



Premier Fluid Systems

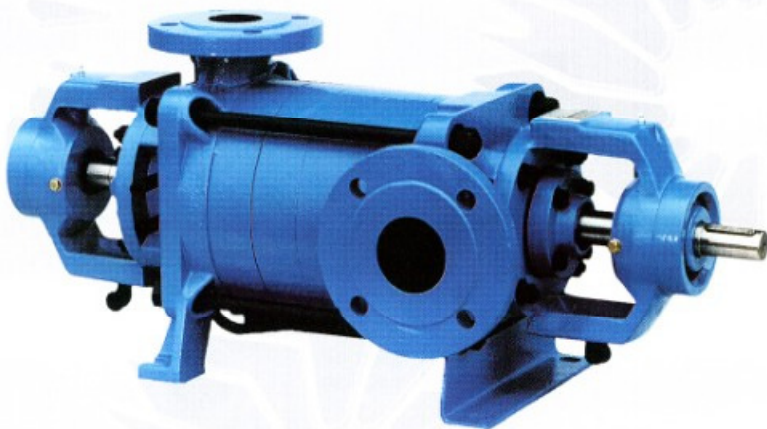
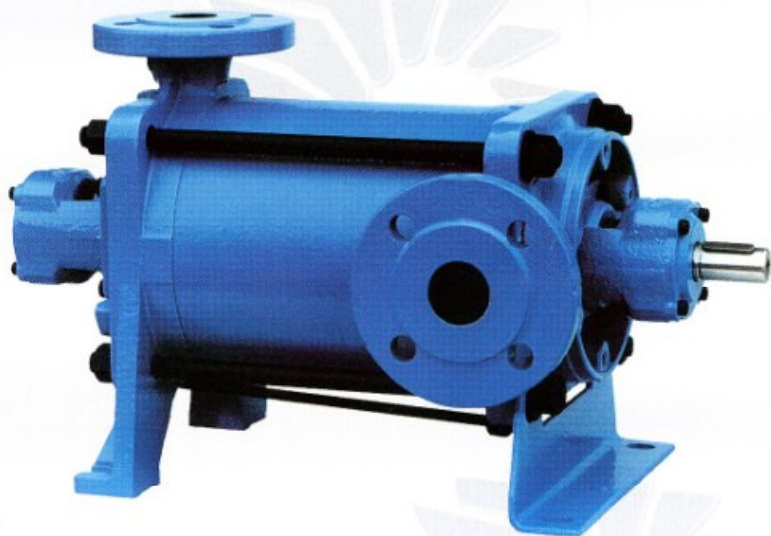
TMA SERIES

MULTISTAGE CENTRIFUGAL PUMPS

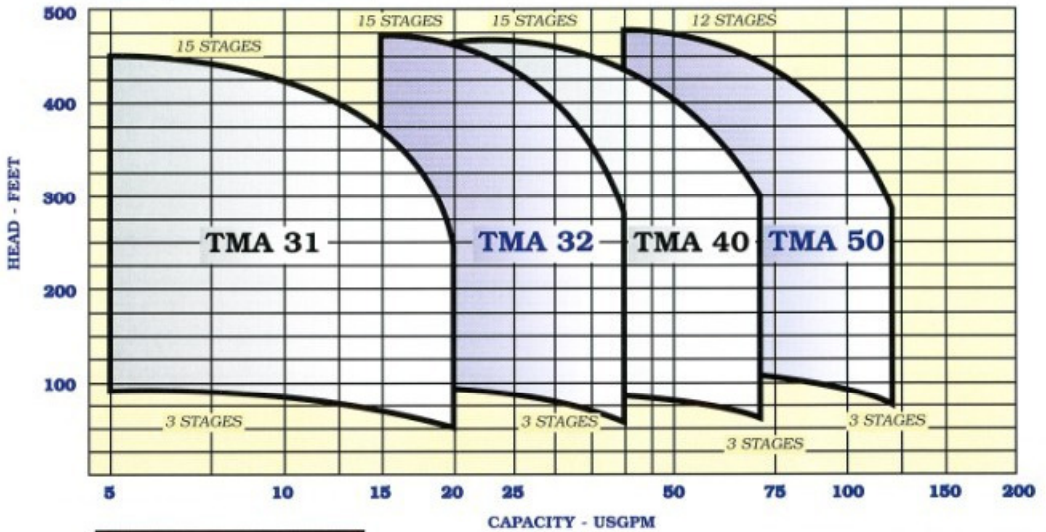
Capacities to 240 USGPM

Heads to 1,300 feet

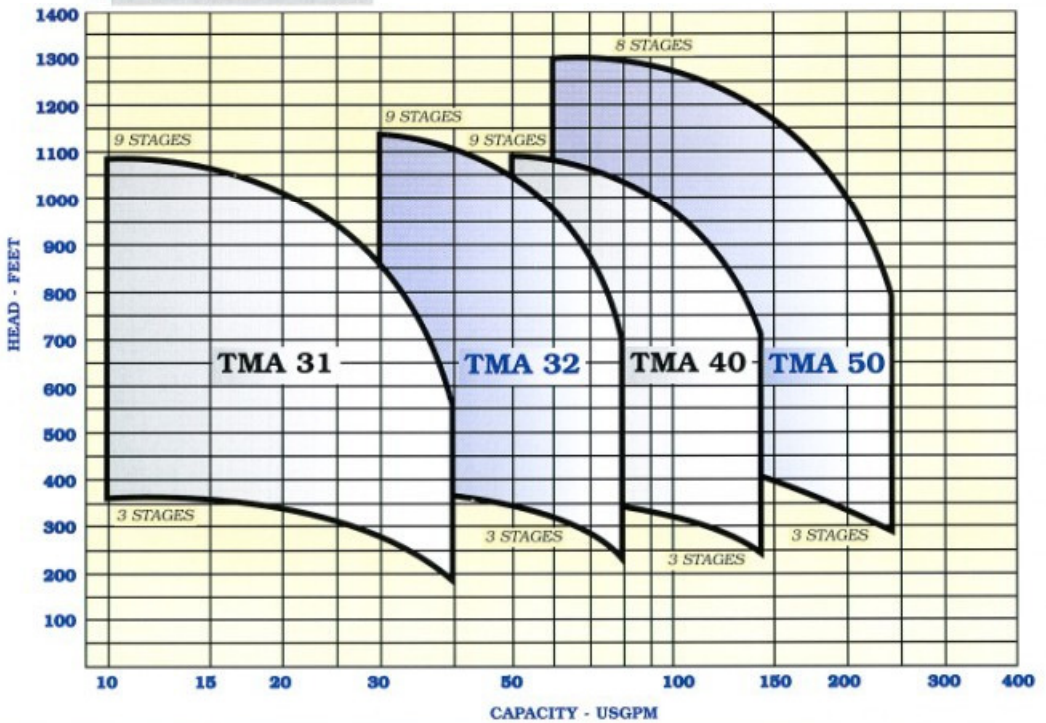
TRAVAINI



AT 1750 RPM



AT 3500 RPM



TMA SERIES

STANDARD CONSTRUCTION

PUMP TYPES	SHAFT SEAL			ARRANGEMENTS	
	STUFFING BOX	MECH. SEAL	DOUBLE MECH. SEAL	CLOSE COUPLED	BASE PLATE
TMA 30/R					
TMA 30/C					
TMA 40					
TMA 50					

SPECIFICATIONS AND OPERATING LIMITS

CAPACITIES	5 TO 240 USGPM
HEADS TO	1,300 FEET
MAXIMUM LIQUID TEMP. WITH STANDARD STUFFING BOX	250° F
MAXIMUM LIQUID TEMP. WITH COOLED STUFFING BOX	320° F
MAXIMUM DISCHARGE PRESSURE	580 PSIG
MAXIMUM SUCTION PRESSURE	230 PSIG

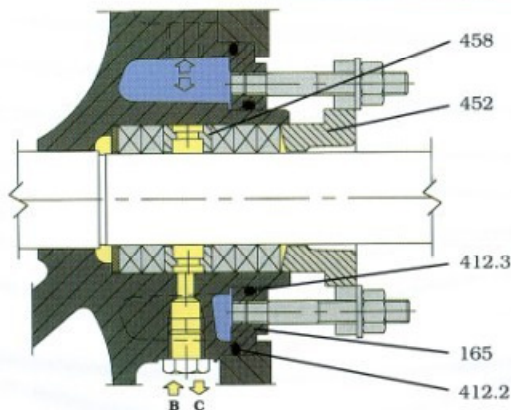
PERFORMANCE DATA AT 3500 RPM, LIQUID WITH 1.0 S.G., VISCOSITY 1.0[°]E TOLERANCES ± 5% EXCEPT HP + 10%

CAPACITY - USGPM		10		20		30		40	
MODEL	IN/OUT	FL.	HP	FL.	HP	FL.	HP	FL.	HP
TMA 31-3	1.5"/1.25"	360	4.8	339	5.4	282	6.1	183	6.3
TMA 31-4		480	6.4	452	7.2	376	8.2	244	8.4
TMA 31-5		600	8.0	565	9.0	470	10.2	305	10.5
TMA 31-6		720	9.5	678	10.8	564	12.3	366	12.6
TMA 31-7		840	11.1	791	12.6	658	14.3	427	14.7
TMA 31-8		960	12.7	904	14.4	752	16.4	488	16.8
TMA 31-9		1080	14.3	1017	16.2	846	18.4	549	18.9
NPSH - FL.		5		5.2		5.6		6.3	

CAPACITY - USGPM		30		40		50		60		70		80	
MODEL	IN/OUT	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP
TMA 32-3	1.5"/1.25"	378	6.3	369	6.7	351	7.8	324	8.5	282	9.1	228	9.4
TMA 32-4		504	8.4	492	9.0	468	10.4	432	11.4	376	12.2	304	12.6
TMA 32-5		630	10.5	615	11.2	585	13.0	540	14.2	470	15.2	380	15.8
TMA 32-6		756	12.6	738	13.5	702	15.6	648	17.1	564	18.3	456	19.0
TMA 32-7		882	14.7	861	15.7	819	18.2	756	20.0	658	21.3	532	22.1
TMA 32-8		1008	16.8	984	18.0	936	20.8	864	22.8	752	24.4	608	25.2
TMA 32-9		1134	18.9	1107	20.2	1053	23.4	972	25.6	846	27.4	684	28.4
NPSH - FL.		5.6		6.2		7		8.2		9.8		12	

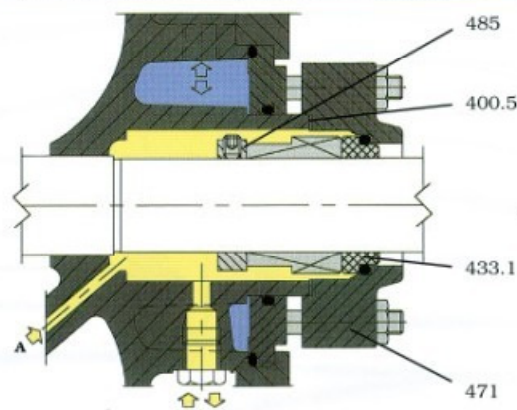
CAPACITY - USGPM		50		60		80		100		120		140	
MODEL	IN/OUT	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP
TMA 40-3	2.5"/2"	363	11.4	360	12.0	345	13.2	321	14.4	282	15.9	237	17.1
TMA 40-4		484	15.2	480	16.0	460	17.6	428	19.2	376	21.2	316	22.8
TMA 40-5		605	19.0	600	20.0	575	22.0	535	24.0	470	26.5	395	28.5
TMA 40-6		726	22.8	720	24.0	690	26.4	642	28.8	564	31.8	474	34.2
TMA 40-7		847	26.6	840	28.0	805	30.8	749	33.6	658	37.1	553	39.9
TMA 40-8		968	30.4	960	32.0	920	35.2	856	38.4	752	42.4	632	45.6
TMA 40-9		1089	34.2	1080	36.0	1035	39.6	963	43.2	846	47.7	711	51.3
NPSH - FL.		5		5.5		8		12		17		22	

CAPACITY - USGPM		60		80		100		120		160		200		240	
MODEL	IN/OUT	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP	FL.	HP
TMA 50-3	2.5"/2"	486	19.5	483	21.0	474	22.8	462	24.6	420	27.9	360	30.9	288	31.5
TMA 50-4		648	26.0	644	28.0	632	30.4	616	32.8	560	37.2	480	41.2	384	42.0
TMA 50-5		810	32.5	805	35.0	790	38.0	770	41.0	700	46.5	600	51.5	480	52.5
TMA 50-6		972	39.0	966	42.0	948	45.6	924	49.2	840	55.8	720	61.8	576	63.0
TMA 50-7		1134	45.5	1127	49.0	1106	53.2	1078	57.4	980	65.1	840	72.1	672	73.5
TMA 50-8		1296	52.0	1288	56.0	1264	60.8	1232	65.6	1120	74.4	960	82.4	764	84.0
NPSH - FL.		4.5		5		5.5		6		8		11		15.5	



Stuffing Box with Lantern Ring and Flushing

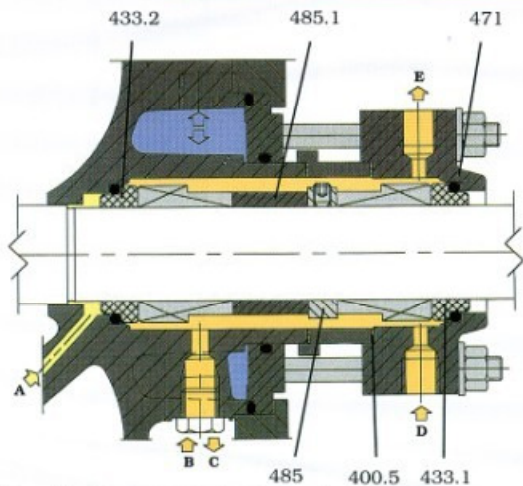
The packed stuffing box with lantern ring design is provided to prevent air from entering the pump, especially at the pump suction end. The lantern ring is supplied to ensure that flushing liquid from an external source lubricates the packing. This arrangement is also provided where the liquid being pumped contains small solid particles or is prone to crystallization. The flushing liquid should be compatible with the media being pumped, and should be supplied at a pressure that is higher than the pump inlet pressure. This liquid enters through port B and exits through port C.



Single Mechanical Seal

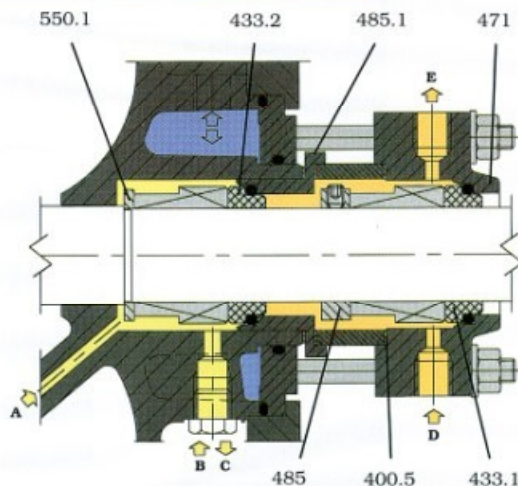
The series TMA pump seal housings are designed to accept single mechanical seals that are standardized according to DIN 24690/K. To ensure proper lubrication the seal faces are flushed with the fluid that is being pumped through internal port A. When required, the flushing liquid can be supplied from an external source through port B.

Part No.	Description	Part No.	Description
165	Heating or Cooling Cover	458	Lantern Ring
400.5	Gasket	471	Mechanical Seal Cover
412.2(.3)	O-Ring	485(.1)	Mechanical Seal Locking Ring
433.1(.2)	Mechanical Seal	542	Mechanical Seal Bushing
452	Gland	550.1	Junk Ring



Double Back to Back Mechanical Seals

This arrangement is suitable for handling hot or abrasive liquids. It is also used for liquids that are corrosive or which may solidify. The mechanical seals are supplied with an external flushing liquid through port D and exits through port E. The flushing liquid should be compatible with the liquid being pumped and supplied at a pressure of 0.5 to 1.0 Atm higher than the pump operating pressure.



Double Mechanical Seals in Series

This design is used when pumping hazardous liquids. The internal mechanical seal is flushed with the liquid that is being pumped through port A. The external mechanical seal is flushed with a liquid from an external source through port D and exits through port E. The flushing liquid for the external mechanical seal should be compatible with the liquid being pumped and can be supplied at low pressure.

OTHER PRODUCTS

**CLOSE-COUPLED SINGLE STAGE
LIQUID RING PUMPS FOR HIGH VACUUM**



**SELF-PRIMING
CENTRIFUGAL PUMPS**



**MONOSTAGE CENTRIFUGAL PUMPS
FOR THERMAL FLUIDS**

LIQUID RING VACUUM PUMPS

Continuing research of TRAVAINI PUMPS results in product improvements: therefore any specifications may be subject to change without notice.

Premier Fluid Systems

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Represented by:

MULTISTAGE CENTRIFUGAL PUMPS FOR MEDIUM AND HIGH PRESSURES: TMA SERIES

MAIN APPLICATIONS:

- Boiler feed
- For handling clean or slightly dirty liquids
- For heating plants
- Water supply piping
- Autoclaves
- Fire fighting operations
- Agriculture and irrigation
- For handling all hydrocarbons

LIMITS OF USE:

Capacity from 5 to 240 USGPM

Head to 1300 ft

Temperature tolerance: maximum 250° F

without cooled stuffing boxes,

320° F with cooled stuffing boxes.

CONSTRUCTION:

The Travaini TMA series pumps are multistage centrifugal type pumps that employ a closed type impeller design. The impellers are in series so that the head increases as the liquid being pumped is transferred from each impeller.

On the TMA series, the axial thrusts are balanced by balancing blades on the back of the impeller. The remaining thrust forces are absorbed by the heavy duty single ball bearing at the non-drive end and angular bearing at the drive end. For pump designs that have two external bearings, a pressure pipe is provided to relieve pressures in the seal area from the discharge side of the pump to the suction side.

The TMA pump design uses the latest foundry technologies. This allows for one piece components which effectively increases pump efficiencies, simplifies pump assembly and maintenance, at the same time, reducing the weight of the pump without sacrificing the overall strength and durability.

For the smaller TMA 30 series a close coupled design is available where space is limited. This design also eliminates any concerns for misalignment, which will enhance the pump's performance and extend the overall life of the pump.

