Manufacturer	**FOCQUET**
Reference	**CO 2016 0433**
Type	**MF 315LB-08** **MF 355MB-08**
Customer	**TES INDUSTRIAL SYSTEMS B.V.**
Reference	**P0446.10/16021503**

since 1892

Declaration of Compliance

Buyer : **TES INDUSTRIAL SYSTEMS B.V.**
Mechanisatieweg 2
4906 AE Oosterhout, Netherlands

Order no. : **P0446.10/16021503**

Scope of delivery :

№	Quantity	Description	Type
01	1	AC Squirrel Cage Induction Motor	MF 315LB-08
02	1	AC Squirrel Cage Induction Motor	MF 355MB-08

We certify that the listed products have been manufactured, examined and delivered according to the technical specifications of the order.

GEMBLOUX, 20th April 2016

_____
Person in charge

The electrical apparatus:

Three-phase asynchronous motor with squirrel-cage rotor
& Three-phase asynchronous motor with slip ring rotor

Of the series **MA / MF / MB**

Followed by the motor type, are in conformity with the instructions of the following EU directives:

2006/95/EG
2004/108/EG

The conformity with the instructions of these directives is proved by the observation of the following standards:

EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
EN 55014-1, EN 55014-2
EN 61000-3-2, EN 61000-3-3
EN 60034-1, EN 60034-2-1, EN 60034-5. EN 60034-6, EN 60034-9, EN 60034-30
IEC 60038
EN 60204-1

The specified product is exclusively intended for fitting into another machine. Start of operation is permitted until conformity of the end product with the directive **2006/42/EC** is established.

Gembloux, 01st January 2015

_____
Bruno Focquet
Managing Director

This certificate attests the conformity with the named Directives; however, it is not a promise of properties in the meaning of product liability.

In case of electronic communication, the signature does not appear.

Data		
Rotor		Squirrel Cage Rotor
Type		**MF 315LB-08**
Serial Number		20160433-01
Design		IEC 34-1 / EN60034-1
Duty		S1
Phase		3
Power	kW	110
Voltage	V	400
Tolerance	%	+/- 10
Frequency	Hz	50
Tolerance	%	+/- 2
Connection		Δ
Poles		8
Speed	rpm	735
Direction of Rotation		Both
Current	A	206
Efficiency	%	94
Power Factor		0,82
Torque	Nm	1.429
Start Up		DOL / VFD
I_A/I_N	%	640
M_A/M_N	%	180
M_K/M_N	%	200
Mounting		IM B3
Frame Size		315 L
Housing material		Cast Iron
Protection		IP 55
Cooling		IC 411
Balancing		Half Key
Insulation class		F
Temperature Rise		B
Weight	kg	~1.150

Bearings & Lubrication		
Bearing Type		Antifriction Bearing
Cooling		Self Cooled
Type	Drive End	6319.C3
	Non Drive End	6319.C3 – Insulated
Lubrication interval	h	6.100
Volume of Grease	g	45
Lubricant		Caltex SRI-2
Painting		
System		Moderate
Colour		RAL 7030
Vibration		
Vibration	mm/s	< 2,8
Starting		
Starts	Cold	3
	Warm	2
	Per Year	1.000
Ambiance		
Ambient temperature	°C	- 20 … + 40
Altitude	m above sea level	≤ 1.270
Humidity	%	< 95
Installation		Outdoor / Indoor
Accessories		
Regreasing device		
KTY 84/130 Sensor		
Metal Fan		
Encoder Hübner HOG 10 DN 1024 I LR 16H7 + ESL90		

FOCQUET
1st in Electrical Power Machines

Date (d/m/y):	**19/04/2016**
Customer:	**TES**
Motor:	**MF 315LB-08**
Serial No:	**20160433-01**

Test Report

Name-Plate Data

Duty	S1		Δ		
f [Hz]	50	U_N [V]	400	cos ϕ	0,82
n_N[min-1]	735	I_N [A]	206	P_N [Kw]	110
IP	55	IS.Class	F	Net B3 [kg]	1118

Drive-end Bearing	319		Non drive-end Bearing		6319
Phase-Resistance at 20°C	[Ω] 0,0257		[Ω] 0,0258		[Ω] 0,0257

TEMPERATURE-RISE TEST

Conn.	U [V]	f [Hz]	I_N ass / I_N abs [A]	P_N ress / P_N out [kW]	Lasting [h]	Terminals	Winding θ Initial [°C]	Wind. Res. Initial [Ω]	Amb. θ Final [°C]	Frame θ Final [°C]	Wind. Res. Final [Ω]	Temperature Rise Δθ [K]
Δ	400	50	206	110	4		20	0,026	22	62	0,033	69,2

LOAD TEST

Conn.	Load	U [V]	f [Hz]	n [min-1]	S %	[A]	input [kW]	T_N [Nm]	out [kW]	η %	cos ϕ	Notes
Δ	25 %	400	50	748	0,267	80	31,55	351,1	27,5	87,2	0,5693	
Δ	50 %	400	50	745	0,667	120	59,71	705	55	92,1	0,7182	
Δ	75 %	400	50	741	1,2	160,8	88,23	1063	82,5	93,5	0,792	
Δ	**100 %**	**400**	**50**	**736**	**1,867**	**204,5**	**117,2**	**1427**	**110**	**93,8**	**0,8276**	
Δ	125 %	400	50	730	2,667	254,5	146,9	1799	138	93,6	0,8331	

BREAKDOWN TORQUE TEST

Conn.	U [V]	f [Hz]	[A]	n [min-1]	T_N [Nm]	P ress out [kW]	P ass, abs [kW]	η %	cos ϕ
Δ	400	50			2850				

LOCKED ROTOR TEST

Conn.	U [V]	f [Hz]	T_1 [Nm]	$I_{I\,sss,\,abs.}$ [A]	P ass, abs [kW]	cos ϕ
Δ	400	50	2560	1346		

RATIO

I_I / I_N	T_I / T_N	T_I / T_N

DIELECTRIC TEST

Between Windings and the Frame

Test N°	U[V]	[a]
	2380	0.02A

NO-LOAD TEST

Conn.	U [V]	f [Hz]	n_N [min-1]	$I_{I\,sss,\,abs.}$ [A]	P ass, abs [kW]	cos ϕ
Δ	400	50	749	90	5000	0,0773

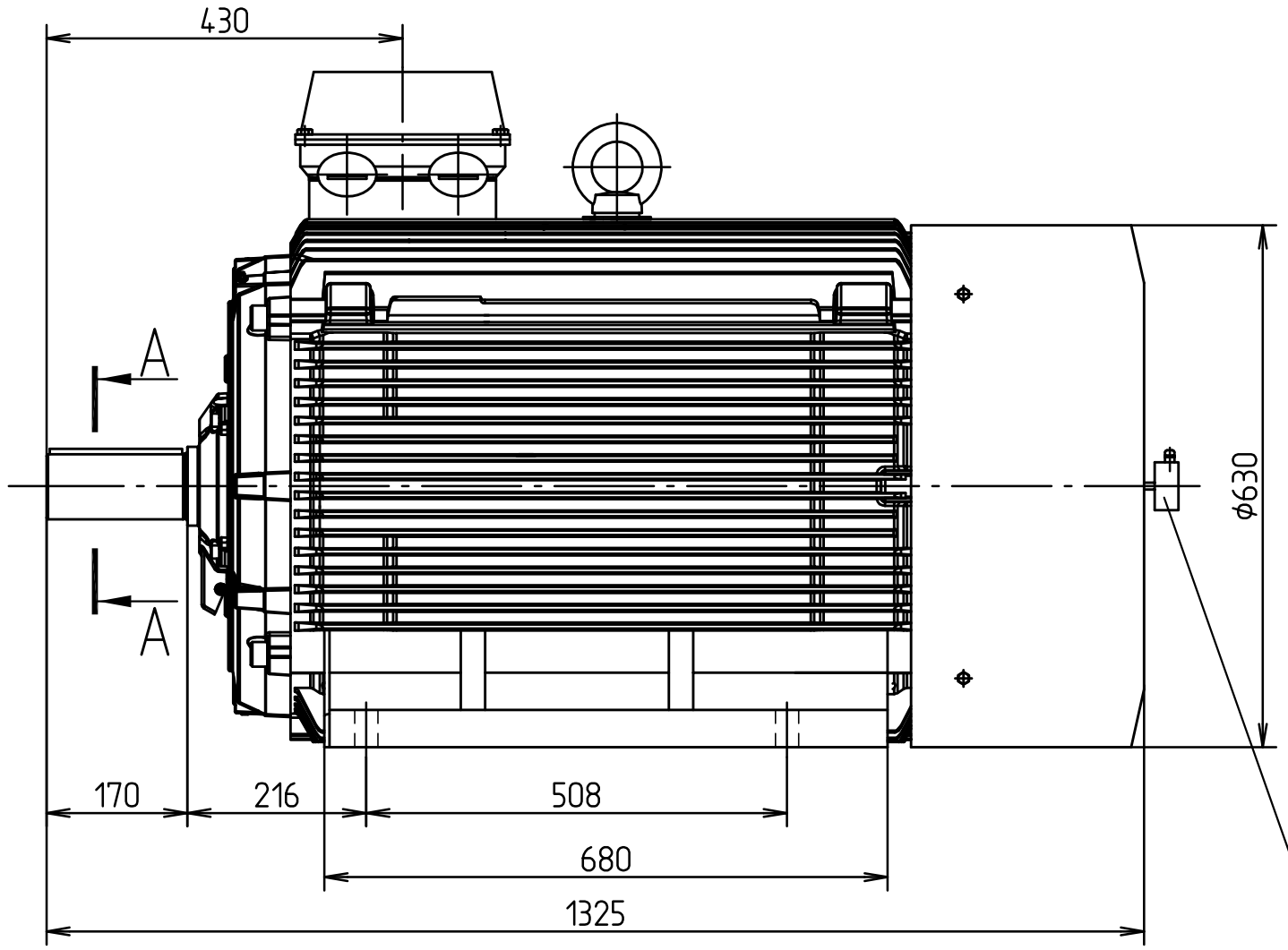
L_{WA} [dB(A)]	
No Load	Load
73	

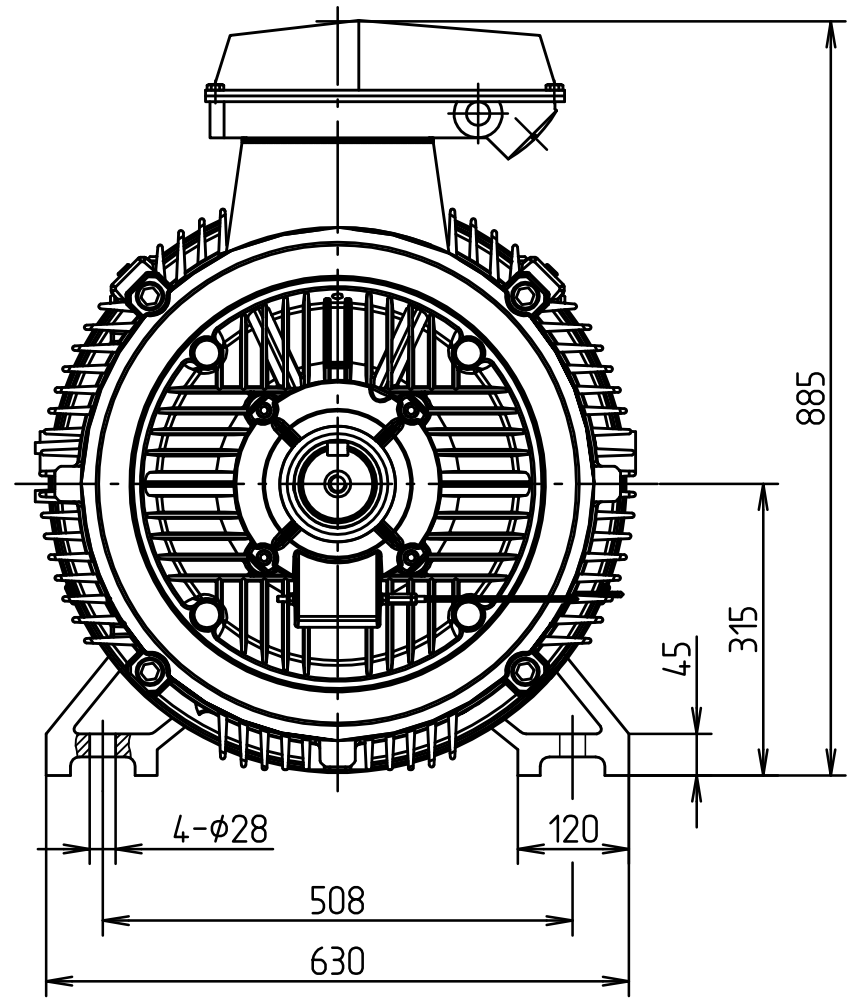
INSUL. RES.

amb. T [°C]	U [V]	[MΩ]
19	1000	500

NOTE:

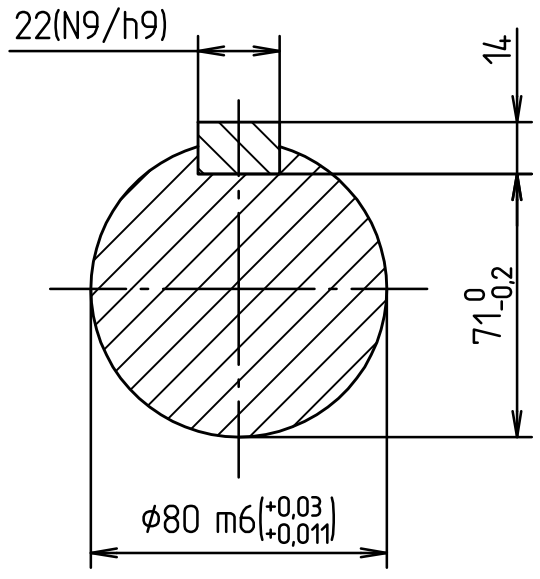
Signature:





Encoder: HOG 10 DN 1024 I LR 16H7+ESL90

A-A



	Datum	Name
Bearbeitet	20.04.2016	E. Babynin
Geprüft	20.04.2016	V. Grigan
Geändert		

FOCQUET
1st in Electrical Power Machines

MF 315LB-08

Ref. 2016 0433-A

A3

Data		
Rotor		Squirrel Cage Rotor
Type		**MF 355MB-08**
Serial Number		20160433-02
Design		IEC 34-1 / EN60034-1
Duty		S1
Phase		3
Power	kW	160
Voltage	V	400
Tolerance	%	+/- 10
Frequency	Hz	50
Tolerance	%	+/- 2
Connection		Δ
Poles		8
Speed	rpm	740
Direction of Rotation		Both
Current	A	299
Efficiency	%	94,2
Power Factor		0,82
Torque	Nm	2.064
Start Up		DOL / VFD
I_A/I_N	%	640
M_A/M_N	%	180
M_K/M_N	%	200
Mounting		IM B3
Frame Size		355 M
Housing material		Cast Iron
Protection		IP 55
Cooling		IC 411
Balancing		Half Key
Insulation class		F
Temperature Rise		B
Weight	kg	~2.200

Bearings & Lubrication		
Bearing Type		Antifriction Bearing
Cooling		Self Cooled
Type	Drive End	6322.C3
	Non Drive End	6322.C3 – Insulated
Lubrication interval	h	6.300
Volume of Grease	g	60
Lubricant		Caltex SRI-2
Painting		
System		Moderate
Colour		RAL 7030
Vibration		
Vibration	mm/s	< 2,8
Starting		
Starts	Cold	3
	Warm	2
	Per Year	1.000
Ambiance		
Ambient temperature	°C	- 20 … + 40
Altitude	m above sea level	≤ 1.270
Humidity	%	< 95
Installation		Outdoor / Indoor
Accessories		
Regreasing device		
KTY 84/130 Sensor		
Metal Fan		
Encoder Hübner HOG 10 DN 1024 I LR 16H7 + ESL90		

FOCQUET
1st in Electrical Power Machines

Date (d/m/y):	**20/04/2016**
Customer:	**TES**
Motor:	**MF 355MB-08**
Serial No:	**20160433-02**

Test Report

Name-Plate Data

Duty	S1		Δ		
f [Hz]	50	U_N [V]	400	cos ϕ	0,82
n_N[min-1]	740	I_N [A]	299	P_N [Kw]	160
IP	55	IS.Class	F	Net B3 [kg]	2150

Drive-end Bearing	6322.C3	Non drive-end Bearing	6322.C3		
Phase-Resistance at 20°C	[Ω] 0,0181	[Ω] 0,0182	[Ω] 0,0182		

TEMPERATURE-RISE TEST

Conn.	U [V]	f [Hz]	I_N ass / I_N abs [A]	P_N ress / P_N out [kW]	Lasting [h]	Terminals	Winding θ Initial [°C]	Wind. Res. Initial [Ω]	Amb. θ Final [°C]	Frame θ Final [°C]	Wind. Res. Final [Ω]	Temperature Rise Δθ [K]
Δ	400	50	300	160	4		19	0,018	22	61	0,0233	68,2

LOAD TEST

Conn.	Load	U [V]	f [Hz]	n [min-1]	S %	[A]	input [kW]	T_N [Nm]	out [kW]	η %	cos ϕ	Notes
Δ	25 %	400	50	749	0,133	130	45,43	510	40	88,1	0,5044	
Δ	50 %	400	50	747	0,4	180	86,1	1023	80	92,9	0,6905	
Δ	75 %	400	50	744	0,8	234	127	1540	120	94,5	0,7834	
Δ	**100 %**	**400**	**50**	**741**	**1,2**	**298**	**168,5**	**2062**	**160**	**95**	**0,8161**	
Δ	125 %	400	50	736	1,867	371	210,5	2595	200	95	0,8189	

BREAKDOWN TORQUE TEST

Conn.	U [V]	f [Hz]	[A]	n [min-1]	T_N [Nm]	P ress out [kW]	P ass, abs [kW]	η %	cos ϕ
Δ	400	50			4140				

LOCKED ROTOR TEST

Conn.	U [V]	f [Hz]	T_1 [Nm]	I_I sss, abs. [A]	P ass, abs [kW]	cos ϕ
Δ	400	50	3720	1907		

RATIO

I_I / I_N	T_I / T_N	T_I / T_N

DIELECTRIC TEST

Between Windings and the Frame

Test N°	U[V]	[a]
	2380	0.02A

NO-LOAD TEST

Conn.	U [V]	f [Hz]	n_N [min-1]	I_I sss, abs. [A]	P ass, abs [kW]	cos ϕ
Δ	400	50	749	140	6000	0,0596

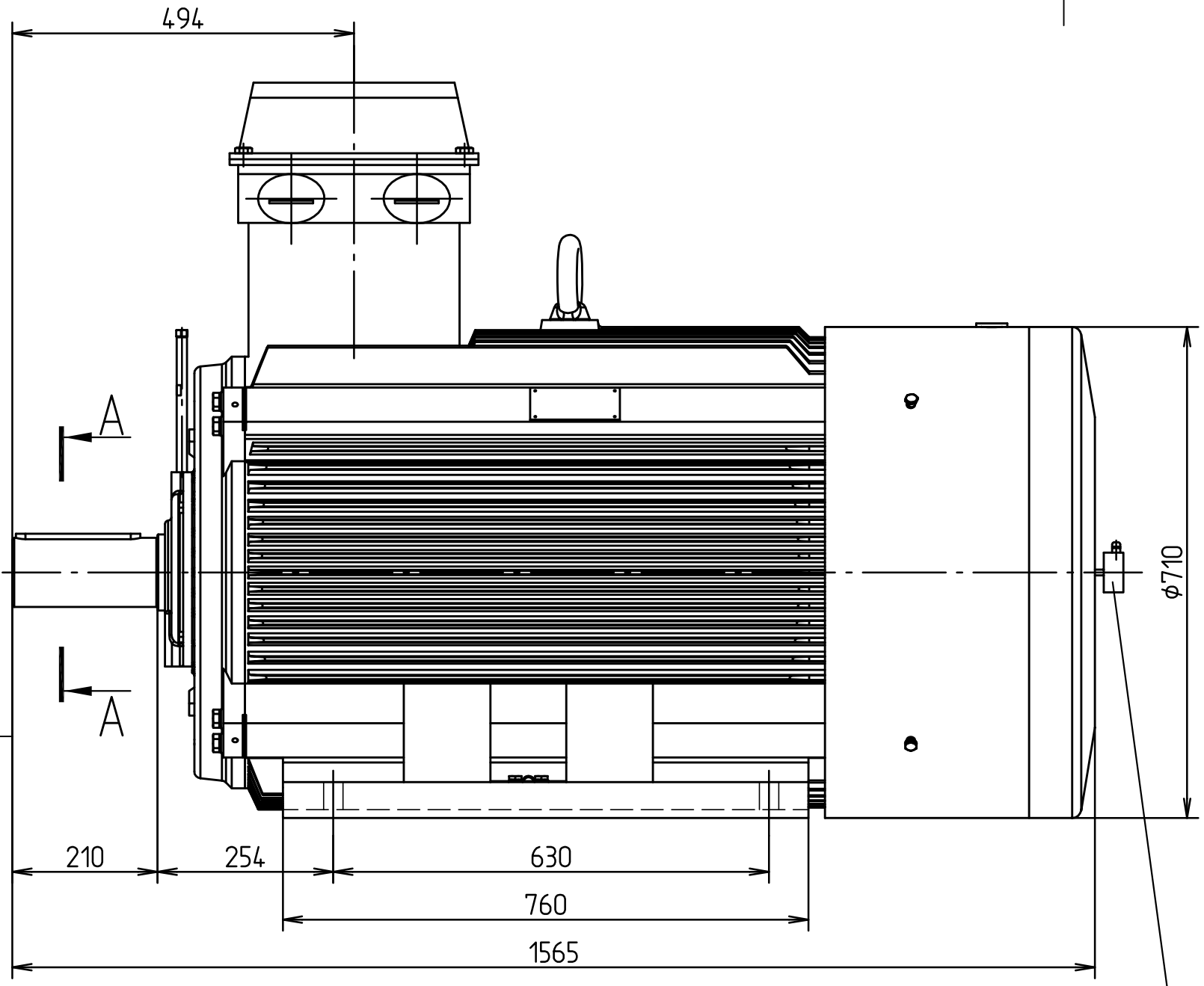
L_{WA} [dB(A)]	
No Load	Load
81	

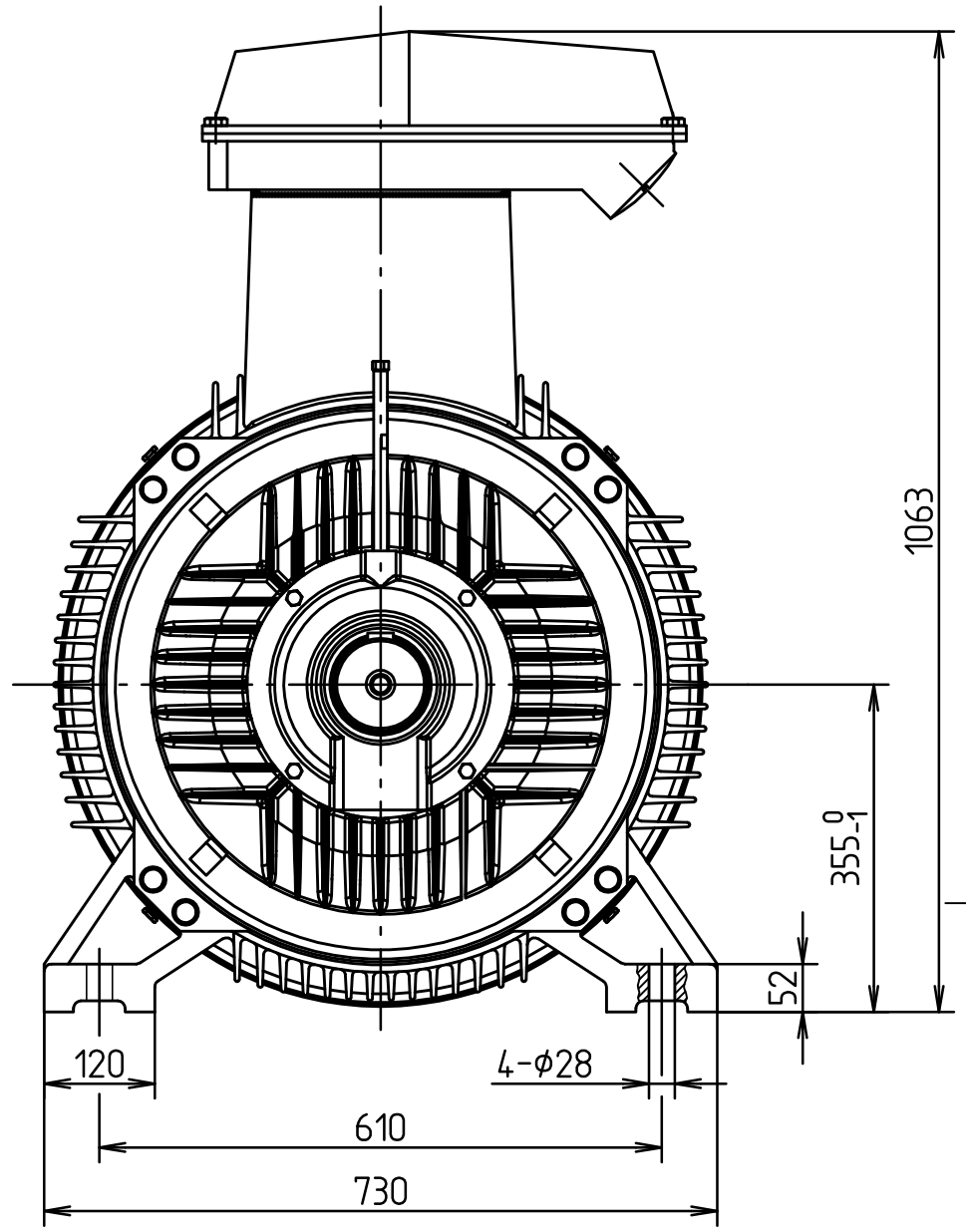
INSUL. RES.

amb. T [°C]	U [V]	[MΩ]
19	1000	500

NOTE:

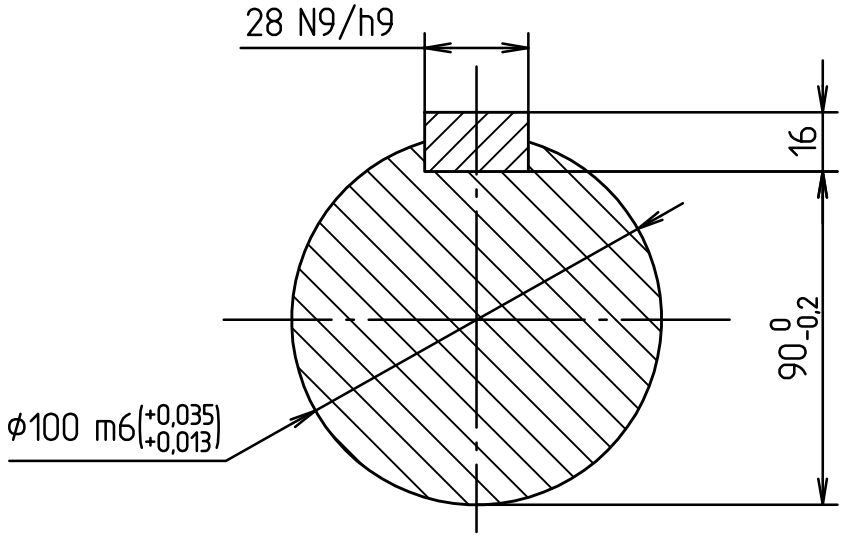
Signature:





Encoder: HOG 10 DN 1024 I LR 16H7+ESL90

A–A



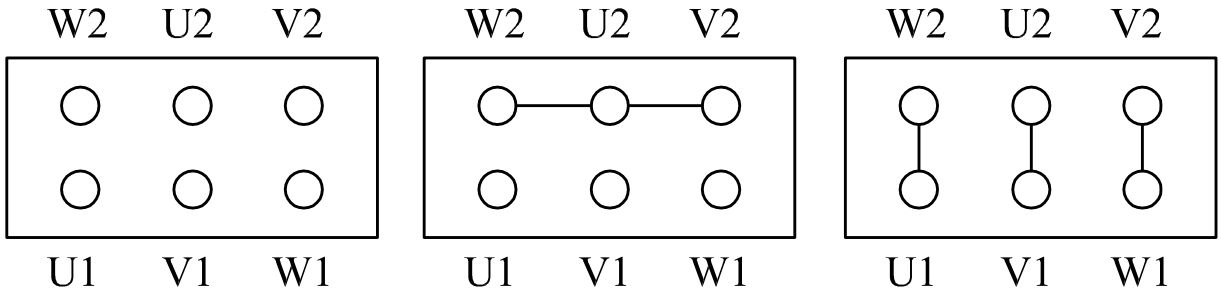
		Datum	Name
Bearbeitet		20.04.2016	E. Babynin
Geprüft		20.04.2016	V. Grigan
Geändert			

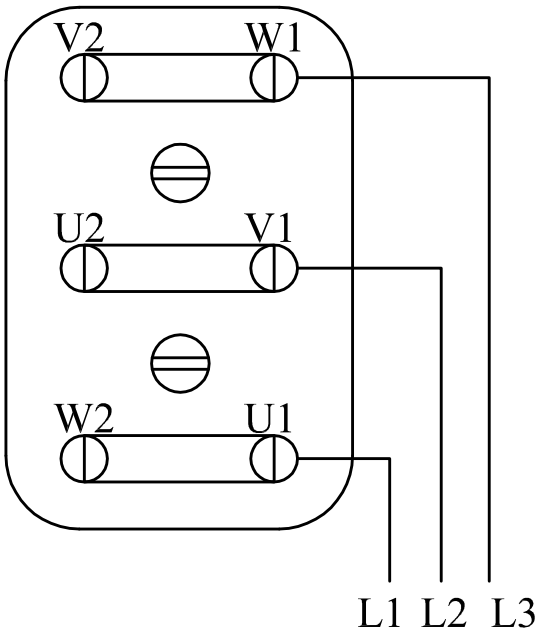
FOCQUET
1st in Electrical Power Machines

MF 355MB-08

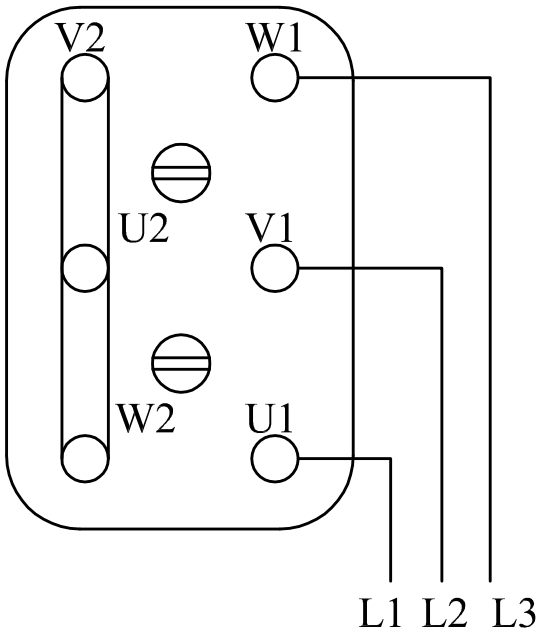
Ref. 2016 0433-B

A3





Δ (DELTA)
CONNECTION



Y (STAR)
CONNECTION

	Datum	Name
Bearbeitet	22.12.2015	E. Babynin
Geprüft	22.12.2015	V. Grigan
Geändert		

FOCQUET
1st in Electrical Power Machines

Motor Connection

A4

FOCQUET SA
Rui des Haipes 1
5030 Gembloux
Belgium

+32.81.62.59.71
+32.81.62.59.79
info@focquet.be
www.focquet.be

Technical modifications reserved, errors excepted.