CDR® Pompe

WE **PUMP** YOUR **CHEMICALS**

DTN SERIES ISO

LINED - MAGNETIC DRIVE CENTRIFUGAL PUMPS

DTN-L ISO
Bare Shaft

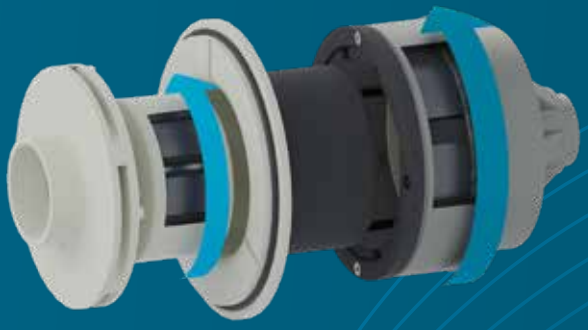
Application fields:

_ Active Pharmaceutical Ingredients Industries
_ Fine Chemical Processing
_ Basic Chemical Processing
_ Petrochemical Processing

ATEX 100
Directive: 2014/34/EU

Mag drive concept

The synchronous drive configuration is based on an outer magnet ring assembly built to magnetically couple with an inner magnet ring assembly. These two magnet rings are locked together by the flux of attracting magnet poles flowing through the containment isolation shell.



Evolution

The new execution with dynamic shaft guarantees a higher reliability of the pump and lower axial thrust all along the performance curve.

DTN-BL ISO
Close Coupled

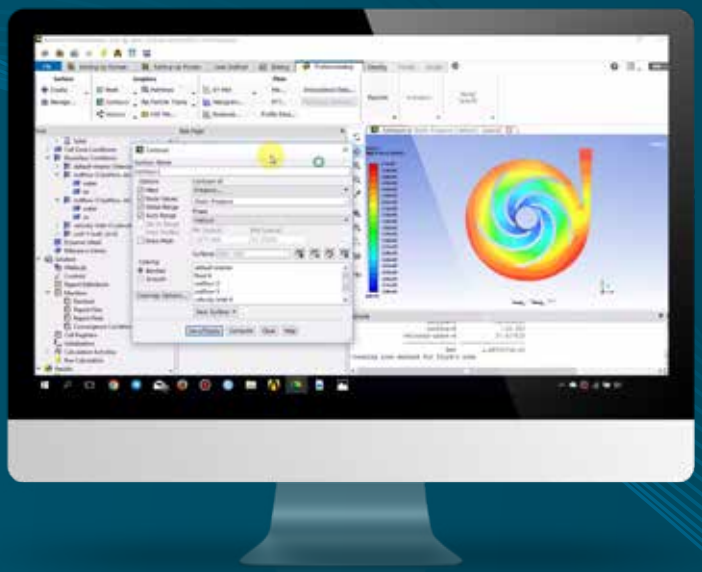
Application fields:

_ Active Pharmaceutical Ingredients Industries
_ Basic Chemical Processing
_ Fine Chemical Processing
_ Air Treatment - Scrubber
_ Petrochemical Services

R&D with Fluidodinamic Simulation

Designed with an innovative simulation software, that permits to obtain high hydraulic performances and efficiency levels near to the physical possible values.

Simulated with Ansys



DTN Series ISO Main features and 3d view

01. Isolation Shell
Thanks to the rotating shaft execution, the **isolation shell** only has the function of pure liquid containment.

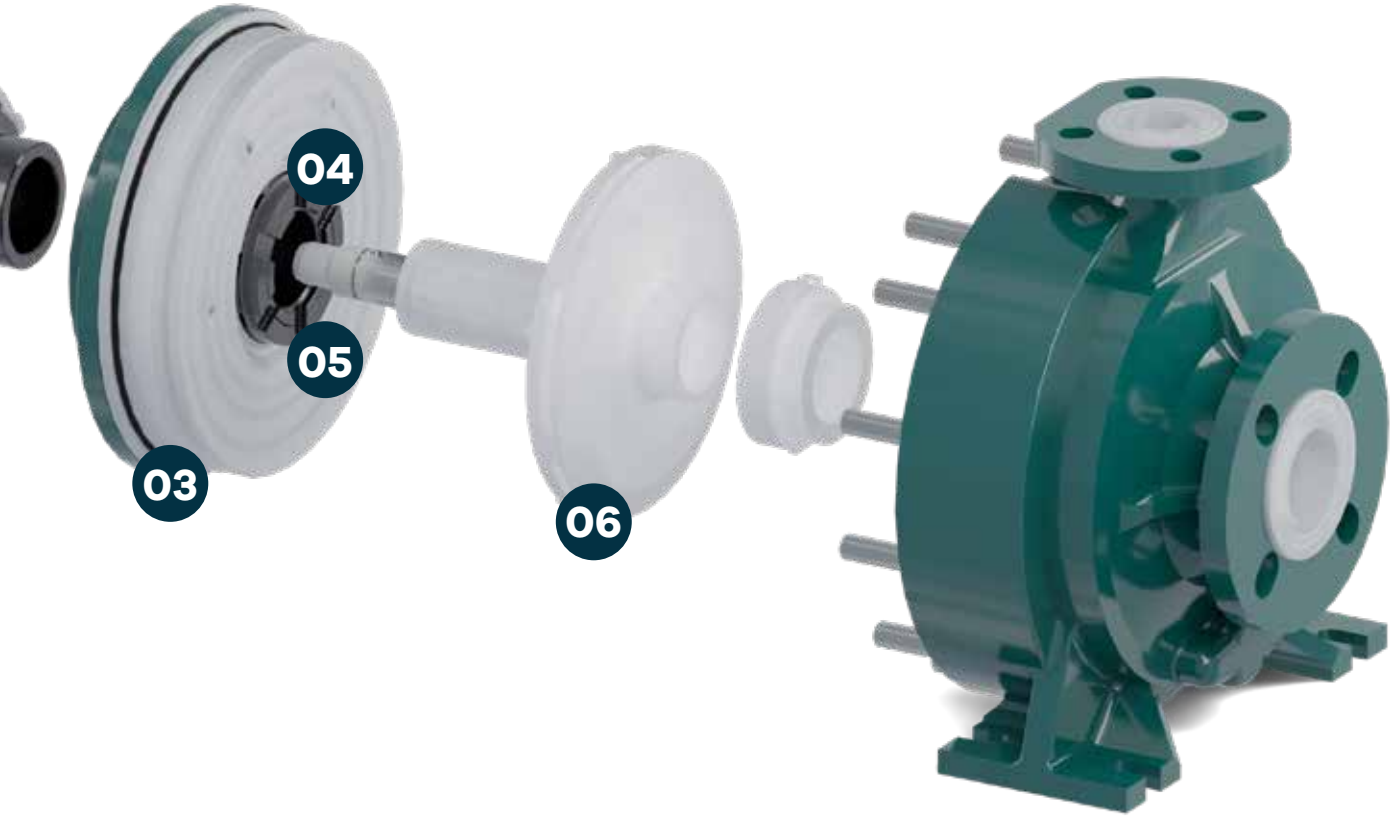
02. Internal Magnet
Separate from impeller, it may be replaced individually. Liner thickness is min. 16 in / 4 mm of pure **ETFE** to provide permeation resistance at high temperature and with liquids with very small molecules **(i.e. Hydrofluoric acid)**.

03. DTN Cartridge Spare Unit
Above unit is provided pre-assembled and permit to reduce downtime to less than 1 hour in case of unexpected failure.

04. RunSafeSIC Advantages
_ Prevent failures by accidental start-up with empty pump;
_ Pumps can be used for low-boiling products close to the vapor tension limit;
_ Pumps also survive accidental un-primings without suffering any major damage;
_ Safety devices have enough time to stop the pump.

05. Bushes
The static and rotating bushings have simple design and they are very easy to assemble. No need for screws of fixing rings. **Available materials: PTFE SiC, SSiC, RSSiC.**

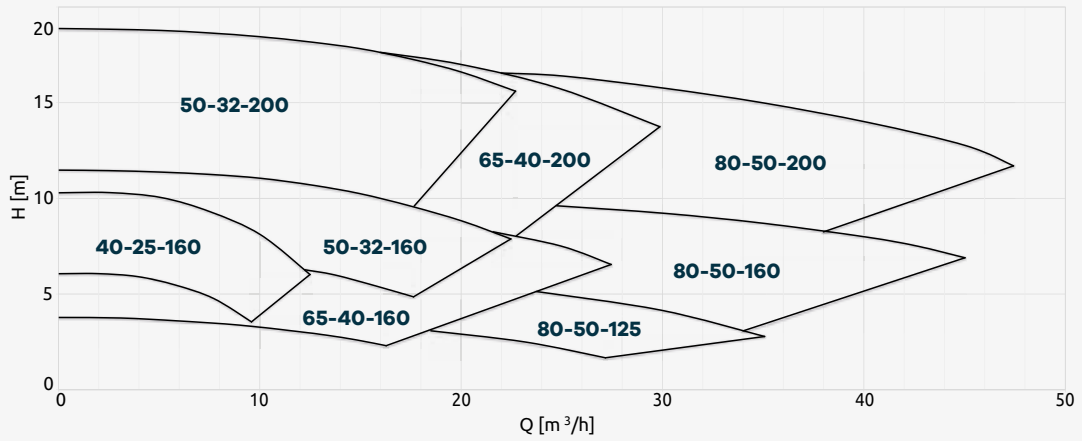
06. Impeller
Lined Impeller obtained in 1 piece without welding by **ILS® system**.
_ Liner stability at high temperature;
_ Liner stability in case of vacuum



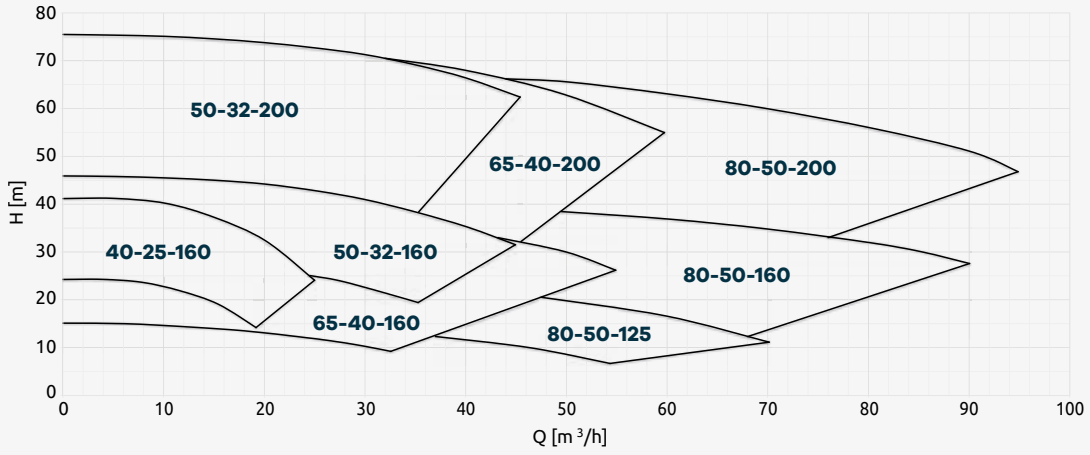
Performance Curves

50 Hz

1450 rpm



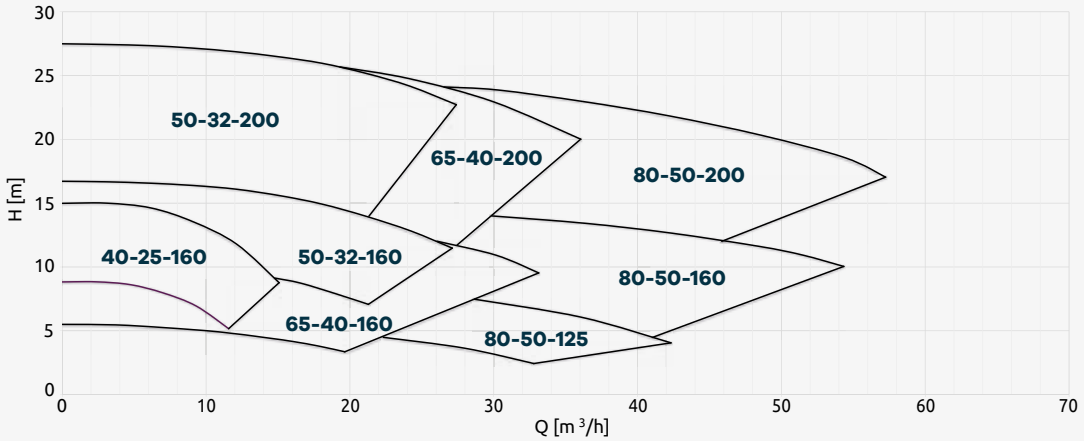
2900 rpm



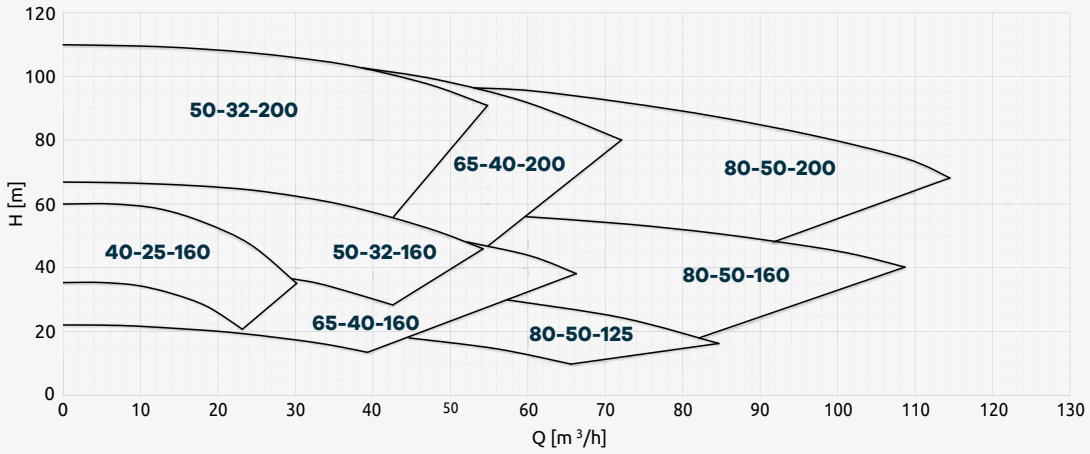
Not binding data refers to water at room temperature.
For specific performance curve contact CDR Pompe S.R.L.

60 Hz

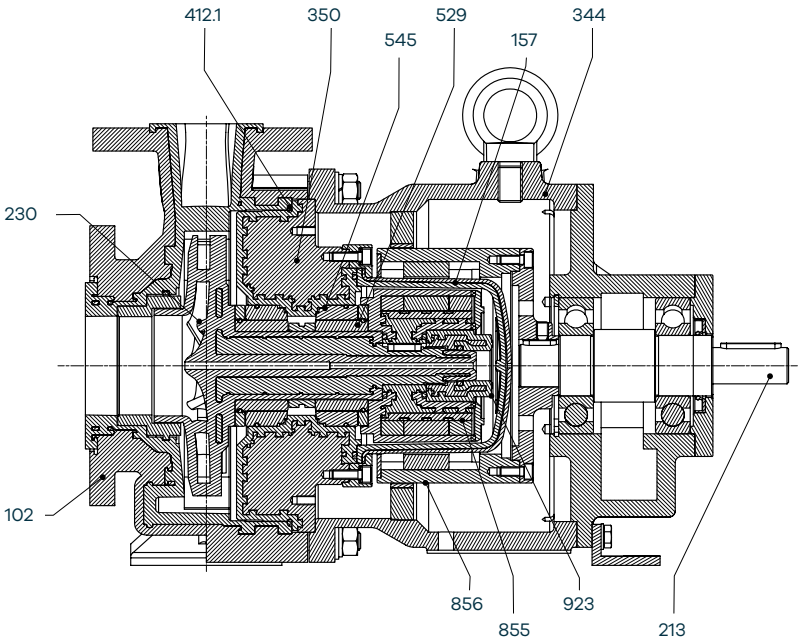
1750 rpm



3500 rpm



DTN-L ISO
Section drawing



Technical Specifications

Performances 3500 rpm

Q max = 115 m³/h
H max = 115 m

Electric Motors

1.1 Kw (motor size 80)
22 Kw (motor size 180)

Temperature range

- 20°C
+ 120°C

Allowable Pressure Range

16 bar (- 20°C)
10 bar (+ 120°C)

Flange Connections

UNI 1092-2 / ISO 7005-2 PN 16
type B slotted ANSI150RF

Viscosity

min: 0,5 cSt
max: 150 cSt

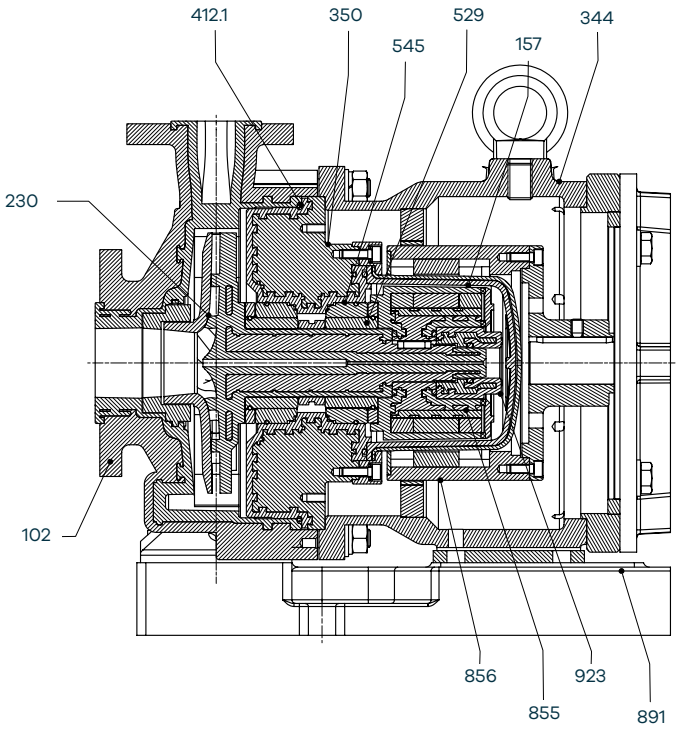
Allowable Solids

Max concentration: 3 % by weigth
Max particle size: 0,01 in (0,25 mm)

Part list

DIN	Component	Material
102	Casing	ETFE lined + Nodular Cast Iron
157	Isolation Shell	ETFE CFR + CF Cover
213	Shaft	Steel
230	Impeller	ETFE lined
344	Lantern	Cast Iron
350	Bushings Support	ETFE lined
412.1	O-Ring Casing	FPM enc. FEP
529	Rotating Bush	PTFE Filled SSiC \ SSiC \ RunSafe SSiC
545	Static Bush	SSiC \ RunSafe SSiC
855	Inner Magnet	ETFE lined + NdFeB
856	Outer Magnet	Cast Iron + NdFeB
923	Locking nut	ETFE lined

DTN-BL ISO
Section drawing



Technical Specifications

Performances 3500 rpm

Q max = 110 m³/h
H max = 110 m

Electric Motors

1.1 Kw (motor size 80)
18.5 Kw (motor size 160)

Temperature range

- 20°C
+ 120°C

Allowable Pressure Range

16 bar (- 20°C)
10 bar (+ 120°C)

Flange Connections

UNI 1092-2 / ISO 7005-2 PN 16
type B slotted ANSI150RF

Viscosity

min: 0,5 cSt
max: 150 cSt

Allowable Solids

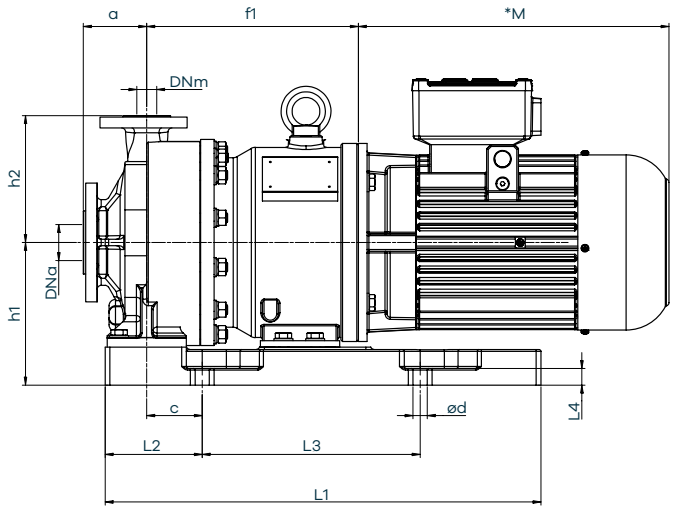
Max concentration: 3 % by weigth
Max particle size: 0,01 in (0,25 mm)

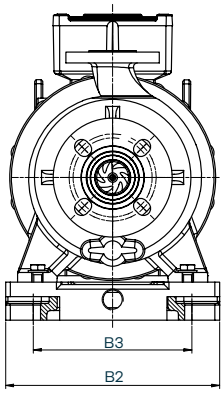
Part list

DIN	Component	Material
102	Casing	ETFE lined + Nodular Cast Iron
157	Isolation Shell	ETFE CFR + CF Cover
230	Impeller	ETFE lined
344	Lantern	Cast Iron
350	Bushings Support	ETFE lined
412.1	O-Ring Casing	FPM enc. FEP
529	Rotating Bush	PTFE Filled SSiC \ SSiC \ RunSafe SSiC
545	Static Bush	SSiC \ RunSafe SSiC
855	Inner Magnet	ETFE lined + NdFeB
856	Outer Magnet	Cast Iron + NdFeB
891	Pump foot pad	Steel
923	Locking nut	ETFE lined

DTN-BL ISO close coupled

Overall Dimensions





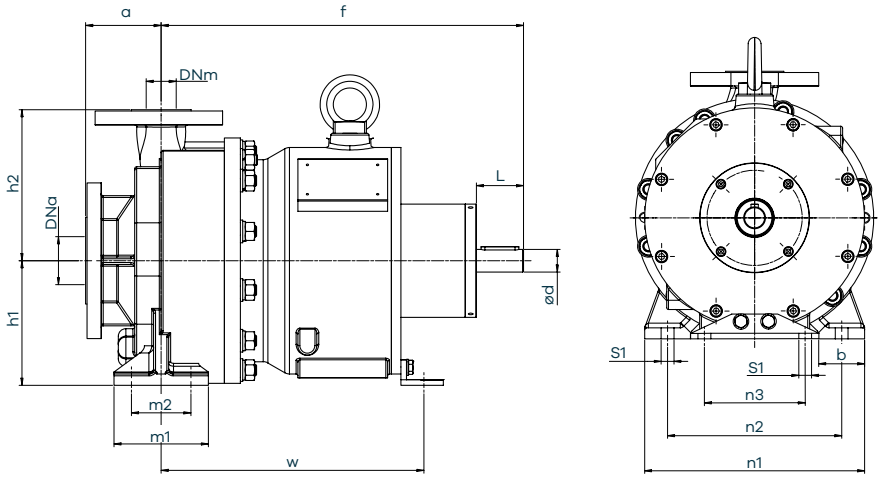
Pump dimensions:

Model	80-50-125	40-25-160	50-32-160	65-40-160	80-50-160	50-32-200	65-40-200	80-50-200
DNa	80	40	50	65	80	50	65	80
DNm	50	25	32	40	50	32	40	50
a In (mm)	100	80	80	80	100	80	100	100
c In (mm)	70	70	70	70	70	70	70	70
h2 In (mm)	160	160	160	160	180	180	180	200
h1 In (mm)	180*	180	180	180	208	208	208	208
f1 mot.80 In (mm)	257	257	257	257	257	257	257	257
f1 mot.90 In (mm)	257	257	257	257	257	257	257	257
f1 mot.100 In (mm)	257	257	257	257	257	257	257	257
f1 mot.112 In (mm)	257	257	257	257	257	257	257	257
f1 mot.132 In (mm)	287	287	287	287	287	287	287	287
f1 mot.160 In (mm)	305	305	305	305	305	305	305	305
B2 In (mm)	270	270	270	270	270	270	270	270
B3 In (mm)	200	200	200	200	200	200	200	200
L1 In (mm)	550	550	550	550	550	550	550	550
L2 In (mm)	122,5	122,5	122,5	122,5	122,5	122,5	122,5	122,5
L3 In (mm)	275	275	275	275	275	275	275	275
L4 In (mm)	21	21	21	21	21	21	21	21
Ød In (mm)	18	18	18	18	18	18	18	18
Weight lb (kg)	78	77	78	79	82	80	97	100

*Con mot.160 h1=208

DTN-L ISO bare shaft

Overall Dimensions

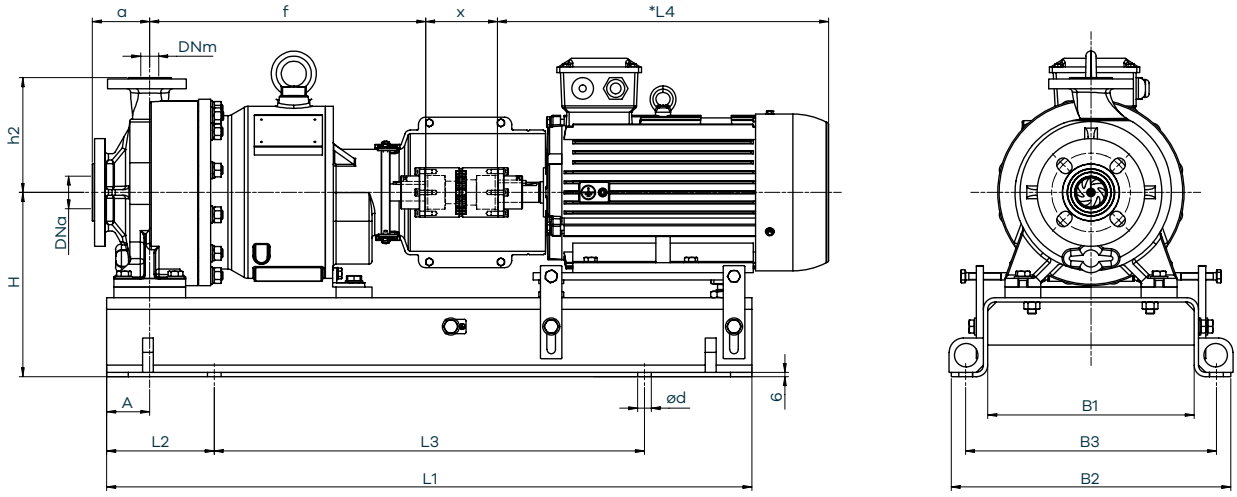


Pump dimensions:

Model	80-50-125	40-25-160	50-32-160	65-40-160	80-50-160	50-32-200	65-40-200	80-50-200
DNa	80	40	50	65	80	50	65	80
DNm	50	25	32	40	50	32	40	50
a In (mm)	100	80	80	80	100	80	100	100
b In (mm)	50	50	50	50	50	50	50	50
Ød In (mm)	24	24	24	24	24	24	24	24
f In (mm)	385	385	385	385	385	385	385	385
h1 In (mm)	132	132	132	132	160	160	160	160
h2 In (mm)	160	160	160	160	180	180	180	200
l In (mm)	50	50	50	50	50	50	50	50
m1 In (mm)	100	100	100	100	100	100	100	100
m2 In (mm)	70	70	70	70	70	70	70	70
n1 In (mm)	240	240	240	240	265	240	240	265
n2 In (mm)	190	190	190	190	212	190	190	212
n3 In (mm)	110	110	110	110	110	110	110	110
S1 In (mm)	14	14	14	14	14	14	14	14
S2 In (mm)	14	14	14	14	14	14	14	14
W In (mm)	285	285	285	285	285	285	285	285
Weight lb (kg)	68	67	68	69	72	70	87	90

DTN-L ISO on base plate

Overall Dimensions



Pump dimensions:

Model	80-50-125	40-25-160	50-32-160	65-40-160	80-50-160	50-32-200	65-40-200	80-50-200
DNa	80	40	50	65	80	50	65	80
DNm	50	25	32	40	50	32	40	50
a In (mm)	100	80	80	80	100	80	100	100
A In (mm)	60	60	60	60	60	60	60	60
f In (mm)	385	385	385	385	385	385	385	385
h2 In (mm)	160	160	160	160	180	180	180	200
x In (mm)	100	100	100	100	100	100	100	100
h1 mot.80 In (mm)	257	257	257	257	285	285	285	285
h1 mot.90 In (mm)	257	257	257	257	285	285	285	285
h1 mot.100 In (mm)	257	257	257	257	285	285	285	285
h1 mot.112 In (mm)	257	257	257	257	285	285	285	285
h1 mot.132 In (mm)	272	272	272	272	300	300	300	300
h1 mot.160 In (mm)	272	272	272	272	300	300	300	300
h1 mot.180 In (mm)	/	/	/	/	/	300	300	300

Baseplate dimensions:

Motor Size	B1 In (mm)	B2 In (mm)	B3 In (mm)	L1 In (mm)	L2 In (mm)	L3 In (mm)	Ød In (mm)	Baseplate Weight w\o motor lb (kg)
mot.80	300	390	350	900	150	600	19	45
mot.90	300	390	350	900	150	600	19	45
mot.100	300	390	350	900	150	600	19	45
mot.112	300	390	350	900	150	600	19	45
mot.132	340	450	400	1000	170	660	24	58
mot.160	380	490	440	1120	190	740	24	90
mot.180	380	490	440	1120	190	740	24	90

*M dimension is according to installed motor manufacturer.

Note

WE PUMP YOUR CHEMICALS

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Technical characteristics:
The data and technical characteristics shown in the General Catalogue are not binding. CDR Pompe SRL reserves the right to implement changes without notice. Therefore the data , the size, performance and any other information reported are indicative and not binding. For any technical details you can request the product update form.