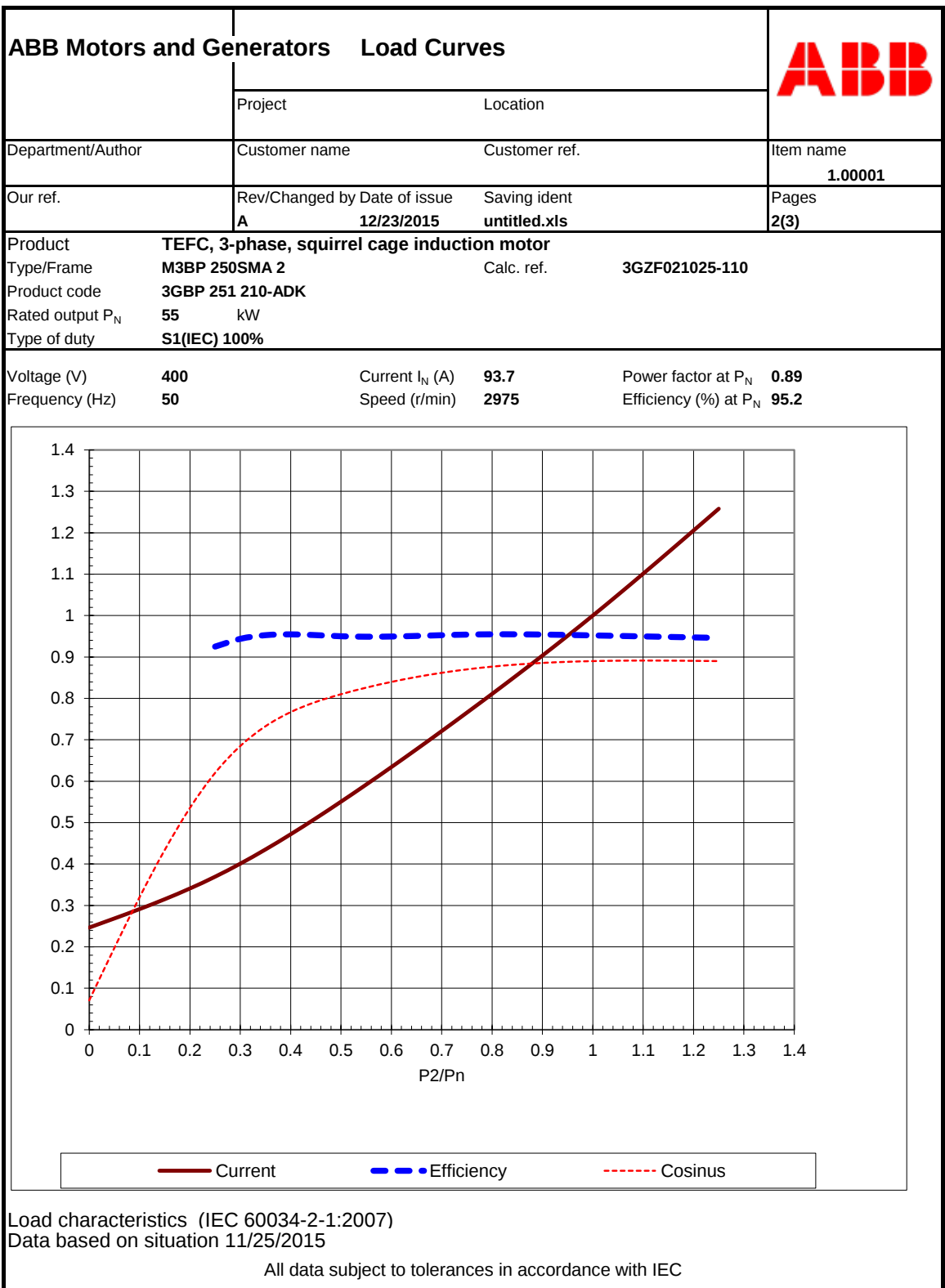


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Item name
		A	12/23/2015	untitled.xls	1.00001
					Pages
					1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	EMM25552-PPN (3GBP251210-ADK+011+332+509)			Calc. ref. 3GZF021025-110
3	Type/Frame	M3BP 250SMA 2			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	55	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	400	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	2975	r/min		
11	Rated current I _N	93.7	A		
12	No-load current	23	A		
13	Starting current I _s /I _N	8		Fulfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	177	Nm		
15	Locked rotor torque T _s /T _N	2.8			
16	Maximum torque T _{max} /T _N	3.3			
17	Minimum torque T _{min} /T _N	2.1			
18	Speed at minimum torque	1800	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	93.7	95.2 / IE3	0.89
20		75	71.7	95.4	0.87
21		50	51.6	95	0.81
22		Start	750		0.35
23	Maximum starting time from hot	15	s		
24	Maximum starting time from cold	27	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	40	°C		
27	Altitude	1000	m.a.s.l.		
28	Enclosure	IP55			
29	Cooling system	IC411 self ventilated			
30	Bearing DE/NDE	6315/C3 - 6213/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	75	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	0.579	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	Top			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	CW or CCW			
40	Weight of rotor	93	kg		
41	Total weight of motor	439	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49	011 = Fulfilling CSA and NRCAN				
50	332 = Baldor Catalog number stamped on rating plate				
51	509 = Fulfilling EISA Subtype I efficiency requirements, CC031A				
52					
Remarks:					
Data based on situation 11/25/2015					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					



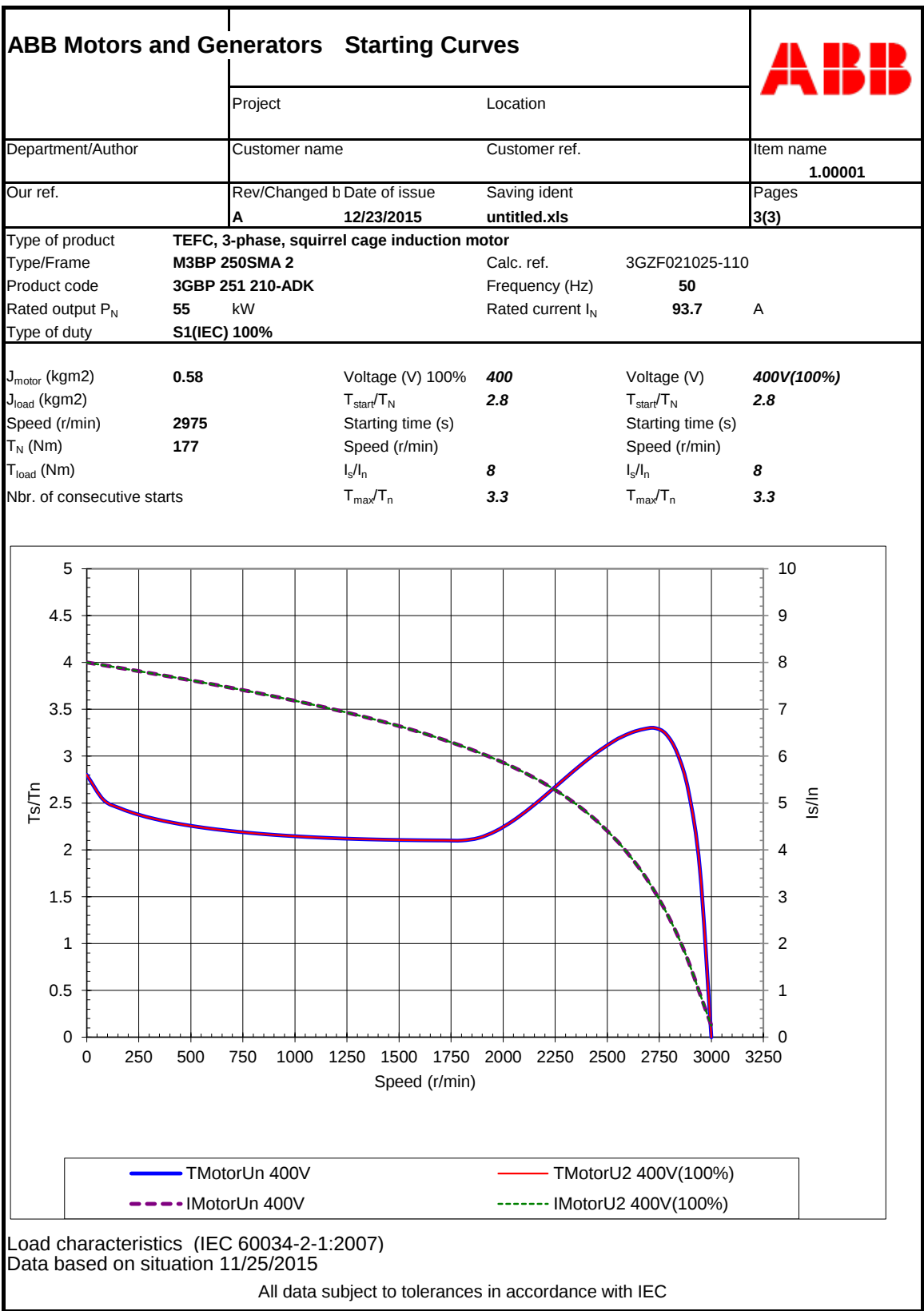
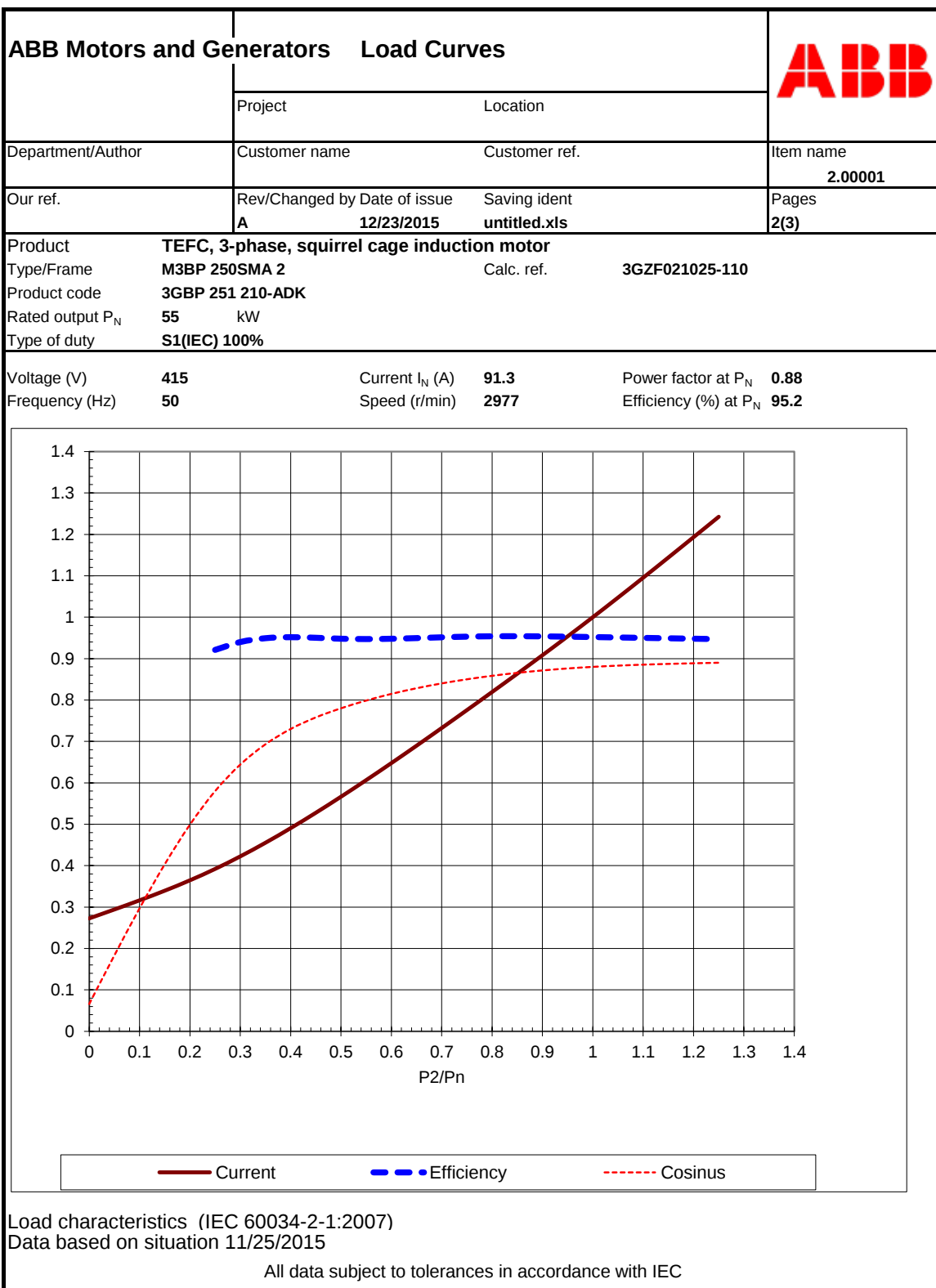


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	Item name 2.00001
Our ref.		Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls	Pages 1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	EMM25552-PPN (3GBP251210-ADK+011+332+509)			Calc. ref. 3GZF021025-110
3	Type/Frame	M3BP 250SMA 2			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	55	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	415	VD		± 5 % (IEC 60034-1)
9	Rated frequency f _N	50	Hz		± 2 % (IEC 60034-1)
10	Rated speed n _N	2977	r/min		
11	Rated current I _N	91.3	A		
12	No-load current	25	A		
13	Starting current I _s /I _N	8.6			Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	176	Nm		
15	Locked rotor torque T _s /T _N	3			
16	Maximum torque T _{max} /T _N	3.5			
17	Minimum torque T _{min} /T _N	2.1			
18	Speed at minimum torque	1800	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	91.3	95.2 / IE3	0.88
20		75	70.8	95.3	0.85
21		50	51.7	94.8	0.78
22		Start	785		0.35
23	Maximum starting time from hot	15	s		
24	Maximum starting time from cold	27	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	40	°C		
27	Altitude	1000	m.a.s.l.		
28	Enclosure	IP55			
29	Cooling system	IC411 self ventilated			
30	Bearing DE/NDE	6315/C3 - 6213/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	75	dB(A)		at load
33	Moment of inertia J = ¼ GD2	0.579	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	Top			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	CW or CCW			
40	Weight of rotor	93	kg		
41	Total weight of motor	439	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition 49 011 = Fulfilling CSA and NRCAN 50 332 = Baldor Catalog number stamped on rating plate 51 509 = Fulfilling EISA Subtype I efficiency requirements, CC031A 52					
Remarks:					
Data based on situation 11/25/2015					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					



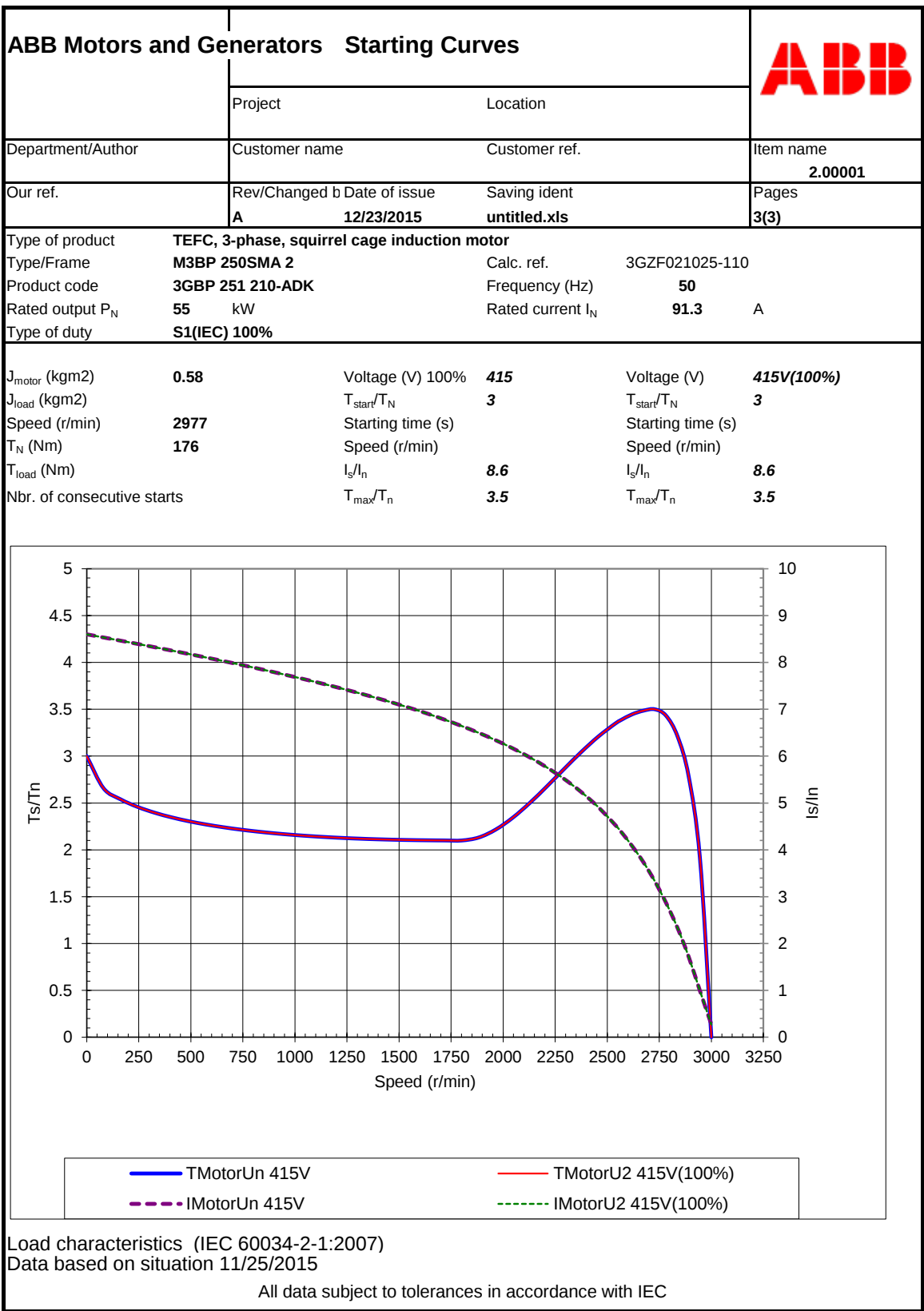
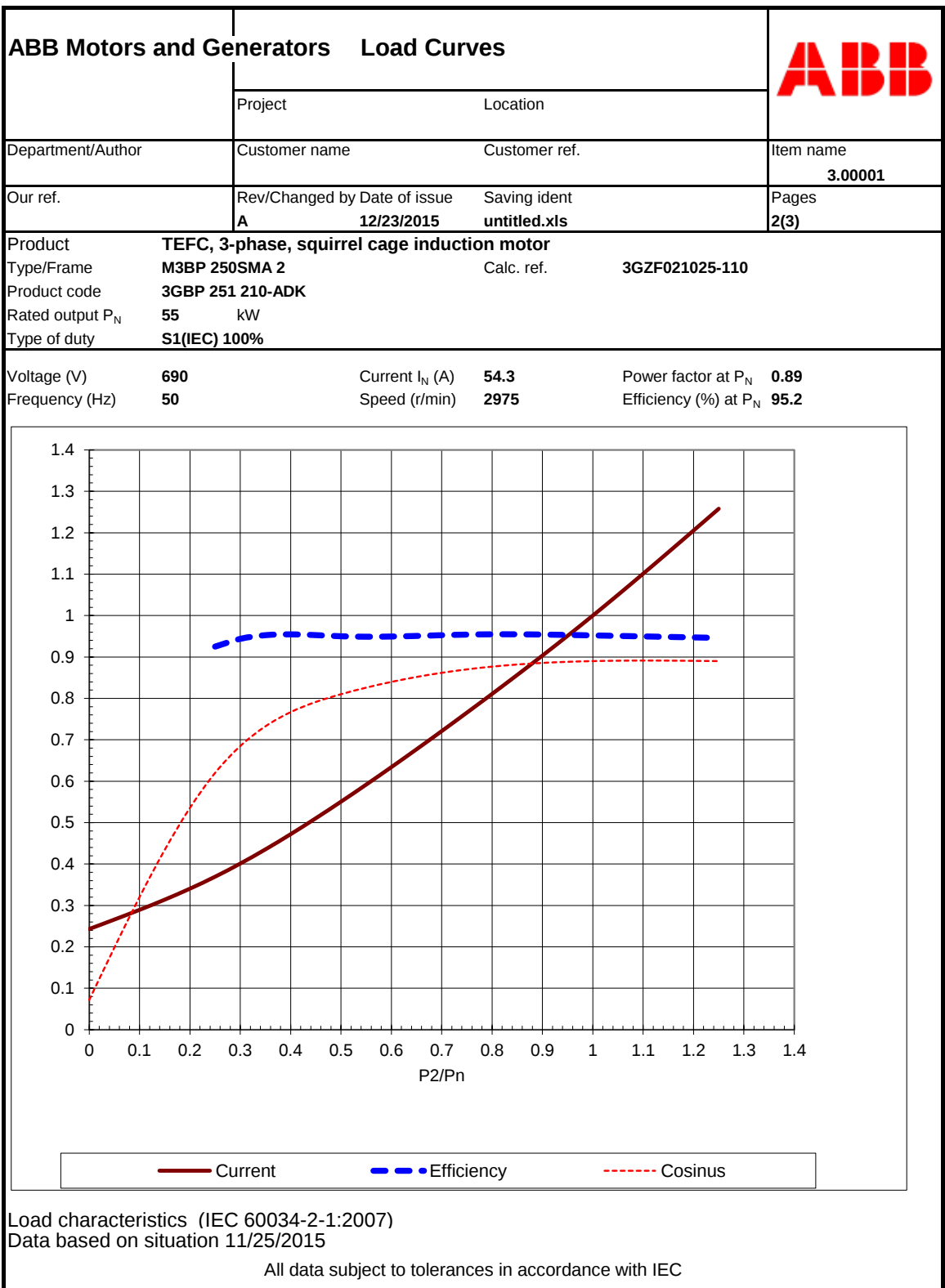


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Item name
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					1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	EMM25552-PPN (3GBP251210-ADK+011+332+509)			
3	Type/Frame	M3BP 250SMA 2			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	55	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	690	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	2975	r/min		
11	Rated current I _N	54.3	A		
12	No-load current	13.2	A		
13	Starting current I _s /I _N	8		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	177	Nm		
15	Locked rotor torque T _s /T _N	2.8			
16	Maximum torque T _{max} /T _N	3.3			
17	Minimum torque T _{min} /T _N	2.1			
18	Speed at minimum torque	1800	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	54.3	95.2 / IE3	0.89
20		75	41.6	95.4	0.87
21		50	29.9	95	0.81
22		Start	435		0.35
23	Maximum starting time from hot	15	s		
24	Maximum starting time from cold	27	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	40	°C		
27	Altitude	1000	m.a.s.l.		
28	Enclosure	IP55			
29	Cooling system	IC411 self ventilated			
30	Bearing DE/NDE	6315/C3 - 6213/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	75	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	0.579	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	Top			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	CW or CCW			
40	Weight of rotor	93	kg		
41	Total weight of motor	439	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49	011 = Fulfilling CSA and NRCAN				
50	332 = Baldor Catalog number stamped on rating plate				
51	509 = Fulfilling EISA Subtype I efficiency requirements, CC031A				
52					
Remarks:					
Data based on situation 11/25/2015					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					



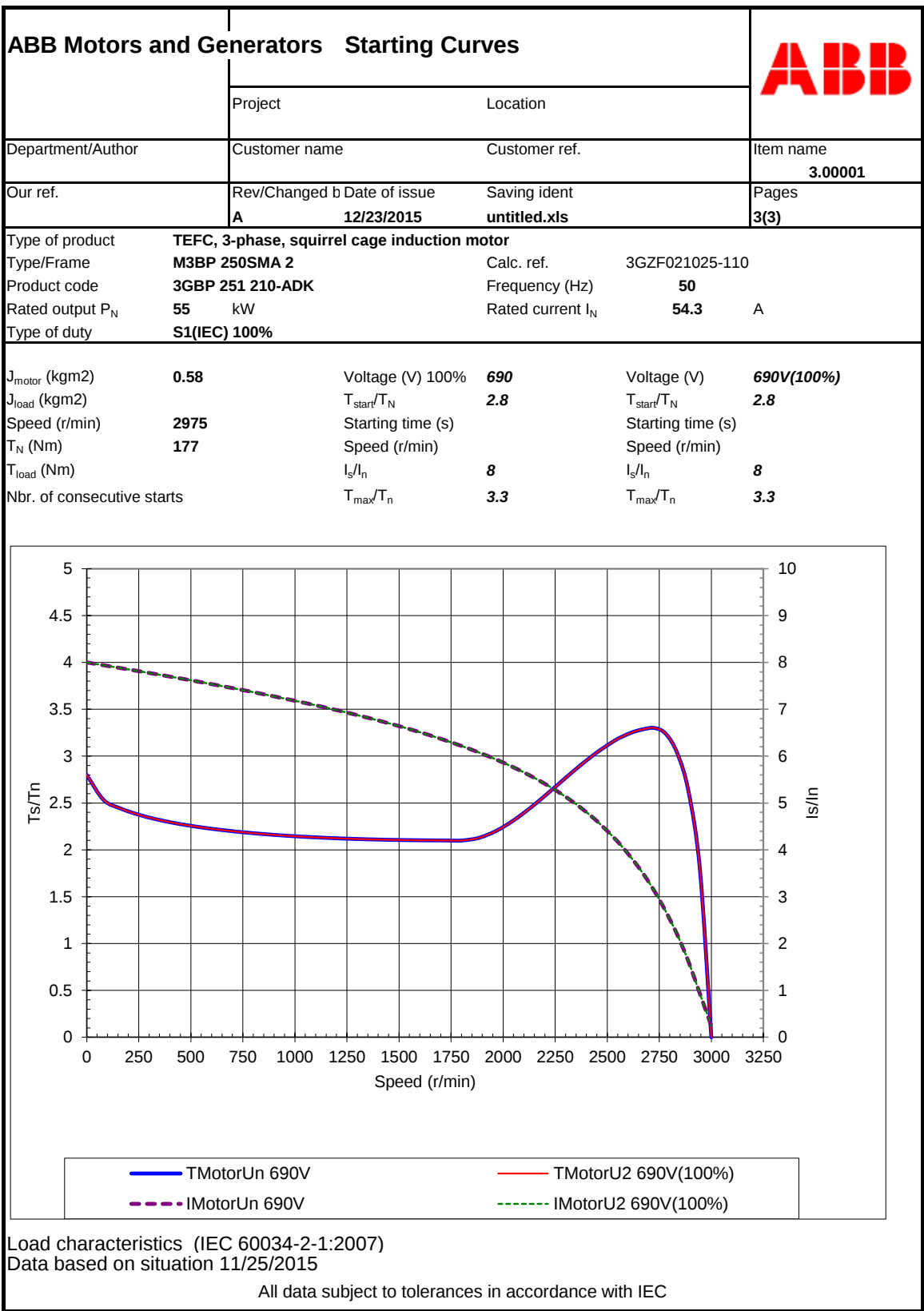


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Item name
		A	12/23/2015	untitled.xls	4.00001
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No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	EMM25552-PPN (3GBP251210-ADK+011+332+509)			Calc. ref. 3GZF021025-110
3	Type/Frame	M3BP 250SMA 2			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	55	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	460	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	60	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	3578	r/min		
11	Rated current I _N	82.1	A		
12	No-load current	22	A		
13	Starting current I _s /I _N	9.1		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	147	Nm		
15	Locked rotor torque T _s /T _N	2.9			
16	Maximum torque T _{max} /T _N	3.6			
17	Minimum torque T _{min} /T _N	2.1			
18	Speed at minimum torque	2160	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	82.1	94.4 / IE3	0.89
20		75	63.2	94.2	0.87
21		50	46.3	93.2	0.8
22		Start	747		0.32
23	Maximum starting time from hot	15	s		
24	Maximum starting time from cold	27	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	40	°C		
27	Altitude	1000	m.a.s.l.		
28	Enclosure	IP55			
29	Cooling system	IC411 self ventilated			
30	Bearing DE/NDE	6315/C3 - 6213/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	83	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	0.579	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	Top			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	CW or CCW			
40	Weight of rotor	93	kg		
41	Total weight of motor	439	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49	011 = Fulfilling CSA and NRCAN				
50	332 = Baldor Catalog number stamped on rating plate				
51	509 = Fulfilling EISA Subtype I efficiency requirements, CC031A				
52					
Remarks:					
Data based on situation 11/25/2015					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					

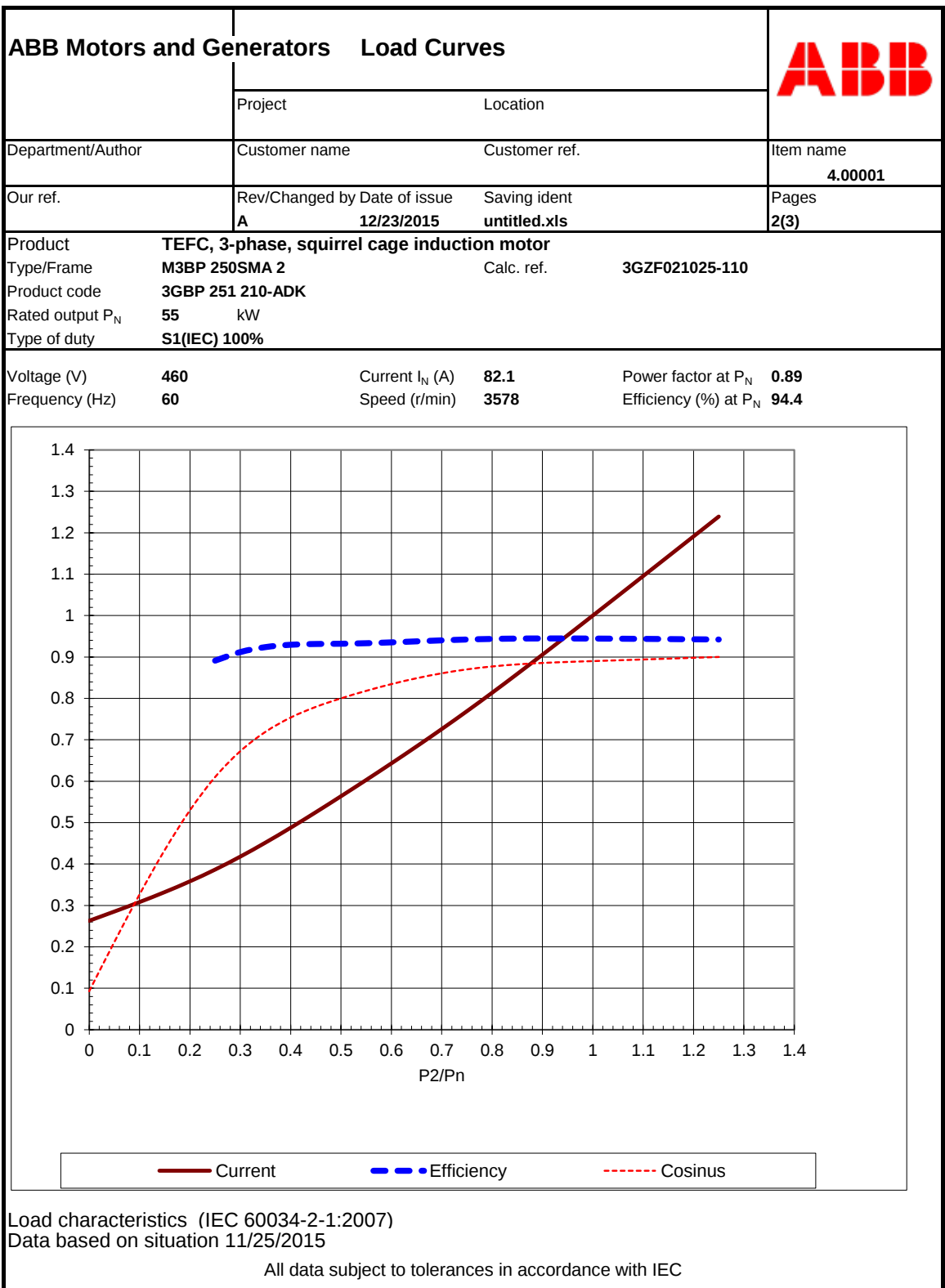


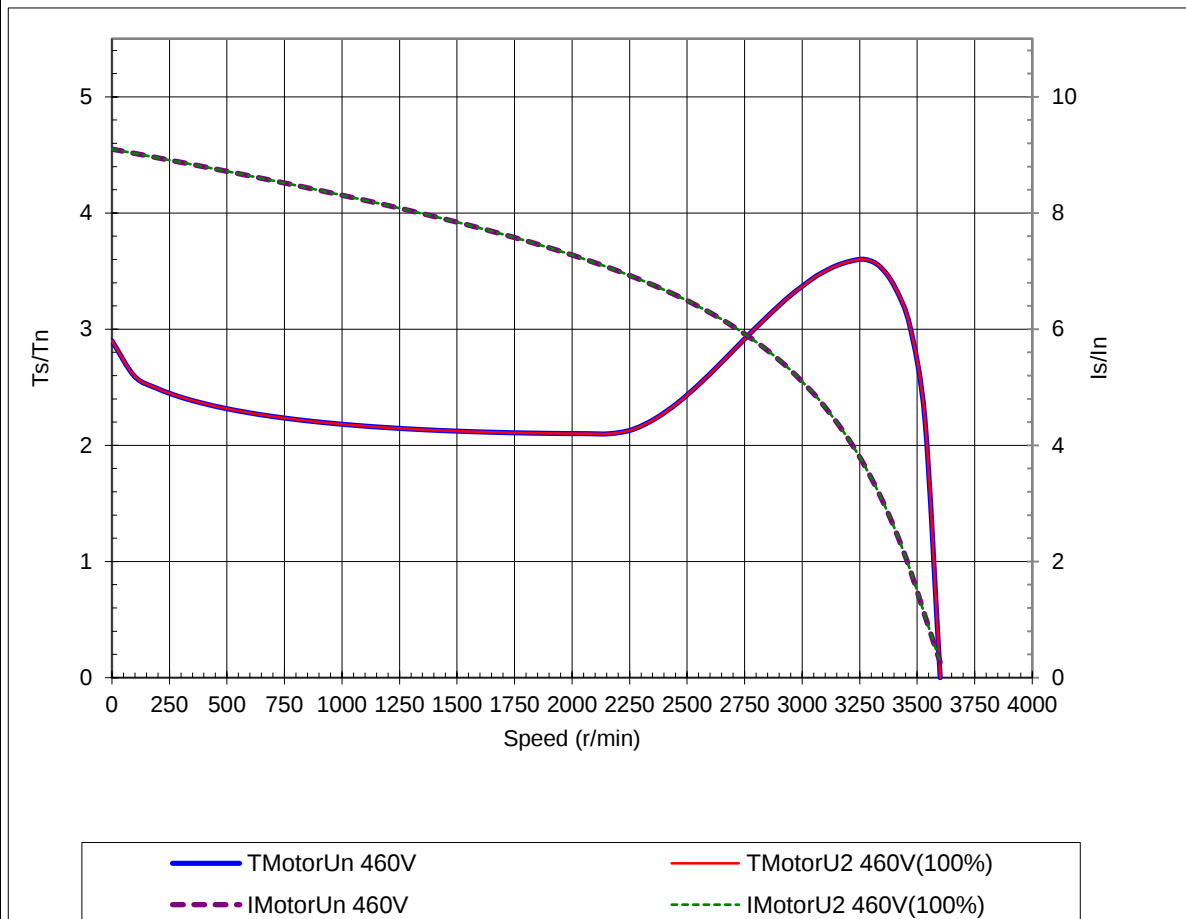
ABB Motors and Generators Starting Curves



	Project	Location	
Department/Author	Customer name	Customer ref.	Item name
			4.00001
Our ref.	Rev/Changed b Date of issue	Saving ident	Pages
	A 12/23/2015	untitled.xls	3(3)

Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 250SMA 2	Calc. ref.	3GZF021025-110
Product code	3GBP 251 210-ADK	Frequency (Hz)	60
Rated output P_N	55 kW	Rated current I_N	82.1 A
Type of duty	S1(IEC) 100%		

J_{motor} (kgm ²)	0.58	Voltage (V) 100%	460	Voltage (V)	460V(100%)
J_{load} (kgm ²)		T_{start}/T_N	2.9	T_{start}/T_N	2.9
Speed (r/min)	3578	Starting time (s)		Starting time (s)	
T_N (Nm)	147	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_N	9.1	I_s/I_N	9.1
Nbr. of consecutive starts		T_{max}/T_N	3.6	T_{max}/T_N	3.6



Load characteristics (IEC 60034-2-1:2007)
Data based on situation 11/25/2015

All data subject to tolerances in accordance with IEC