

Application Specification Sheet for FCMA Soft Starter - 13.6MW			
Enquiry no.	E9871	Job no.	J2522/5
Enquiry handled by	-	Job handled by	Shilpa
Main Contractor	HCC-NCC JV	Client	Jyoti Ltd.
Contact person	-	Contact person	-
Project Ref.	GLIS Phase II, Chokkarao, Dharamsagar Pumping Station		
Motor specifications		Load specifications	
KW	13600	Consumed KW	10441.66
RPM	500	RPM	500
Frame size	5B 356-12VW	Type	Metallic Concrete Volute Pump
Make	CKD Nove Energo a.s.	Make	Jyoti Ltd/CKD Blansko
Machine no.	-	Model No.	2200 VM
Ph segregated Neutral TB	Required Clearances Available	Machine no.	-
Connection	star	Full load torque kgm	14678.9
		Starting Torque p.u.	0.127 Assumed
Supply voltage - volts	11000	Rotating inertia GD sq.	15332 Kgm ²
Voltage variation %	+/-6.3%	Load curves	
Supply frequency - Hz	50	Torque speed	Given by CBE
Frequency variation %	+/- 3%	Min. acc. time	-
Full load torque kgm	26475	Max. acc. time	-
L.R.T. - p.u.	0.77		
Rotating Inertia GD sq.	44000 Kgm ²	System details	
Full load current amps	731	Fault level	-
L.R. Current - p.u.	5.90	Superimposed curve	-
		Supply Xmer capacity	-
Motor curves		Xmer p.u.impedance	-
Torque - speed	Given by CKD		
Current - speed	Given by CKD	Base load p.u.	-
Thermal withstand	Given by CKD	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	By others
		Motor protection relay	By others
Model no. - Neutral side	NSC1-13600-H	other protections	By others
Starting current p.u.	3.20		
Starting torque p.u.	0.22		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.54		
Run voltage p.u.	1		
Bypass arrangement	Vacuum bypass device		
Acceleration Time in seconds	22-24 sec		
Document no.	J2522/5-6-026-01	ITPL property	No copy without permission
Revision	R2		
By	Shilpa		
Date	8/1/2007	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
			Fax- 0091 - 020 - 2712 20 92

Application Specification Sheet for FCMA Soft Starter - 12MW

Enquiry no.	E9098/GO/LS	Job no.	J2375/1
Enquiry handled by	Suvarna	Job handled by	Shilpa
Contractor	Kirloskar Brothers Ltd.	Consultant	-
Contact person	-	Contact person	
		Project Ref.	Bhima Project of A.P
Motor specifications		Load specifications	
KW	12000	Consumed KW	--
RPM	333	RPM	333
Frame size	1600	Type	Pump
Make	WEG	Make	KBL - EBARA
Machine no.	SDW1600	Model No.	2600VLM
Ph segregated Neutral TB	Not Available	Machine no.	--
Connection	-	Full load torque kgm	--
		Starting Torque p.u.	0.1
Supply voltage - volts	11000	Rotating inertia GD sq.	17000 Kgm ²
Voltage variation %	IEC	Load curves	
Supply frequency - Hz	50	Torque speed	R0500012-1734-0150
Frequency variation %	IEC	Min. acc. time	--
Full load torque kgm	38598	Max. acc. time	--
L.R.T. - p.u.	0.8		
Rotating Inertia GD sq.	14395 Kgm ²	System details	
Full load current amps	673 A	Fault level	--
L.R. Current - p.u.	5.3	Superimposed curve	--
		Supply Xmer capacity	--
		Xmer p.u.impedance	--
Motor curves			
Torque - speed	FDE14408OP140778-2005		
Current - speed	FDE14408OP140778-2005	Base load p.u.	--
Thermal withstand	FDE14408OP140778-2005	Max.starting volt drop	--
Equivalent circuit	--		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	By others
		Motor protection relay	By others
Model no. - Line side	LSC1-12000-H-M2	other protections	By others
Starting current p.u.	1.8		
Starting torque p.u.	0.1		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.34		
Run voltage p.u.	1		
Bypass arrangement	Vacuum Circuit Breaker		
Acceleration Time	22-24 Secs		
Document no.	J2375/1-030-01	ITPL property	No copy without permission
Revision	R1		
By	Shilpa		
Date	26/11/05	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
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Application Specification Sheet for FCMA Soft Starter - 10MW

Enquiry no.	E8439	Job no.	J2177
Enquiry handled by	Chinar	Job handled by	Shilpa
Client	Bharat Heavy Electricals Ltd.	End Client	PDO, Oman
Contact person	-	Contact person	-
		Project Ref.	Lakhawair
Motor specifications		Load specifications	
KW	10000	Consumed KW	-
RPM	1500	RPM	1500
Frame size	AG180M112	Type	Hydraulic coupling
Make	BHEL		(Boiler Feed Pump)
Machine no.	-	Make	Voith Turbo
Ph segregated Neutral TB	Available	Model No.	R 18 KGS-14 (API)
Connection	star	Machine no.	-
		Full load torque kgm	4069
Supply voltage - volts	11000	Starting Torque p.u.	0.01
Voltage variation %	±10%	Rotating inertia GD sq.	1452
Supply frequency - Hz	50	Load curves	
Frequency variation %	±5%	Torque speed	3.602-017098
Full load torque kgm	6491.5	Min. acc. time	-
L.R.T. - p.u.	1.685	Max. acc. time	-
Rotating Inertia GD sq.	5000		
Full load current amps	601.5	System details	
L.R. Current - p.u.	5.5	Fault level	-
		Superimposed curve	-
Motor curves		Supply Xmer capacity	-
Torque - speed	E.M.0106	Xmer p.u.impedance	-
Current - speed	EM-0107		
Thermal withstand	EM-0108	Base load p.u.	-
Equivalent circuit	-	Max.starting volt drop	-
Soft Start details		Motor protections	
		Vacuum Circuit breaker	By Others
Model no. - Neutral side	NSC1-14800-20000E-H	Motor protection relay	By Others
Starting current p.u.	1.43	other protections	By Others
Starting torque p.u.	0.114		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.26		
Run voltage p.u.	1		
Bypass arrangement	Bypass VCB		
Acceleration Time	35-38 sec		
Document no.	J2177-030-01	ITPL property	No copy without permission
Revision	R0		
By	Chinar		
Date	29/6/05	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
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Application Specification Sheet for FCMA Soft Starter - 4.3MW

Enquiry no.	E8976/LS	Job no.	J2099/LS
Enquiry handled by	Uttara	Job handled by	Shilpa
Contractor	Uttara Engg. India Pvt. Ltd.	Consultant	-
Contact person	-	Contact person	-
		Project Ref.	
Motor specifications		Load specifications	
KW	4300	Consumed KW	4016
RPM	1494	RPM	-
Frame size	1RQ1718-4	Type	Air compressor
Make	BHEL	Make	Siemens
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Available	Machine no.	-
Connection	star	Full load torque kgm	-
		Starting Torque p.u.	0.036
Supply voltage - volts	11000	Rotating inertia GD sq.	3968
Voltage variation %	±10%	Load curves	
Supply frequency - Hz	50	Torque speed	Available, curve - 2b
Frequency variation %	+2%, -3%	Min. acc. time	-
Full load torque kgm	2805	Max. acc. time	-
L.R.T. - p.u.	0.47		
Rotating Inertia GD sq.	680	System details	
Full load current amps	258	Fault level	-
L.R. Current - p.u.	5	Superimposed curve	-
		Supply Xmer capacity	-
Motor curves		Xmer p.u.impedance	-
Torque - speed	AM44106-11-01		
Current - speed	AM44106-11-01	Base load p.u.	-
Thermal withstand	AM44106-11-04	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft start details		Vacuum Circuit breaker	Client's Scope
		Motor protection relay	Client's Scope
Model no. - Neutral side	NSC1-4300-H	other protections	Client's Scope
Starting current p.u.	2.75		
Starting torque p.u.	0.141		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.55		
Run voltage p.u.	1		
Bypass arrangement	Bypass Device		
Acceleration Time	65-67 secs		
Document no.	J2099-026-01	ITPL property	No copy without permission
Revision	R0		
By	Shilpa		
Date	6/11/2004	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
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Application Specification Sheet for FCMA Soft Starter - 4.3MW

Enquiry no.	E10765	Job no.	J2895/6
Enquiry handled by	Chinar	Job handled by	Chinar
Contractor	Punj Lloyd Ltd.	Consultant	Aker Kvaerner Powergas Ltd./Lurgi
Contact person	-	Contact person	Mr. Nadkarni
		Project Ref.	IOCL, Haldia
Motor specifications		Load specifications	
KW	4300	Consumed KW	-
RPM	333	RPM	333
Frame size	-	Type	Make up compressor
Make	AEG	Make	Thomassen Compression system
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Not Available	Machine no.	-
Connection	-	Full load torque kgm	-
		Starting Torque p.u.	0.18
Supply voltage - volts	6600	Rotating inertia GD sq.	1896
Voltage variation %	±10%	Load curves	
Supply frequency - Hz	50	Torque speed	Available
Frequency variation %	±5%	Min. acc. time	-
Full load torque kgm	12557	Max. acc. time	-
L.R.T. - p.u.	0.58		
Rotating Inertia GD sq.	26500	System details	
Full load current amps	387.6	Fault level	-
L.R. Current - p.u.	3.8	Superimposed curve	-
		Supply Xmer capacity	-
		Xmer p.u.impedance	-
Motor curves			
Torque - speed	Available		
Current - speed	Available	Base load p.u.	-
Thermal withstand	Available	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	By Others
		Motor protection relay	By Others
		other protections	By Others
Model no. - Line side	LSC1-4300-M-DC		
Starting current p.u.	2.9		
p.u.	0.3		
Starting current supply side p.u.	current		
Starting torque p.u.	0.2		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.63		
Run voltage p.u.	1		
Bypass arrangement	8-10sec		
Acceleration Time			
Document no.	J2895/5-7-026-01	ITPL property	No copy without permission
Revision	R0		
By	Chinar		
Date	27/10/07	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
			Fax- 0091 - 020 - 2712 20 92

Application Specification Sheet for FCMA Soft Starter - 1.492MW			
Enquiry no.	EX1100/AI	Job no.	X1637/AI/5
Enquiry handled by	P. R. Deo	Job handled by	Shilpa Patil
Contractor	York International, Dubai	Consultant	Mott Macdonald, Dubai
Contact person	-	Contact person	-
		Project Ref.	Dubai Marina Phase-1
Motor specifications		Load specifications	
KW	1492	Consumed KW	-
RPM	2974	RPM	2974
Frame size	-	Type	Chiller Compressor
Make	ABB Automation	Make	York International
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Available	Machine no.	-
Connection	star	Full load torque kgm	-
		Starting Torque p.u.	0.045
Supply voltage - volts	11000	Rotating inertia GD sq.	12
Voltage variation %	± 10	Load curves	
Supply frequency - Hz	50	Torque speed	Curve No. PNCC 560 LD 02
Frequency variation %	± 5	Min. acc. time	-
Full load torque kgm	487.4	Max. acc. time	-
L.R.T. - p.u.	0.4		
Rotating Inertia GD sq.	148	System details	
Full load current amps	91	Fault level	-
L.R. Current - p.u.	4.48	Superimposed curve	-
		Supply Xmer capacity	35 / 50 MVA
Motor curves		Xmer p.u. impedance	34.68% at nominal tap position
Torque - speed	Curve No. PNCC 560 LD 02		at 50 MVA
Current - speed	Curve No. PNCC 560 LD 02	Base load p.u.	-
Thermal withstand	-	Max. starting volt drop	Within 4%
Equivalent circuit	-		
		Motor protections	
Soft Start Details		Vacuum Circuit breaker	Other Agency
		Motor protection relay	Other Agency
Model no. - Neutral side	NSC1-1500-H	other protections	Other Agency
Starting current p.u.	3.27		
Starting torque p.u.	0.21		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.73		
Run voltage p.u.	1		
Bypass arrangement	Vacuum Contactor		
Acceleration Time	22-23 Sec		
Document no.	X1637/5-035-000	ITPL property	No copy without permission
Revision	R2		
By	Shilpa		
Date	9/28/2001	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.	Ph. - 0091 - 020 - 2712 17 10	
		Fax- 0091 - 020 - 2712 20 92	

Application Specification Sheet for FCMA Soft Starter - 1.03MW			
Enquiry no.	-	Job no.	J2688
Enquiry handled by	-	Job handled by	Shilpa
Contractor	Oswal Denim	Consultant	--
Contact person	-	Contact person	--
		Project Ref.	
Motor specifications		Load specifications	
KW	1030	Consumed KW	-
RPM	2975	RPM	2975
Frame size	500D	Type	Centrifugal Compressor
Make	TECO Elec.& Mach. Co. Ltd.	Make	Ingersoll Rand
Machine no.	AECK-S2001	Model No.	-
Ph segregated Neutral TB	Available	Machine no.	--
Connection	star	Full load torque kgm	--
		Starting Torque p.u.	0.05
Supply voltage - volts	11000	Rotating inertia GD sq.	70.12Kg-m ²
Voltage variation %	+/-10%	Load curves	
Supply frequency - Hz	50	Torque speed	Considered
Frequency variation %	+/-5%	Min. acc. time	--
Full load torque kgm	327	Max. acc. time	--
L.R.T. - p.u.	0.65		
Rotating Inertia GD sq.	81.61 Kg-m ²	System details	
Full load current amps	61.9	Fault level	--
L.R. Current - p.u.	6	Superimposed curve	--
		Supply Xmer capacity	--
Motor curves		Xmer p.u.impedance	--
Torque - speed	Available		
Current - speed	Available	Base load p.u.	--
Thermal withstand	-	Max.starting volt drop	--
Equivalent circuit	-		
		Motor protections	
Soft start details		Vacuum Circuit breaker	--
		Motor protection relay	--
Model no. - Neutral side	NSC1-1030-H	other protections	--
Starting current p.u.	3.44		
Starting torque p.u.	0.211		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.57		
Run voltage p.u.	1		
Bypass arrangement	Bypass Vacuum Device		
Acceleration Time	28 secs		
Document no.	J2688--030--01	ITPL property	No copy without permission
Revision	R0		
By	Shilpa		
Date	10/3/2007	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.	Ph. - 0091 - 020 - 2712 17 10	
		Fax- 0091 - 020 - 2712 20 92	

Application Specification Sheet for FCMA Soft Starter - 6.65MW

Enquiry no.	E6308/IT	Job no.	J1748/IT
Enquiry handled by	Suvarna	Job handled by	Shilpa
Contractor	Air Liquide	Project	1041-Sterlite
Contact person	-	Consultant	-
Motor specifications		Load specifications	
KW	6650	Consumed KW	-
RPM	1490	RPM	1490
Type	HKM-171 E04	Type	Compressor
Make	Siemens	Make	Demag
Machine no.	-	Model No.	VK 50-3 curve 2a
Ph segregated Neutral TB	Available	Machine no.	-
Connection	star	Full load torque kgm	-
		Starting Torque p.u.	0.038
Supply voltage - volts	6600	Rotating inertia GD sq.	4580
Voltage variation %	± 10	Load curves	
Supply frequency - Hz	50	Torque speed	Available
Frequency variation %	± 5	Min. acc. time	-
Full load torque kgm	4345	Max. acc. time	-
L.R.T. - p.u.	0.5		
Rotating Inertia GD sq.	1000	System details	
Full load current amps	702	Fault level	-
L.R. Current - p.u.	5.5	Superimposed curve	-
		Supply Xmer capacity	-
		Xmer p.u.impedance	-
Motor curves			
Torque - speed	Available		
Current - speed	Available	Base load p.u.	-
Thermal withstand	-	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	Other Agency
		Motor protection relay	Other Agency
		other protections	Other Agency
Model no. - Neutral side	NSC1-6650-M		
Starting current p.u.	3.3		
Starting torque p.u.	0.18		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.6		
Run voltage p.u.	1		
Bypass arrangement	Vacuum Circuit Breaker		
Acceleration Time	38-39 Sec		
Document no.	J1748/IT-026-01	ITPL property	No copy without permission
Revision	R0		
By	Chinar		
Date	9/10/2002	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.	Ph. - 0091 - 020 - 2712 17 10	
		Fax- 0091 - 020 - 2712 20 92	

Application Specification Sheet for FCMA Soft Starter - 5.4 MW

Enquiry no.	E2512	Job no.	J1169L
Enquiry handled by	Mohan	Job handled by	
Customer	AIR LIQUIDE	Consultant	EIL
contact person	-	contact person	
End client	IPCL. GANDHAR	Project Ref.	3rd stream Air separation
contact person	-		plant
<u>Motor specifications</u>		<u>Load specifications</u>	
KW	5400	Consumed KW	4770
RPM	1493	RPM	1493
Frame size	1RQ7806-4/B3	Type	Compressor
Make	BHEL -Bhopal	Make	Mannesmann Demag
Machine no.		Machine no.	VK 40 -4
Ph segregated Neutral TB	available	Full load torque Kgm	3520
Connection	Star-Y	Starting Torque p.u.	0.075
		Rotating inertia Kg-msq.	3640
Supply voltage - volts	6600	Load curves	MANNESMANN DEMAG
Voltage variation %	6% +/-	Torque speed-starting	26754415 11/3/97
Supply frequency - Hz	50	Min. acc. time	29
Frequency variation %		Max. acc. time	36
Full load torque kgm	3522		
L.R.T. - p.u.	0.65 p.u.	System details	
Rotating Inertia GD sq.	1280	Fault level	25 KA - 1 Second.
Full load current amps	541	Superimposed curve	
L.R. Current - p.u.	5	Supply Xmer capacity	
Motor curves	BHEL	Base load p.u.	
Torque - speed	47003A421-11, 6/8/97	Max.starting volt drop	
Current - speed	47003A421-11,6/8/97		
Thermal withstand	AM47003-11/02		
Equivalent circuit	-	Generator capacity	NA
		Xd'	
Soft Start details		Gen. overcurrent capacity	
Model no.-Line side		Base load	
Model no. - Neutral side	NSC1-5400,Air cooled	Max. starting volt drop	
Starting current p.u.	2.8	3.1	
Satrtng torque p.u.	0.2	0.25	
Min. acc. torque p.u.	0.1	0.15	Motor protections-client
Starting voltage	56%	62%	client's scope
Starting time	37-38 sec	27-28 sec	Circuit breaker
Bypass arrangement	Vacuum Circuit Breaker	Motor protection relay	
		speed switch feedback	
		other protections	
		Capacitor after CB	
Document no.	htss/"enq"/001/01	ITPL property	No copy without permission
Revision	R0		
By	Prafulla Deo		
Date	10/16/1998	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
			Fax- 0091 - 020 - 2712 20 92

Application Specification Sheet for FCMA Soft Starter - 4.3MW

Enquiry no.	E10765	Job no.	J2895/5
Enquiry handled by	Chinar	Job handled by	Chinar
Contractor	Punj Lloyd Ltd.	Consultant	Aker Kvaerner Powergas Ltd./Lurgi
Contact person	-	Contact person	-
		Project Ref.	IOCL, Haldia
Motor specifications		Load specifications	
KW	4300	Consumed KW	-
RPM	333	RPM	333
Frame size	-	Type	Make up compressor
Make	AEG	Make	Thomassen Compression system
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Not Available	Machine no.	-
Connection	-	Full load torque kgm	-
		Starting Torque p.u.	0.18
Supply voltage - volts	6600	Rotating inertia GD sq.	1896
Voltage variation %	±10%	Load curves	
Supply frequency - Hz	50	Torque speed	Available
Frequency variation %	±5%	Min. acc. time	-
Full load torque kgm	12557	Max. acc. time	-
L.R.T. - p.u.	0.58		
Rotating Inertia GD sq.	26500	System details	
Full load current amps	387.6	Fault level	-
L.R. Current - p.u.	3.8	Superimposed curve	-
		Supply Xmer capacity	-
		Xmer p.u.impedance	-
Motor curves			
Torque - speed	Available		
Current - speed	Available	Base load p.u.	-
Thermal withstand	Available	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	By Others
		Motor protection relay	By Others
Model no. - Line side	LSC1-4300-M-DC	other protections	By Others
Starting current p.u.	2.9		
Dynamic compensation Current p.u.	0.3		
Starting current supply side p.u.	Less than 3 times of motor current		
Starting torque p.u.	0.2		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.63		
Run voltage p.u.	1		
Bypass arrangement	Vacuum Circuit Breaker		
Acceleration Time	8-10sec		
Document no.	J2895/5-7-026-01	ITPL property	No copy without permission
Revision	R0		
By	Chinar		
Date	27/10/07	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.	Ph. - 0091 - 020 - 2712 17 10	
		Fax- 0091 - 020 - 2712 20 92	

Application Specification Sheet for FCMA Soft Starter - 2.5MW

Enquiry no.	E10113	Job no.	J2553
Enquiry handled by	Suvarna	Job handled by	Chinar
Client	IOCL, Panipat	Consultant	-
Contact person	-	Contact person	-
		Project Ref.	-
Motor specifications		Load specifications	
KW	2500	Consumed KW	-
RPM	2995	RPM	4565
Frame size	-	Type	Crude Oil Feed Pump
Make	Schorch Gmbh	Make	Ingersoll - Dresser
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Not Available	Machine no.	-
Connection		Full load torque kgm	751
		Starting Torque p.u.	0.15
Supply voltage - volts	6600	Rotating inertia GD sq.	27.08
Voltage variation %	± 10	Load curves	
Supply frequency - Hz	50	Torque speed	D5548a
Frequency variation %	± 3	Min. acc. time	-
Full load torque kgm	813	Max. acc. time	-
L.R.T. - p.u.	1.08		
Rotating Inertia GD sq.	200 (assumed)	System details	
Full load current amps	246A	Fault level	250MVA(withstand)
L.R. Current - p.u.	8.13	Superimposed curve	-
		Supply Xmer capacity	12.5MVA
Motor curves		Xmer p.u.impedance	7%
Torque - speed	D5548a		
Current - speed	D5548a	Base load p.u.	-
Thermal withstand	-	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft Start details		Vacuum Circuit breaker	In Client's Scope
Model no. - Line side	LSC1-2500-M-M2	Motor protection relay	In Client's Scope
Starting current p.u.	4.4 times	other protections	In Client's Scope
Starting torque p.u.	0.31		
Min. acc. torque p.u.	0.16		
Starting voltage p.u.	0.54		
Run voltage p.u.	1		
Acceleration Time	19 - 20 Sec.		
Document no.	: E10113/PC/2005/2	ITPL property	No copy without permission
Revision			
By	Suvarna		
Date	18/10/2005	Email No. : design@innotech-ind.com	
Spec sheet for softstart	Innovative Technomics Pvt. Ltd.	Ph. - 0091 - 020 - 2712 17 10	
		Fax- 0091 - 020 - 2712 20 92	

Application Specification Sheet - 0.9MW

Enquiry no.	-	Job no.	J2811/3
Enquiry handled by	-	Job handled by	Chinar
Client	Trend Electric	Consultant	-
Contact person		Contact person	-
		Project Ref.	Hyundai Motors Ltd.
Motor specifications		Load specifications	
KW	900	Consumed KW	-
RPM	2972	RPM	2972
Frame size	AMA 400L2A BAI	Type	Centrifugal Compressor
Make	ABB	Make	Ingersoll Rand
Machine no.	-	Model No.	-
Ph segregated Neutral TB	Available	Machine no.	-
Connection	star	Full load torque kgm	-
		Starting Torque p.u.	0.05
Supply voltage - volts	3300	Rotating inertia GD sq.	45.2
Voltage variation %	±10%	Load curves	
Supply frequency - Hz	50	Torque speed	Available
Frequency variation %	±5%	Min. acc. time	-
Full load torque kgm	295	Max. acc. time	-
L.R.T. - p.u.	0.4		
Rotating Inertia GD sq.	36	System details	
Full load current amps	186.23	Fault level	-
L.R. Current - p.u.	4.6	Superimposed curve	-
		Supply Xmer capacity	-
Motor curves		Xmer p.u.impedance	-
Torque - speed	Available		
Current - speed	Available	Base load p.u.	-
Thermal withstand	Available	Max.starting volt drop	-
Equivalent circuit	-		
		Motor protections	
Soft start details		Vacuum Circuit breaker	By Others
		Motor protection relay	By Others
Model no. - Neutral side	NSC1-900-M	other protections	By Others
Starting current p.u.	3.2		
Starting torque p.u.	0.185		
Min. acc. torque p.u.	0.1		
Starting voltage p.u.	0.68		
Run voltage p.u.	1		
Bypass arrangement	Vacuum Bypass Device		
Acceleration Time	19-21 sec		
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Revision	R0		
By	Chinar		
Date	29/6/07	Email No. : design@innotech-ind.com	
Spec sheet for softstart proposal	Innovative Technomics Pvt. Ltd.		Ph. - 0091 - 020 - 2712 17 10
			Fax- 0091 - 020 - 2712 20 92