Prime FLUID MANAGEMENT

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TRVX-TRMX Series

Liquid Ring Vacuum Pumps

pompetravaini

Capacity up to 2000 m³/h
Max vacuum 33 mbar

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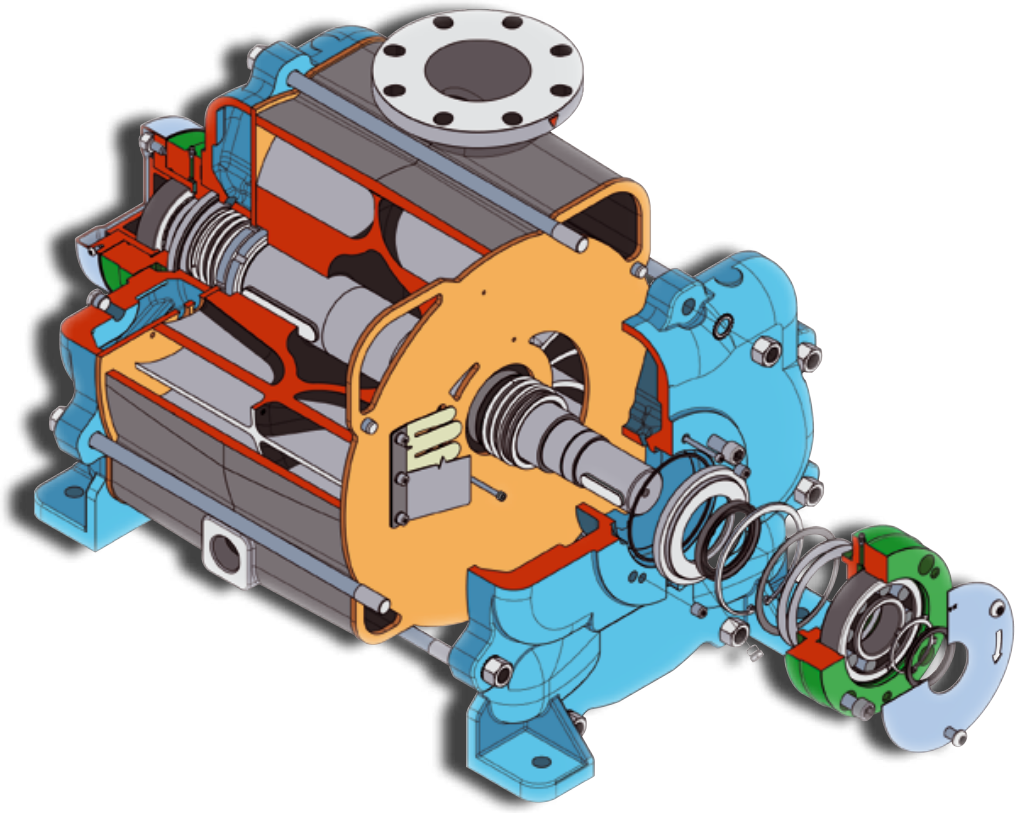
TRVX-TRMX Series

Liquid Ring Vacuum Pumps

pompetravaini

1. *The new hydraulic profile allows a performance increase over 10% than the traditional liquid ring vacuum pump designs. Increases the efficiency and operational cost savings all over the entire pump life.*

2. *The pump weight is average 30% less compared with the traditional liquid ring vacuum pump designs with compact supporting components dimensions. This advantage allows installation and transportation costs saving.*



3. *Compact dimensions and volume (L x W x H) 50% less compared with the traditional liquid ring vacuum pump designs. Optimization of factory or plant installation spaces and related costs saving.*

4. *Single and direct service liquid connection. Easy pump fitting without the use of complicate piping. This ensures a fast and economic pump installation.*

5. *Central body impeller housing with integrated suction and discharge manifolds with compact overall dimensions. This feature reduces pump components and increases robustness. The maintenance and assembly time and costs saving result to be greatly advantaged.*

6. *The suction and discharge port plates are always in stainless steel allowing a greater reliability trough the time and ensuring stable performances. They never require to be replaced during ordinary maintenance reducing down the spare parts cost.*

TRVX-TRMX Series

Liquid Ring Vacuum Pumps

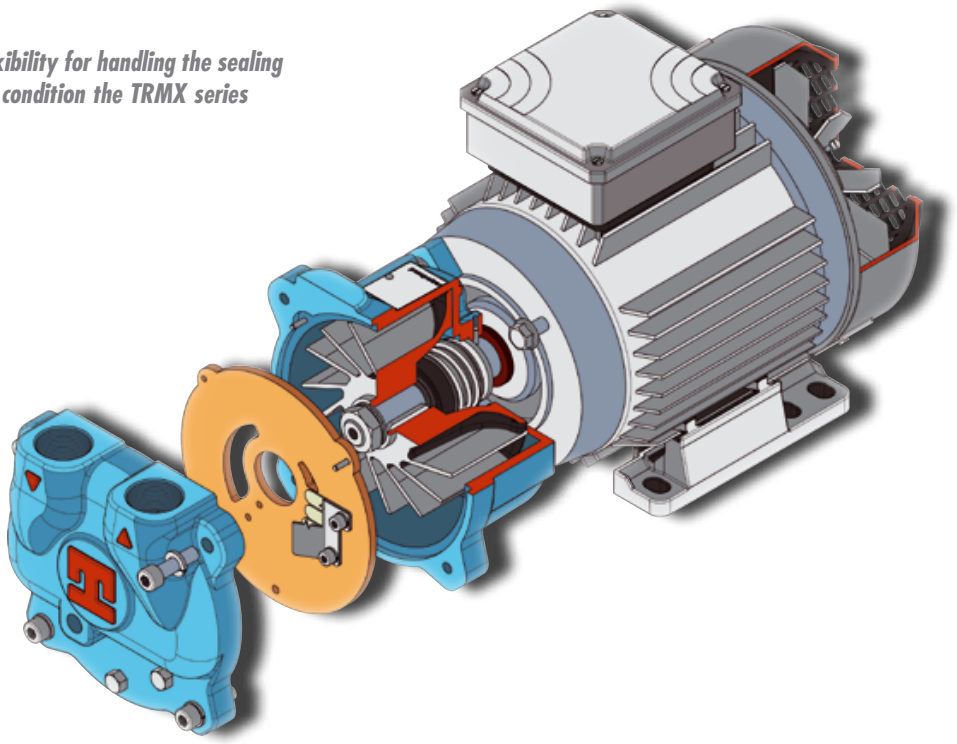
pompetravaini

1. *The TRMX series is the transfer of all the TRVX series basic concepts on the monoblock pumps production. The result is an economical pump with outstanding performance and reliability.*

2. *The new hydraulic profile design allows a performance increase from 10% to 20% compared with previous series. This increases the efficiency and operational cost savings all over the entire pump life.*

3. *Compared with the previous TRMB series, the TRMX is 10% lighter. The volume is 10-20% smaller. These two features permit fast and less expensive installations.*

4. *Maximum flexibility for handling the sealing liquid. In std. condition the TRMX series*



5. *Maximum flexibility for handling the sealing liquid. In std. condition the TRMX series requires up to 40% less sealing fluid flow compared with the previous TRMB series, ensuring a big saving in the operating cost. In the applications where is required the possibility to aspirate big sealing liquid flow, pumps are supplied with enhanced higher sealing liquid flow capability.*

6. *Inox port plate with laser cut port profiles. This solution make the port plate free from wear and the laser cut ports guarantee the execution of the best performing designed profiles. Very noticeable the increase of the pump working economy.*

7. *Innovative anti-cavitation system derived from the TRVX series. The injection port is located very close to the suction port improving the highest operational vacuum level and guarantee higher efficiency all over the pump vacuum range. With this solution the pump operational cost is reduced in a sensible way.*

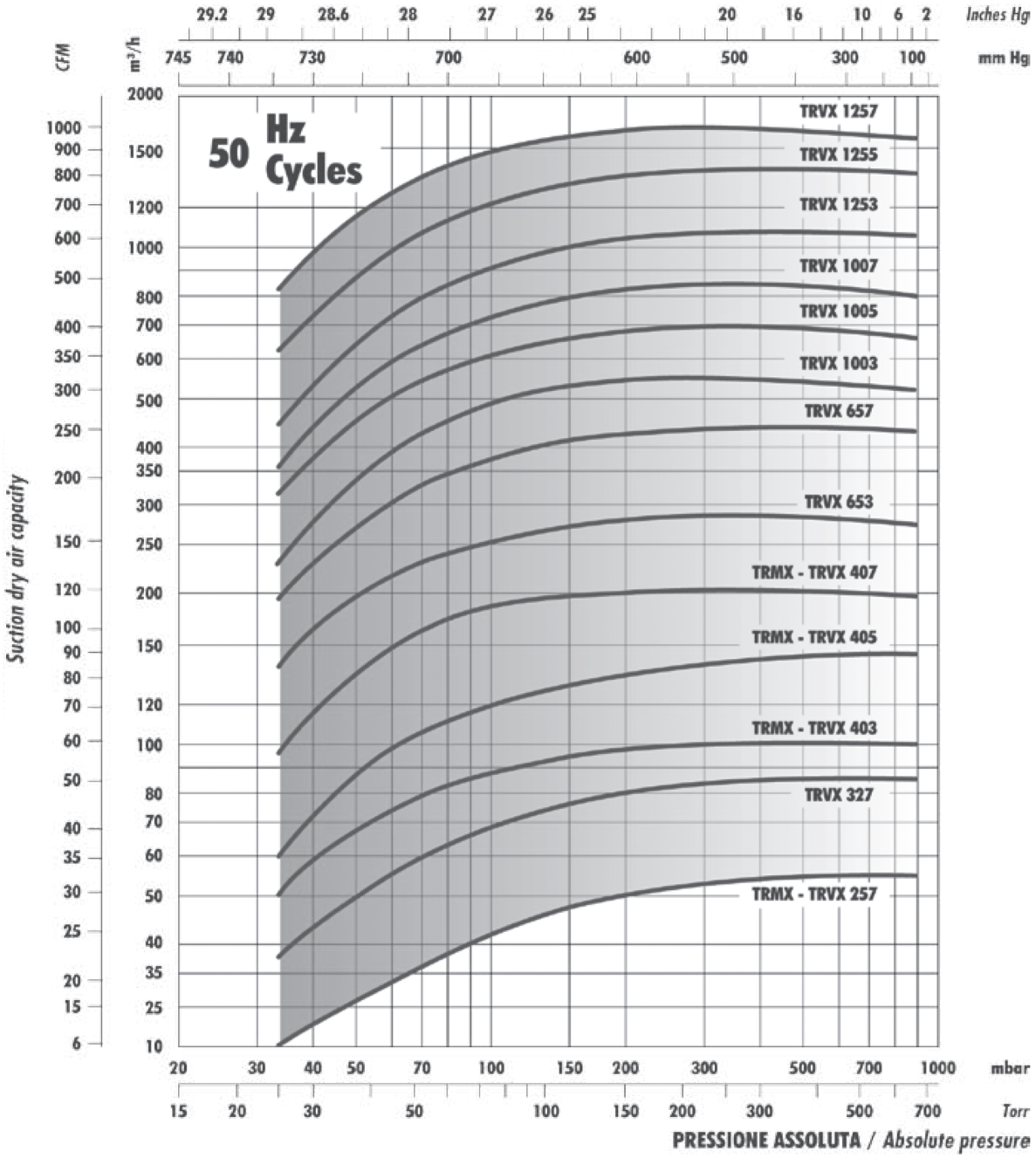
TRVX-TRMX Series

Liquid Ring Vacuum Pumps

pompetravaini

Performance field

This is a quick selection chart where to select, knowing flow and absolute pressure, the pump model. Each pump model has a specific literature where to get all working and installation parameters.



Data refers to 15°C water as service liquid and 20°C suction dry air.

The TRVX series with double bearing shaft can work as compressor up to absolute pressure of 2000 mbar.
It is available a reinforced version that can work up to 4000 mbar absolute discharge pressure.

TRVX-TRMX Series
Liquid Ring Vacuum Pumps

pompetravaini

Codification

TRVX 100 7 / 1 - C / A3 - M

Costruzione Pompetravaini
Pompetravaini construction

Pompe per vuoto ad anello di liquido
Liquid ring vacuum pumps

Tipo di costruzione (tipo di girante)
Construction type (impeller type)
- V = **pompa ad uno stadio con valvole. Albero con doppia supportazione**
  single stage pump with valves. Double bearing shaft
- M = **pompa ad uno stadio con valvole. Girante montata direttamente sull' albero del motore**
  single stage pump with valves. Impeller assembled on motor shaft

Versione con piastra aspirante/premente da lamiera tagliata al Laser in AISI 304 o AISI 316
Suction/discharge Laser cut port plates from AISI 304 or AISI 316 sheet

DN bocche aspiranti e prementi (mm)
Suction and discharge flanges size (mm)

Grandezza nominale di progetto della girante all'interno della famiglia di pompe con la stessa bocca
Impeller nominal dimensions within the same range of flange dimensions of pump series

Numero del progetto costruttivo
Design number

Tipo di tenuta sull'albero
Shaft seal type
- C = **Tenute meccanica semplice (singola o bilaterale)**
  Mechanical seal (single or bilateral)
- C2 = **N° 2 tenute meccaniche doppie contrapposte**
  Nr. 2 double back to back mechanical seals
- CS = **N° 2 tenute meccaniche doppie in serie**
  Nr. 2 double tandem mechanical seals

Materiali di costruzione (vedi tabella seguente)
Construction materials (see following chart)

Costruzione lanternata monoblocco (su richiesta) - Solo per esecuzione TRVX
Close-coupled lantern construction (on request) - TRVX construction only
- M = **esec. Lanternata per motore elettrico B5 unificato secondo le norme UNEL-MEC**
  lantern construction for B5 electric motor according to UNEL-MEC standard
- N = **esec. Lanternata per motore elettrico D unificato secondo le norme NEMA**
  lantern construction for D electric motor according to NEMA standard

Standard construction materials

The table is indicative: for detailed info please contact our Sales Office.
Special material available upon request.

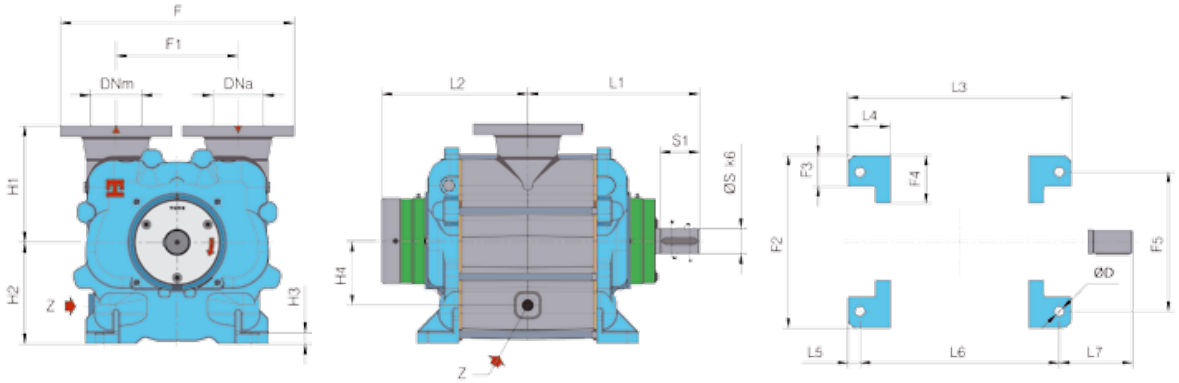
Descrizione *Description*	F	RX	RA	A3
Corpo aspirante e premente *Suction and discharge casing*	Ghisa *Cast iron*			
Corpo posteriore *Rear casing*				
Corpo intermedio *Intermediate casing*				
Albero *Shaft*	AISI 420 *Stainless steel*		AISI 316 *Stainless steel*	
Girante *Impeller*	Ghisa *Cast iron*			
Piastra idraulica *Port plate*	AISI 304 *Stainless steel*			

TRVX-TRMX Series
Liquid Ring Vacuum Pumps

pompetravaini

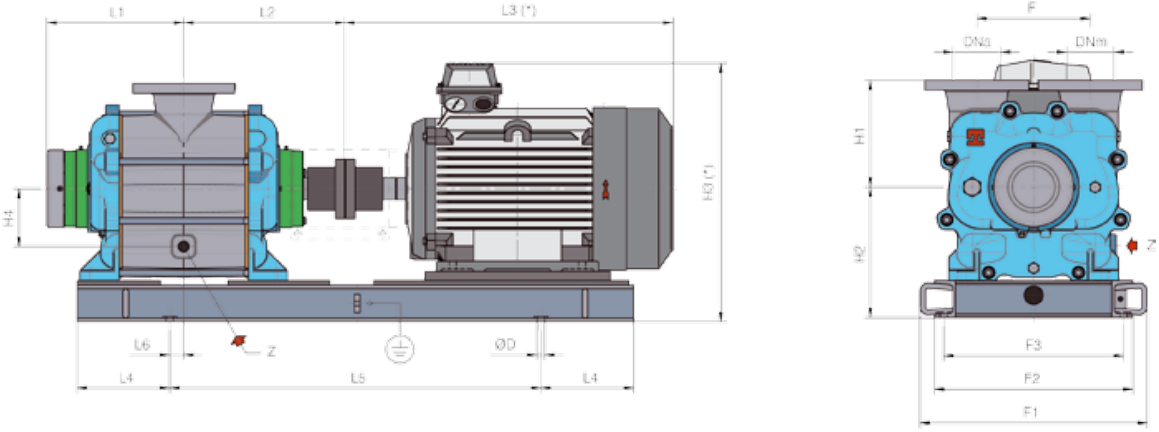
Overall dimensions

BARESHAFT construction



Pompa Pump	DN a/m	Peso Weight	ØD	Z	F	F1	F2	F3	F4	F5	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7	ØS	S1
TRVX 653	65	97	Ø16	G3/4	385	200	310	60	85	250	190	180	18	105	270	215	337	85	24	289	125	38	65
TRVX 657	65	111	Ø16	G3/4	385	200	310	60	85	250	190	180	18	105	305	250	407	85	24	359	125	38	65
TRVX 1003	100	152	Ø19	G1	460	240	360	65	100	290	230	200	22	126	322	270	397	85	24	349	147	48	80
TRVX 1005	100	165	Ø19	G1	460	240	360	65	100	290	230	200	22	126	347	295	448	85	24	400	147	48	80
TRVX 1007	100	170	Ø19	G1	460	240	360	65	100	290	230	200	22	126	347	295	448	85	24	400	147	48	80
TRVX 1253	125	379	Ø21	G1½	590	340	520	95	140	430	300	285	25	187	380	323	517	120	40	437	162	60	90
TRVX 1255	125	414	Ø21	G1½	590	340	520	95	140	430	300	285	25	187	415	358	587	120	40	507	162	60	90
TRVX 1257	125	457	Ø21	G1½	590	340	520	95	140	430	300	285	25	187	450	393	657	120	40	577	162	60	90

COUPLED construction (BASEPLATE-COUPLING)



(*)= dimensioni in funzione della marca del motore installato
(*)= dimensions depend on installed motor manufacturer
Z= ingresso alimentazione
Z= liquid supply inlet
Disegno schematico.
Dimensioni in mm con tolleranze secondo EN 735-1995.
Schematic drawing.
Dimensions in mm with tolerances according to EN 735-1995.
Pesi in Kg, riferiti a pompe in ghisa escluso motore, non impegnativi.
Weights in Kgs, referred to cast iron pumps without motor, not binding.

Pompa Pump	DN a/m	Peso Weight	ØD	Z	F	F1	F2	F3	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6
TRVX 653	65	151	Ø18	G¾	200	440	370	330	190	270	*	105	215	270	*	200	700	54
TRVX 657	65	170	Ø18	G¾	200	430	370	330	190	270	*	105	250	305	*	200	700	14
TRVX 1003	100	212	Ø18	G1	240	480	420	380	230	290	*	126	270	322	*	200	800	30
TRVX 1005	100	225	Ø18	G1	240	480	420	380	230	290	*	126	295	347	*	200	800	30
TRVX 1007	100	230	Ø18	G1	240	480	420	380	230	290	*	126	295	347	*	200	800	30
TRVX 1253	125	545	Ø18	G1½	340	674	590	542	300	422	*	187	323	380	*	300	1050	43
TRVX 1255	125	580	Ø18	G1½	340	674	590	542	300	422	*	187	358	415	*	300	1050	43
TRVX 1257	125	620	Ø18	G1½	340	674	590	542	300	422	*	187	393	450	*	300	1050	43

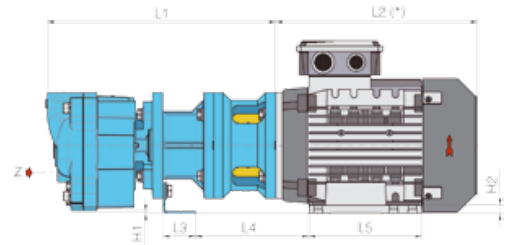
TRVX-TRMX Series
Liquid Ring Vacuum Pumps

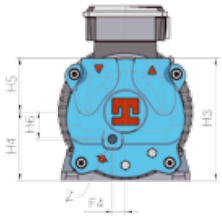
pompetravaini

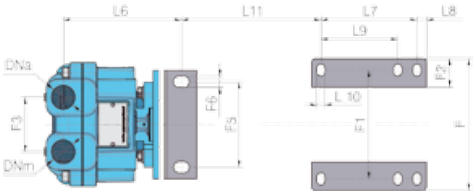
Overall dimensions

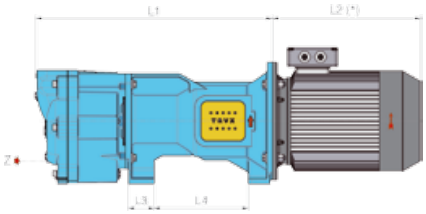
LANTERN construction

TRVX 257
motore B34
TRVX 257
B34 motor



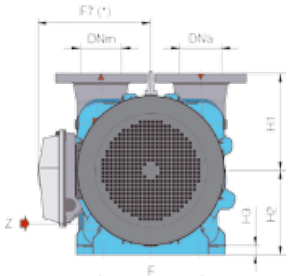


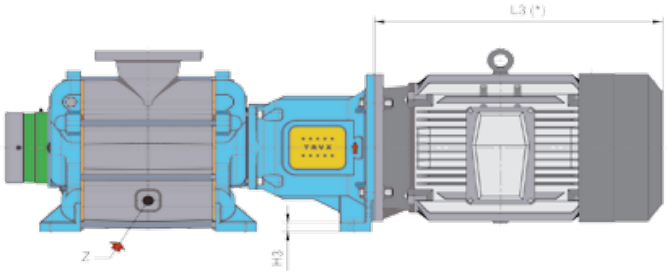


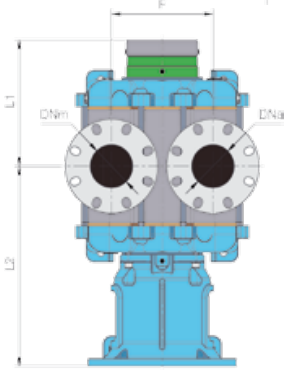


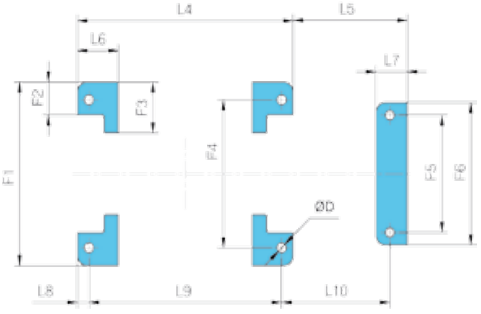
TRVX 40x
motore B5
TRVX 40x
B5 motor

Pompa Pump	DN a/m	Peso Weight	Z	F	F1	F2	F3	F4	F5	F6	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	Frame motore Motor frame
TRVX 257	G1	18	G ¼	170	140	37	70	17	110	14	3.5	11	160	90	70	36	303	*	43	150	150	153.8	125	12.5	100	10	182	90
TRVX 403	G1½	60	G ½	140	110	-	80	15	200	25	-	-	290	160	130	55	536	*	65	235	-	168	-	-	-	14	116	100
TRVX 405	G1½	73	G ½	140	110	-	80	15	200	25	-	-	290	160	130	55	556	*	65	235	-	191	-	-	-	14	116	112
TRVX 407	G1½	88	G ½	140	110	-	80	15	200	25	-	-	290	160	130	55	590	*	65	235	-	232	-	-	-	14	116	132









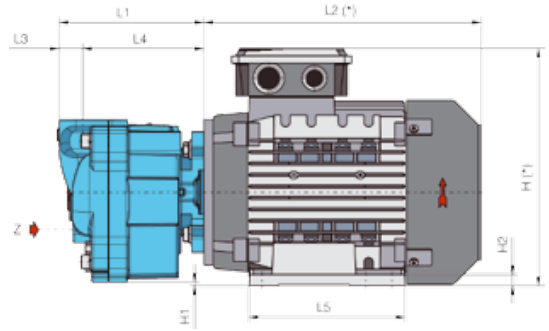
Pompa Pump	DN a/m	Peso Weight	ØD	Z	F	F1	F2	F3	F4	F5	F6	F7	H1	H2	H3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Frame motore Motor frame
TRVX 653	65	116	Ø16	G3/4	200	310	60	85	250	230	280	*	190	180	18	212	422	*	337	240	85	65	24	289	198	132
TRVX 657	65	136	Ø16	G3/4	200	310	60	85	250	230	280	*	190	180	18	250	420	*	407	210	85	65	24	359	198	160
TRVX 1003	100	185	Ø19	G1	240	360	65	100	290	230	280	*	230	200	22	270	442	*	397	237	85	65	24	349	225	160
TRVX 1005	100	198	Ø19	G1	240	360	65	100	290	230	280	*	230	200	22	295	467	*	448	237	85	65	24	400	225	180
TRVX 1007	100	203	Ø19	G1	240	360	65	100	290	230	280	*	230	200	22	295	467	*	448	237	85	65	24	400	225	180

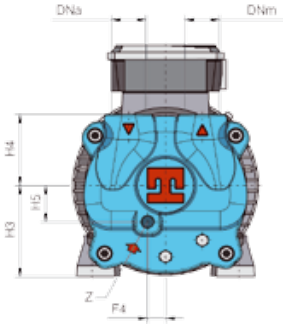
TRVX-TRMX Series
Liquid Ring Vacuum Pumps

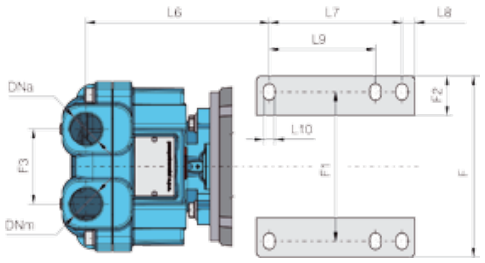
pompetravaini

Overall dimensions

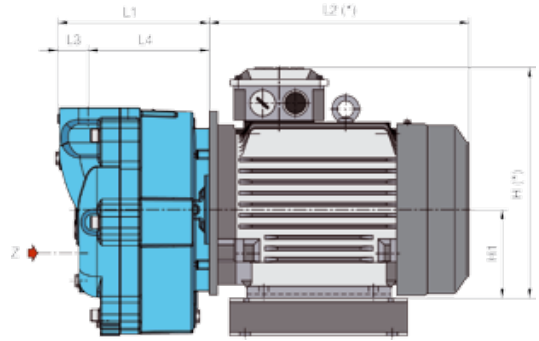
CLOSE-COUPLED construction

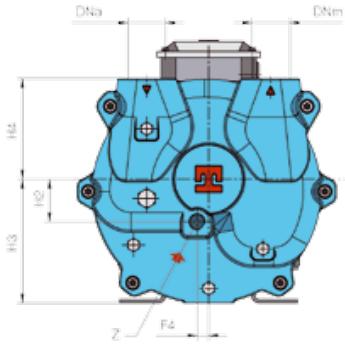


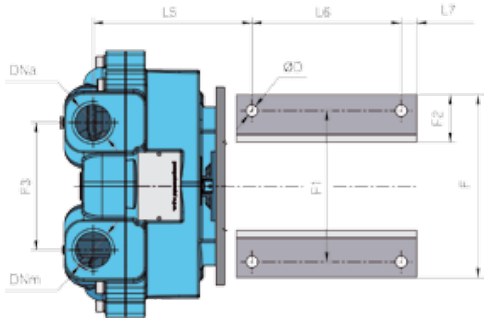




Pompa Pump	DN a/m	Peso Weight	Z	F	F1	F2	F3	F4	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Frame motore Motor frame
TRMX 257	G1	27	G ¼	170	140	37	70	17	3.5	11	90	70	36	139.5	*	22.5	117	150	173	125	12.5	100	10	90
TRMX 327	G1 ¼	45	G ³/₈	200	160	55	90	29	-	12	100	82	40.5	178	*	30	148	172	211	140	15	140	12	100







(*)= dimensioni in funzione della marca del motore installato
(*)= dimensions depend on installed motor manufacturer
Z= ingresso alimentazione
Z= liquid supply inlet
Disegno schematico.
Dimensioni in mm con tolleranze secondo EN 735-1995.
Schematic drawing.
Dimensions in mm with tolerances according to EN 735-1995.
Pesi in Kg, riferiti a pompe in ghisa con motore per funzionamento a 50 Hz, non impegnativi.
Weights in Kgs, referred to cast iron pumps with 50 Hz motor, not binding.

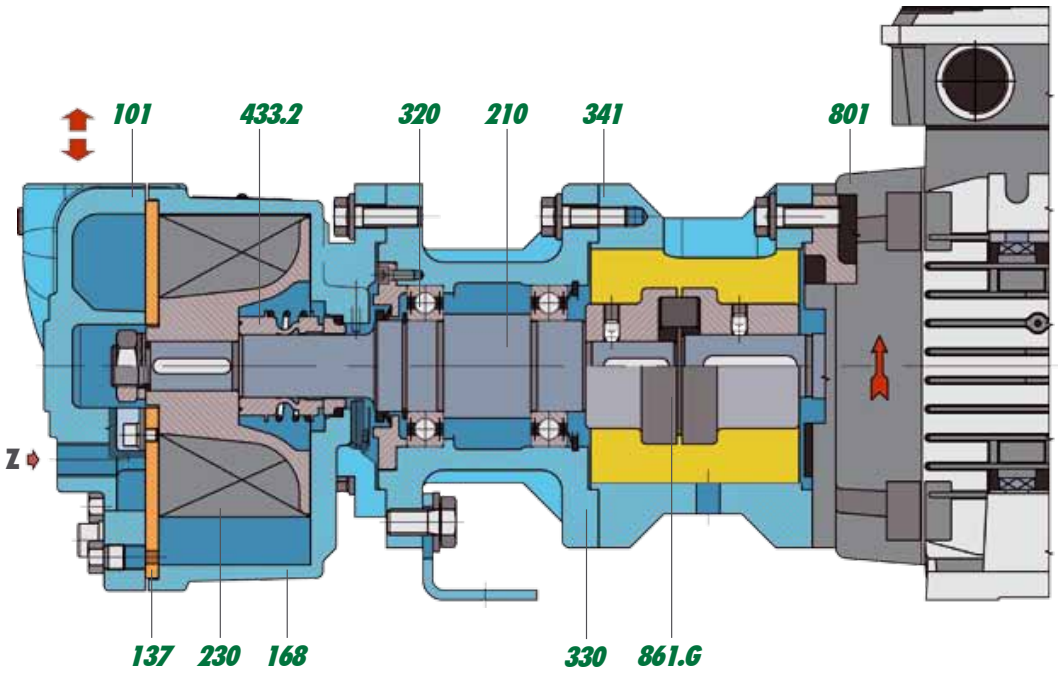
Pompa Pump	DN a/m	Peso Weight	Z	ØD	F	F1	F2	F3	F4	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7	Frame motore Motor frame
TRMX 403	G1 ½	69	G ½	14	200	160	60	160	15	100	55	160	130	193	*	39	154	200	188	20	100
TRMX 405	G1 ½	74	G ½	14	230	190	60	160	15	112	55	160	130	193	*	39	154	200	188	20	112
TRMX 407	G1 ½	110	G ½	14	262	216	60	160	15	132	55	160	130	193	*	39	154	200	188	20	132

TRVX-TRMX Series
Liquid Ring Vacuum Pumps

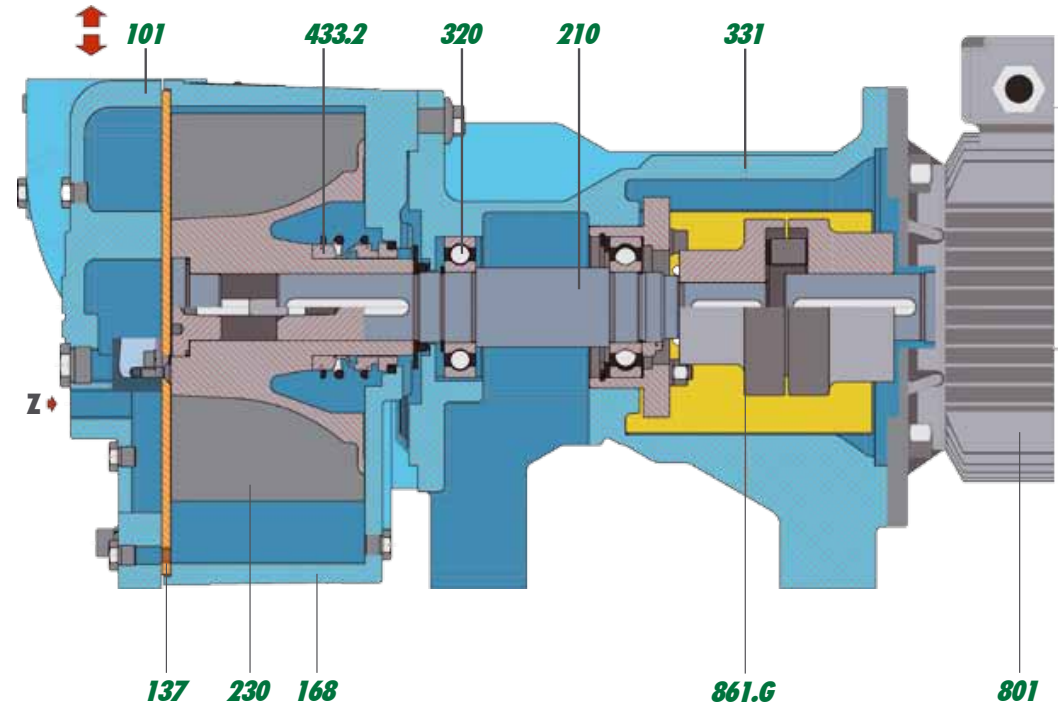
pompetravaini

Cross section drawings

TRVX 257



TRVX 40x



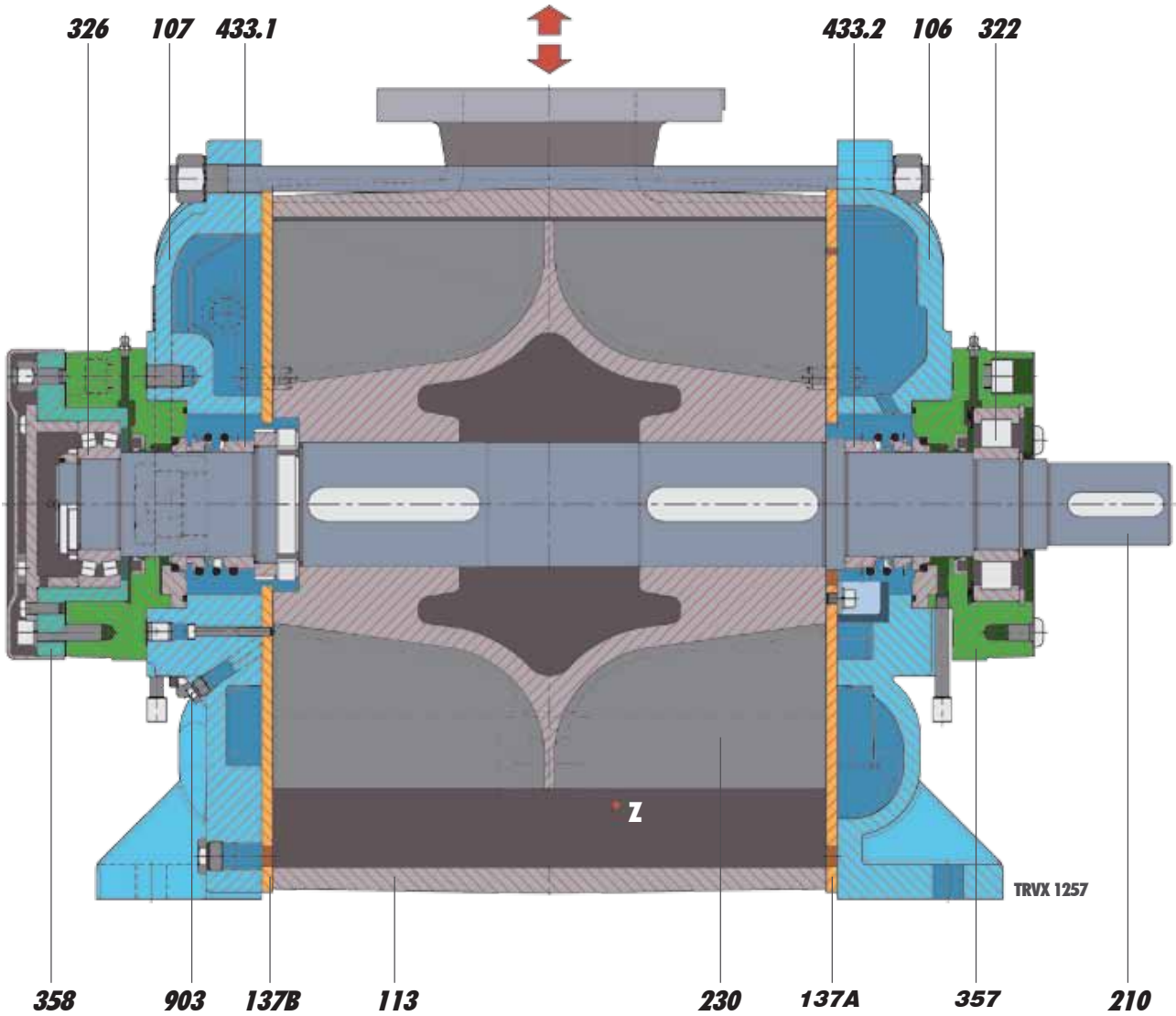
VDMA	Descrizione / *Description*	VDMA	Descrizione / *Description*
101	Corpo aspirante-premente/ *Suction-discharge casing*	331	Supporto cuscinetti con piede / *Foot mounted bearings bracket*
137	Piastra idraulica / *Port plate*	341	Lanterna / *Motor lantern*
210	Albero / *Shaft*	433.2	Tenuta meccanica - rotazione destra/*Mechanical seal - right hand rotation*
230	Girante / *Impeller*	801	Motore Elettrico flangiato /*Electric Flanged motor*
168	Coperchio girante/ *Impeller cover*	861.G	Gruppo giunto / *Coupling assembly*
320	Cuscinetto a una corona di sfere / *Single row ball bearing*		

TRVX-TRMX Series
Liquid Ring Vacuum Pumps

pompetravaini

Cross section drawings

TRVX 65x - 100x - 125x



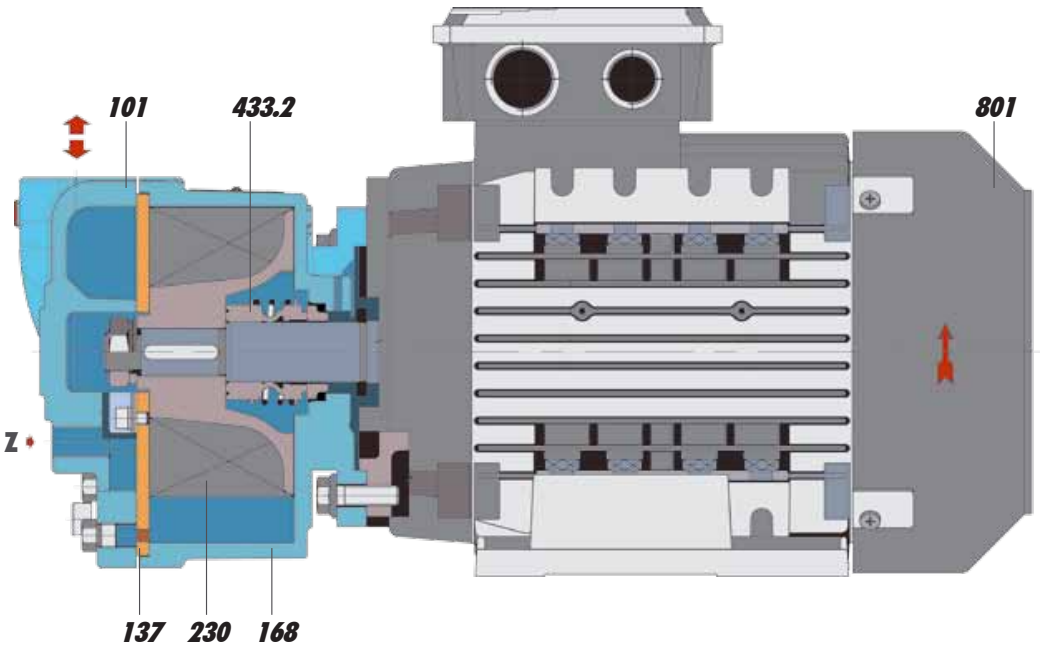
VDMA	Descrizione / *Description*	VDMA	Descrizione / *Description*
113	Corpo intermedio / *Interstage casing*	326	Cuscinetto a due corone di rulli / *Double row roller cylindrical bearing*
106	Corpo aspirante / *Suction casing*	322	Cuscinetto a una corona di rulli / *Single row cylindrical roller bearing*
107	Corpo premente / *Discharge casing*	357	Scatola cuscinetto e Tenuta Meccanica / *Mech. seal and bearing housing*
137A	Elemento piastra - Anteriore / *Port plate - Front side*	358	Supp. cuscinetto per reg. assiale / *Bearing housing for axial regulation*
137B	Elemento piastra - Posteriore / *Port plate - Rear side*	433.1	Tenuta meccanica -rotazione sinistra / *Mechanical seal - left hand rotation*
210	Albero / *Shaft*	433.2	Tenuta meccanica -rotazione destra / *Mechanical seal - right hand rotation*
230	Girante / *Impeller*	903	Attacco anticavitazione / *Anticavitation connection*

TRVX-TRMX Series
Liquid Ring Vacuum Pumps

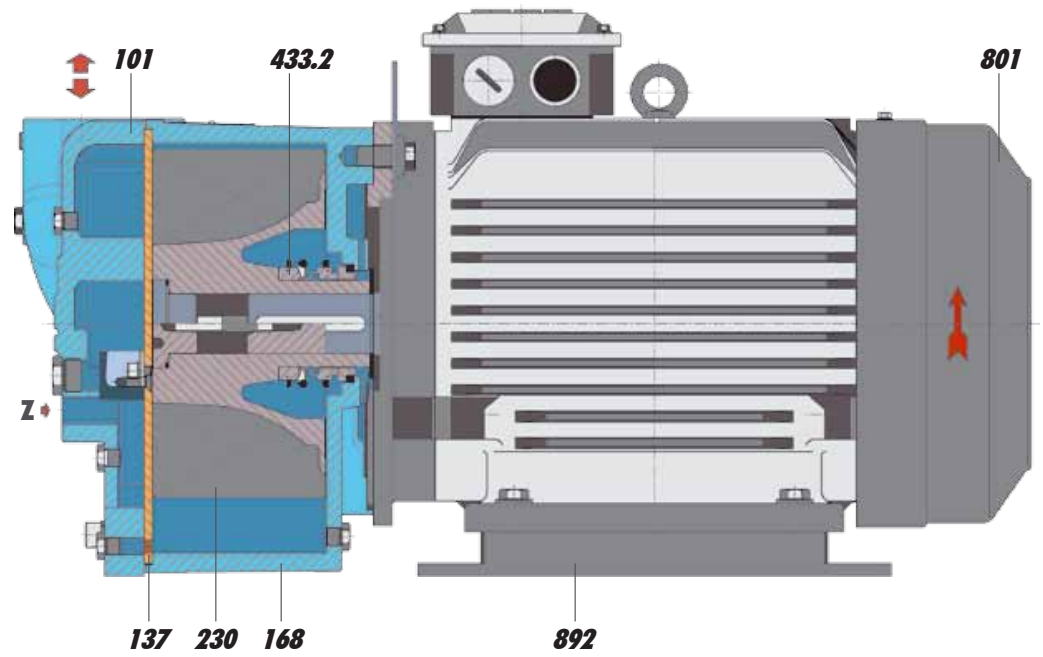
pompetravaini

Cross section drawings

TRMX 257



TRMX 40x



VDMA	Descrizione / *Description*	VDMA	Descrizione / *Description*
101	Corpo aspirante-premente / *Suction-discharge casing*	433.2	Tenuta meccanica - rotazione destra / *Mechanical seal - right hand rotation*
137	Elemento piastra / *Port plate*	801	Motore flangiato / *Flanged motor*
230	Girante / *Impeller*	892	Spessore di allineamento / *Raising pad*
168	Coperchio girante / *Impeller cover*		

Available in New Zealand from:

Prime Fluid Management
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