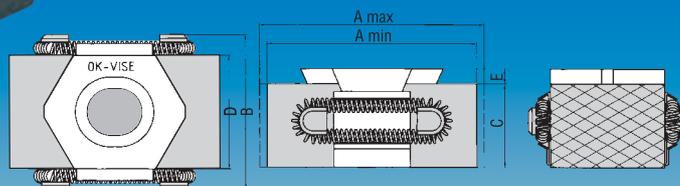
**FK2-VT**

Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
FK2-VT	57	<b>61</b>	65	56	29	42	5	M16x040	110	360	0.465	48-52



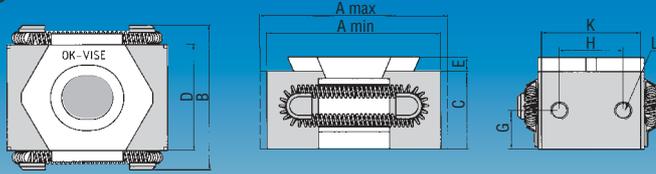
**FK2-VT-S**

Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
FK2-VT-S	57	<b>60</b>	64	56	29	42	5	M16x040	110	360	0.465	48-52



**FK2-VT+5**

Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
FK2-VT+5	67	<b>70</b>	75	56	29	42	5	M16x040	100	360	0.550	30-34



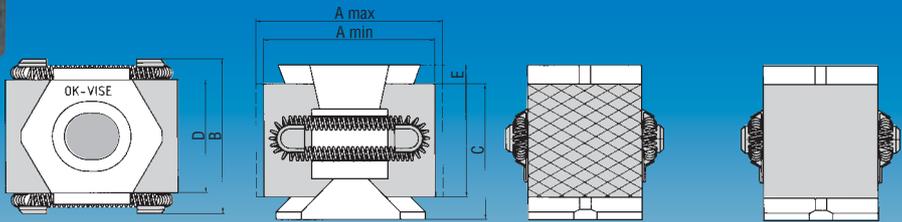
Type	A			B	C	D	E	G	H	K	L	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max													
<b>FK2-VT-T</b>	61	<b>65</b>	70	56	29	42	5	14,5	26	40	4xM5	M16x040	100	360	0.480	30-34

**FK2-VT-T**



**PULL-DOWN ACTION**

When the single-wedge clamps keep the workpieces steadily in place, not allowing upward or downward movement, the double-wedge clamps generate a pull-down action pressing the workpieces also towards the fixture base.



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>FK2-WT</b>	58	<b>61</b>	66	56	50	42	5	M16x060	150	360	0.730	48-52

**FK2-WT**



Type	A			B	C	D	E	Socket Head Screw DIN 912	Pressing force of Jaws, kN	Tightening torque, Nm	Weight in kg approx.	Hardness of jaws HRC
	min	optimum	max									
<b>FK2-WT-S</b>	58	<b>61</b>	66	56	50	42	5	M16x060	150	360	0.730	48-52

**FK2-WT-S**

## SPECIAL MODELS



CLAMPING  
**KOK-VISE**  
METHOD



## SPECIAL MODELS

Special models include additional piece models and self adjustable models.

## ADDITIONAL PIECE MODELS

In additional piece models we have machined female threadings (M5) at the end of the jaw for socket head screws allowing quick and easy use of various different additional pieces. This model is ideal when machining short series and when shape of the workpiece changes frequently. Additional pieces can be made out of different materials such as plastic, aluminium or steel, taking account whatever requirements the material of workpieces demand. Different shapes can also be machined to additional pieces.



## MACHINABLE JAWS

Single-wedge clamps are also available with extended jaws and can be machined to suit the geometry of the workpiece. The smallest model can be machined up to 3 mm and the larger ones up to 5 mm.

## SELF ADJUSTABLE MODELS

B-model clamps have a self adjustable ball pressure screw inserted into a clamp jaw. Ball bearing at the end is made of steel and is equipped with a torsion protection allowing a ball to self adjust up to 9 degrees. This makes clamping of inaccurate parts and castings more flexible.



## ROTARY PALLET SYSTEM

OK-VISE rotary columns are made of aluminium and they come with steel made corner clamps. They work as a trunion unit between indexer and a tail support. This new system makes efficient use of machinable area a reality, ultimately leading to savings in tool changes, less operator interventions and extended cycle times. Most important feature is a possibility to use subplates resulting to a remarkable cut down in machine stop times.

OK-VISE low-profile clamps can be moved steplessly in t-slots allowing the maximum flexibility when size of the part is changing.



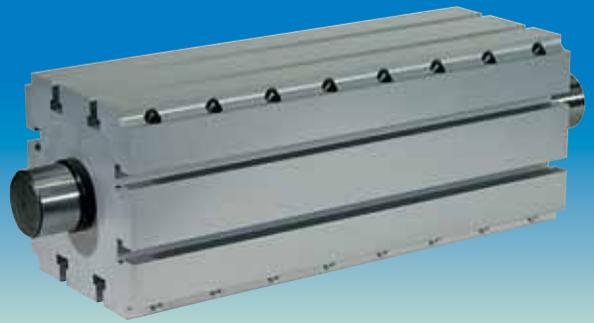
**RPS-T50**



**RPS-2T50**



**RPS-T40**



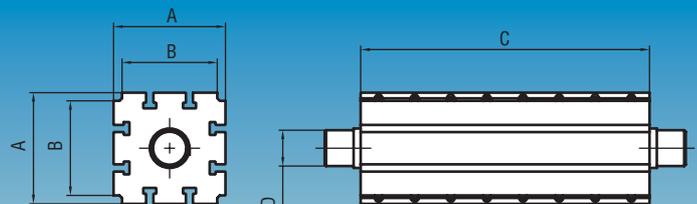
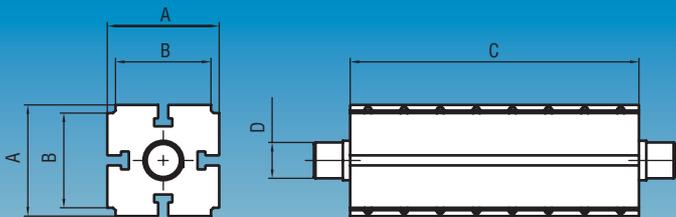
**RPS-2T40**



**RPS-T30**



**RPS-2T30**



Type	A	B	C	D	T-slot
<b>RPS-T30</b>	155mm	132mm	300mm	50mm	M12 nut
<b>RPS-T40</b>	155mm	132mm	400mm	50mm	M12 nut
<b>RPS-T50</b>	155mm	132mm	500mm	50mm	M12 nut

Type	A	B	C	D	T-slot
<b>RPS-2T30</b>	155mm	132mm	300mm	50mm	M8 nut
<b>RPS-2T40</b>	155mm	132mm	400mm	50mm	M8 nut
<b>RPS-2T50</b>	155mm	132mm	500mm	50mm	M8 nut

## SUBPLATES, CORNER CLAMPS AND FIXED STOPPERS TO COMPLETE THE RPS

Columns especially in machining centres are not normally thought of as quick-change devices. However, when column is combined with flexible subplates, users can gain the advantage of quick part changes. Rather than mounting workholding to a column the workpieces and clamps can be mounted to subplates that in turn are mounted to the columns faces with corner clamps.



Specially fitted aluminium subplates are available for each trunion unit. Thickness of the plate is 22 mm.

### Corner clamps

Steel made Corner clamps are designed for M10 socket head screws and come in two different sizes.

CC-1 49 mm



CC-2 99 mm



### Fixed stoppers

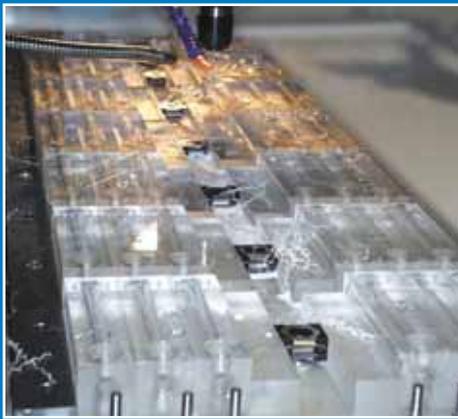
We are also offering 6 different type of standard fixed stoppers designed to fit especially to our rotary column.

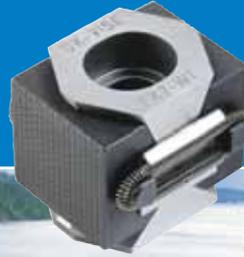
### Adapter

Adapter plate to locate and lock the trunion unit designed to fit for OK-VISE RPS system.



# APPLICATION EXAMPLES





## KYTOLA Group

OK-VISE Oy is located next to its parent company Kytola Instruments, known as the world market leader in lubrication and seal water monitoring. Key applications are found in the pulp and paper, mining, steel and chemical industries. The roots of the Kytola Group date back 100 years to 1906.

### FULL 10 YEAR WARRANTY

OK-VISE Oy has been a leading manufacturer of wedge-clamps for over 20 years. Some of our first customers have been using same clamps for this time and are still using them on daily basis. Based on this experience and after conducting extensive tests with our clamps we are prepared to give a full 10 year warranty for the quality of raw material and craftsmanship of all wedge and jaw parts of our low-profile clamps excluding the blackening, springs and sideplates.

Simply return the whole clamp with defected part directly to us and we will replace the part and ship the complete clamp back to you. Replaced sparepart and return shipping at our cost. The warranty does not cover damages caused by a machine malfunction, failure or machinist causing a damage due to a human error or a misuse of a clamp.

# OK-VISE®

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