PPI / NARGAN	DEHDASHT PETROCHEMICAL INDUSTRY COMPANY DEHDASHT HIGH DENSITY POLYETHYLENE PROJECT	PGPIC
Contract No.: DPIC/98-12	DOCUMENT TITLE: Main Motor Data Sheet and Curve	POI: IFA / Rev.: D0
	DOCUMENT No: DPIC9812-000-VD-1002-ME-DS-0042	Sheet 1 of 6

Main Motor Data Sheet and Curve

PURCHASER'S COMMENT/APPROVAL STATUS	
1	AP: Approved (Released for Manufacturing)
2	AN: Approved With Minor Comments (Fabrication may Proceed)
3	NF: Approved With Comments (Fabrication not Proceed)
4	RJ: Rejected
5	NR: Not be Returned
Date: XX.XX.XX	Signature:

Purchaser: NARGAN

Requisition No.: DPIC98-12-001-000-ME-MR-4150-0001-D1

Item No. (Tag No.): PK-6101

Vendor Doc. No.: DPIC9812-000-VD-1002-ME-DS-0041

REV.	DATE ISSUE	Purpose of Issue	PREPARED	CHECKED	APPROVED
D0	23-Jan-22	IFA	M.R	M.M	A.V

KASRAVAND Engineering & Construction

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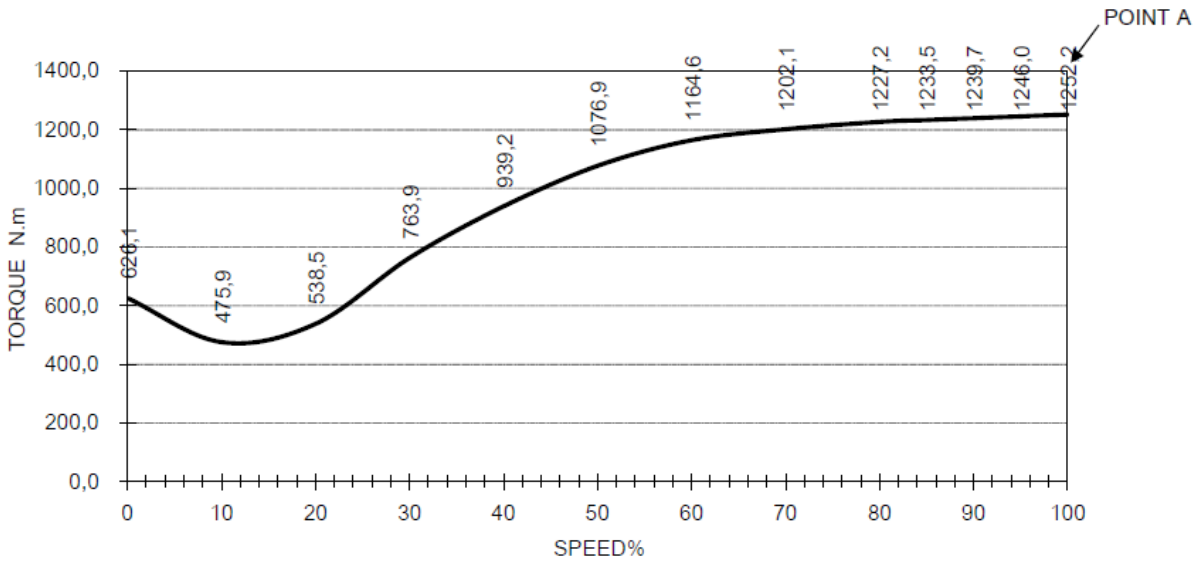
Example of a similar motor

Technical Datasheet – AIR COOLED

Kind of motor	: Three phase squirrel cage induction		
Design, tests and tolerances	: IEC 60034 / EN 60034, EN60079-7		
Unless otherwise stated, locations refer viewing to motor drive end			
Quantity	: 2		
Rated output (P_N)	: 1240	kW	
Duty	: S1 [according DIN EN 60034-1 (VDE0530-1)]		
Service Factor	: SF 1.0		
Rated voltage (Vr)	: 11000	V +/- 5 %	
Connection	: Star		
Frequency	: 50	Hz	
Rated speed	: 2978	rpm	
Direction of rotation	: clockwise	(assumption) - viewing to motor drive end	
Overspeed	: 3600	rpm for max. 2 minutes	
Efficiency (eta) 4 / 4	: 96.2	%	
Power factor (cos phi) 4 4	: 0.90		
Full load current (FLC)	: 138	A	
Starting current (I_A)	: 5.5	x FLC	
Rated torque (FLT)	: 3976	Nm	
Starting torque (M_A)	: 0.4	x FLT	
Break down torque (M_K)	: 1.7	x FLT	
Moment of inertia (J), appr.	: 17	kgm²	
Mass of motor, appr.	: 7100	kg	
Outline dimension drawing	: 5955897	preliminary	
Driven load	: compressor	(power consumption ≤ unknown kW)	
Load moment of inertia (J)	: 3	kgm² (referred to motor speed)	
Load torque curve	: see figure below		



Starting time (t_a) @ 100/80% Vr : ~5 / ~13 sec.
Locked rotor time @ 100/80% Vr : ~15 / ~26 sec. from cold condition (speed switch – see additional price)
Locked rotor time (T3) @ 100% Vr: ~2 sec. after S1 duty, acc. EN 60079-7

Starting frequency @ 100% Vr:
3 consecutive starts with motor initially at maximum ambient temperature (cold)
2 consecutive starts with motor initially at rated operating temperature (warm)
motor coasting to rest between starts (without brakes)

Starting frequency @ 80% Vr:
2 consecutive starts with motor initially at maximum ambient temperature (cold)
1 consecutive starts with motor initially at rated operating temperature (warm)
motor coasting to rest between starts (without brakes)

Please note: The given starting frequency is only valid during commissioning phase without explosive atmosphere outside and inside motor.
During operation in hazardous areas, only S1 duty (no consecutive starts acc. EN 60034-1) is permissible.

Please note: During start or restart the maximum allowable surface temperature / ignition temperature of the mentioned temperature class will be exceeded by the motor!
The customer is responsible to detect such conditions and has to ensure that during the condition “ignitable gas mixture” a start up or restart of the motor is not possible.
Equipment to do that such as: openings in motor housing for purging, gas sensor, purge unit, …… is not included in our price / in our scope of supply.

Minimal voltage for safe start up : 80% Vr
Method of starting : direct on line (DOL)
Insulation / temperature rise : F / B

Degree of protection : IP 55

Ex-protection : Ex ec IIB T3 Gc Zone 2
Method of cooling : IC 611 with top-mounted air-air cooler

Average sound pressure level, in 1 meter, at no load: 85 dB(A) + 3 dB tolerance

Mounting : IM 1001 (B3)
Shaft end(s) : 1, normal, cylindrical

Type of bearings : Sleeve bearings with natural cooling
- Bearing play : +/- 3 mm

Coupling : direct, flexible
- A limited end float type coupling is required to limit axial end play to +/- 1 mm

Additional load from motor : appr. +/- 1500N
It has to be considered that additional axial forces from the motor will be transferred through the motor shaft onto connected components (such as couplings, bearings, etc.) of the whole drive chain due to the two floating bearings inside the motor. Therefore such components need to be designed to withstand such dragging and compressive forces.
The axial displacement from the adjusted magnetic center depends on the axial coupling slack.

Additional load from driven machine : none

Installation : outdoors (under protection roof only, supplied by costumer – assumption)
Attention: Direct run radiation increases the temperature.
That is the reason why explosion proof motors must always be protected with a protection roof against direct sun radiation.

Ambient temperature min. / max. : -15 / +48 °C

Altitude of installation, max. : 1000 m above sea level
Climatic protection stage : C2 (Protection against 100 % air humidity and chemically aggressive atmosphere)
Final painting : RAL 5010 (80+80=**160µm**) surface treatment and corrosion protection according DIN EN ISO 12944-5

Main terminal box : 1, acc. MFR standard
- Degree of protection : IP 55
- Ex protection : yes, suitable for the explosion protection of the motor
- Amount of connections : 3
- Position from DE : on the right hand side - assumption
- Cable entrance : from bottom with "nonmagnetic" removable undrilled gland plate
- No. of cables : unknown
- Cable outside diameter : unknown
-Cable glands : without cable glands

Star point terminal box : none
- Degree of protection : IP 55

Auxiliary terminal box	: 2 (one for RTDs and one for space heater), acc. MFR standard
- Degree of protection	: IP 55
- Ex protection	: yes, suitable for the explosion protection of the motor
- Position	: on the right hand side - assumption
Balancing quality	: G 2.5 acc. to DIN ISO 21940 – 11 (The rotor will be balanced with half key in accordance to EN 60034-14.)
Smoothness of running	: Grade A (2.3mm/sec. – rigid mounting) according to EN 60034-14
Tests	: routine test in our factory acc. to MFR standard test schedule
Documentation	: In English or German acc. MFR standard

Accessories:
- 6 single RTDs (Pt 100) in the stator winding
- 1 double RTD (Pt 100) on each bearing side
- all RTDs in 3-wire design from terminal box, without monitoring equipment
- 1 space heater (230 V) Ex-design, wired to aux. terminal box

Further product specific data:
- the coupling half has to rest at least on the total length of the feather key