

ECOL MOTOR
MODEL D1S 280S-2
TECHNICAL DATA SHEET

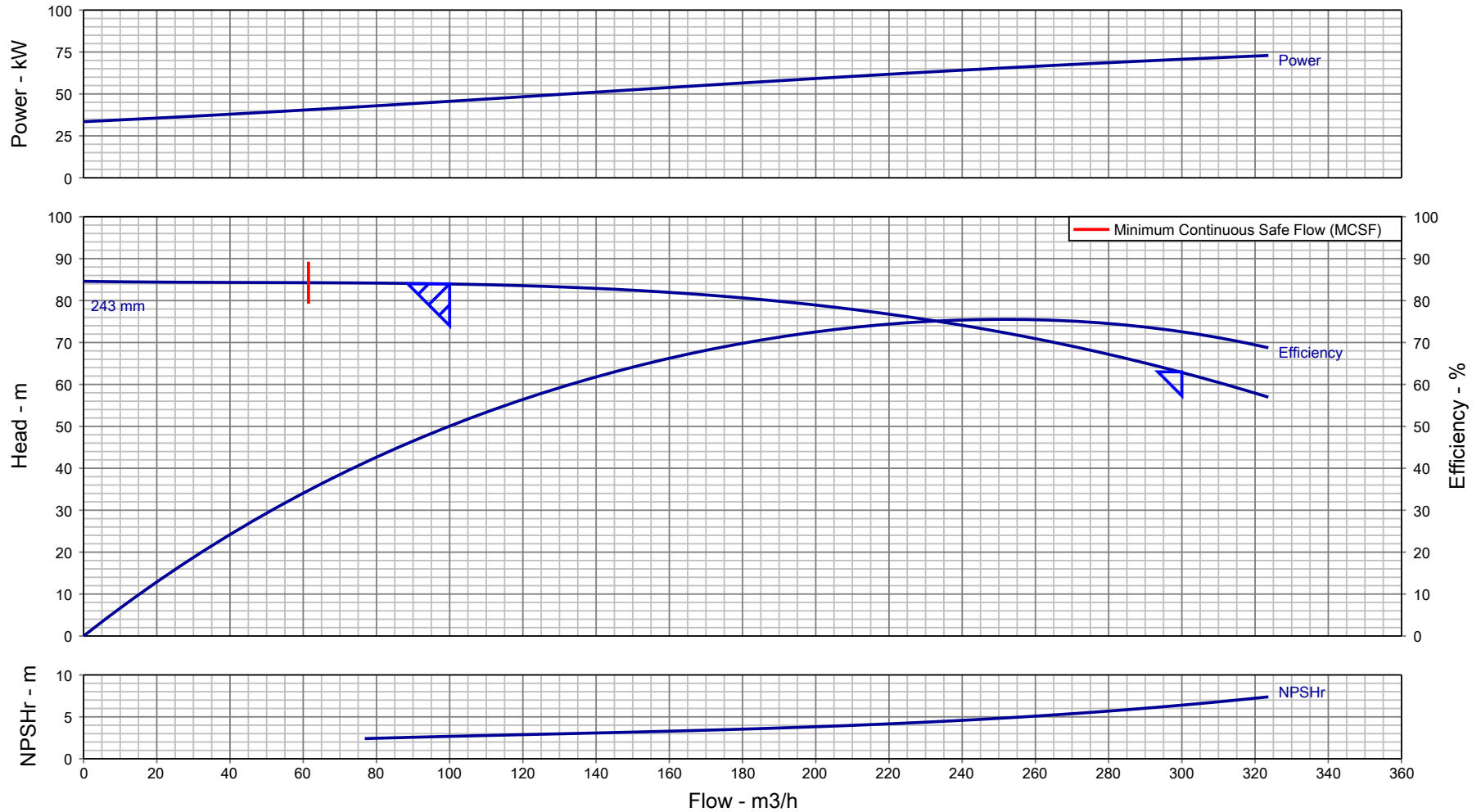
General Data	
Frame size	280
Housing material	Casting iron
Install model	According to the standard
Type of feet	Removable feet (Standard) Fixed feet (Optional)
Net weight	530 kg
Insulation class	F (Standard)
	H (Optional)
Protection degree	IP 55 (Standard)
	IP 56 (Optional)
Thermal protection	Without (Standard)
	Customizable (Optional)
Rotation direction	Clockwise (Standard)
	Counter clockwise (Optional)
Service duty	S1
Vibration level	A
Balance	Half-key balanced
Cable glands	2 - M50x 1.5
Cooling	IC 411
Painting color	RAL 7024 (Standard)
	Customizable (Optional)
Regulations	IEC / DIN / ISO / VDE / EN
Standard	IEC 60034

Environmental conditions	
Ambient temperature	From -20°C to +40°C
Maximum altitude	1000 m above sea level

Electrical Data		
Output	75	kW
Frequency	50	Hz
Voltage (±5%)	400	V Δ @ 50Hz
	690	V Y @ 50Hz
	480	V Δ @ 60Hz
	828	V Y @ 60Hz
Rotation speed	2930	RPM @ 50Hz
	3516	RPM @ 60Hz
Rated current	131.21	A (In) @ Δ 50Hz
	75.75	A (In) @ Y 50Hz
Starting current	7.5	xIn
Rated torque	244.45	Nm (Mn)
Starting torque	2	xMn
	2.3	xMn
Efficiency	IE1	
	92.7	@ 100% load
	92.9	@ 75% load
Power factor cosφ	91.1	@ 50% load
	0.89	@ 100% load

Mechanical Data		
Bearings brand	C&U	(Standard)
	Customizable	(Optional)
Bearings type	6316 C3	(DE)
	6316 C3	(NDE)
Lifetime of bearings		- hours
Allowed radial load		6750 N
Allowed axial load		57700 N
Grease type	polyurea-based grease	
Lubrication interval of NDE bearing		3500 h
Lubrication interval of DE bearing		3500 h
Moment of inertia	0.698710	Kg*m ²
Noise level	94	dB(A)

Pump Performance Curve



Customer :	Pump Size/ Stages : DB 100/26/ 1	Flow, rated : 100.0 m ³ /h
Customer enquiry :	Speed, rated : 2970 rpm	Differential Head : 84.00 m
Project : Default	Based on curve number : HD10223A0 Rev 0	Fluid density rated : 0.998 kg/dm ³
Quote number : 312657	Viscosity : 1.00 cSt	Efficiency : 50.07 %
Item number : 001	Cq/Ch/Ce/Cn [HI2010] : 1.00 / 1.00 / 1.00 / 1.00	Power, rated : 45.60 kW
Quantity : 1	Minimum recommended driver rating : 75.00 kW / 101 hp	NPSH required : 2.67 m
Date last saved : 09 Oct 2020 9:52 AM	Performance testing standard : ISO 9906 / ANSI-HI 14.6 Gr 2B	Liquid Type/ Application : Water

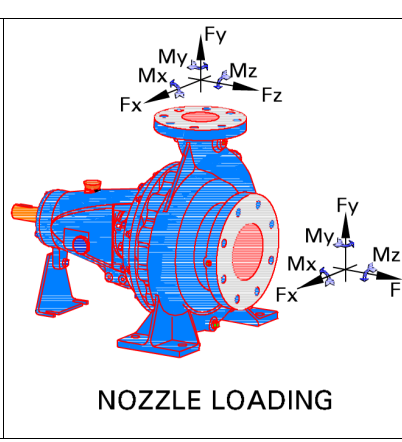
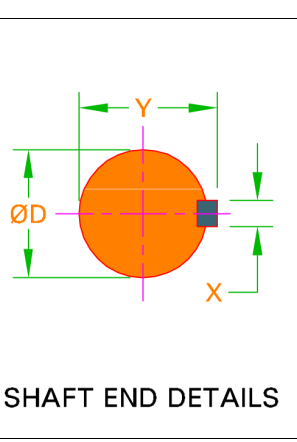
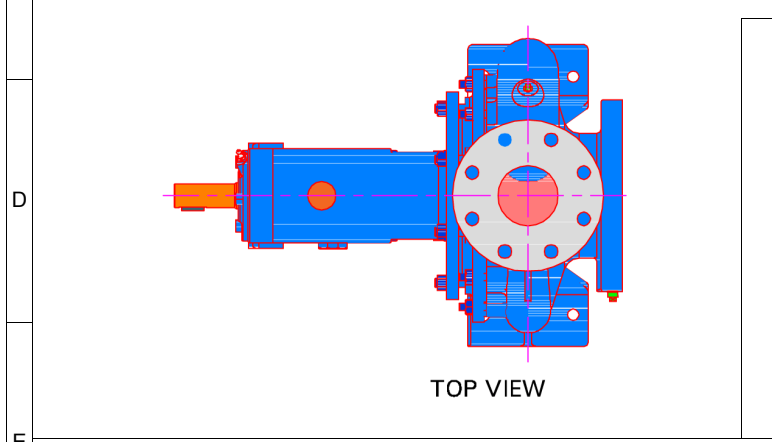
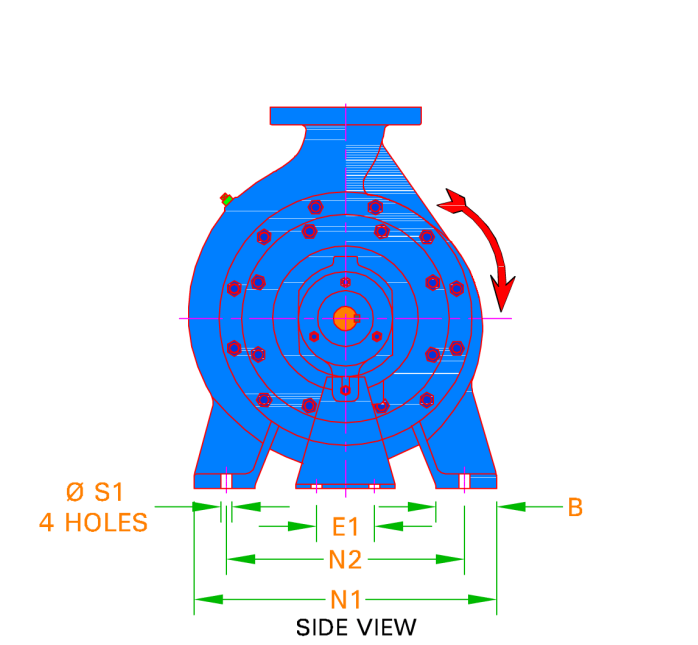
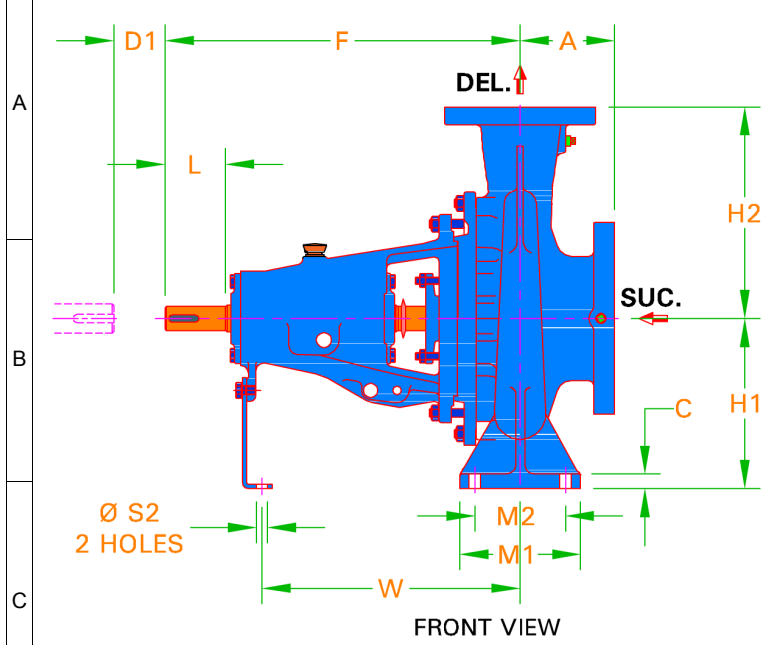
Notes: 1. Performance at shut off condition is approximate. 2. Rated impeller diameter is approximate. 3. Only duty point is guaranteed as per testing standard.



Enriching Lives

Pump Performance Datasheet

General			
Customer	:	Quote number	: 312657
Customer Enquiry No.	:	Pump model	: DB 100/26
Project	: Default	Stages	: 1
End user	: -	Based on curve number	: HD10223A0 Rev 0
Tag number	: 001	Date last updated	: 09 Oct 2020 9:52 AM
Service	: -	Quantity of pumps	: 1
Operating Conditions		Liquid	
Flow, rated	: 100.0 m3/h	Liquid handled	: Water
Suction pressure, rated / max	: 0.00 bar.g / 0.00 bar.g	Additional liquid description	: Fresh Water
Discharge pressure, rated	: 8.22 bar.g	Temperature, max	: 20.00 deg C
Head, rated (requested)	: 84.00 m	Solids diameter, max	: 0.00 mm
NPSH available, rated	: Value not specified	Solids in suspension by volume	: 0.00 %
Frequency	: 50 Hz	Specific gravity, rated / max	: 0.998 / 0.998 kg/dm3
		Viscosity, Rated / Max.	: 1.00 cSt / -
Performance		Driver & Power Data	
Pump speed, rated	: 2970 rpm	Driver sizing specification	: Maximum Power
Impeller Dia, Rated (Approx.)	: 243 mm	Margin over specification	: 0.00 %
Impeller diameter, maximum	: 264 mm	Power, rated	: 45.60 kW
Impeller diameter, minimum	: 205 mm	-	: -
Efficiency at duty point	: 50.07 %	-	: -
NPSH required / margin required	: 2.67 m / 0.50 m	Driver Rating	: 75KW
MCSF	: 61.45 m3/h		
Cq/Ch/Ce: [-]	: 1.00 / 1.00 / 1.00	Pressure Data	
Water eq. duties (Qw/Hw/Ew)	: 100.0 m3/h / 84.00 m / 50.07 %	Maximum working pressure	: 8.28 bar.g
Suction / Delivery nozzle size	: 125 mm / 100 mm	Maximum allowable working pressure	: 16.00 bar.g
Noise level	: 90 dB	Maximum allowable suction pressure	: 1.96 bar.g
Vibration level (RMS)	: 5.1 mm/s	Hydrostatic test pressure	: 18.34 bar.g
Test standard	: ISO 9906 / ANSI-HI 14.6 Gr 2B	Construction	
Starting condition	: Closed Delivery Valve	Basic construction	: End Suction Pump-OH1
		Impeller type	: Enclosed
		Selection status	: Near Miss
		Rec. Pipe Size (Suc / Del)	: 150 mm / 125 mm
Material			
MOC Code	: 16MOC		
Material (Casing / Impeller / Shaft)	: CI IS210:FG260 (012) / CI IS210:FG260 (012) / ST ST ASTM A276-410 ANLD (253)		
-	: -		



Enriching Lives

PUMP DUTIES			
CAPACITY	100.0 m ³ /h	EFFICIENCY	50.07 %
TOTAL HEAD	84.00 m	PUMP INPUT	45.60 kW
DENSITY	0.998 kg/dm ³	NPSHR	2.67 m

FLANGE DRILLING STANDARD AND DETAILS					
SUCTION	BS EN1092 PN16 FF		DELIVERY	BS EN1092 PN16	
	NOM. SIZE	RF DIA.	P.C.D.	NO OF HOLES	HOLE DIA.
SUCTION	125 mm	N.A.	210 mm	8	18.0
DELIVERY	100 mm	N.A.	180 mm	8	18.0

	FORCES			MOMENTS		
	Fx	Fy	Fz	Mx	My	Mz
SUCTION	114.0 kgf	284.0 kgf	227.0 kgf	1,697 N.m	843 N.m	843 N.m
DELIVERY	91.00 kgf	227.0 kgf	182.0 kgf	1,353 N.m	677 N.m	677 N.m

TAPPING DETAILS	
DESCRIPTION	SIZE / TYPE
Suction Gauge	1/2"BSP
Delivery Gauge	1/2"BSP
Casing Drain	3/8"BSP
Casing Vent	NA
Bearing Cooling in / out	NA
Pad Cooling in / out	NA
Priming in	NA
Base Drain	NA

DIRECTION OF ROTATION FROM DE: CLOCKWISE

PUMP	DB 100/26	PUMP WT.	103.0
		GD*2	0.03 kg
REC. DRIVER RATING	75KW	RATED SPEED	2970R
ENQ. NO./DATE	/	QUANTITY	1
PO. NO./DATE	-	TAG NO.	001
QUOTATION NO.	0	DATE	-
O/A NO.	-	MISI	-
CUSTOMER	-		
END USER	-		
PROJECT	Default		
CONSULTANT	-		
SERVICE	-		

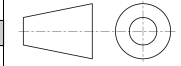
NOTES:
 • ALL DIMENSIONS ARE IN mm
 • DIM 'D1' INDICATES THE DISTANCE REQUIRED TO REMOVE BACK PULL OUT ASSEMBLY.

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A	F	H1	H2	B	C	M1	M2	N1	N2	S1	E1	S2	W	-	D
140	470	225	280	80.00	16.00	160	120	400	315	18.00	110	14.00	342	-	32.00

X	Y	L	D1	-	-	-	-	-	-	-	-	-	-	-	-
10.00	35.00	80.00	140	-	-	-	-	-	-	-	-	-	-	-	-

-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kirloskar Brothers Limited
 KIRLOSKARVADI - 416308, DIST. - SANGLI (INDIA)

PUMP OUTLINE DRAWING

DRAWING NO. TL02-1-