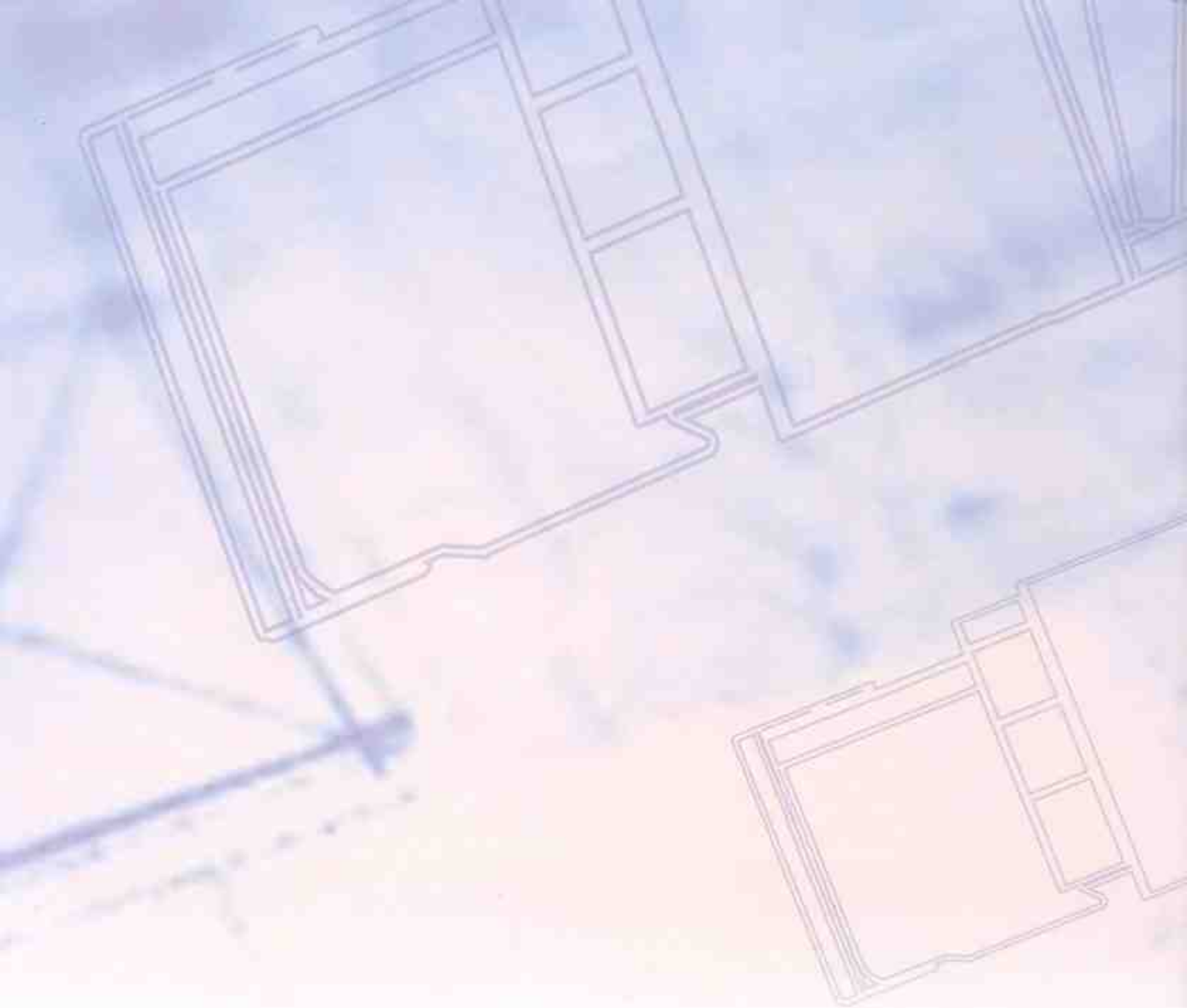

North American Marine Jet, Inc.

Manufacturers of pleasure, commercial and military marine jet products

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THE TRAKTOR®

The evolution of the TRAKTOR® JET as a unique propulsion system has proven the exemplary design and engineering talents of North American Marine Jet.

In the Fall of 1987, North American Marine Jet, Inc. introduced a revolutionary new Marine Jet to the marine propulsion industry, the TRAKTOR® JET I-150.

Designed by NAMJ engineers, this dramatically improved marine jet was built to meet the high thrust, slow speed requirements of the Alaskan salmon fishing fleet. The TRAKTOR® JET met the challenge. Featuring a huge 18" impeller, the TJI-150 produced very high thrust at very low hull speed through a 13" nozzle. This revolutionary TRAKTOR® JET design was made even more desirable when it was offered as part of an innovative "skid pak". The skid pak was an integral unit that included the jet, driveline,

JET EVOLUTION

transmission, grid cooler and diesel engine, all assembled and tested prior to shipment.

Due to the tremendous acceptance of this revolutionary new high thrust, slow speed marine jet package, NAMJ expanded into new market areas selling the TRAKTOR® JET HT Series to the oil industry for seismograph usage in the Gulf Coast, Russia, South America, Europe, Asia and Scandinavia. NAMJ also expanded into the excursion and workboat markets and was involved in military applications for the Swedish Army. After an intensive 3-year test period, the Swedish Army awarded a contract to NAMJ for the TJI-150E for their new bridge erection fleet.

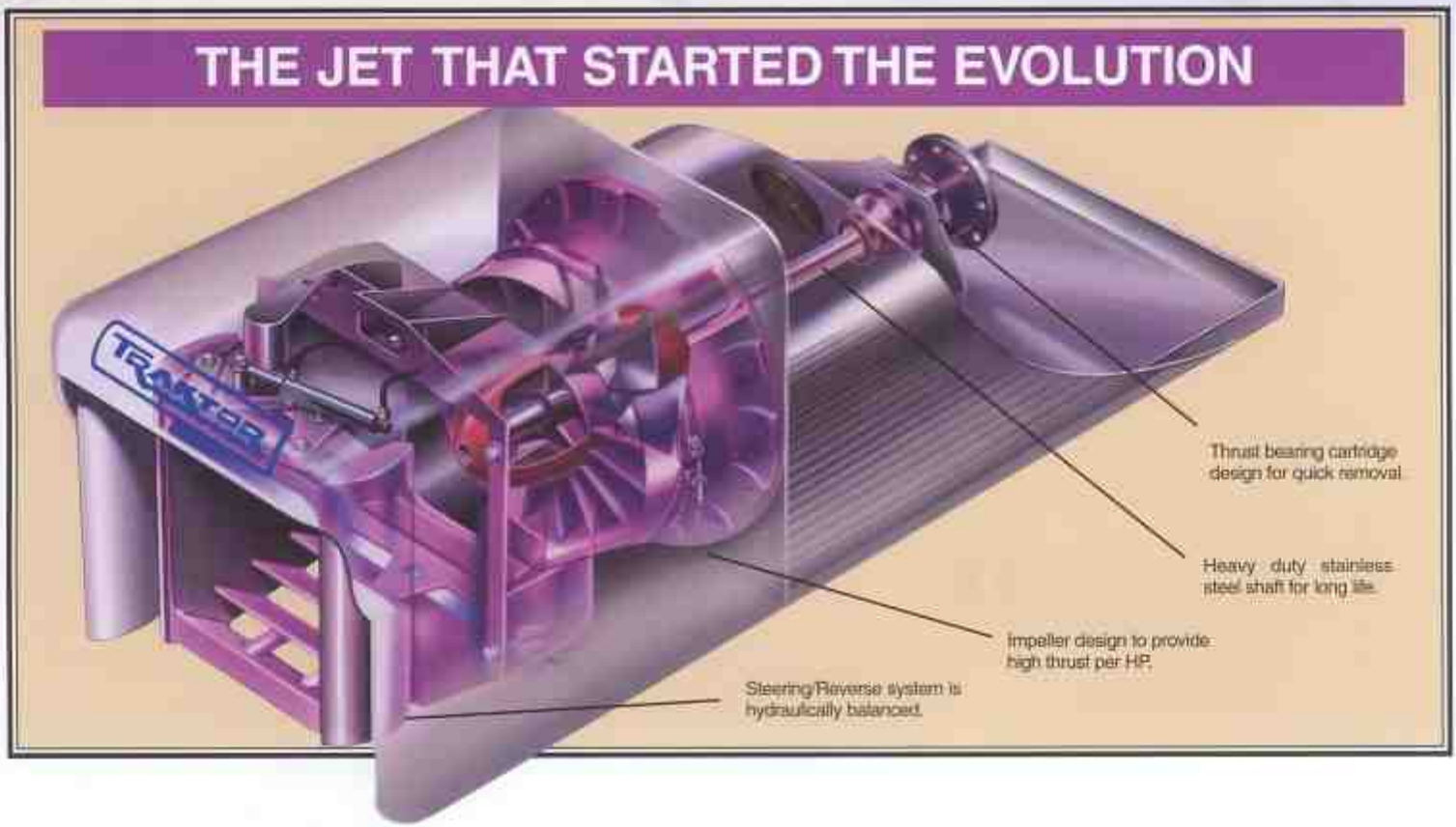
The next step in TRAKTOR® JET evolution was the TRAKTOR® JET HH series. Knowledge gained through years of experience in designing and developing numerous projects with the TRAKTOR® JET HT series led to the HH series. The new HH series is not only able to produce high thrust at very low speeds, but now also provides increased dynamic thrust at the planing speeds with good performance up to 30 knots.

As a natural design progression, NAMJ applied the high thrust, low speed features of the TRAKTOR® JET and created a powerful new 360-degree thruster series. These new thrusters can deliver high thrust in a full 360-degrees, making them ideally suited for bow thruster and main propulsion systems. NAMJ provides 360-degree thrusters in many different configurations and construction materials to meet customer needs. All current models of the TRAKTOR® JET, as well as NAMJ's high-speed models, are available in 360-degree thruster options.

North American Marine Jet, Inc. is always ready to tackle new challenges. As a case in point, when the world's largest family entertainment company needed a power source for the centerpiece for their incredible Millennium celebration, they chose four TJI-150 360-degree thruster units to provide maneuverability for a world class show.

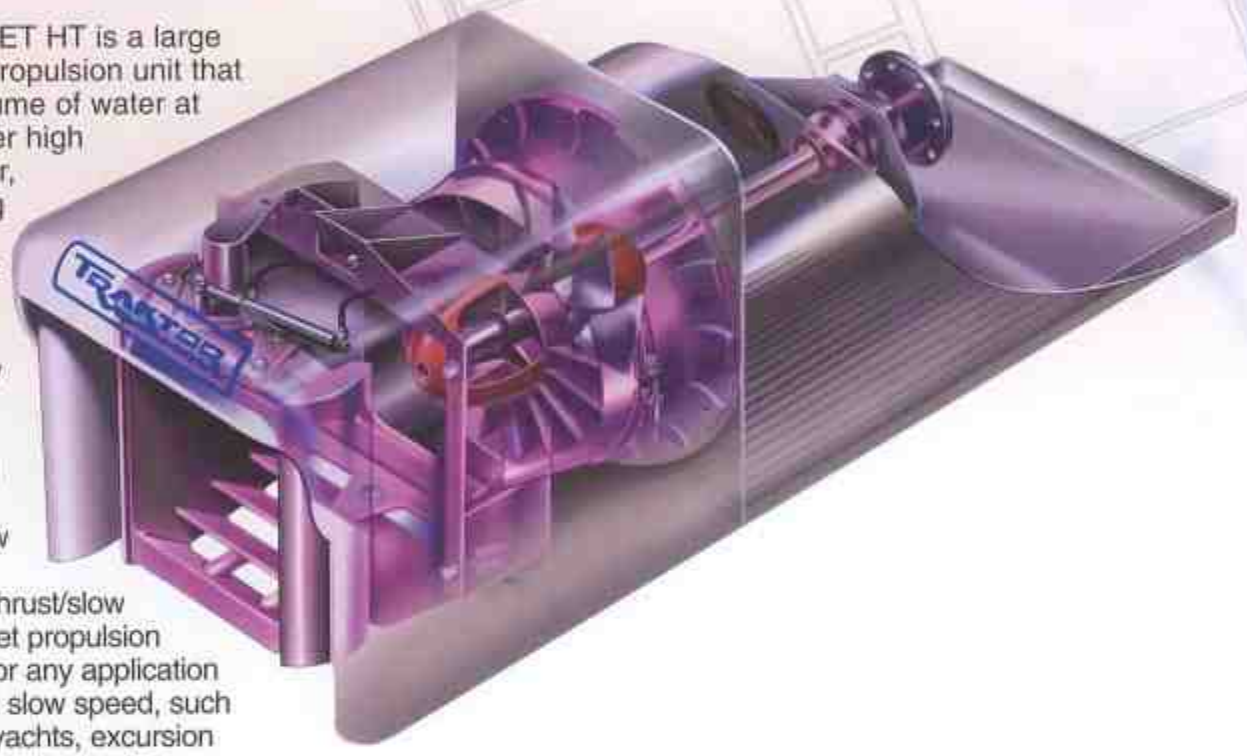
At NAMJ, we have proven time and time again our ability to exceed the expectations of our clients. We welcome your request for more specific information about our full line of marine jet systems.

THE JET THAT STARTED THE EVOLUTION



NORTH AMERICAN MARINE JET INC.

TRAKTOR® JET HT
454/609/864/1320



The TRAKTOR® JET HT is a large diameter marine jet propulsion unit that can pump a high volume of water at slow velocity to deliver high thrust per horsepower, equal to or exceeding propeller performance in the 0-20 knot range. TRAKTOR® JETS also offer the added benefits of low maintenance, easy installation, quiet operation and no hull protrusions, making them ideal for shallow water applications.

This original, high thrust/slow speed, line of marine jet propulsion units is ideally suited for any application requiring high thrust at slow speed, such as work boats, motor yachts, excursion boats, oil recovery/boom boats, fishing seine skiffs, and tenders. These true axial flow units feature low shaft speeds (300-1050 RPM) providing efficient and dependable service when driven by diesel engines of up to 1200 horsepower.

SPECIFICATIONS

	TJ-454HT	TJ-609HT	TJ-864HT	TJ-1320HT
Dry weight:	500 lbs.	900 lbs.	2000 lbs.	3,500 lbs.
Impeller Diameter:	18"	24"	34"	52"
Nozzle Diameter:	13"	19"	24"	39"
HP Range:	75-175	150-375	300-600	700-1400
Impeller RPM Range:	700-1050	600-850	480-630	275-360
Speed Range:	0-20 knots	0-20 knots	0-20 knots	0-20 knots
Maximum Efficiency Range:	10-15 knots	10-15 knots	10-15 knots	10-15 knots
Bollard Pull:	2,800 lbs.	5,000 lbs.	12,000 lbs.	30,000 lbs.

Dimensions shown in inches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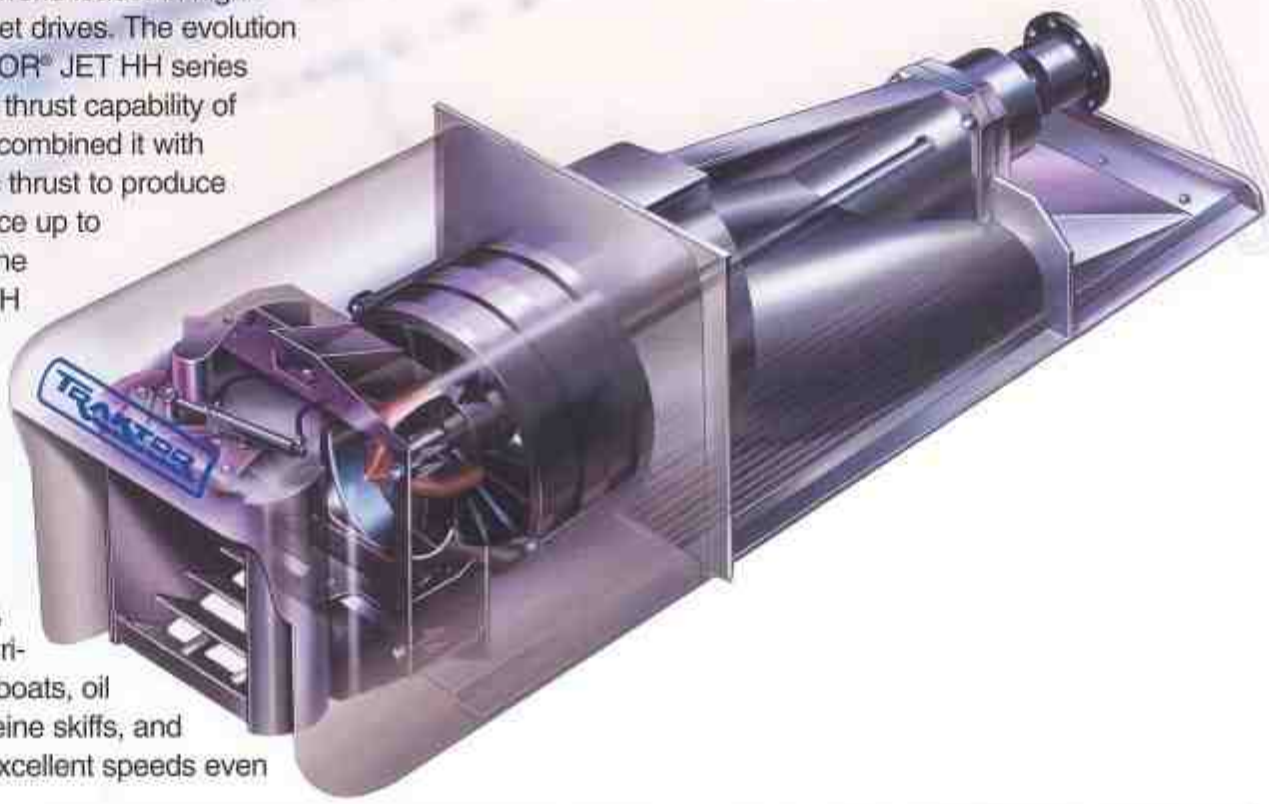
NORTH AMERICAN MARINE JET INC.

TRAKTOR® JET HH 381/431/609/965

North American Marine Jet, Inc. is recognized as the world leader in high-thrust/slow-speed jet drives. The evolution of the new TRAKTOR® JET HH series has taken the high thrust capability of the HT series and combined it with increased dynamic thrust to produce efficient performance up to 30 knots, making the TRAKTOR® JET HH series the most versatile jets on the market.



These rugged and dependable units are ideal for many types of workboats, military, patrol, harbor security, bridge erection boats, oil recovery, fishing seine skiffs, and ferries, providing excellent speeds even when the vessels are heavily loaded.

SPECIFICATIONS

	TJ-381HH	TJ-431HH	TJ-609HH	TJ-965HH
Dry weight:	400 lbs.	550 lbs.	1100 lbs.	4200 lbs.
Impeller Diameter:	15"	17"	24"	38"
Nozzle Diameter:	11"	12.5"	19.5"	28"
HP Range:	175-350	200-450	300-700	950-1500
Impeller RPM Range:	1175-1400	900-1150	550-750	400-466
Maximum Speed Range:	0-30 knots	0-30 knots	0-30 knots	0-30 knots
Maximum Efficiency Range:	18-24 knots	18-24 knots	18-24 knots	18-24 knots
Bollard Pull:	3,500 lbs.	5,000 lbs.	8,000 lbs.	19,500 lbs.

Dimensions shown in inches

NORTH AMERICAN MARINE JET INC.

TRAKTOR® JET 360° THRUSTERS

TRAKTOR® JET 360-degree thrusters are designed to take advantage of the high thrust characteristic of the TRAKTOR® JET HT and HH series.

North American Marine Jet has several models available up to 1500 HP. The TRAKTOR® JET 360-degree thruster is ideally suited for slow speed (1-15 knots) displacement craft.

Typical installations are found in workboats, ferries, landing craft and modular causeway systems, where they are used as bow thrusters, dynamic positioning propulsion and main propulsion systems.

FEATURES	BENEFITS
Horizontal Impeller Shaft	Lower Profile
Flush Mounted Nozzle	No need for Tunnels or Ramps
Infinite 360-Degree Rotation	Easy to Control
High Thrust per Envelope	Increased Payload Capability
Automatic Priming System	Shallow Draft Applications
Bolt or Weld-in Installation	Ease of Installation
Self-Contained Thruster Assembly	No Extra Fabrication

NORTH AMERICAN MARINE JET INC.

NOMERA® FIRE PUMPS

Nomera® fire pumps were developed for easy in-hull installation (rather than the standard fire truck installation) by utilizing multi-stage mixed flow impellers in lieu of a single centrifugal type volute. The size and number of impeller stages is determined by the customer's head (PSI) and flow (GPM) requirements. Units can be constructed of stainless steel, steel, aluminum or Ni-Resist depending on the application.

Even though these pumps are designed for fighting fires, the flow can be directed to operate several other systems simultaneously. Bow and stern thrust, as well as main propulsion can be achieved. Each Nomera® Fire Pump System is engineered for its specific job, assuring both dependable and powerful performance with low maintenance. Additional detailed technical information is available upon request.

Please contact North American Marine Jet at namj@marinejet.com, or call 501-778-4151.

Specifications of General Roy S. Kelly Fireboat

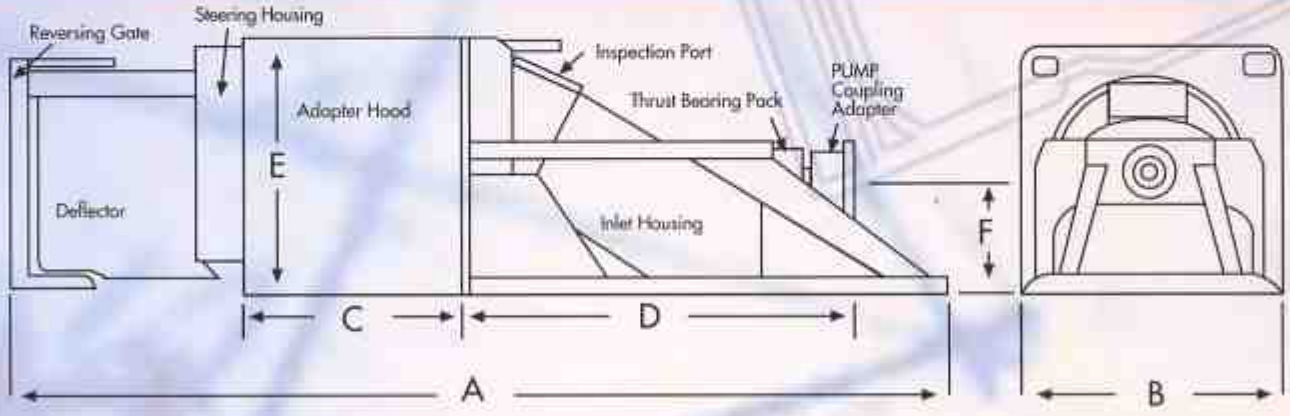
Twin 16H J-3 stage Fire Pumps
Number of Stages: 3
Impeller Diameter: 13-1/16 inches
Each 16HJ-3 delivers 5000 GPM @ 415 feet of head (650 HP)
Max Flow: 8000 GPM @ 260 feet of head (800 HP)

The Roy S. Kelly fire boat is equipped with 8 fully remote controlled monitors. The fire pumps also operate as stern and bow thrusters and can be used for additional propulsion.

NORTH AMERICAN MARINE JET INC.

TECHNICAL

TRAKTOR® JETS



TRAKTOR® JET HT

	A	B	C	D	E	F
TJ-454HT	67	30	33	23	28	12.5
TJ-609HT	99.39	32	20.5	50	34	17
TJ-864HT	147	40	29	54	42	21.5
TJ-1320HT	220	60	44	85	60	30

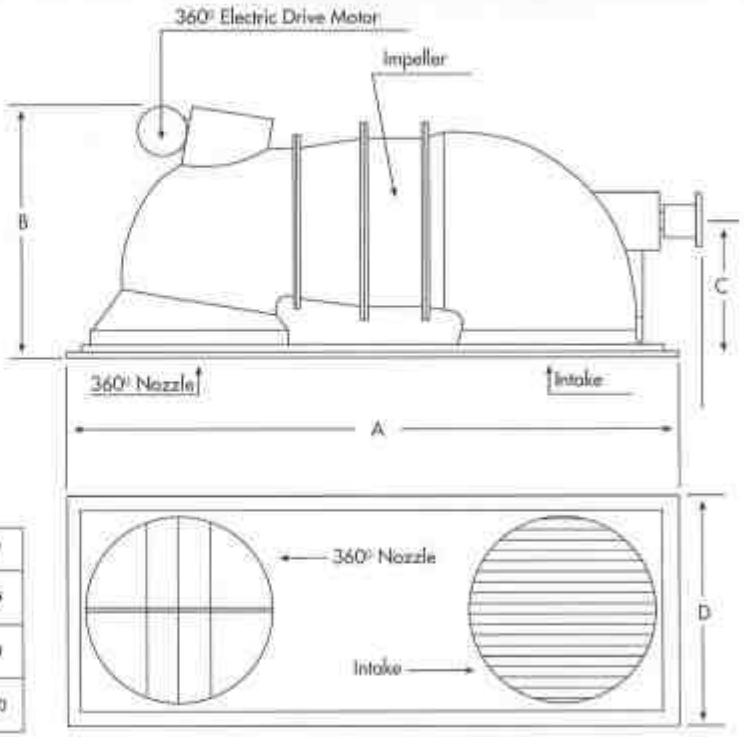
DIMENSIONS IN INCHES

TRAKTOR® JET HH

	A	B	C	D	E	F
TJ-381HH	67	27	12	33	22	12
TJ-431HH	75	27	12	38	27	13
TJ-609HH	117	32	37.87	43	34	17
TJ-965HH	184	53	39	88	53	27

DIMENSIONS IN INCHES

THRUSTERS



TRAKTOR® JET 360 Degree Thrusters

	A	B	C	D
TJ-454HT/360	85.25	39	24	39
TJ-864HT/360	128	63	44	54
TJ-965HT/360	182	69	26	52

DIMENSIONS IN INCHES

Model	Thrust 360°	HP
TJ-450HT/360	2300 lbs.	150
[illegible]	9500 lbs.	600
[illegible]	24,000 lbs.	1500

INFORMATION

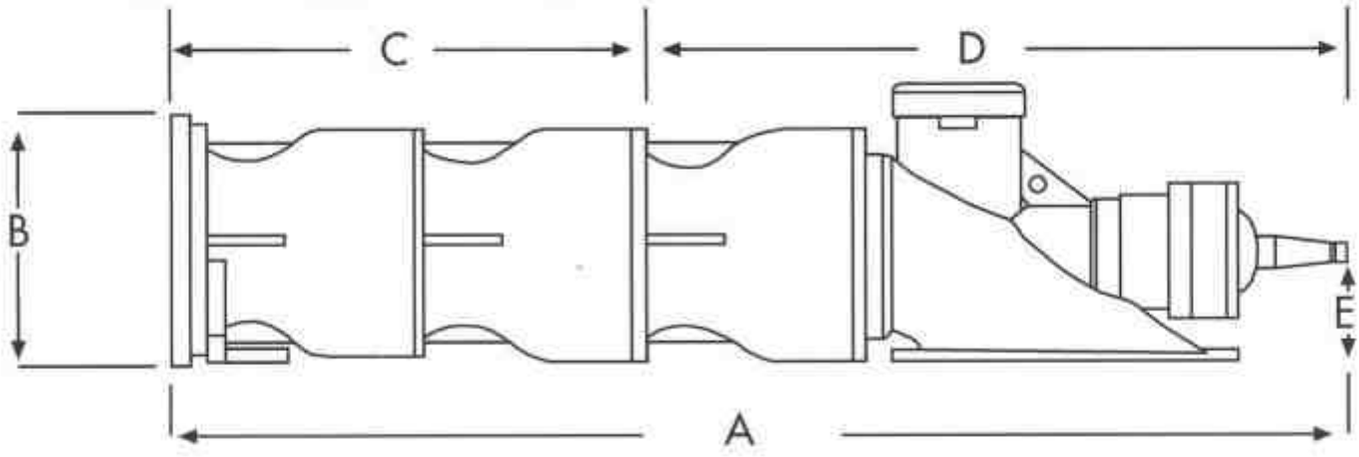
IMPELLERS

NAMJ impellers are at the heart of our legendary jet performance. Innovative approaches to hub and blade geometry has resulted in new more efficient impeller designs. High thrust and outstanding performance is now delivered at lower shaft speeds. Typical damage from high impact debris on the blades is reduced because of lower rotational speeds of the Traktor Jet impellers. Lower dynamic vibrations are a result as well.

The HT impeller has eleven blades, a large hub diameter, and is well-suited for high thrust applications from 0-20 knots.

The HH impeller has seven blades, a tapered hub, and unique water acceleration characteristics which are better suited for 0-30 knot boat speeds.

FIRE PUMPS



NOMERA® JET FIRE PUMPS

NJ-406/Fire	A	B	C	D	E
3 Stage	91	23	60	31	12 with no intake
2 Stage	71	23	40	31	12 with no intake

DIMENSIONS IN INCHES

Marine Jet Propulsion Solutions Since 1985