CE CERTIFICATE

Number:	**7-3-2013-A**
Producer:	Ferrometal Oy Supplier nr. 88
Product:	410 stainless steel countersunk head chipboard screws Per drawings: CTS-S-1110 Ruspert Brown, Ruspert Brown CF111, Ruspert Green G400Q and Ruspert Silver; CTS-S-1455 Ruspert Brown CF-111, Ruspert Green G400Q; CTS-S-1958 Ruspert Silver
Base of certificate:	Initial type test report 12.0737r date 2013-05-01.
Standard:	**EN 14592+A1: 2012**

SHR declares that it performed the initial type testing on the products mentioned, according to the standard: EN 14592+A1:2012. Detailed data of the testing is documented in SHR-report 12.0737r date 2013-05-01.

Wageningen, May 6th, 2013

Dr. ir. J.A. van Aken
Vice director

SHR matches all general requirements for the competence of testing and calibration laboratories according to NEN-EN-ISO/IEC 17025: 2005 and is audited for this by the Dutch Accreditation Counsel. SHR is recognised by the European Union as a notified body under the number 1686.
Detailed information can be found on the website www.ec.europa.eu/enterprise/newapproach/nando

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CERTIFICATE

CE Certificate **7-3-2013-B**

6-5-2013

Initial Type Testing results;

Types of screws tested;

Type A 410 SS 6 lobes countersunk head with 4 ribs chipboard screw coarse thread type 17 cutting point CTS-S-1110 ruspert green G-400Q. 4.2mm X 45mm

Type B 410 SS 6 lobes countersunk head with 4 ribs chipboard screw coarse thread type 17 cutting point CTS-S-1110 ruspert silver 4.8mm X 75mm

Type C 410 SS 6 lobes countersunk head with 4 ribs chipboard screw type 17 cutting point head angle 90° CTS-S-1455 ruspert brown CF 111 4.2mm X 55mm

Type D 410 SS 6 lobes countersunk head chipboard screw partial thread CTS-S-1958 ruspert silver 4.5mm X 50mm

Characteristic withdrawal resistance

Measured in Spruce 450 kg/m^3 WMC 13%

Type A	Type B	Type C	Type D
$F_{ax,k}$(Nmm²)	$F_{ax,k}$(Nmm²)	$F_{ax,k}$(Nmm²)	$F_{ax,k}$(Nmm²)
19.6	22.5	19.1	22.7

Characteristic pull through resistance

Measured in Okoume plywood, 18mm, 525 kg/m^3, EN 314 class 3

Type A	Type B	Type C	Type D
$F_{head,k}$ (Nmm^2)	$F_{head,k}$ (Nmm^2	$F_{head,k}$ (Nmm^2	$F_{head,k}$ (Nmm^2
42.4	28.0	36.6	34.9

Characteristic torsional resistance

Measured in Spruce 450 kg/m^3 WMC 13%

Type A	Type B	Type C	Type D
$R_{tor,k}$ (Nm)	$R_{tor,k}$ (Nm	$R_{tor,k}$ (Nm	$R_{tor,k}$ (Nm
0.84	1.78	0.77	0.87

Characteristic torsional ratio

Type A	Type B	Type C	Type D
$F_{tor,k}$ (Nm)	$F_{tor,k}$ (Nm)	$F_{tor,k}$ (Nm)	$F_{tor,k}$ (Nm)
3.93	4.15	8.21	3.91

Characteristic yield moment

Type A	Type B	Type C	Type D
$M_{y,k}$ (Nmm)	$M_{y,k}$ (Nmm)	$M_{y,k}$ (Nmm)	$M_{y,k}$ (Nmm)
3849	8478	4096	4939

Characteristic tensile capacity

Type A	Type B	Type C	Type D
$F_{tens,k}$ (Nmm^2)	$F_{tens,k}$ (Nmm^2)	$F_{tens,k}$ (Nmm^2)	$F_{tens,k}$ (Nmm^2)
440	479	454	440