

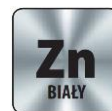
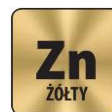
## Section 1. PRODUCT DESCRIPTION

### HARDENED COUNTERSUNK FLAT HEAD WOOD SCREW WITH FULL THREAD, PZ – KDH/KMH

Hardened screw KDH/KMH is made of zinc-plated low carbon steel coated with yellow or blue protective coating. Screws for connecting wooden elements including solid wood, glued laminated timber, X-Lam and LVL timber panels and wood-based panels. Screws have counter-sunk head with PZ drive, full thread and a special cutting point suitable for connections in wooden structures.

#### Features and advantages of screws:

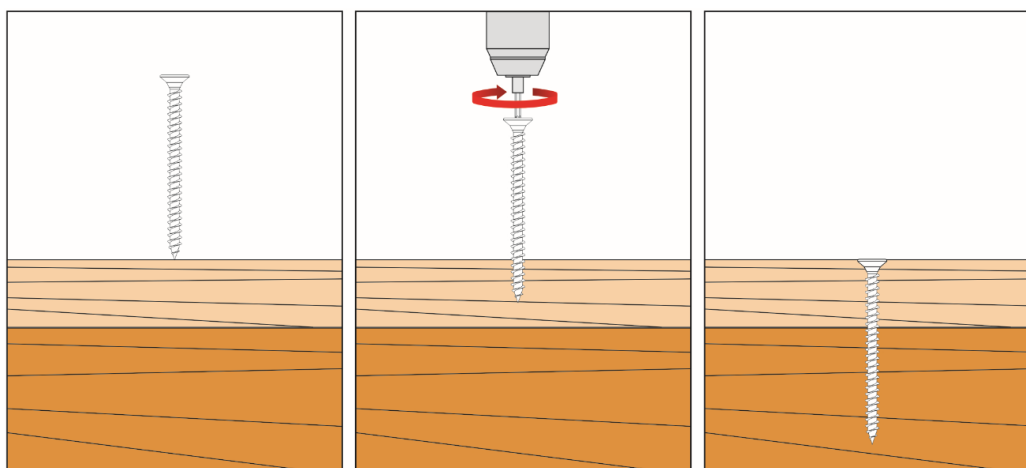
- wax coating – reduced torque, faster and easier installation
- counter-sunk head – ensures flush fitting of the screw in the installed member
- PZ drive – ensures fast and reliable installation
- profile of thread – provides fast and reliable connection
- full thread – provides maximum efficiency of connection when installing thin elements



Screws conform to European standard: PN-EN 14592:2008+A1:2012

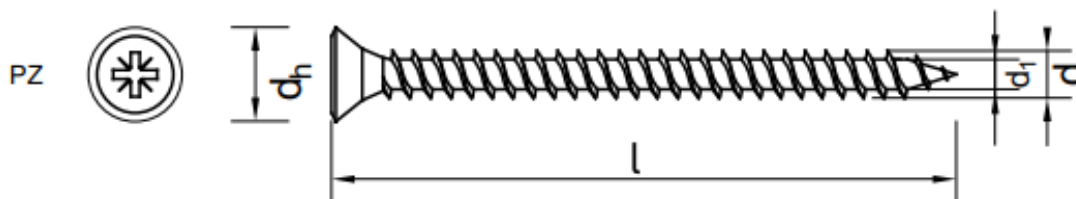
## Section 2. METHOD OF INSTALLATION

1. Original screws delivered by the manufacturer can be used only
2. Before installation select adequate length of screws depending on thickness of elements to be fastened and minimum anchorage depth
3. The fastened wooden elements should be defect-free (no knots, cracks, colourations, rots, structure and shape defects, mechanical damages) as any defects reduce their strength
4. Screws should be installed using screw gun and bit suitable for PZ drive
5. Screws should be driven directly in wooden substrate without prior drilling



**PRODUCT DATA SHEET – KDH/KMH**

**Section 3. TECHNICAL DATA**



TECHNICAL PARAMETERS							
Parameter	Unit	Value					
Thread outer diameter	d [mm]	3	3,5	4	4,5	5	6
Thread inner diameter	d <sub>1</sub> [mm]	2	2,25	2,65	2,8	3,1	3,8
Smooth part diameter	d <sub>s</sub> [mm]	-	-	-	-	-	-
Head diameter	d <sub>h</sub> [mm]	6	7	8	9	10	12
Head area	A [mm <sup>2</sup> ]	28	38	50	64	79	113
Length range	l [mm]	10-40	13-60	13-60	16-60	20-60	40-60
Drive type	-	PZ-1	PZ-2	PZ-2	PZ-2	PZ-2	PZ-3
Screw material	-	carbon steel					
Corrosion protection	galvanized	≥ 5 μm					
Corrosivity category	-	C1/C2					
Substrate material	wood	≥ C24					
European standard	-	PN-EN 14592:2008+A1:2012					

STRENGTH PARAMETERS							
Parameter	Unit	ø3	ø3,5	ø4	ø4,5	ø5	ø6
Material characteristic yield strength	M <sub>y,k</sub> [Nm]	2,454	3,641	5,162	7,023	9,247	14,815
Characteristic pull-out resistance	f <sub>ax,k,90</sub> [N/mm <sup>2</sup> ]	19,80	22,69	23,59	24,09	22,42	12,19
Characteristic resistance to head pull-through	f <sub>head,k</sub> [N/mm <sup>2</sup> ]	25,66	26,51	24,74	26,09	22,93	20,46
Characteristic resistance for tension	f <sub>tens,k</sub> [kN]	3,95	5,04	5,57	7,03	8,25	9,58
Characteristic torsional strength	f <sub>tor,k</sub> [Nm]	1,76	2,32	2,80	4,65	5,59	9,29
Screw resistance factor	R <sub>tor,k</sub> [Nm]	0,49	1,29	1,46	2,37	3,04	3,89

SELECTION TABLE										
Product marking		Number of pieces in a box	Product marking		Number of pieces in a box	Screw diameter	Screw length	Working thread length	Usable length	Drive type
Zn - yellow	Zn - blue	[kg]	Zn - yellow	Zn - blue	pcs	d [mm]	l [mm]	l <sub>g</sub> [mm]	t <sub>fix</sub> [mm]	[-]
KDH-30010(X5)	KDH-30010-B(X5)	5	-	-	-	3,0	10	-	-	PZ-1
KDH-30012(X5)	KDH-30012-B(X5)	5	KMH-30012	KMH-30012-B	2000	3,0	12	-	-	PZ-1
KDH-30013(X5)	KDH-30013-B(X5)	5	KMH-30013	KMH-30013-B	2000	3,0	13	-	-	PZ-1
KDH-30016(X5)	KDH-30016-B(X5)	5	KMH-30016	KMH-30016-B	2000	3,0	16	-	-	PZ-1
KDH-30020(X5)	KDH-30020-B(X5)	5	KMH-30020	KMH-30020-B	2000	3,0	20	-	-	PZ-1
KDH-30025(X5)	KDH-30025-B(X5)	5	KMH-30025	KMH-30025-B*	1500	3,0	25	-	-	PZ-1
KDH-30030(X5)	KDH-30030-B(X5)	5	KMH-30030	KMH-30030-B*	1000	3,0	30	-	-	PZ-1
KDH-30035(X5)	KDH-30035-B(X5)	5	KMH-30035	KMH-30035-B*	1000	3,0	35	-	-	PZ-1
KDH-30040(X5)	KDH-30040-B(X5)	5	KMH-30040	KMH-30040-B*	500	3,0	40	-	-	PZ-1
KDH-35013(X5)	KDH-35013-B(X5)	5	KMH-35013	KMH-35013-B	2000	3,5	13	-	-	PZ-2
KDH-35016(X5)	KDH-35016-B(X5)	5	KMH-35016	KMH-35016-B	2000	3,5	16	-	-	PZ-2
KDH-35020(X5)	KDH-35020-B(X5)	5	KMH-35020	KMH-35020-B	1500	3,5	20	-	-	PZ-2
KDH-35025(X5)	KDH-35025-B(X5)	5	KMH-35025	KMH-35025-B*	1000	3,5	25	-	-	PZ-2
KDH-35030(X5)	KDH-35030-B(X5)	5	KMH-35030	KMH-35030-B*	500	3,5	30	-	-	PZ-2
KDH-35035(X5)	KDH-35035-B(X5)	5	KMH-35035	KMH-35035-B*	500	3,5	35	-	-	PZ-2
KDH-35040(X5)	KDH-35040-B(X5)	5	KMH-35040	KMH-35040-B*	500	3,5	40	-	-	PZ-2
KDH-35045(X5)	KDH-35045-B(X5)	5	KMH-35045	KMH-35045-B*	500	3,5	45	-	-	PZ-2
KDH-35050(X5)	KDH-35050-B(X5)	5	KMH-35050	KMH-35050-B*	400	3,5	50	-	-	PZ-2
KDH-35060(X5)	KDH-35060-B(X5)	5	KMH-35060	KMH-35060-B*	400	3,5	60	-	-	PZ-2

**PRODUCT DATA SHEET – KDH/KMH**

KDH-40013(X5)	KDH-40013-B(X5)	5	KMH-40013	KMH-40013-B	1500	4,0	13	-	-	PZ-2
KDH-40016(X5)	KDH-40016-B(X5)	5	KMH-40016	KMH-40016-B	1000	4,0	16	-	-	PZ-2
KDH-40020(X5)	KDH-40020-B(X5)	5	KMH-40020	KMH-40020-B	1000	4,0	20	-	-	PZ-2
KDH-40025(X5)	KDH-40025-B(X5)	5	KMH-40025	KMH-40025-B	1000	4,0	25	-	-	PZ-2
KDH-40030(X5)	KDH-40030-B(X5)	5	KMH-40030	KMH-40030-B	500	4,0	30	-	-	PZ-2
KDH-40035(X5)	KDH-40035-B(X5)	5	KMH-40035	KMH-40035-B	500	4,0	35	-	-	PZ-2
KDH-40040(X5)	KDH-40040-B(X5)	5	KMH-40040	KMH-40040-B*	500	4,0	40	-	-	PZ-2
KDH-40045(X5)	KDH-40045-B(X5)	5	KMH-40045	KMH-40045-B*	300	4,0	45	-	-	PZ-2
KDH-40050(X5)	KDH-40050-B(X5)	5	KMH-40050	KMH-40050-B*	300	4,0	50	-	-	PZ-2
KDH-40055(X5)	KDH-40055-B(X5)	5	KMH-40055	KMH-40055-B*	250	4,0	55	-	-	PZ-2
KDH-40060(X5)	KDH-40060-B(X5)	5	KMH-40060	KMH-40060-B*	250	4,0	60	-	-	PZ-2
KDH-45016(X5)	KDH-45016-B(X5)	5	KMH-45016	KMH-45016-B	1000	4,5	16	-	-	PZ-2
KDH-45020(X5)	KDH-45020-B(X5)	5	KMH-45020	KMH-45020-B	1000	4,5	20	-	-	PZ-2
KDH-45025(X5)	KDH-45025-B(X5)	5	KMH-45025	KMH-45025-B	500	4,5	25	-	-	PZ-2
KDH-45030(X5)	KDH-45030-B(X5)	5	KMH-45030	KMH-45030-B	500	4,5	30	-	-	PZ-2
KDH-45035(X5)	KDH-45035-B(X5)	5	KMH-45035	KMH-45035-B	500	4,5	35	-	-	PZ-2
KDH-45040(X5)	KDH-45040-B(X5)	5	KMH-45040	KMH-45040-B*	300	4,5	40	-	-	PZ-2
KDH-45045(X5)	KDH-45045-B(X5)	5	KMH-45045	KMH-45045-B	300	4,5	45	-	-	PZ-2
KDH-45050(X5)	KDH-45050-B(X5)	5	KMH-45050	KMH-45050-B*	250	4,5	50	-	-	PZ-2
KDH-45060(X5)	KDH-45060-B(X5)	5	KMH-45060	KMH-45060-B*	250	4,5	60	-	-	PZ-2
-	KDH-50020-B(X5)	5	-	-	-	5,0	20	-	-	PZ-2
KDH-50025(X5)	KDH-50025-B(X5)	5	KMH-50025	KMH-50025-B*	500	5,0	25	-	-	PZ-2
KDH-50030(X5)	KDH-50030-B(X5)	5	KMH-50030	KMH-50030-B*	500	5,0	30	-	-	PZ-2
KDH-50035(X5)	KDH-50035-B(X5)	5	KMH-50035	KMH-50035-B	500	5,0	35	-	-	PZ-2
KDH-50040(X5)	KDH-50040-B(X5)	5	KMH-50040	KMH-50040-B	500	5,0	40	-	-	PZ-2
KDH-50045(X5)	KDH-50045-B(X5)	5	KMH-50045	KMH-50045-B*	300	5,0	45	-	-	PZ-2
KDH-50050(X5)	KDH-50050-B(X5)	5	KMH-50050	KMH-50050-B	300	5,0	50	-	-	PZ-2
KDH-50060(X5)	KDH-50060-B(X5)	5	KMH-50060	KMH-50060-B*	200	5,0	60	-	-	PZ-2
KDH-60040(X5)	KDH-60040-B(X5)	5	KMH-60040	KMH-60040-B*	200	6,0	40	-	-	PZ-3
KDH-60050(X5)	KDH-60050-B(X5)	5	KMH-60050	KMH-60050-B*	200	6,0	50	-	-	PZ-3
KDH-60060(X5)	KDH-60060-B(X5)	5	KMH-60060	KMH-60060-B*	200	6,0	60	-	-	PZ-3

\*Screw on request and to order

#### Section 4. REMARKS

1. All previous versions of this Product Data Sheet shall cease to be valid
2. Data given in this Product Data Sheet is in accordance with current knowledge and published in good faith. KLIMAS Sp. z o.o. is not responsible for correctness and quality of the fixing if recommendations regarding method of use and installation are not followed.