

INSPECTION REPORT

LANDE END. METAL ÜRÜNLER SAN. VE TİC. A.Ş.

TÜV AUSTRIA TURK

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PROJECT NAME / REFERENCE NO

LN-SP-42U7511-M-BL, LN-SP-32U7511-M-BL, LN-SP-17U7511-M-BL,
(42U, 32U, 17 U) 19" (W=750X,D=1130x H=1000, W=750X,D=1130x H=1666,
W=750X,D=1130XH=2110) SOUNDproof series free standing Cabinets Static and
Dynamic Load Tests / 21-IS-2236

INSPECTION REQUESTED BY

LANDE ENDÜSTRİYEL METAL ÜRÜNLER SAN. VE TİC. A.Ş.

INSPECTION PLACE

20. CADDE NO: 14 ESKİŞEHİR ORGANİZE SANAYİ BÖLGESİ ESKİŞEHİR / TURKEY

INSPECTION DATES

14.03.2022



Report No

21-IS-2236-2022-IR-001

Rev

00

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Controlled Copy

Date of Report

15.03.2022

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Manufacturer Name/ Adress : LANDE ENDÜSTRİYEL METAL ÜRÜNLER
SAN. VE TİC. A.Ş.
20. Cadde No: 14 Eskisehir Organize
Sanayi Bolgesi Eskisehir / TURKEY

**Manufacturer Contact Person
& Contact Details** : Özlem KUMRU
QC Manager
ozlem.kumru@lande.com.tr

**Inspectors Name
& Contact Details** : Mutlu DEMİR
Independent 3rd Party Inspector TÜV AT

Subject of Inspection : 19" (W=750X,D=1130x H=1000)
(W=750X,D=1130x H=1666)
(W=750X,D=1130XH=2110)
SOUNDproof series free standing
Cabinets

Scope of Service : Dynamic and static load tests acc. to
Lande test instruction (TA-56.00)

INTRODUCTION

Lande Cabinet Center has ordered TÜV AUSTRIA TURK to witnessing the dynamic load test for rack cabinet according to Lande dynamic test instruction (TA-56.00)

Lande Cabinet has produce 19" (W=750X,D=1130xH=1000), (W=750X,D=1130xH=1666) (W=750X,D=1130xH=2110) SOUNDproof series free standing Cabinet. TÜV Austria Turk has applied the test 3 sample. Our inspector attended at premises of Lande cabinet center at Eskişehir. Free standing cabinet were subject to dimensions check according to Lande dynamic and static test instruction (TA-56.00)

2 DYNAMIC LOAD TEST

2.1 Static and Dynamic load test for 42 U,32U,17U DC Cabinet

The purpose of the static and dynamic load test is to evaluate the load bearing capability of the structural parts of subracks or the subrack as part of the chassis. After placing an equal amount of weight on subracks of the cabinet, the axial force is applied horizontally to the forward, backward and right, left in accordance with the determined speed value distance value, the displacement of the cabinet. then to analyze and evaluate its current situation.

2.2 Static load test conditions

1. First of all, weight and subracks weighted and placed on the subracks of the cabinet.



Each weight used for testing 32.2 kg



Subrack weight used for testing 11.2 kg

2. In total, **1500kg** weight should be loaded in subrack for static load test (inside the cabinet).



42U (W=750X,D=1130XH=2110) Cabinet



32 U (W=750X,D=1130x H=1666) Cabinet



17 U (W=750X,D=1130x H=1000) Cabinet



**17 U (W=750X,D=1130x H=1000) Cabinet
internal frame**



**32 U (W=750X,D=1130x H=1666) Cabinet
internal frame**



42U (W=750X,D=1130XH=2110) Cabinet internal frame



**42U (W=750X,D=1130XH=2110) Cabinet static
load test**



**32 U (W=750X,D=1130x H=1666) Cabinet static
load test**



17 U (W=750X,D=1130x H=1000) Cabinet static load test

2.3 Dynamic load test conditions

1. In total, **750kg** weight should be loaded in subrack for dynamic load test (inside the cabinet).



**42U (W=750X,D=1130XH=2110) Cabinet
dynamic load test**



**32 U (W=750X,D=1130x H=1666) Cabinet
dynamic load test**



17 U (W=750X,D=1130x H=1000) Cabinet dynamic load test

2. The cabinet test sample should be placed on a hard floor.



3. The cabinet test specimen should be assembled according to the intended use conditions (i.e. feet or wheels are attached).



4. The cabinet has a front door and the front door must be mounted on the front of the cabinet before testing.
5. The cabinet has a rear door and the rear door must be mounted at the back of the cabinet before testing.
6. The cabinet has side covers and the side covers should be mounted on the side of the cabinet before testing.

7. In the meantime, the cabinet is moved axially forward and backward and horizontally to the right and left with a forklift.
8. The cabinet was securely tied with a rope and one end of the rope was tied to the forklift, the other end was tied to the forklift, then the forklift speed was moved within a certain speed range ($V = 1.3-1.7\text{m/s}$).



9. The distance to move left and right horizontally was determined as 56 meters (28 meters go and 28 meters come back). This horizontal movement was completed once to the right and once to the left.



10. After the cabinet is moved forward and backward, it should be determined whether there is any mechanical deformation in the cabinet and subracks while the weights on the subracks in the cabinet are present.

2.4 Assessment following the static and dynamic load test

- After the cabinet is moved forward and backward, it should be determined whether there is any mechanical deformation in the cabinet and subracks while the weights on the subracks in the cabinet are present.
- No deformation (eg opening or closing of cabin doors) that would affect form, fit or function shall be allowed,
- Side pillars inside the cabinet are not warped and physically deformed,
- No slope and deflection on the shelves in the cabinet,
- Loss of movement and no functional loss in cabinet wheels,
- There was no evidence of guide rail deflection, damage, dislocation, shearing or loosening.
- There was no structural deformation affecting form, fit and function.

3. REMARKS AND RESULTS

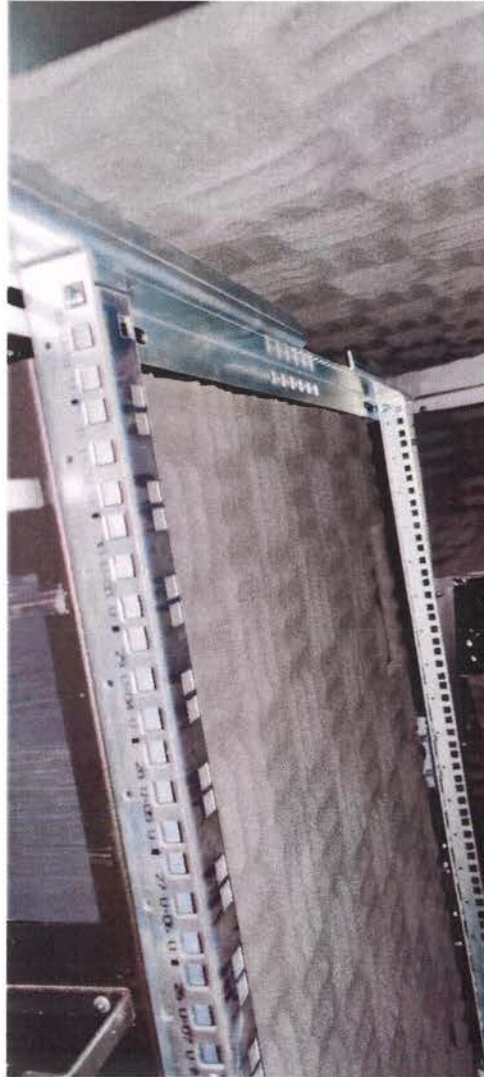
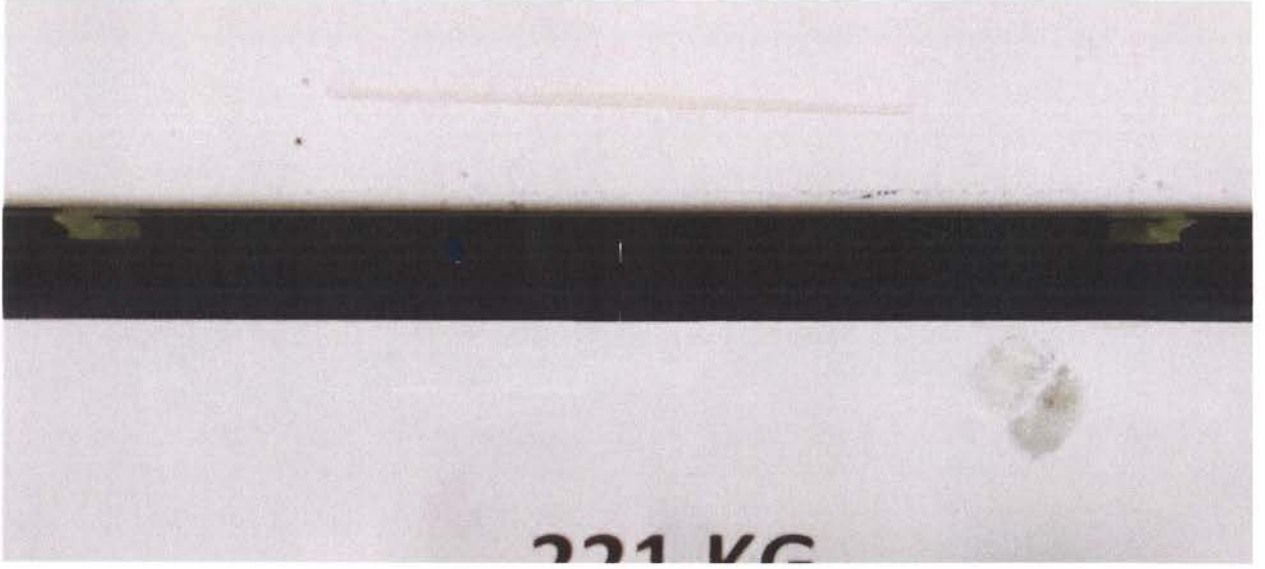
- Rackcabinet dimensions measurement checks were made,



- Control and tolerance for cabinet acc. to IEC 60917
- Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence,
- No deformation (eg opening or closing of cabin doors) that could affect form, fit or function was observed.



- No physical deformation was observed on the side pillars inside the cabinet. There was no slope on the subracks inside the cabinet.





- There was no loss of movement or functional loss in cabinet wheels.



4. ATTACHMENTS

- LANDE IDENTITY DECLARATION
- FR-115.00 LANDE STATIC AND DYNAMIC LOAD TEST REPORT
- TECHNICAL DRAWINGS CABINETS AND SUBRACK
- MATERIAL CERTIFICATES
- WHEEL TECHNICAL DATASHEET

Approvals & Disclaimers

The signatures below certify that this report has been reviewed and accepted and demonstrates that the signatories are aware of all the requirements contained herein and are committed to ensuring their provision.

This claim inspection report prepared on a best effort basis and is meant for information only. TÜV AUSTRIA TURK, with this report does not carry financial and legal obligation.

	Name, Surname	Signature	Position	Date
Prepared & Approved by	Mutlu DEMİR		Technical Manager	15.03.2022

31/01/2022

AYNİYET BEYANI IDENTITY DECLARATION

Mutlu DEMİR	TÜV AUSTRIA
Date:	Rev. ☒
App. ☐	

LN-SP-XXX model ürünlerin bütün teknik özelliklerinin (örn. tasarım, konstrüksiyon, özellikler, kritik komponentler) aynı olduğunu beyan ederiz.

We declare that all technical features (eg design, construction, features, critical components) of LN-SP-XXX model products are the same.

SOUNDproof Series Free Standing 19" Cabinets 17U W=750mm D=1130mm														
Product Number	Product Description	Size WxDXH mm	h size in U	h in mm	H mm, overall incl feet, castor and plinth	Width Overall mm	Width Rail to Rail mm	Depth Overall mm	Depth Shipping Conf. Rail to Rail mm	QTY IN PACKAGE	PACKING DIMENSIONS WxDXH mm	Standard NET Weight of product kgs	Gross Weight of Product kgs	QTY IN PALETTE
LN-SP-17U7511-M-BL	17U 19" SOUNDproof Cabinet W=750mm D=1130mm	750x1130x1000	17U	756	1000	750	19"	1130	740	1	820x1200x1120	138	152	1

SOUNDproof Series Free Standing 19" Cabinets 32U W=750mm D=1130mm														
Product Number	Product Description	Size WxDXH mm	h size in U	h in mm	H mm, overall incl feet, castor and plinth	Width Overall mm	Width Rail to Rail mm	Depth Overall mm	Depth Shipping Conf. Rail to Rail mm	QTY IN PACKAGE	PACKING DIMENSIONS WxDXH mm	Standard NET Weight of product kgs	Gross Weight of Product kgs	QTY IN PALETTE
LN-SP-32U7511-M-BL	32U 19" SOUNDproof Cabinet W=750mm D=1130mm	750x1130x1666	32U	1423	1666	750	19"	1130	740	1	820x1200x1787	165	183	1

SOUNDproof Series Free Standing 19" Cabinets 42U W=750mm D=1130mm														
Product Number	Product Description	Size WxDXH mm	h size in U	h in mm	H mm, overall incl feet, castor and plinth	Width Overall mm	Width Rail to Rail mm	Depth Overall mm	Depth Shipping Conf. Rail to Rail mm	QTY IN PACKAGE	PACKING DIMENSIONS WxDXH mm	Standard NET Weight of product kgs	Gross Weight of Product kgs	QTY IN PALETTE
LN-SP-42U7511-M-BL	42U 19" SOUNDproof Cabinet W=750mm D=1130mm	750x1130x2110	42U	1867	2110	750	19"	1130	740	1	820x1200x2231	210	228	1

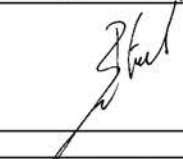
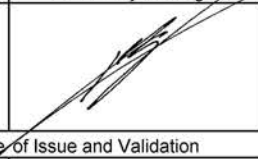
MMK METALURJİ SAN.TİC.VE LİMAN İŞLETMELİĞİ A.Ş.
 Address:Özerli Mah.Alparslan Türkeş Blv No:346
 T:+903267701000 F:+9032167181618 Web:www.mmkturkey.com.tr

INSPECTION CERTIFICATE
EN 10204 Type 3.1-ASTM A 924-/A924M

Certificate Id	Date	Complies	Document Id: KYS.FR.17.035
	06.09.2021	EN 10168	Publish Date: 21.03.2012
Prepared by Quality Control			Revising Date: 13.06.2017
			Revising 02
			Customer Name/Address
			AKPEN METAL MAKİNA
			BARAJ YOLU CADDESİ NO:20
			ESENŞEHİR Y.DUDULLU ÜMRANIYE
			Customer No: 0001121544
			Order No: 0015093388- 320
			Spec No: 050277001
			Order Date: 02.07.2021

Product Type			Steel Grade		Internal Diameter mm	Package	Coating Designation	Spangle	Surface Quality	Chemical Passivation Type	Oil Amount g/m2	Thickness		Width		Length		Any Supplementary Requirements	BARAJ YOLU CADDESİ NO:20 ESENSEHIR Y.DUDULLU ÜMRANIYE Customer No: 0001121544 Order No: 0015093388- 320 Spec No: 050277001 Order Date: 02.07.2021												
												mm	inch	mm	inch	mm	inch														
GCRP HOT DIPPED GALVANIZED COILS			DX51D+Z		508	RK ETW	50	M	A	C3	0.0	2,00	0,000	1000	0,000	0.0	0,000	Supplementary Information													
Heat Id	Parent Coil Id	Coil Id	Weight		Actual Length		Chemical Composition *																Mechanical and Technical Test								
																							Tensile Test								
							C %	Si %	Mn %	P %	S %	Al %	Ti %	Cu %	Mo %	Ni %	Cr %	V %	Nb %	N %	B %	N(ppm)	Ceq	Sample Location	Sample Direction	Yield Strength (Mpa)	Tensile Strength (Mpa)	Elongation %	Re/Rm	r 90	n 90
21M02438	2128C00820	2130G50407	9260	0,00	589	0,0000	0,0500	0,0100	0,2400	0,0110	0,0140	0,0460	0,0010	0,0500	0,0030	0,0300	0,0300	0,0030	0,0010	0,0050	0,0003	0	0,0000	2	1	238	336	36,50	0.70	-	-

Subrack Material Certificate


Sample Location	Test Direction	Checking of Marking, Surface, Shape and Dimension - OK			BETÜL SOYLU Specification and Certification Supervisor	ÖZGÜR KARAKAŞ Quality Control & Laboratory Manager	Stamp of Inspection Representative
1-Head	1-Transverse	MMK METALURJİ has been certified by IATF 16949:2016, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO/IEC 27001:2013 and ISO 50001:2018					
2-Tail	2-Longitudinal	REACH,RoSH declaration for Continuously Hot Dip Galvanized Coated and Organic Coated products.					
3-Head&Tail	3-45 Degree	It is hereby certified that the quality of goods mentioned in this document is in European standards and Certifications, and the goods may be exported.					
4-Centre		The tests specified with "" are within the scope of TS EN ISO/IEC 17025:2017 accreditation.					
5-Head&Tail&Centre		NOTE for Continuously Organic Coated products:*.Geo:d/8, Light:D65/10, SPIN,CIELab					
			Product Standard	EN10346	Date of Issue and Validation		
			Tolerances Dimension and Shape	EN10143			
			Special Instruction		06.09.2021	06.09.2021	

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

ÇIKARILMIŞ SERMAYE : 3.500.000.000 TL

ÜRETİM YERİ : ERDEMİR
MÜŞTERİ ADI : AKPEN METAL MAKİNA PLASTİK SAN.VE TİC.LTD.ŞTİ.
SİPARİŞ NO : 21100621335
EBAD , mm : 1.5 X 1500 X R mm
STANDART ve KALİTESİ : EN 10130-2006 DC01 (ERDEMİR 6112)
ÜRÜN TİPİ ve AÇIKLAMASI : CCR : SOĞUK HADDELENMİŞ, SÜREKLİ TAVLAMA YAPILMIŞ A YÜZEY RULO
ŞARTNAME NO : 21100045631
LOT NO :



TEST SERTİFİKASI

EN 10204 : 2004 TİP 2.2

TARİH : 28/10/2021

SERTİFİKA NO : 21Y000165265

SAYFA NO : 1 / 1

KAPLAMA AĞIRLIĞI (GR/M2) -
YAĞLAMA MİKTARI (MG/M2) 2000
YÜZEY PÜRÜZLÜLÜĞÜ 0.61-01.9

ÜRÜN BİLGİLERİ					MEKANİK ÖZELLİKLER															
					ÇEKME TESTİ										BH TESTİ			SERTLİK_ORT	KATLAMA	
																				NUM YERİ YÖNÜ
					N/ MM2	N/ MM2	UZAMA A80	BH_YS	BH	BH2	KMÇ AÇI									
Etiket No	Tonaj (KG)	Döküm No	Bobin / Paket / Levha No	Dilim Adedi																
1210314325044	12,790	1R2168886	31214538200		BE	264	340	37.9												
1210314325060	13,190	1R2168990	31214201100		BE	253	347	32.5												
1210314325114	13,850	F867753	61804194100		BE	237	333	33.3												

AE AÇIKLAMALAR
Pcm=C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B
IIW/Ceq=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Ceq=C+Mn/6
Ceq=C+(Mn+Si)/6
UCS: 230C*+190S+75P+45Nb-12.3Si-5.4Mn-1
AE1: Nb+V+Ti AE2: Cu+Cr+Ni
AE3: Cr+Cu+Mo+Ni AE4: Cr+Mo+Ni
AE5: Al/N AE6: Cu+Ni
AE7: P+S AE8: Si+2.5P
AE9: Ti/N AE10: Ti/B
AE11: Mn/Si AE12: Cu+Ni+Cr+Mo+V
AE13: Mo+Cr AE14: Cr+Cu+Mo
AE15: Nb+V AE16: Nb+V+Ti+B
AE17: Nb+Ti AE18: C+P
AE19: Mn+Cr+Mo AE20: Mn/C
AE21: 3.4N + 1.5S AE22: Al+Si
AE23: Mn+Si AE24: Cu+Ni+Mo
AE25: C + (Mn/5) + (5*P)-(Ni/10)-(Mo/15)+(Cu/10) (Segregasyon Endeksi)

KİMYASAL BİLEŞİM , DÖKÜM ANALİZİ						
DÖKÜM NO	C	Mn	P	S	Si	Al
	%	%	%	%	%	%
1R2168886	0,041	0,182	0,009	0,011	0,011	0,033
1R2168990	0,035	0,219	0,012	0,010	0,012	0,043
F867753	0,038	0,190	0,011	0,006	0,008	0,042

Internal Frame Material Certificate



EREĞLİ DEMİR ve ÇELİK FABRİKALARI T.A.Ş. BU MALZEMENİN BAZİK OKSİJEN METODU İLE YAPILMIŞ OLDUĞUNU VE EN 10130-2006 DC01 (ERDEMİR 6112) KAİDELERİNE UYGUN OLARAK TEST EDİLDİĞİNİ YUKARIDAKİ DEĞERLERİ İLE TEVSİK EDER .

İBRAHİM AKDÜMBEK
METALURJİ LABORATUVARI
MÜHENDİSİ

SERKAN DİKEÇ
KALİTE METALURJİ
MÜDÜRÜ

EREĞLİ DEMİR ve ÇELİK FABRİKALARI T.A.Ş.

ÇIKARILMIŞ SERMAYE : 3.500.000.000 TL

ÜRETİM YERİ : ERDEMİR

T E S T S E R T İ F İ K A S I
EN 10204 : 2004 TYPE 2.2

TARİH :21/08/2020

SERTİFİKA NO :0115174Y

SAYFA NO : 1

MÜŞTERİ ADI :AKPEN METAL MAKİNA PLASTİK SAN.VE TİC.LTD.ŞTİ.

SİPARİŞ NO :08229711008

EBAT,mm : 2.000 X 900 X R

STANDART ve KALİTESİ :EN 10130-2006 DC01 (ERDEMİR 6112)

ÜRÜN TİPİ ve AÇIKLAMASI :CCR:SÜREKLİ TAVLAMA YAPILMIŞ A YÜZEY RULO

YÜZEY PÜRÜZLÜLÜĞÜ : 0.61 / 1.90

Ü R Ü N B İ L G İ L E R İ					M E K A N İ K Ö Z E L L İ K L E R										K İ M Y A S A L B İ L E Ş İ M , D Ö K Ü M A N A L İ Z İ %										
ETİKET	NO	TONAJ (Ton)	DÖKÜM NO	BOBİN veya LEVHA NO	DİLİM veya LEVHA ADET	ÇEKME TESTİ NUM	YER	AKMA	ÇEKME %	UZ	LAMA	BH	r	n	LİK	DARBE TESTİ, joule YÖNÜ :	YÜKSEK SICAK 'C	AKMA 'C	N/MM2	C %	MN %	P %	S %	SI %	AL %
0430247796		8,380	020810	20165173100		BE	266.7	351.1	36											0.035	0.184	0.012	0.009	0.013	0.025

Internal Frame Material Certificate



EREĞLİ DEMİR ve ÇELİK FABRİKALARI T.A.Ş. BU MALZEMENİN BAZİK OKSİJEN METODU İLE YAPILMIŞ OLDUĞUNU ve EN 10130-2006 DC01 (ERDEMİR 6112) KAİDELERİNE UYGUN OLARAK TEST EDİLDİĞİNİ YUKARIDAKİ DEĞERLERİ İLE TEVSİK EDER.

İBRAHİM AKDÜMBEK
METALURJİ LABORATUVARI
MÜHENDİSİ

SERKAN DİKEÇ
KALİTE METALURJİ MÜDÜRÜ

NOT : B:Baştan, O:Ortadan, S:Sondan, E:Enine, L:Boyuna
MERSİS No(İstanbul Merkez):0352-0006-4260-0020;Ticaret Sicil No(İstanbul Şube):90659;Ticaret Sicil No(Ereğli Şube):1574/272
Merkez:İstanbul Barbaros Mah. Ardiç Sok. No: 6 34746 Ataşehir-İstanbul

www.erdemir.com.tr



7.2.1 Static ve Dynamic load tests

Product Definition:	32 U 750 1130 Cabin	Product Size:	750x1130	Production date:	28.02.2022
Product code:	LN-SP-17U7511-C-BL				

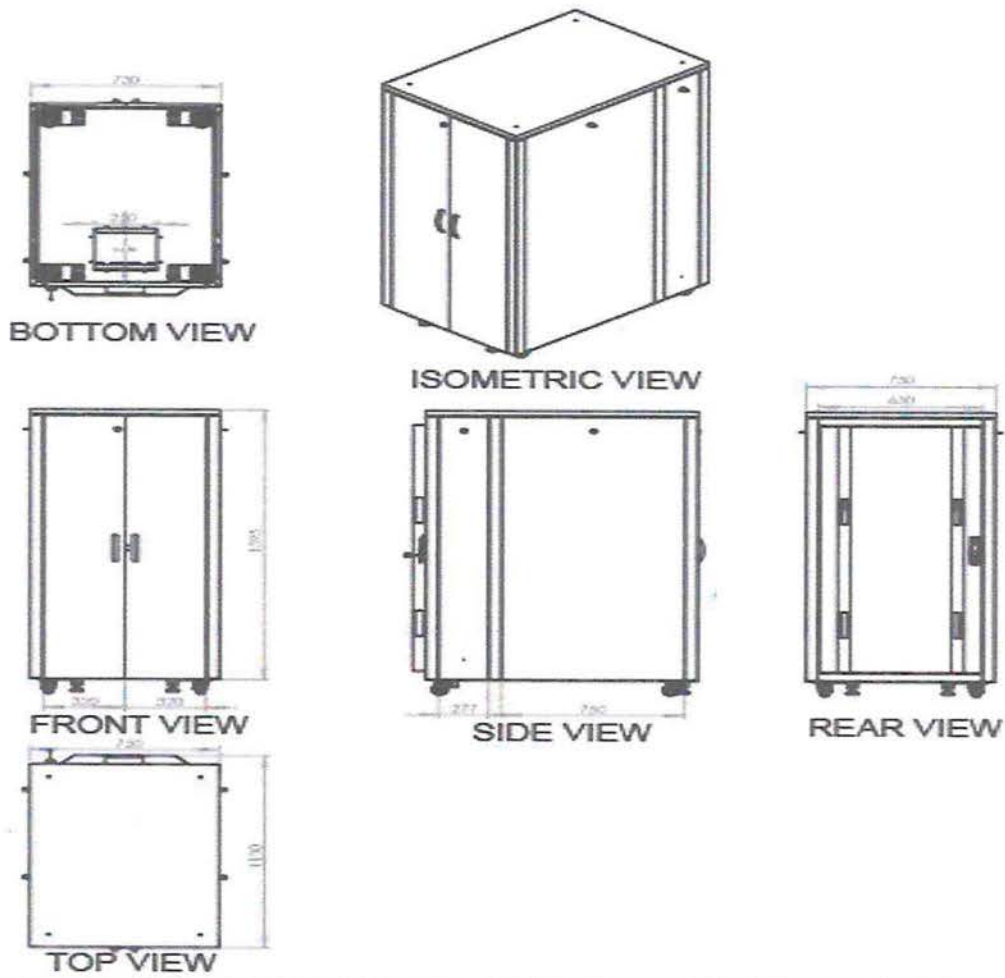


Figure 1- Technical Picture of the Product

CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917

Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K
Rack 4	251	NOK	O.K	Rack 4	251	NOK	O.K
Rack 5	251	NOK	O.K	Rack 5	251	NOK	O.K
Rack 6	251	NOK	O.K	Rack 6	251	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K
Rack 4	251	NOK	O.K	Rack 4	251	NOK	O.K
Rack 5	251	NOK	O.K	Rack 5	251	NOK	O.K
Rack 6	251	NOK	O.K	Rack 6	251	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K
Rack 4	251	NOK	O.K	Rack 4	251	NOK	O.K
Rack 5	251	NOK	O.K	Rack 5	251	NOK	O.K
Rack 6	251	NOK	O.K	Rack 6	251	NOK	O.K

Dynamic Sequence of Movement and Post Dynamic Movement analyzes are given below

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 2	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917

Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence

In TA-56.00 Dynamic Load Test Instruction, under the title of Evaluation Following Test

As a result of  the positive fulfillment of the criteria specified in articles b1), b2), b3) within the scope of evaluating the physical condition of the cabinet during and after the dynamic movement sequence the sample is evaluated as passed the Dynamic Load Test of the cabinet.

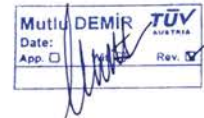
Static Load test result (before and after test)Total 1506 kg on the racks of the Cabinet (251x6= 1506kg) does not cause physical deformation and functional problems of any parts of the cabinet .It must be transported without loss.

Dynamic Load test result (before and after test)Total 753 kg on the racks of the Cabinet (251x3=753 kg) does not cause physical deformation and functional problems of any parts of the cabinet. It must be transported without loss.

(Technical details are specified in TA-56.00 Dynamic Load Test Instruction)

Within the scope of TS EN 61587-1 / 23.03.2010 (Type Tests for Mechanical Structures for Electronic Devices) It has the TSE Conformity Certificate of the Turkish Standards Institute.

Within the scope of TS EN / IEC 61587-1: 2018 (Type Tests for Mechanical Structures for Electronic Devices) It has the Product Certificate of LVT Independent Test Laboratories.



Prepared by	Approved by:
Özlem Kumru	Şenol Topcu



7.2.1 Static ve Dynamic load tests

Product Definition:	42U 750 1130 Cabin	Product Size:	750x1130	Production date:	28.02.2022
Product code:	LN-SP-42U7511-C-BL				

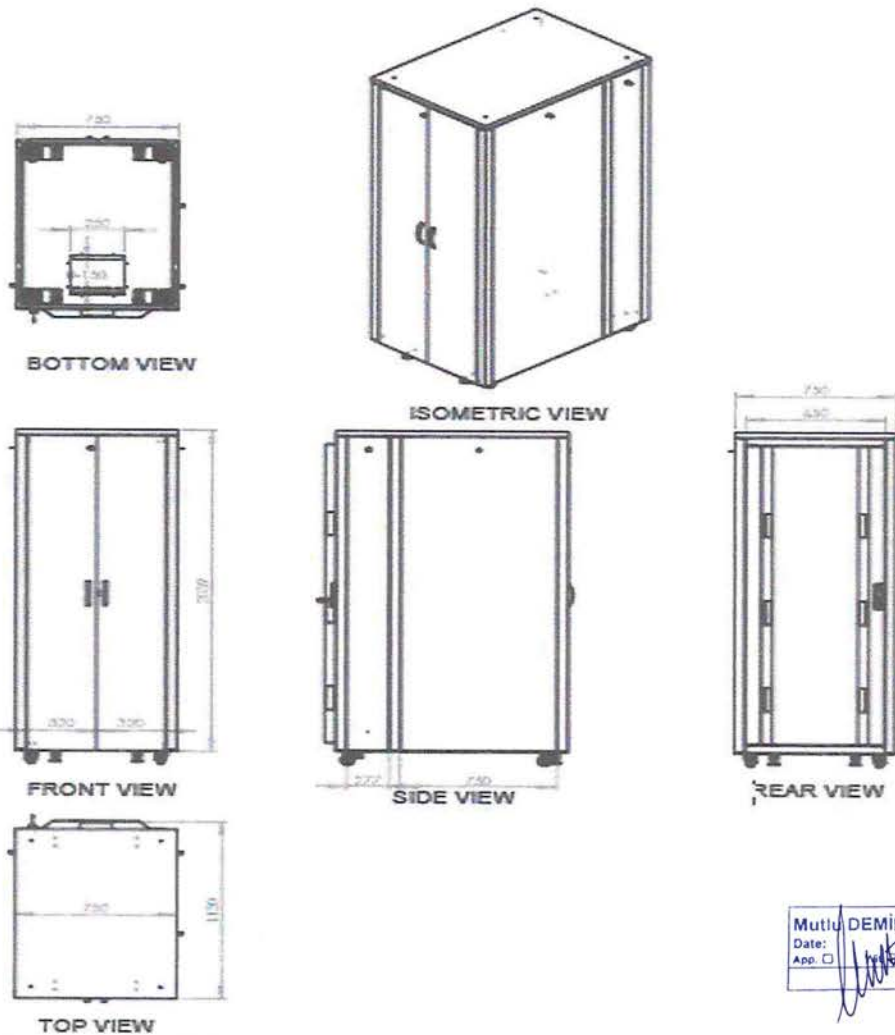


Figure 1- Technical Picture of the Product

CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917

Evaluation results from the physical state of the cabinet during and after the static status sequence

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	221	NOK	O.K	Rack 1	221	NOK	O.K
Rack 2	221	NOK	O.K	Rack 2	221	NOK	O.K
Rack 3	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 4	221	NOK	O.K	Rack 4	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 5	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 6	221	NOK	O.K
Rack 7	191	NOK	O.K	Rack 7	221	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	221	NOK	O.K	Rack 1	221	NOK	O.K
Rack 2	221	NOK	O.K	Rack 2	221	NOK	O.K
Rack 3	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 4	221	NOK	O.K	Rack 4	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 5	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 6	221	NOK	O.K
Rack 7	191	NOK	O.K	Rack 7	191	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	221	NOK	O.K	Rack 1	221	NOK	O.K
Rack 2	221	NOK	O.K	Rack 2	221	NOK	O.K
Rack 3	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 4	221	NOK	O.K	Rack 4	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 5	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 6	221	NOK	O.K
Rack 7	191	NOK	O.K	Rack 7	191	NOK	O.K

Dynamic Sequence of Movement and Post Dynamic Movement analyzes are given below

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917

Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence

In TA-56.00 Dynamic Load Test Instruction, under the title of Evaluation Following Test

As a result of  the positive fulfillment of the criteria specified in articles b1), b2), b3) within the scope of evaluating the physical condition of the cabinet during and after the dynamic movement sequence the sample is evaluated as passed the Static Load Test and Dynamic Load Test of the cabinet.

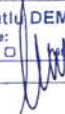
Static Load test result (before and after test)Total 1517 kg on the racks of the Cabinet (221x6+191= 1517kg) does not cause physical deformation and functional problems of any parts of the cabinet .It must be transported without loss.

Dynamic Load test result (before and after test)Total 753 kg on the racks of the Cabinet (251x3=753 kg) does not cause physical deformation and functional problems of any parts of the cabinet. It must be transported without loss.

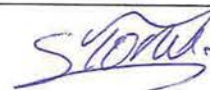
(Technical details are specified in TA-56.00 Dynamic Load Test Instruction)

Within the scope of TS EN 61587-1 / 23.03.2010 (Type Tests for Mechanical Structures for Electronic Devices) It has the TSE Conformity Certificate of the Turkish Standards Institute.

Within the scope of TS EN / IEC 61587-1: 2018 (Type Tests for Mechanical Structures for Electronic Devices) It has the Product Certificate of LVT Independent Test Laboratories.

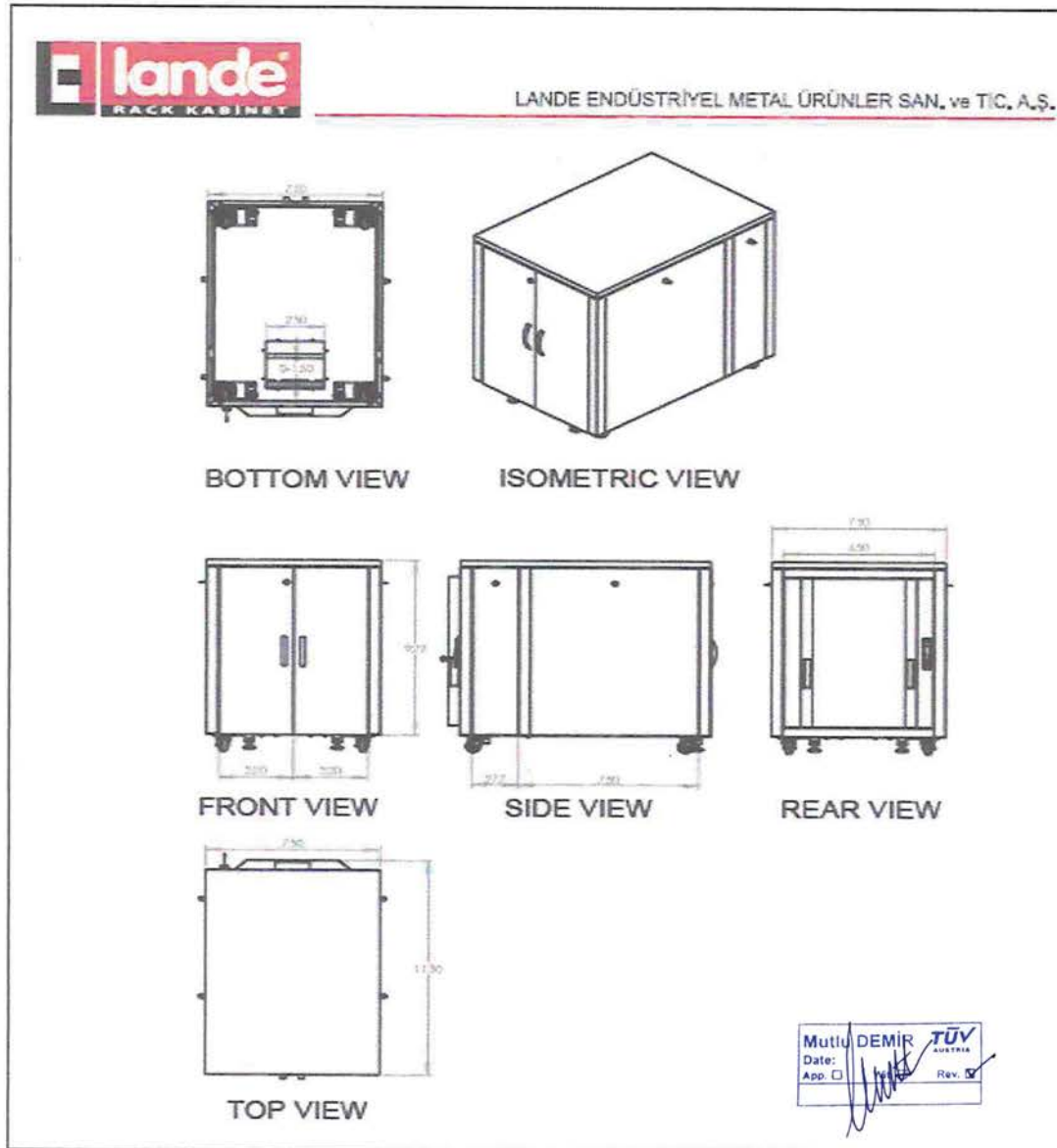
Mutlu DEMİR TÜV
Date: 
App: ☐ Rev: 

Prepared by	Approved by:
Özlem Kumru	Şenol Topcu



7.2.1 Static ve Dynamic load tests

Product Definition:	17U 750 1130 Cabin	Product Size:	750x1130	Production date:	28.02.2022
Product code:	LN-SP-17U7511-C-BL				

**Figure 1- Technical Picture of the Product****CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917**

Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	281	NOK	O.K	Rack 1	281	NOK	O.K
Rack 2	281	NOK	O.K	Rack 2	281	NOK	O.K
Rack 3	281	NOK	O.K	Rack 3	281	NOK	O.K
Rack 4	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 3	221	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	281	NOK	O.K	Rack 1	281	NOK	O.K
Rack 2	281	NOK	O.K	Rack 2	281	NOK	O.K
Rack 3	281	NOK	O.K	Rack 3	281	NOK	O.K
Rack 4	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 3	221	NOK	O.K

Static Status Sequence				After Static Status			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	281	NOK	O.K	Rack 1	281	NOK	O.K
Rack 2	281	NOK	O.K	Rack 2	281	NOK	O.K
Rack 3	281	NOK	O.K	Rack 3	281	NOK	O.K
Rack 4	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 5	221	NOK	O.K	Rack 3	221	NOK	O.K
Rack 6	221	NOK	O.K	Rack 3	221	NOK	O.K

Dynamic Sequence of Movement and Post Dynamic Movement analyzes are given below

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result	Rack Number	Load (kg)	Side bolts inside the cabinet are not warped and physically deformed.	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result	Rack Number	Load (kg)	Inclination and deflection of the shelves in the cabinet	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

Dynamic Sequence of Movement				Post Dynamic Movement			
Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result	Rack Number	Load (kg)	Loss of movement and functional loss in cabinet wheels	Test Result
Rack 1	251	NOK	O.K	Rack 1	251	NOK	O.K
Rack 2	251	NOK	O.K	Rack 2	251	NOK	O.K
Rack 3	251	NOK	O.K	Rack 3	251	NOK	O.K

CONTROL AND EVALUATION IEC 60917 / CONTROL AND TOLERANCE IEC 60917

Evaluation results from the physical state of the cabinet during and after the dynamic movement sequence

In TA-56.00 Dynamic Load Test Instruction, under the title of Evaluation Following Test

As a result of  the positive fulfillment of the criteria specified in articles b1), b2), b3) within the scope of evaluating the physical condition of the cabinet during and after the dynamic movement sequence the sample is evaluated as passed the Dynamic Load Test of the cabinet.

Static Load test result (before and after test) Total 1506 kg on the racks of the Cabinet $(281 \times 3) + (221 \times 3) = 843 + 663 = 1506$ kg does not cause physical deformation and functional problems of any parts of the cabinet .It must be transported without loss.

Dynamic Load test result (before and after test) Total 753 kg on the racks of the Cabinet $(251 \times 3 = 753$ kg) does not cause physical deformation and functional problems of any parts of the cabinet. It must be transported without loss.

(Technical details are specified in TA-56.00 Dynamic Load Test Instruction)

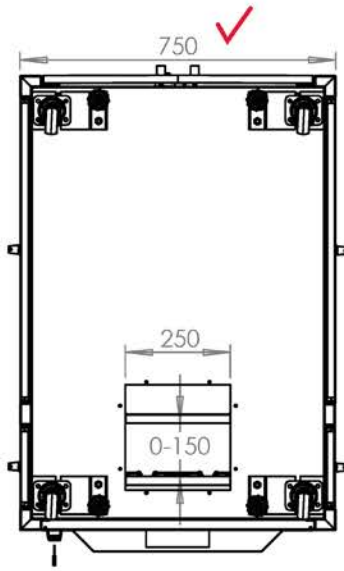
Within the scope of TS EN 61587-1 / 23.03.2010 (Type Tests for Mechanical Structures for Electronic Devices) It has the TSE Conformity Certificate of the Turkish Standards Institute.

Within the scope of TS EN / IEC 61587-1: 2018 (Type Tests for Mechanical Structures for Electronic Devices) It has the Product Certificate of LVT Independent Test Laboratories.

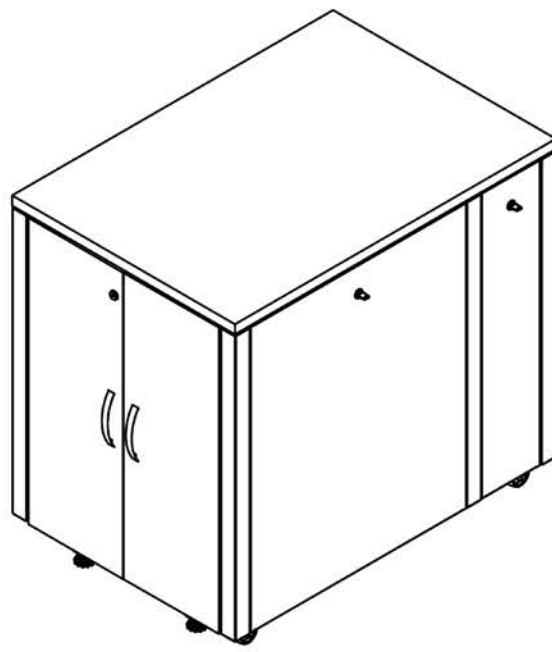


Prepared by	Approved by:
Özlem Kumru	Şenol Topcu

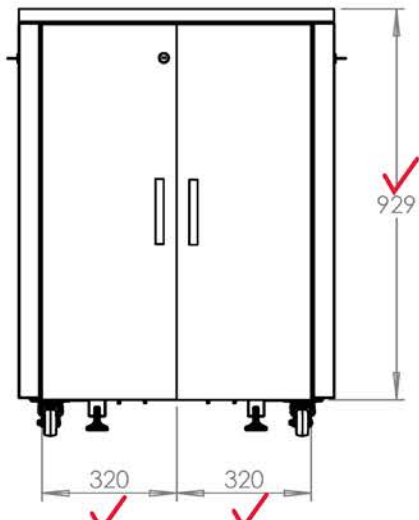




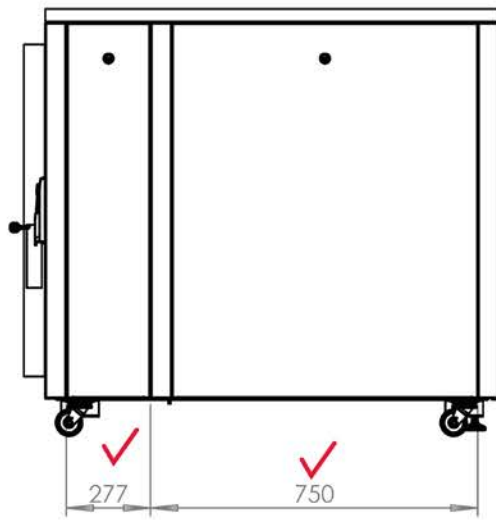
BOTTOM VIEW



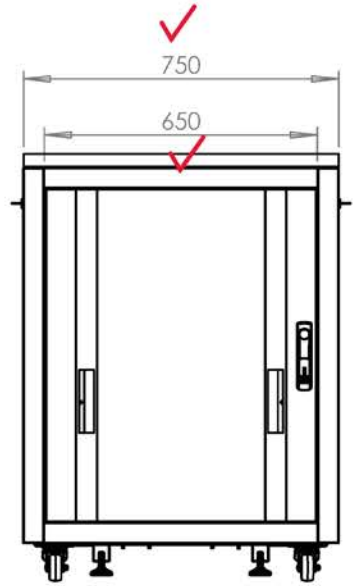
ISOMETRIC VIEW



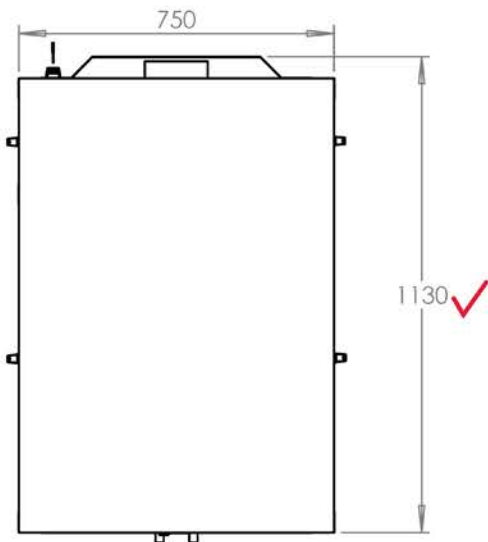
FRONT VIEW



SIDE VIEW



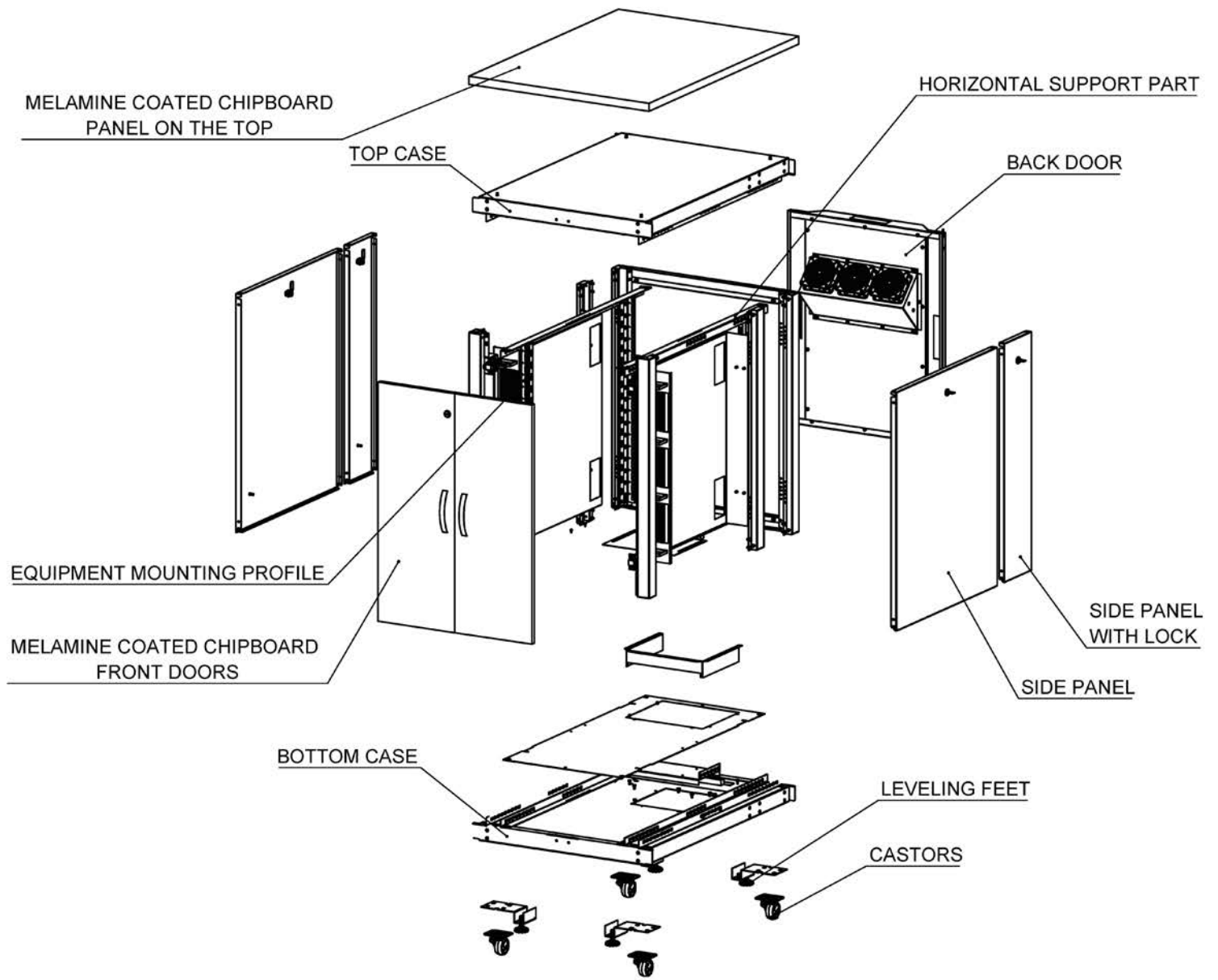
REAR VIEW



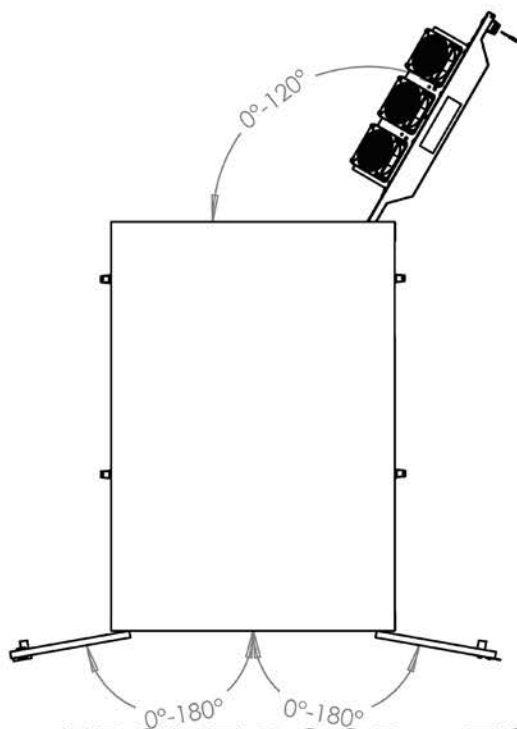
TOP VIEW



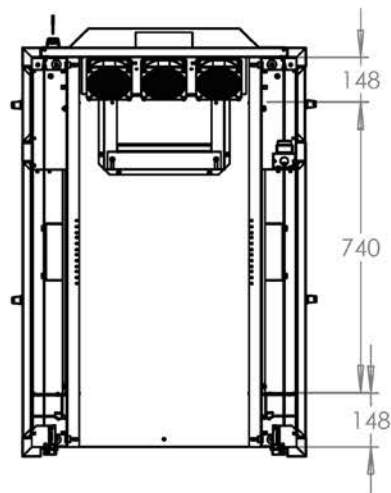
Dimensions checked by during the inspection



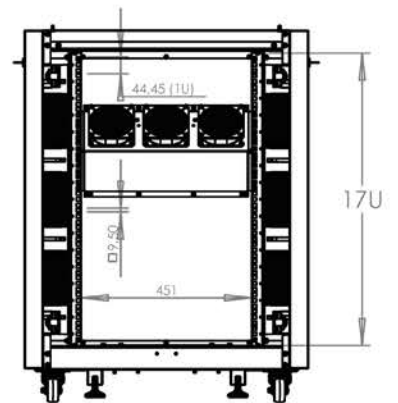
EXPLODED VIEW



FRONT DOOR
OPENING ANGLE

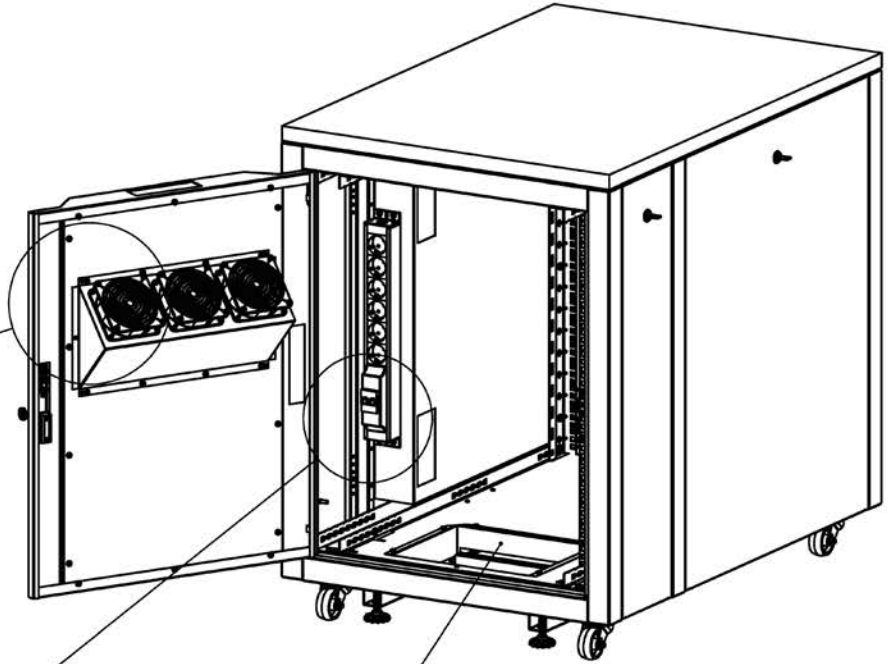
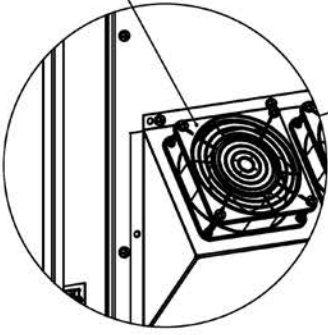


EQUIPMENT MOUNTING
DISTANCE

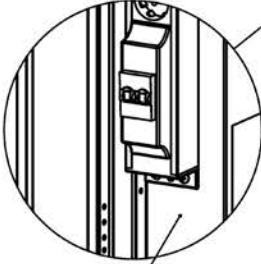


DIMENSIONS IN
WIDTH AND HEIGHT

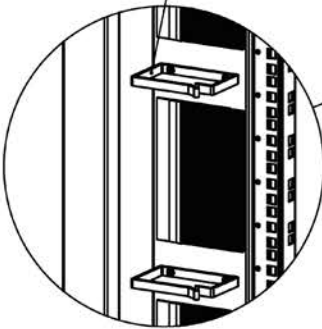
FAN MODULE



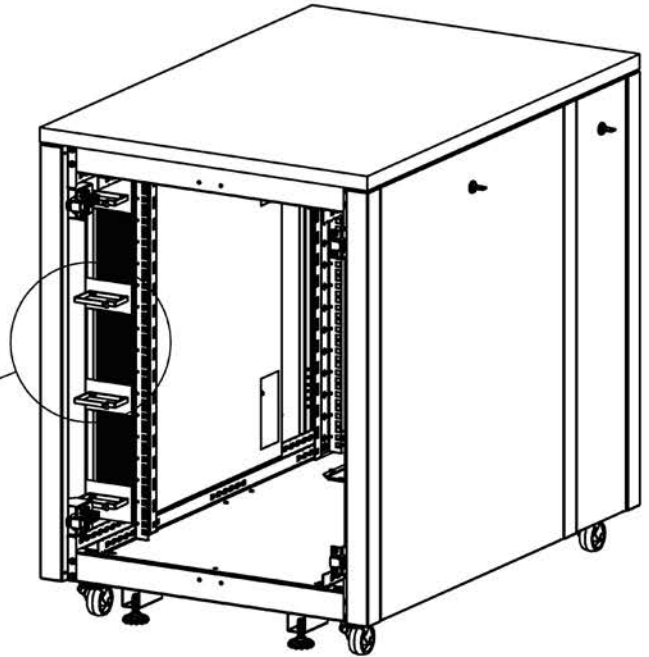
SLIDING, GASKETTED
CABLE ENTRY
ON THE BOTTOM

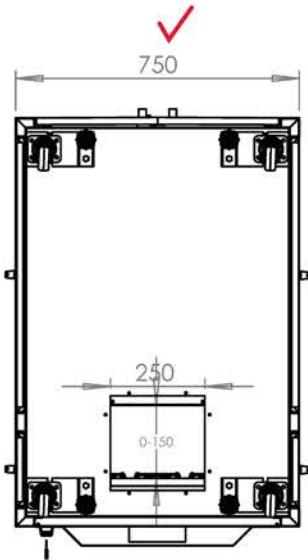


VERTICAL PDU
ASSEMBLY

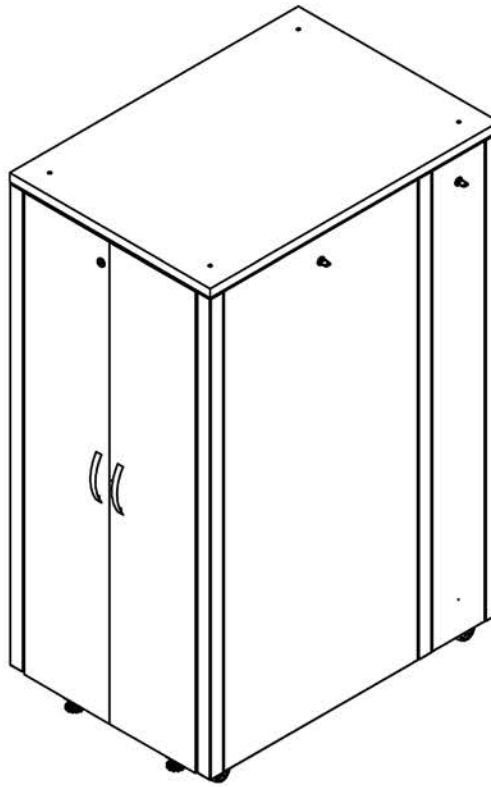


CABLE MANAGEMENT RINGS
AND
BRUSHES

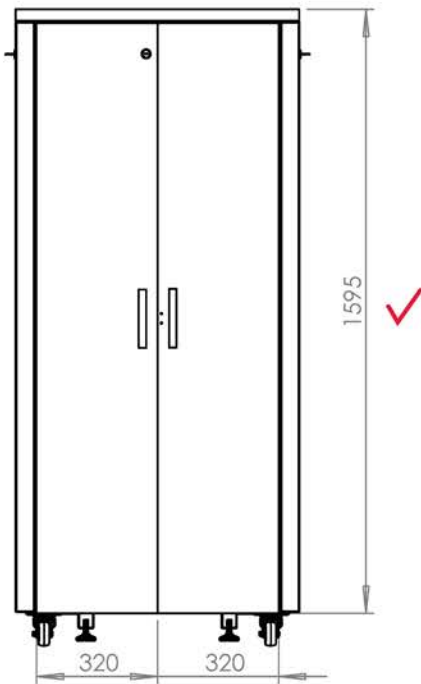




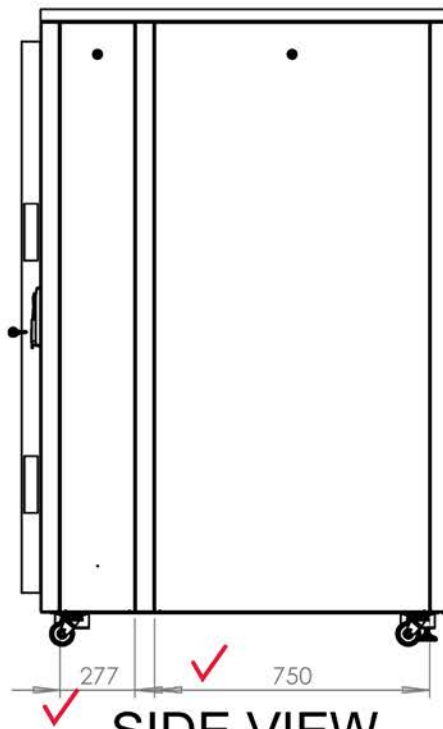
BOTTOM VIEW



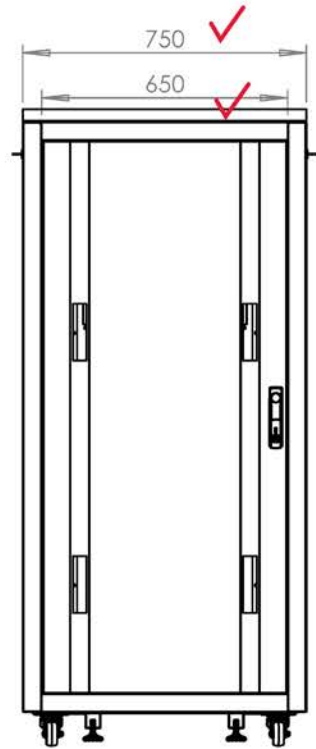
ISOMETRIC VIEW



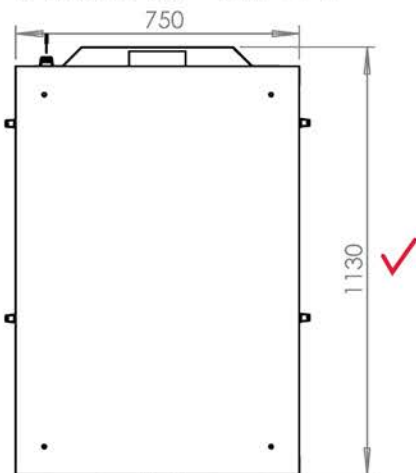
FRONT VIEW



SIDE VIEW

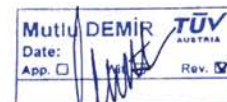


REAR VIEW



TOP VIEW

Dimensions checked by during the inspection



MELAMINE COATED CHIPBOARD
PANEL ON THE TOP

HORIZONTAL SUPPORT PART

TOP CASE

BACK DOOR



SIDE PANEL WITH LOCK

MELAMINE COATED CHIPBOARD
FRONT DOORS

EQUIPMENT MOUNTING PROFILE

SIDE PANEL

BOTTOM CASE

CASTORS

LEVELING FEET

0°-120°

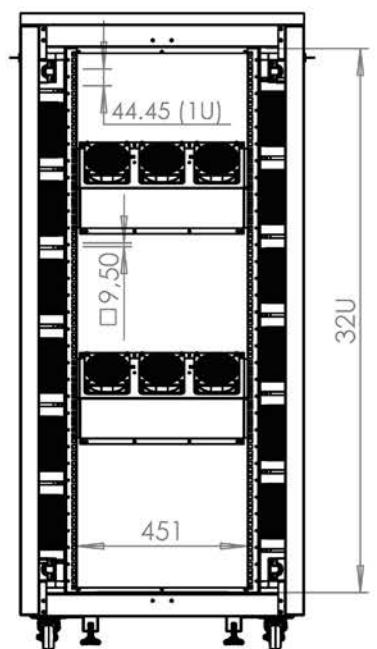
0°-180°

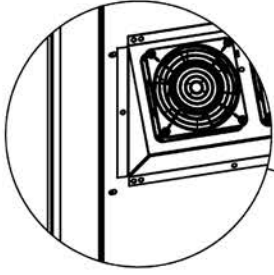
0°-180°

FRONT DOOR
OPENING ANGLE

EQUIPMENT
MOUNTING DISTANCE

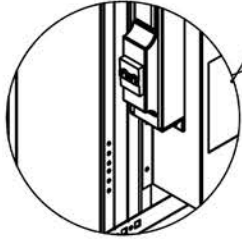
DIMENSIONS IN
WIDHT AND HEIGHT



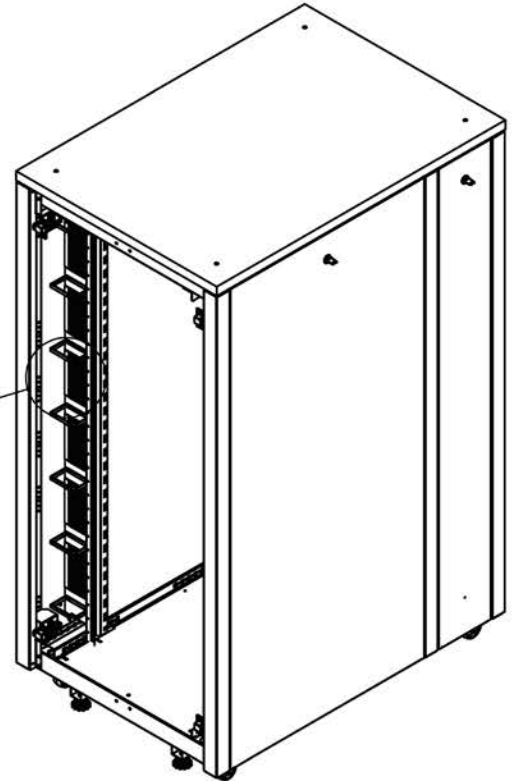
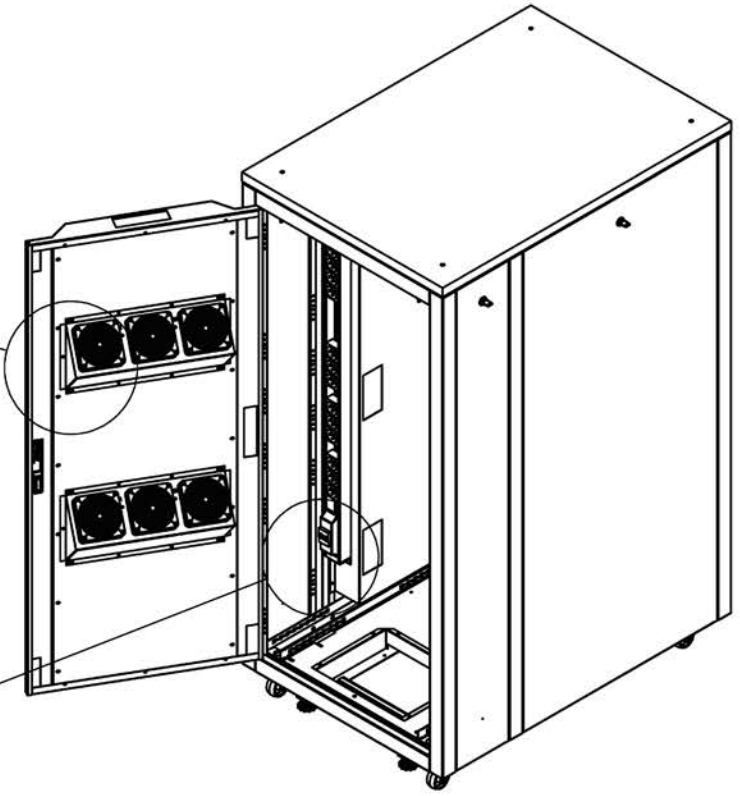
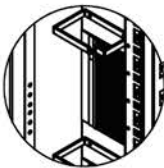


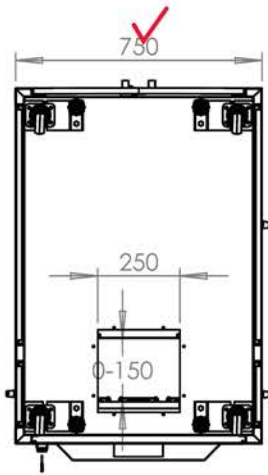
FAN MODULE

VERTICAL PDU ASSEMBLY

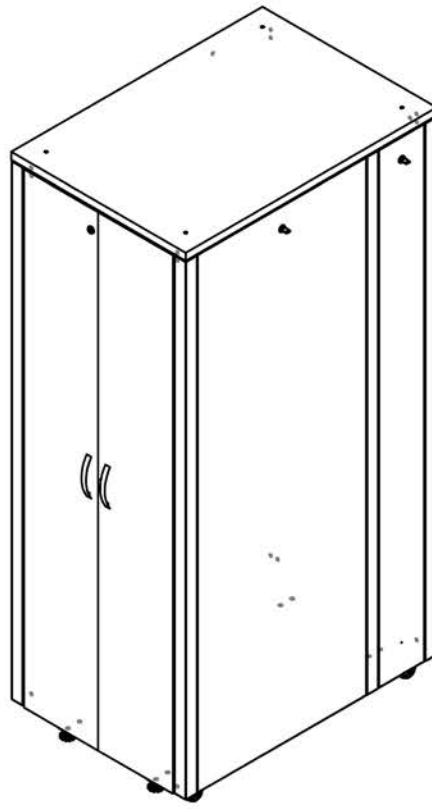


CABLE MANAGEMENT RINGS
AND
BRUSHES

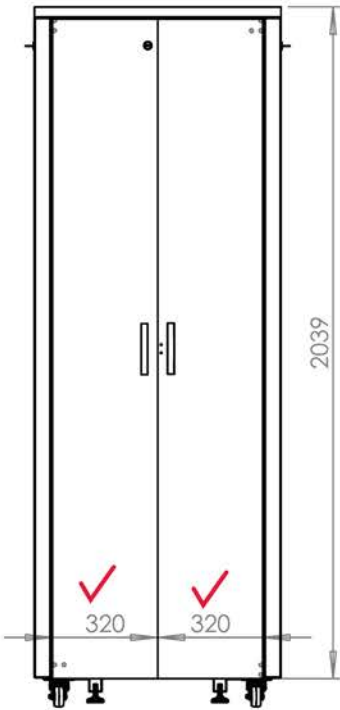




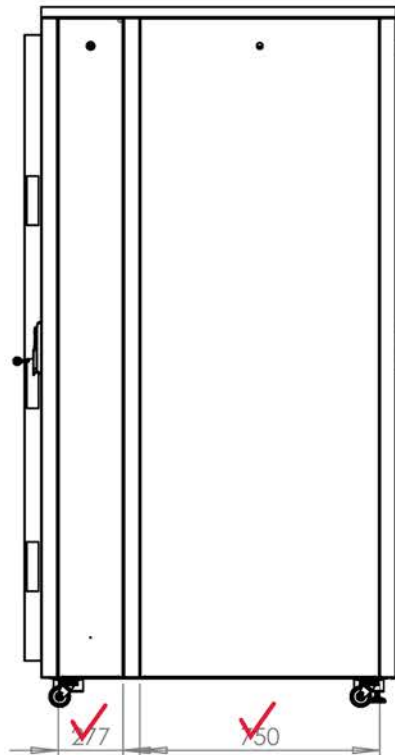
BOTTOM VIEW



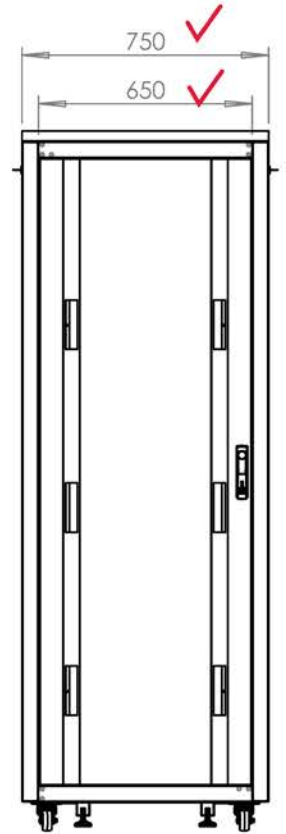
ISOMETRIC VIEW



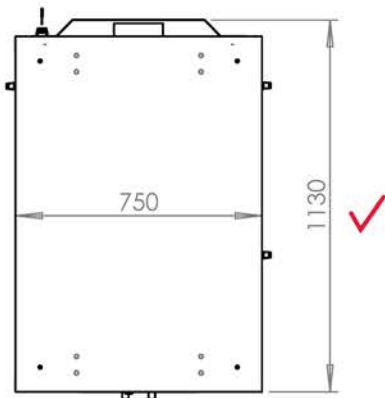
FRONT VIEW



SIDE VIEW

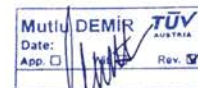


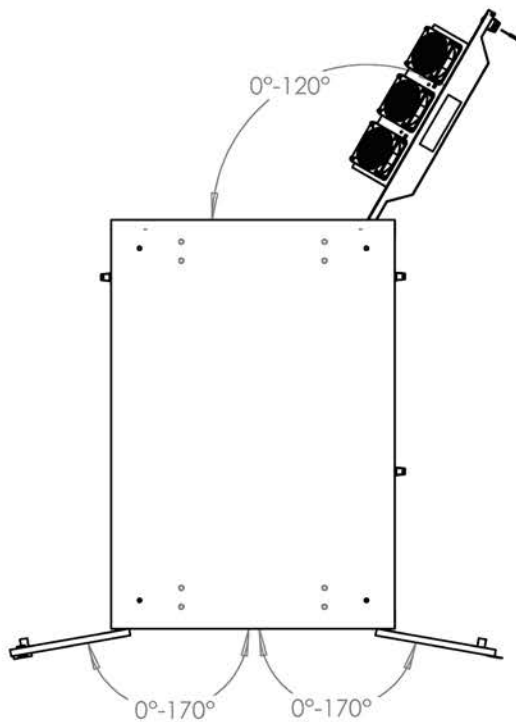
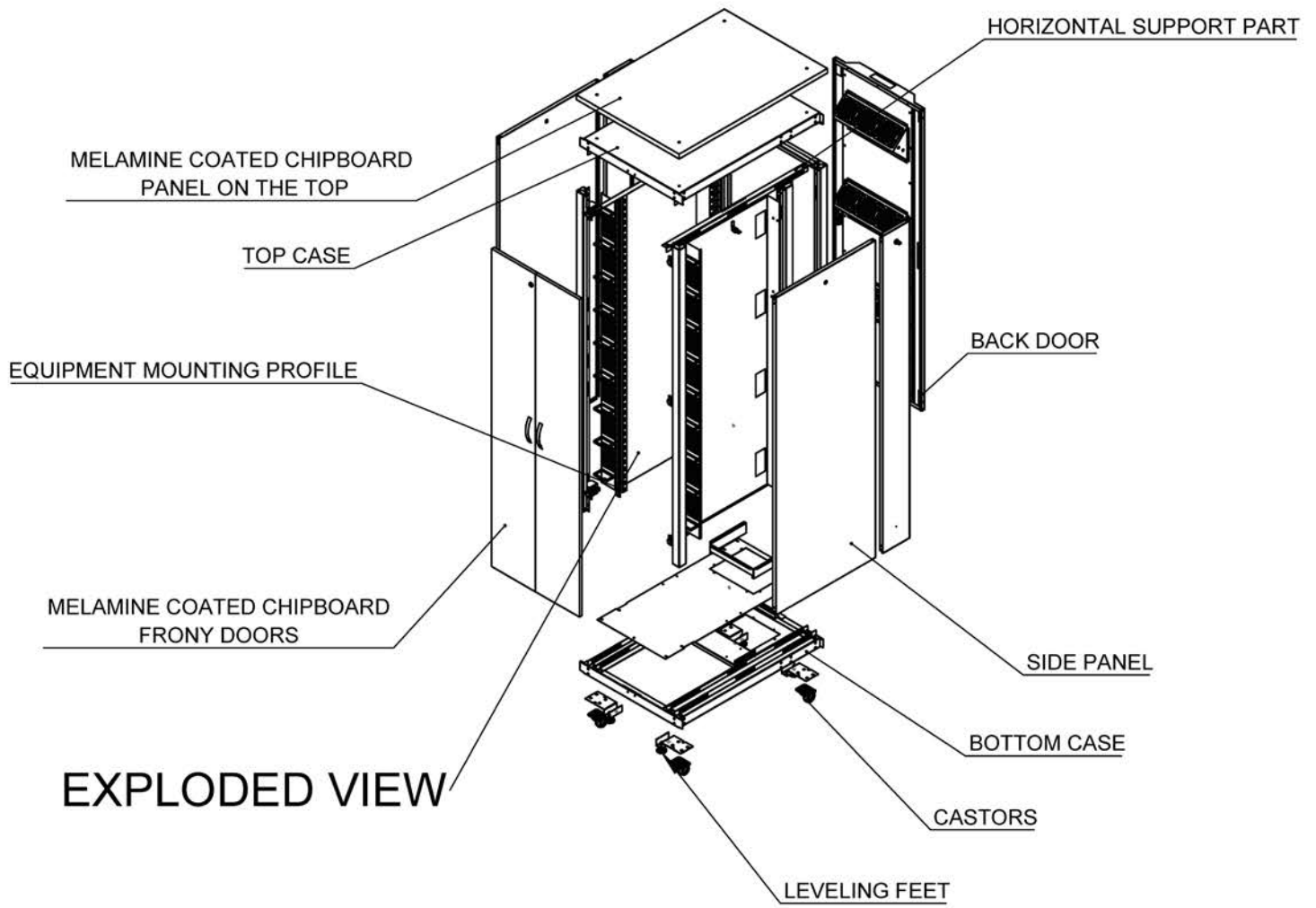
REAR VIEW



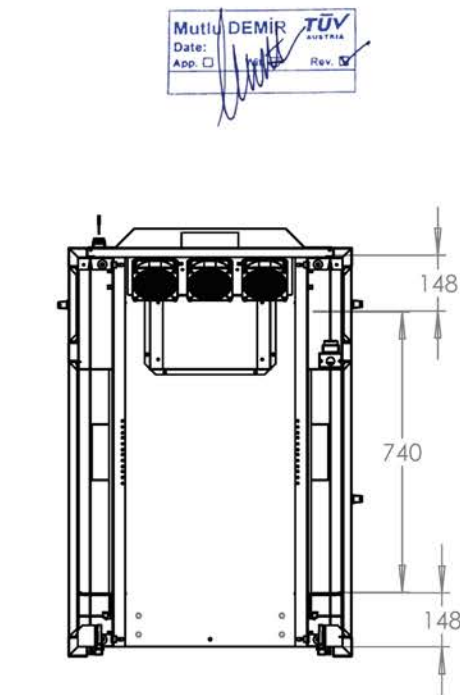
TOP VIEW

Dimensions checked by during the inspection

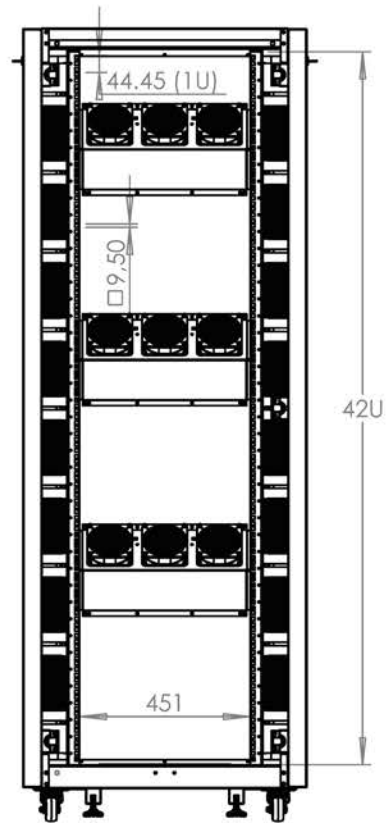




**FRONT DOOR
OPENING ANGLE**

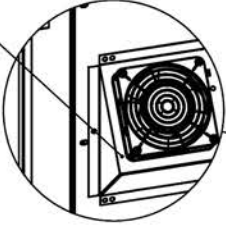


**EQUIPMENT MOUNTING
DISTANCE**

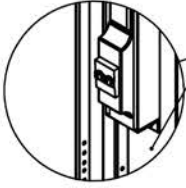


**DIMENSIONS IN
WIDHT AND HEIGHT**

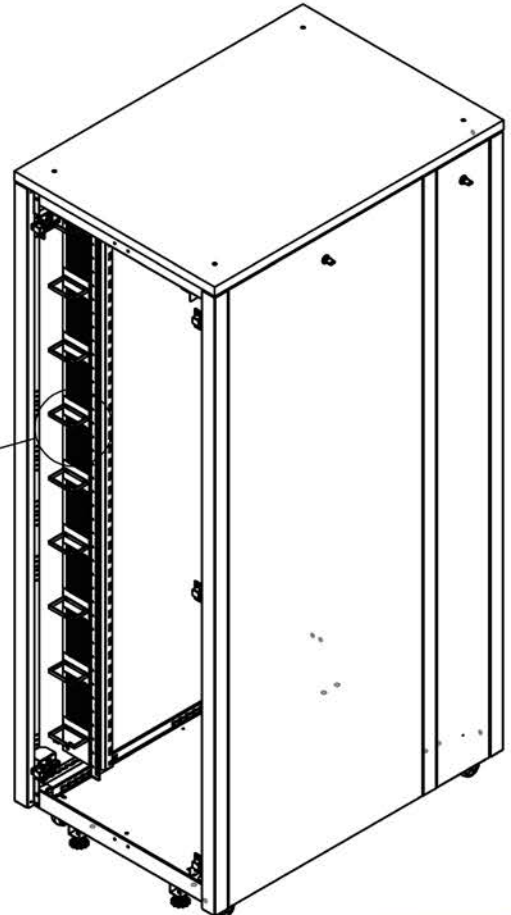
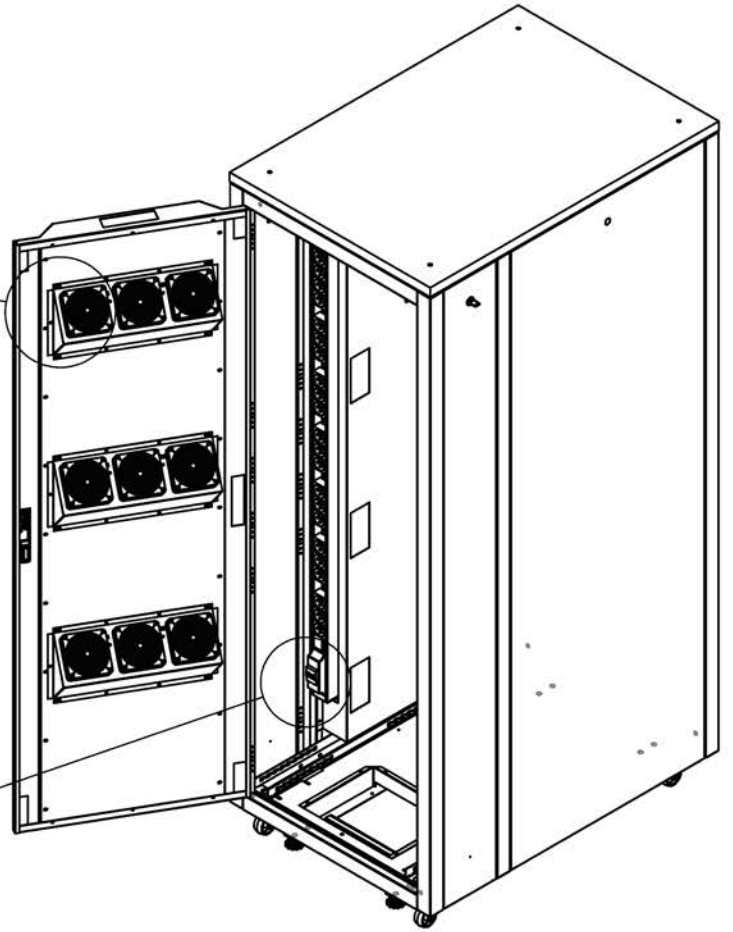
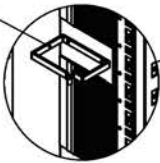
FAN MODULE

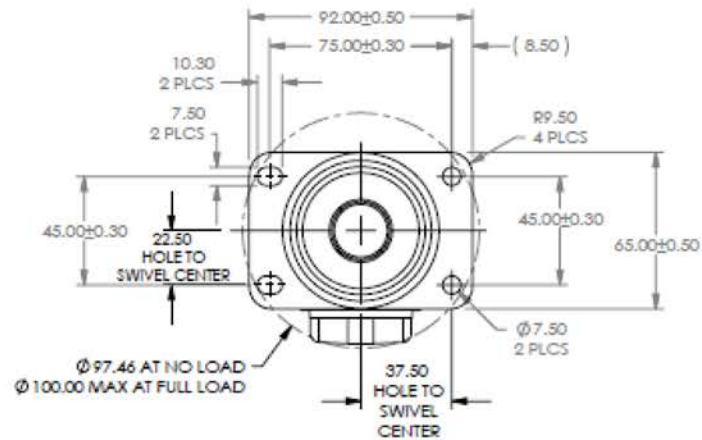


VERTICAL PDU ASSEMBLY

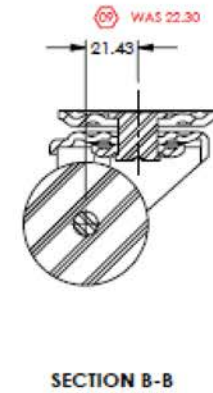
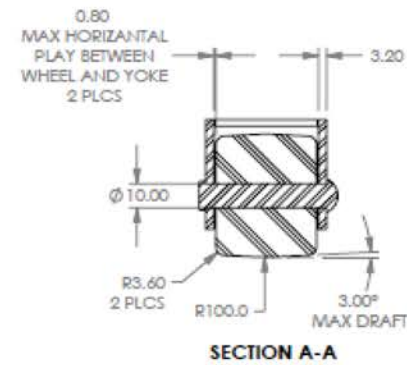
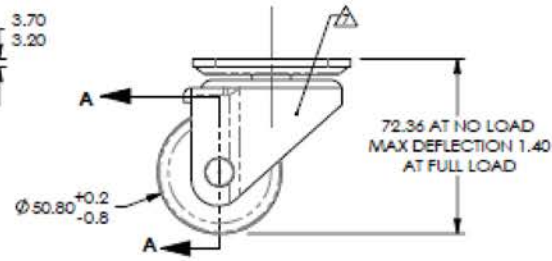
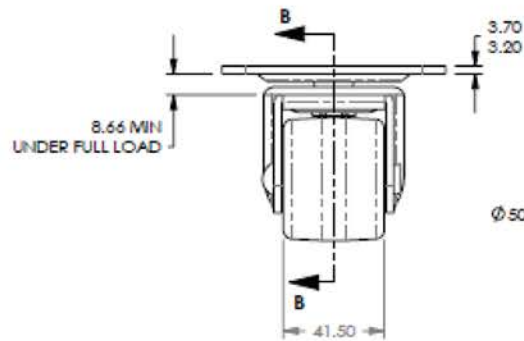


CABLE MANAGEMENT RINGS AND BRUSHES





Cabinet wheel material datasheet



Nots:

Material: (Deviations from the following materials to be approved by the user)

York shaft,

Retainer : Astem 4130 Steel Or Equivalent To Be Approved .

Wheel: NY6+Fiber 15%

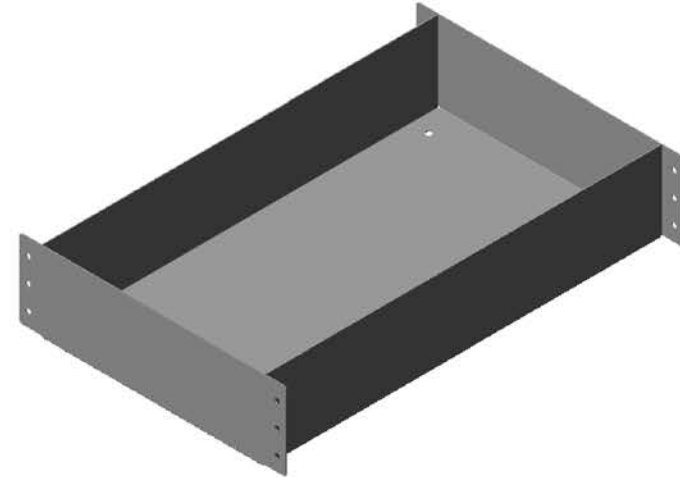
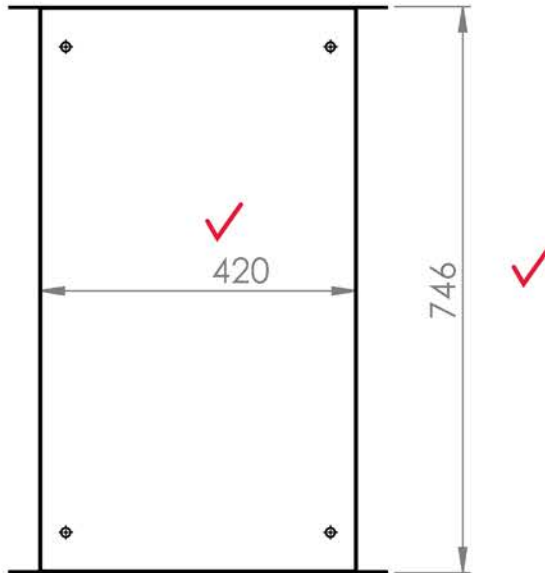
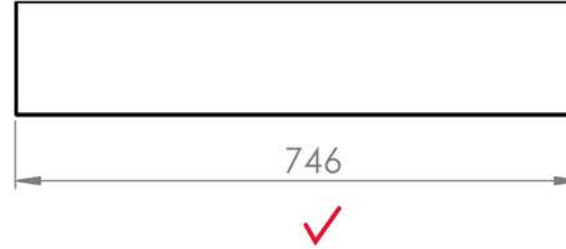
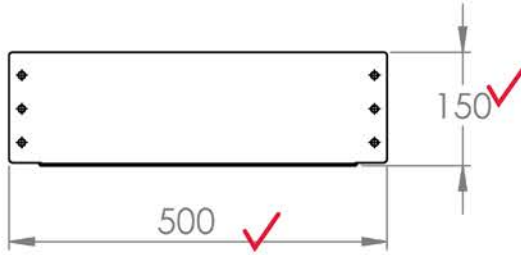
Wheel Bearing : PA6 Akulon K224

Finish: Wheel Black Stem, Axle , Top plat top plate, Yolk And Retainer Type III Electrodeposited Zinc Per ASTM-B633 W/class 3 clear

Dynamic Weight Rating : 650LBS And Test Requested.

All Items to be RoHs compliant.

Shanghai BM Hardware Ltd Model :870-71046B



Dimensions checked by during the inspection

ÇİZEN/ DRAWN BY	ŞENOL TOPCU	TARİH/ DATE	24.01.222	REVİZYON No. REVISION No.	
PRODUCT PART NUMBER & DESCRIPTION	PART NUMBER:			DESCRIPTION:	
PROJE ADI/ PROJECT NAME					



METROLOJİSTİK

KALİBRASYON MÜH. DAN. EĞT. HİZ. TİC. LTD. ŞTİ.

Baksan Sanayi Sitesi 114. Blok No:3 ESKİŞEHİR / TÜRKİYE

Tel : +90 222 340 25 99 Fax : +90 222 340 60 99

info@metrolojistik.com.tr www.metrolojistik.com.tr



Kalibrasyon
TS EN ISO/IEC 17025
AB-0062-K

AB-0062-K

LANTR0043

12-21

Kalibrasyon Sertifikası Calibration Certificate

Cihazın Sahibi / Adresi
Customer / Adress

LANDE ENDÜSTRİYEL METAL ÜRÜNLERİ SAN. VE TİC. A.Ş.
O.S.B. 20. CAD. NO:14 526110 ESKİŞEHİR

İstek Numarası
Order No

MET.LAB.TF210659

Makine/Cihaz
Instrument/Device

Terazi (30000 g 1 g)

İmalatçı
Manufacturer

DİKOMSAN

Tip/Model
Type/Model

-

Seri Numarası
Serial Number

-

Kalibrasyon Tarihi
Date of Calibration

21.12.2021

Sertifikanın Sayfa Sayısı
Number of pages of the Certificate

2



26 Aralık 2021

UYGUNDUR

Onur Hilmi DURALIOĞLU
Kalite Mühendisi

Bu kalibrasyon sertifikası, Uluslararası Birimler Sisteminde (SI) tanımlanmış birimleri realize eden ulusal ölçüm standartlarına izlenebilirliği belgeler.

This calibration certificate documents the traceability to national standards, which realize the unit of measurement according to the International System of Units (SI).

Kalibrasyon laboratuvarı olarak faaliyet gösteren Metrolojistik Kalibrasyon Müh. Dan. Eğt. Hiz. Tic. Ltd. Şti. TÜRKAK'tan AB-0062-K akreditasyon dosya numarası ile TS EN ISO/IEC 17025:2017 standardına göre akredite edilmiştir.

Metrolojistik Kalibrasyon Müh. Dan. Eğt. Hiz. Tic. Ltd. Şti. accredited by TÜRKAK under registration number AB-0062-K for TS EN ISO/IEC 17025:2017 a Calibration Laboratory.

Türk Akreditasyon Kurumu(TÜRKAK) kalibrasyon sertifikalarının tanınırlığı konusunda Avrupa Akreditasyon Birliği(EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği(ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.

Turkish Accreditation Agency(TURKAK) is signatory to the European co-operation for Accreditation (EA) Multilateral Agreement(MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for recognition of calibration certificates.

Ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri ve kalibrasyon metodları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.

The measurements, the uncertainties with confidence probability and calibration methods are given on the following pages which are part of this certificate.

Mühür/Kaşe
Seal

Yayın Tarihi
Date

Kalibrasyonu Yapan
Calibrated by

Onaylayan / Tarih
Approval / Date



21.12.2021

İ.Hakkı KURT

21.12.2021

Hamza KARAÇELİK

Bu sertifika, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız sertifikalar geçersizdir.

This certificate shall not be reproduced other than in full except with the permission of the laboratory. Calibration certificates without signature are not valid.

METROLOJİSTİK

Sayfa 2/2
Page

KALİBRASYON MÜHENDİSLİK DANIŞMANLIK
EĞİTİM HİZMETLERİ VE TİCARET LTD. ŞTİ.

AB-0062-K

LANTR0043

12-21

Makine / Cihaz

Instrument/Device

Kabul Tarihi / Yer

Date of receipt / Place

Prosedür / Yöntem

Procedures / Methods

Terazi

Ölçüm Aralığı : 0-30000 g Çözünürlük : 1 g

LANDE ENDÜSTRİYEL METAL ÜRÜNLERİ SAN. VE TİC. A.Ş.

O.S.B. 20. CAD. NO:14 526110 ESKİŞEHİR

MET.LAB.KP003, EURAMET CG-18/ V.1.0

Kalibrasyon işlemi, standart ağırlıklar kullanılarak teraziye Tekrarlanabilirlik, Köşe Yüğü ve gösterge hata testlerinin uygulanmasıyla gerçekleştirilmiştir.

Çevre Şartları

Environ. Conditions

Sıcaklık

Temperature

(23±2) °C

Bağıl Nem

Relative Humidity

(50±15) %rh

Cihaz Kontrolü

Device Control

Cihazın ölçüm fonksiyonlarında herhangi bir eksiklik tespit edilmemiştir.

Uygunluk Beyanı

Declaration of Conformity

Metrolojik Kalibrasyon olarak verdiğimiz kalibrasyon hizmetlerinde ölçüm sonuçlarına yönelik herhangi bir uygunluk değerlendirilmesi yapılmamaktadır.

Ölçüm Belirsizliği

Measurement Uncertainty

$U = \pm (0,91 + 6,40E-07 \cdot R)$ g R: Gösterge Değeri [g]

Beyan edilen genişletilmiş ölçüm belirsizliği, standart belirsizliğin, k=2 olarak alınan genişletme katsayısı ile çarpımı sonucunda bulunan değerdir ve %95 oranında güvenilirlik sağlamaktadır. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Kalibrasyonda Kullanılan Referanslar / References Used In Calibration

Cihaz Device	Seri Serial	İzlenebilirlik Traceability
Kütle	Demirkol F1 80	AB-0012-K / 8KT1700
-	-	-
-	-	-
-	-	-

Ölçüm Sonuçları / Measurement Results

Önyükleme :

30000 g 3 kez

Ayarlama :

☐ Dahili Ayar

☐ Haricî Ayar

☒ Yapılmadı

Tekrarlanabilirlik Testi (g)			Köşe Yüğü Testi (g)			Uygulama Konumları
Konum	Uygulanan Yüğü	Okunan	Konum	Uygulanan Yüğü	Okunan	
1	20000	19993	1	10000	9995	
		19994	2		9995	
		19994	3		9995	
		19994	4		9995	
		19994	5		9995	

Gösterge Hatası(Doğrusallık) Testi

Uygulanan Yüğü, L	Gösterge Değeri, I	Gösterge Hatası, E	Belirsizlik, U
g	g	g	g
0	0	0	0,91
7500	7497	-3	0,91
15000	14995	-5	0,91
22500	22490	-10	0,92
30000	29988	-12	0,93



Gösterge - Hata eğrisi :

-3,95E-04 R

E : Hata Değeri R : Gösterge Değeri