

Teleflex Marine Steering

Steering Options Based On Engine Type:

All Outboards & Power Assisted Stern Drives

ⓘ denotes Tilt Steering available for this product

		ALL NON-POWER-ASSISTED OUTBOARD ENGINES (NO FEEDBACK)			POWER-ASSISTED
		Up to V-4 & V-6 50 MPH or less	Up to V-6 to 55 MPH	V-6 & Larger (to 300 HP) 60 MPH+	Outboards/ Stern Drives Inboards
CURRENT STEERING TYPE	Rotary Mechanical (cable)	NFB™ Safe-T II ⓘ SS132XX (3 turns) or NFB 4.2 Rotary Single Cable ⓘ SS147XX (4.2 turns)	NFB™ 4.2 Rotary No FeedBack Dual Cable ⓘ SS148XX (4.2 turns) (best for lower speeds)	Upgrade to SeaStar® PRO ⓘ HK73XX or HK7400 (no hoses) (both: 4.25 turns)	HPS® Rotary ⓘ (order by components) or Safe-T QC® ⓘ SS137XX (both: single cable, 3 turns)
	Rack & Pinion Mechanical (cable)	NFB™ No FeedBack Rack Single Cable ⓘ SS151XX (4 turns) (use SeaStar for multi- engines & autopilots)	NFB™ No FeedBack Pro Rack Dual Cable ⓘ SS152XX (4 turns) (use SeaStar for multi- engines & autopilots)	NFB™ No FeedBack Pro Rack Dual Cable ⓘ SS152XX (4 turns) (use SeaStar for multi- engines & autopilots)	HPS® Rack & Pinion ⓘ (order by components) or The Rack™ ⓘ SS141XX (both: single cable, 4 turns) (use SeaStar for multi- engines & autopilots)
	Hydraulic	BayStar™ ⓘ HK4200/4230 (O/B to 150 HP; 4.5 turns) or SeaStar® ⓘ HK63XX/ HK6400 (5 turns) or SeaStar® P/A* ⓘ	BayStar™ ⓘ or SeaStar® ⓘ HK63XX/ HK6400 (no hoses) or SeaStar® P/A* ⓘ (order by components)	SeaStar® PRO ⓘ HK73XX or HK7400 (no hoses) (both: 4.25 turns) or SeaStar® P/A* ⓘ (must use P/A Pro with SeaStar Pro helm)	SeaStar® Steering ⓘ or SeaStar® P/A* ⓘ (both: best for autopilots, cylinders are drive-specific)

*SeaStar® P/A is a power-assist add-on subsystem which requires presence or purchase of a complete SeaStar steering system (SeaStar Pro helms require use of SeaStar P/A Pro). NOTE: Some high performance boats/engine combinations develop instability at high speed. Instability becomes more prevalent in boats faster than 50 MPH. Dual-cable steering or SeaStar PRO systems are recommended by Teleflex and engine makers for these boats. IMPORTANT: No FeedBack Steering MUST NOT be used in dual station, power-assisted, or autopilot installations!

Will it Fit?

MECHANICAL CONSIDERATIONS: Mounting hardware for NFB 4.2, Safe-T II and HPS helms fits the Safe-T dash cutout. NFB Rack helms fit 1984-date "The Rack" mounting holes. 1996-date "back mount" rack helms use a unique rack cable and will not work with old style rack cables.

HYDRAULIC CONSIDERATIONS: SeaStar helms retrofit into most boats. The SeaStar front mount cylinder is best for outboards with 22" splashwells or wider. Side/splashwell mount cylinders are offered, but require more room. Check splashwell dimensions before ordering outboard cylinders.

Outboards (without power steering): No FeedBack™ (NFB™ - mechanical), BayStar® or SeaStar® (hydraulic) is recommended as replacement steering for all non-power-assisted outboards. For high performance boats or other applications in which there may be engine flutter or some steering instability, dual cable NFB (4.2/Pro Rack) mechanical systems or SeaStar PRO® hydraulic systems are recommended. For most rotary steered boats made after 1993, upgrading to NFB can be as simple as a helm change.

Stern Drives & Outboards (with power steering): HPS™ High Performance Steering is recommended for power-steered stern drives and other power-assisted applications. Both rotary and rack versions feature unique, coated core construction for minimal backlash at the wheel. Traditional mechanical systems (Safe-T QC® & Back Mount Rack & Pinion) may also be used for power-assisted applications. SeaStar® is recommended for all vessels using autopilots.

selecting the steering system best for you

Steering Options Based On Engine Type:

All Inboards, Non Power-Assisted Stern Drives

ⓘ denotes Tilt Steering available for this product

CURRENT STEERING TYPE	STERN DRIVES		INBOARD POWERED BOATS, INCLUDING MULTIPLE STATIONS		
	(non power-assisted)		Up to 34 feet (most engines)	Up to 50 feet (single or dual engines)	Over 50 feet (most engines)
	<p>NOTE: "turns" in parentheses refers to number of steering wheel turns lock-to-lock. Higher number means lower turning effort. Lower number means quicker steering response.</p>	<p>NFB™ 4.2 Rotary Single Cable ⓘ SS147XX (4.2 turns) or NFB™ Rack Single Cable ⓘ SS151XX (4 turns)</p>	<p>Big-T® ⓘ (single cable; order by components; dual station version available) (3 turns)</p>	—	—
<p>Mechanical (cable)</p>	<p>SeaStar® ⓘ Stern Drive Steering ⓘ or SeaStar® P/A* ⓘ (order system by components; dual station versions available; best for boats with autopilots; cylinders are drive-specific)</p>	<p>SeaStar® ⓘ or Hynautic® Inboard or SeaStar® P/A* ⓘ (order system by components; dual station version available; best for autopilots; many cylinder options)</p>	<p>SeaStar® or Capilano™ Inboard Steering (order system by components) or SeaStar® or Hynautic® Inboard Steering (order by components)</p>	<p>SeaStar® Power Steering ⓘ (order system by components; dual station version available; best for autopilots; many cylinder options)</p>	
<p>Hydraulic General Purpose (number of turns varies with helm & cylinder)</p>	<p>SeaStar® Hynautic® (Twin External Cylinders) (order components; dual station version available)</p>	<p>SeaStar® Capilano™ or SeaStar® Hynautic® (order components; dual station version available)</p>	<p>SeaStar® Capilano™ SeaStar® Hynautic® or SeaStar® Power Steering ⓘ (order by components)</p>	<p>NOTE: Boats over 50 feet should have steering loads reviewed by Teleflex. Please contact Teleflex Canada tech service for assistance.</p>	
<p>Hydraulic Heavy Duty (turns vary)</p>					

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Please use these guides to assist in making your selection, but remember that **the recommendations are general in nature. Any boat/steering system combination should be water-tested by the installer to ensure safe and dependable steering.** Displacement hulls do react differently than planing hulls. As a result, the type of hull on the boat, as well as the horsepower, may affect steering system selection. If in doubt, please contact Teleflex Technical Service for assistance. **We are happy to help you.** For Teleflex and Morse mechanical product technical support, contact 610-495-7011, FAX 610-495-7688 or on-line at www.teleflexmarine.com. For Capilano, Hynautic, SeaStar and SyTen product technical support, contact 604-270-6899 or 941-488-6744, FAX 604-270-7172 or on-line at www.teleflexmarine.com.

Stern Drives (without power steering): SeaStar or NFB 4.2 No FeedBack Steering is recommended for **non-power-assisted** stern drives and small inboards. **SeaStar is recommended for all vessels using autopilots.**

Inboards: Big-T®, SeaStar, SeaStar Capilano™, and SeaStar Power Steering are available for various inboard and sail boats. **SeaStar® is recommended for vessels with dual stations and those using autopilots. Big-T is the only mechanical steering system currently offered for twin station boats. Big-T service parts are available or you can upgrade to SeaStar.**

Jet Boats: Teleflex has supplied many versions of steering for jet boats. *If you are replacing jet boat steering, please refer to the Teleflex catalog or contact Technical Service for assistance. (610-495-7011, FAX 610-495-7688 or on-line at www.teleflexmarine.com.)*

Tilt Steering: You can upgrade to the comfort and convenience of Tilt steering with all Teleflex systems except Capilano.

Multiple Engine Tie Bars: Installation of a new steering system may require the replacement of tie bars for dual or triple engines. Please refer to the SeaStar Selection Guide to make sure you order the proper one.