

## TRHB 50

### Two Stage High Vacuum Pump

PERFORMANCE DATA	: From 25 Torr	CAPACITY:	125 – 320 cfm
FEATURES	: Two-stage rotating pump with externally located bearings grease lubricated.		
SHAFT SEALING	: Mechanical seal - Double mechanical seal – Packing seal.		
OPTIONS	: Bareshaft pump - Coupled to electric motor on baseplate – Monoblock with electric motor		



#### TECHNICAL DATA

PUMP TYPE		TRHB 50-280		TRHB 50-340		TRHB 50-420	
		1450	1750	1450	1750	1450	1750
Speed	RPM	1450	1750	1450	1750	1450	1750
Motor - installed power	HP	15	15	15	20	20	25
Average service liquid flow	GPM	8	8	10	10	13	13
Noise level at 60 Torr	dB(A)	70	73	70	73	71	74
Minimum suction pressure	Torr	25	25	25	25	25	25

Pumps are provided with threaded connections for service liquid, pump draining, grease, anticavitation valve and companion valve. Pumps are also provided, by request, with auxiliary threaded connections, flanged air-liquid separator tank, non return valve, ejector, vacuum relief valve, flow valve to control the flow of the liquid supply, vacuum gauges, pressure gauges and compound gauges. We can also provide information on our water sealed and oil sealed systems.

For more detailed information please contact our Sales Office.

#### Example for Model Designation

**T R H B 50 – 420 / C - M / GH**

**T** Travaini Pump USA construction

**R** Liquid Ring Pump

**H** Double stage pump for high vacuum

**B** Design number

**50** Flange size (mm)

**420** Nominal capacity (m<sup>3</sup>/h)

**C** Shaft sealing  
C = Mechanical seal  
C2 = Double mechanical seal  
B = Packing seal

**M** Closed-coupled construction with lantern (by request)

**GH** Materials of construction  
GH-F-RA-A3 = See table

#### Standard Materials of Construction

Part No.	Description	GH	F	RA	A3
106	Suction casing	Cast Iron			
107	Discharge casing				
137	Port plate				
110	Impeller housing				
210	Shaft	Stainless Steel AISI 420	Stainless Steel AISI 316		
147	Manifold	Steel			
357	Bearing housing mech. seal	Cast Iron			
230	Impeller	Bronze	Ductile Iron	Stainless Steel AISI 316	

Special Materials Available Upon Request

Indicative table: for further information please consult our Sales Office

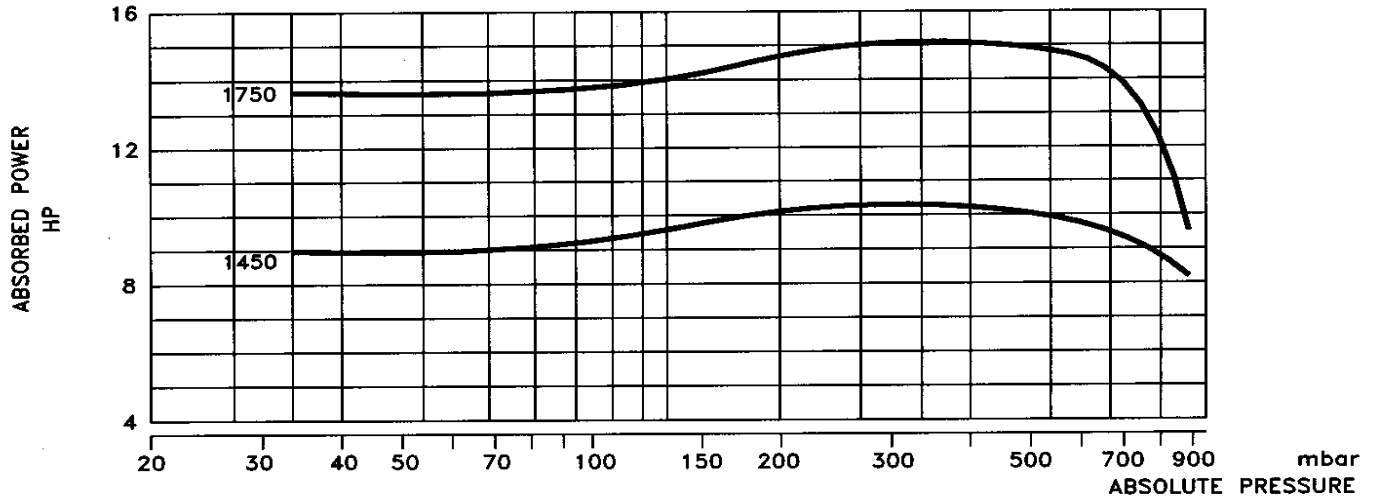
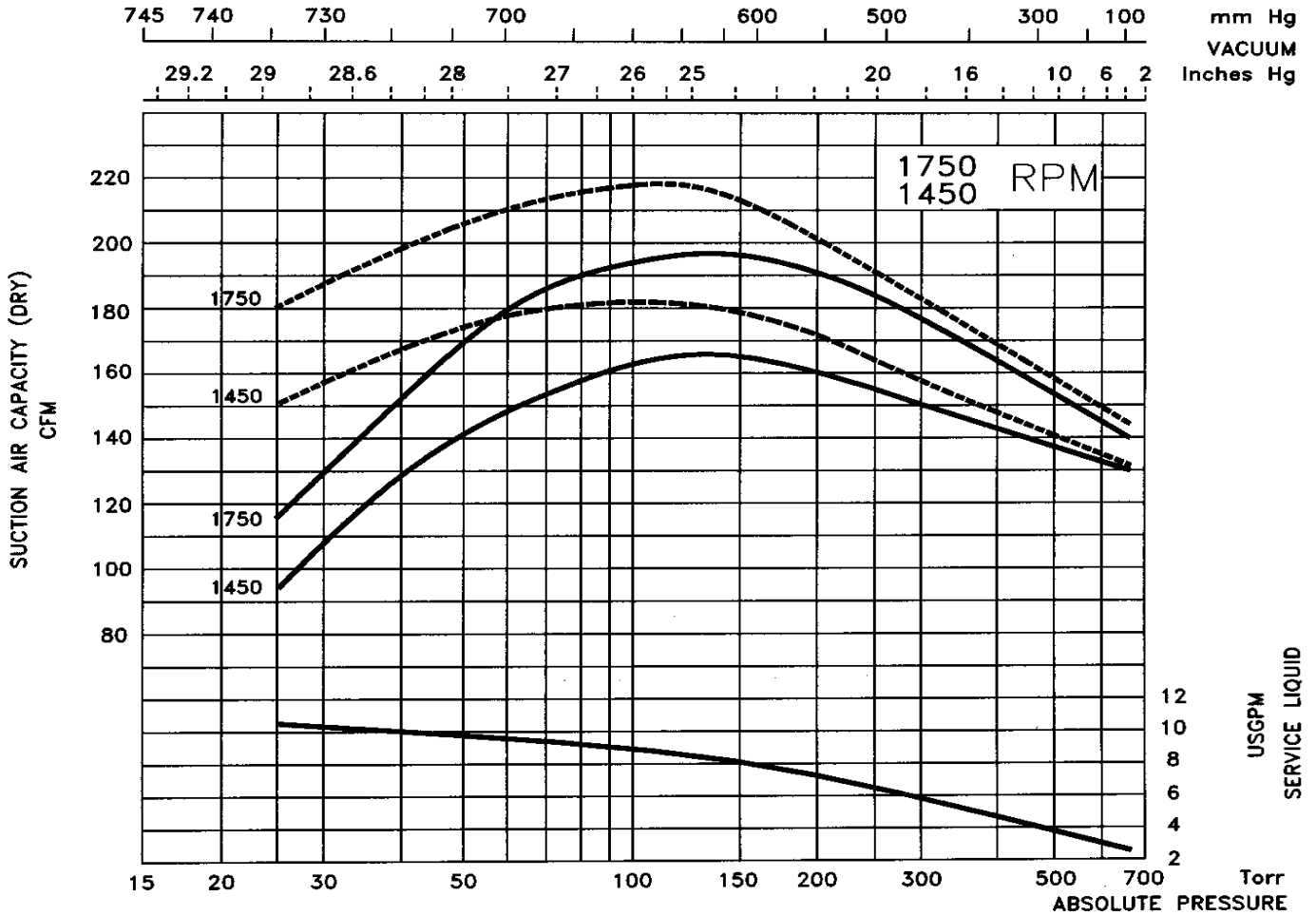


Liquid Ring & Rotary Vane Vacuum Pumps and System

DATA BASED ON :  
 DRY AIR AT 68 °F - 20 °C  
 SATURATED AIR AT 68 °F - 20 °C  
 SERVICE LIQUID WATER  
 SERVICE LIQUID TEMPERATURE 59 °F - 15 °C  
 DISCHARGE PRESSURE 1013 mbar

S.S. PUMPS  
 CAPACITY : -10%  
 Tol.: 10%

PERFORMANCE DATA  
 LIQUID RING VACUUM PUMP  
 PUMP MODEL  
**TRHB 50-280**

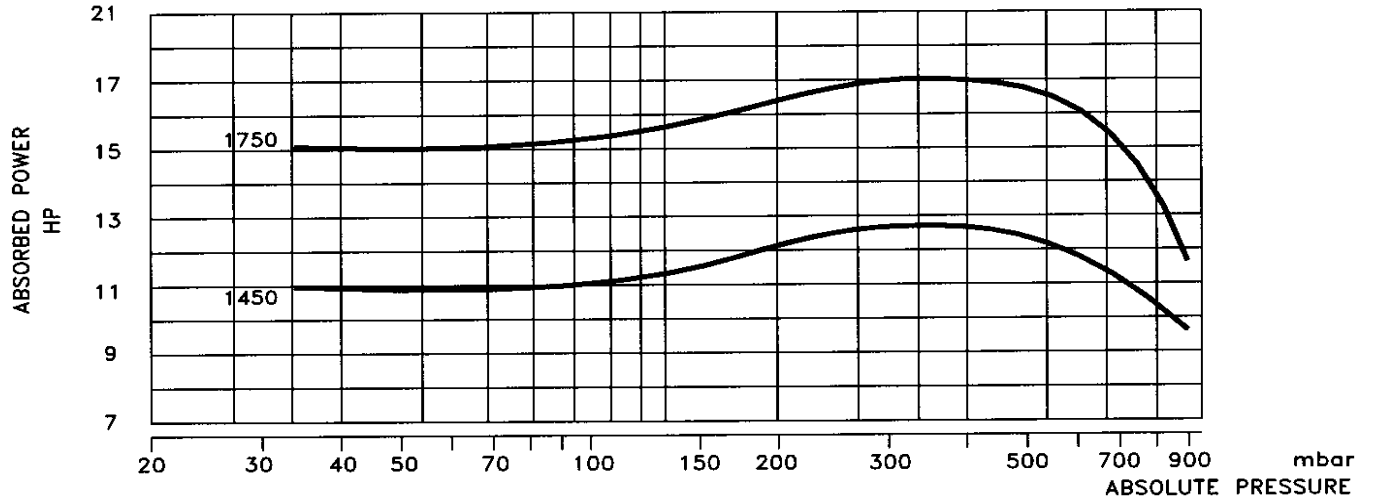
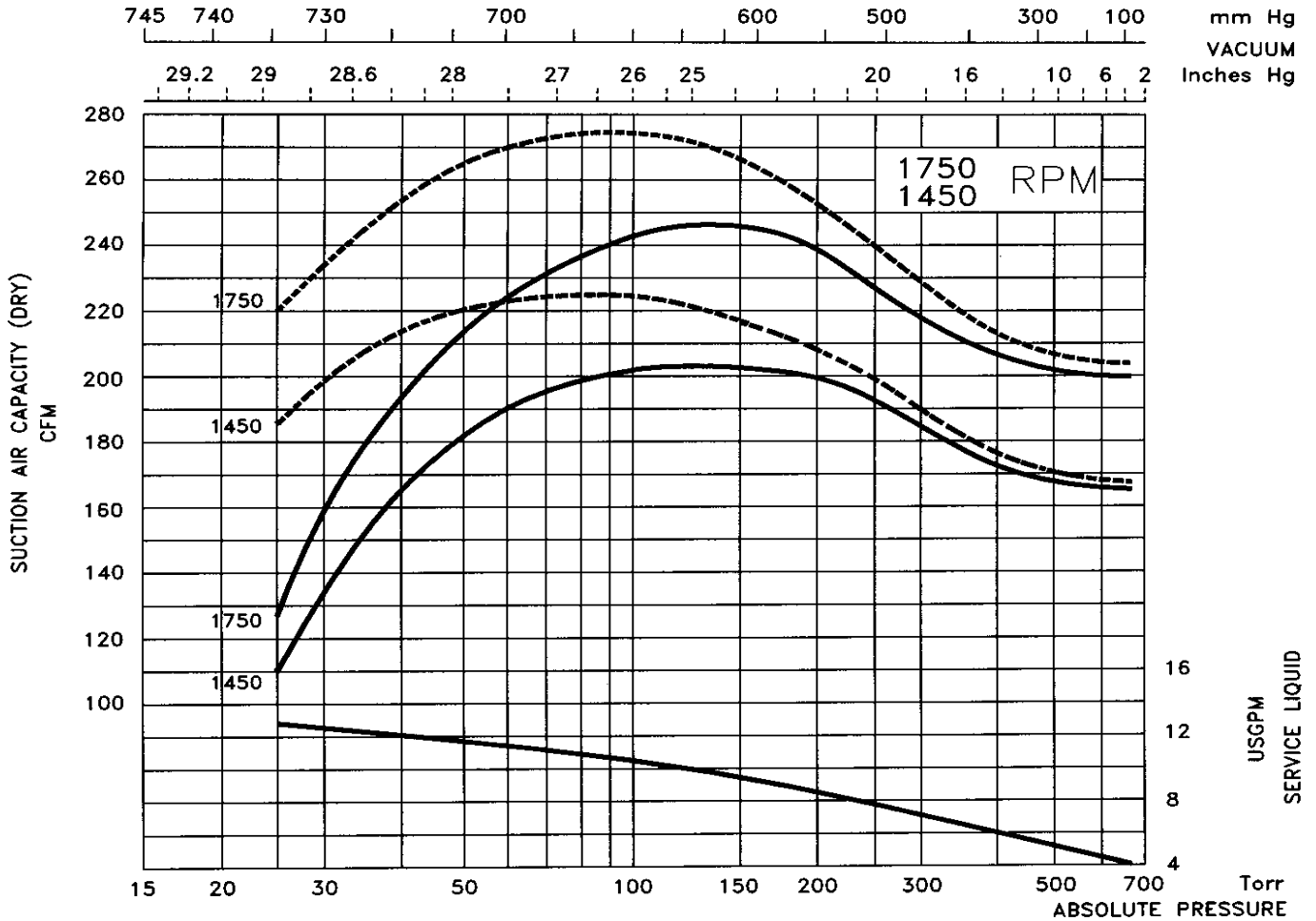




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 DISCHARGE PRESSURE 1013 mbar  
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 Tol.: 10%

PERFORMANCE DATA  
 LIQUID RING VACUUM PUMP  
 PUMP MODEL  
**TRHB 50-340**

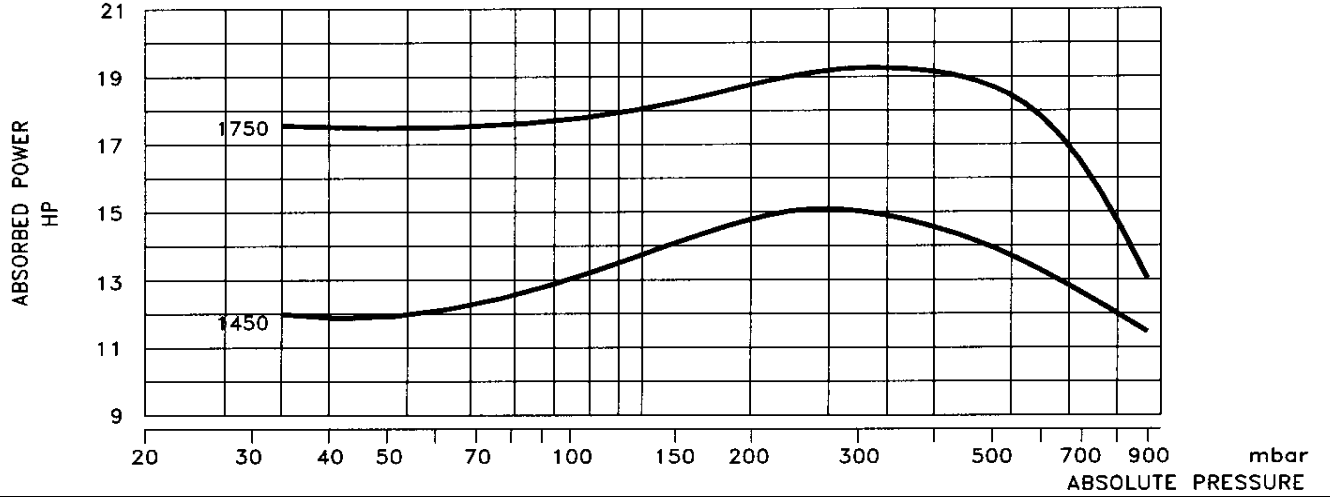
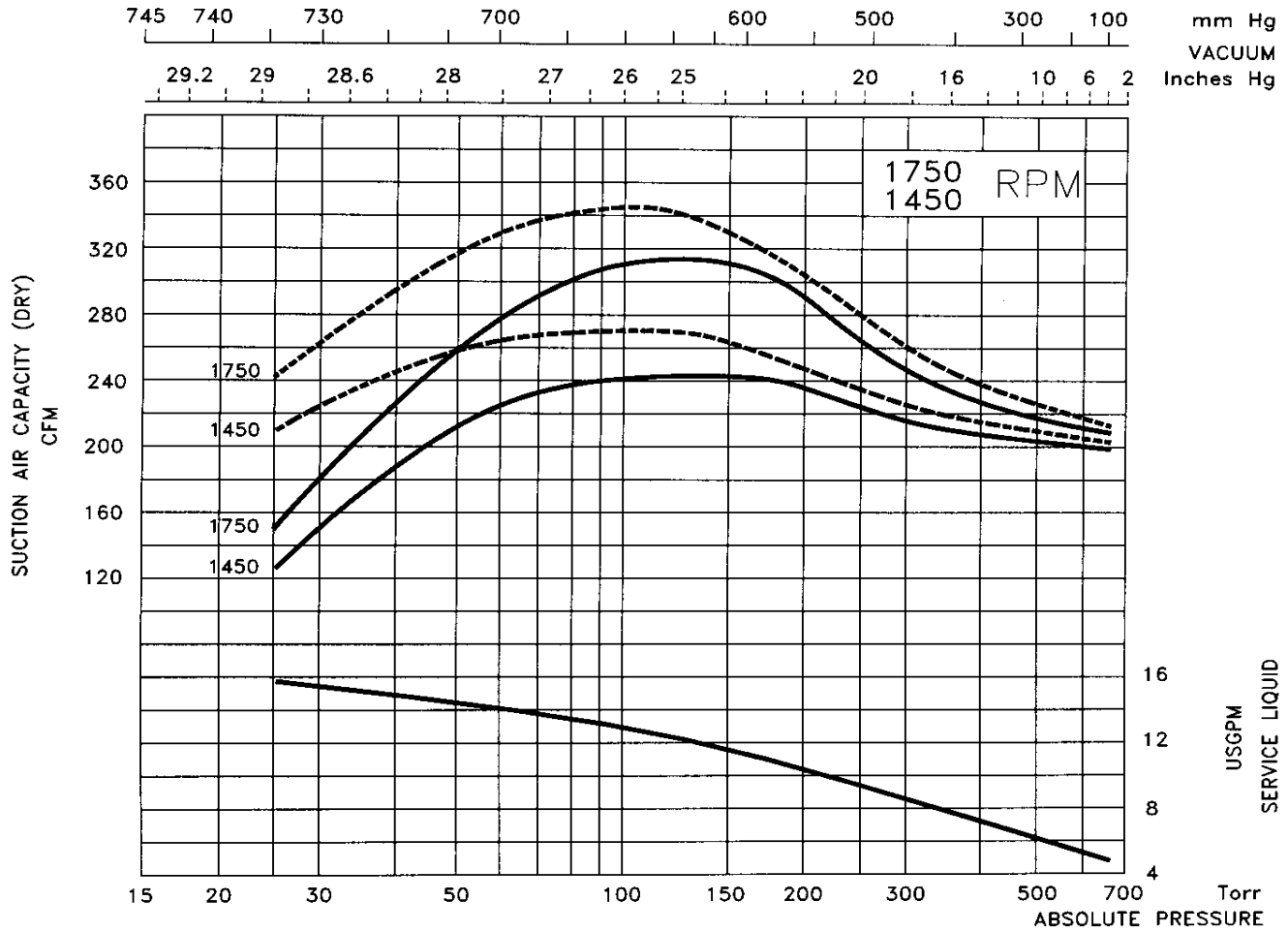


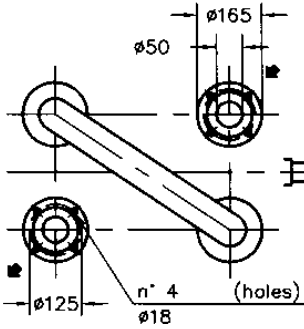
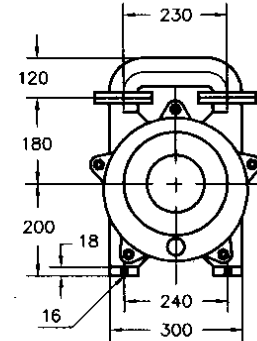
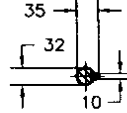
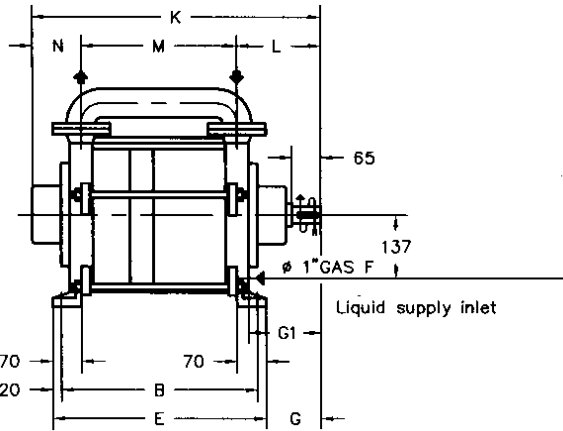


Liquid Ring & Rotary Vane Vacuum Pumps and System

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 DRY AIR AT 68 °F - 20 °C  
 SATURATED AIR AT 68 °F - 20 °C  
 SERVICE LIQUID  
 SERVICE LIQUID TEMPERATURE 59 °F - 15 °C  
 DISCHARGE PRESSURE 1013 mbar  
 S.S. PUMPS  
 CAPACITY : -10%  
 WATER  
 Tol.: 10%

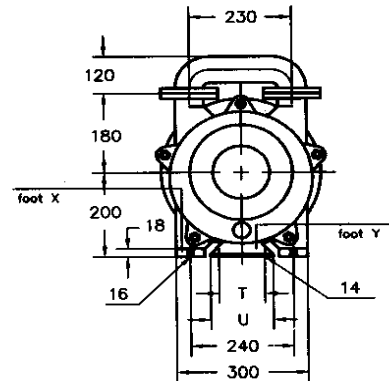
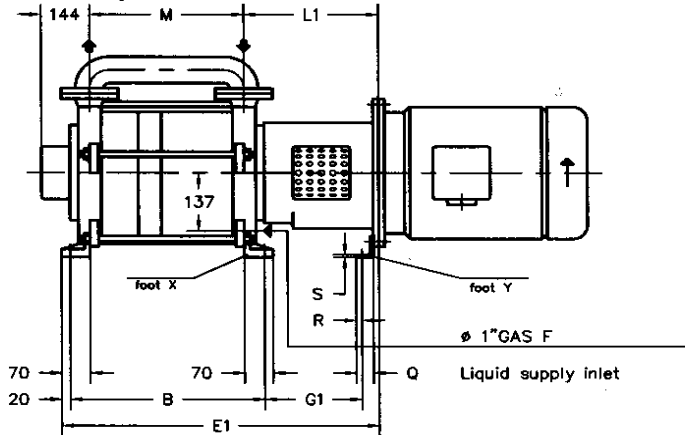
PERFORMANCE DATA  
 LIQUID RING VACUUM PUMP  
 PUMP MODEL  
**TRHB 50-420**



**TRHB 50/C**
**Bareshaft Construction with Mechanical Seal**


Pump Type	B	E	M	G	G1	K	L	N	Weight lbs.
TRHB 50-280/C	419	459	319			679			286
TRHB 50-340/C	479	519	379	146	185	739	216	144	308
TRHB 50-420/C	519	559	419			779			319

**Note:** mm  
Dimensions in mm. ----- =inches  
25.4

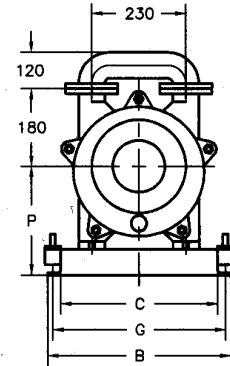
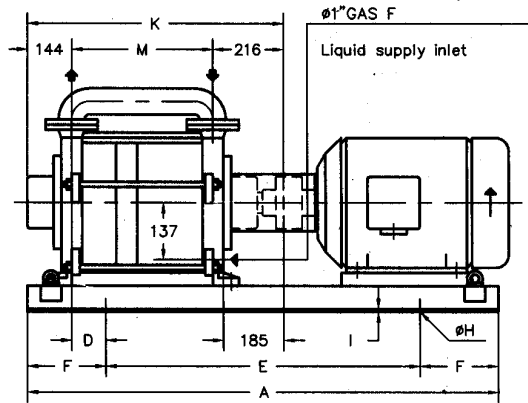
**Closed-Coupled Construction with Mechanical Seal**


Pump Type	4 Poles Motor HP	Pump										Weight <sup>1</sup> lbs.
		B	E1	G1	L1	M	Q	R	S	T	U	
TRHB 50-280/C	15	419	685	222	313	319	45	20	4	110	140	321
	15		730			352						
TRHB 50-340/C	20	479	790	244	342	379	65	28	39	230	280	374
	20					381						
TRHB 50-420/C	25	519	830			419						392

<sup>1</sup> Weight without motor  
Dimensions are for reference only. Please consult the factory for certified drawings.  
The weights refer to the GH construction

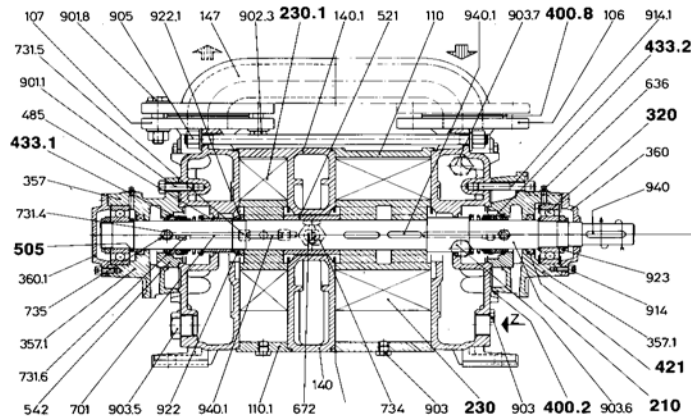
## TRHB 50/C

### Base-Mounted Construction (Baseplate-Coupling) with Mechanical Seal



Pump Type	4 Poles Motor HP	Base-plate	Pump												Weight <sup>1</sup> lbs.
			A	B	C	D	E	F	G	H	I	K	M	P	
TRHB 50-280/C	15	903	1170	410	350	70	770	200	380	14	6	679	319	290	195
	15					130									192
	20					130									195
TRHB 50-340/C	15	906	1400	560	420	50	950	225	510	18	7	739	379	300	212
	20	1350	120			900								330	215
	25	1350	120			900								330	236
TRHB 50-420/C	15	906	1400	560	420	100	950	225	510	18	7	779	419	300	217
	20	1350	140			900								330	220
	20	1350	140			900								330	241
	30	1350	140			900								330	241

1 Weight without motor



GH-F-RA construction  
A3 construction

**Note:** Dimensions in mm. ----- = inches  
25.4

Typical Cross Section with Mechanical Seal

TRHB 50 – 280/C, 340/C, 420/C

**COMPONENTS**

VDMA No	DESIGNATION	VDMA No	DESIGNATION	VDMA No	DESIGNATION
106	Suction casing	400.8	Gasket	901.1	Screw
107	Discharge casing	421	Radial seal ring	901.8	Bolt
110	Impeller casing	433.1	Mechanical seal c.c.w.	902.3	Stud
110.1	Impeller casing	433.2	Mechanical seal c.w.	903	Plug
140	Intermediate element	485	Mech. seal locking ring	903.5	Plug
140.1	Intermediate element	505	Shoulder ring	903.6	Plug
147	Manifold	521	Spacer sleeve	903.7	Plug
210	Shaft	542	Seal bush	905	Tie-bolt
230	Impeller	542	Seal bush	914	Screw
230.1	Impeller	636	Grease nipple	914.1	Screw
320	Ball bearing	672	Anticavitation valve	922	Nut
357	Bearing and mech. seal housing	701	Pipe	922.1	Nut
357.1	Bearing and mech. seal housing	731.4	Fitting	923	Nut
360	Bearing cover	731.5	Fitting	940	Key
360.1	Bearing cover	731.6	Fitting	940.1	Key
400	Gasket	734	Nipple	Z	Liquid supply inlet
400.2	Gasket	735	Nipple		

• = Recommended spare parts