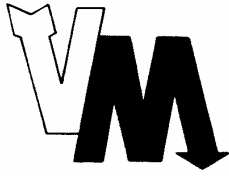


Vita Motivator Co.



Tyger

Portable Eductor Kits



VM # 1316-1" TYGER

Portable Ejector Kit

The V.M. # 1316 - 1" Portable Ejector is used on board tankers, oil rigs, and vessels of all types. The portable ejector is used to remove liquids from tanks, sumps, pits, and cargo and ballast spaces. This small eductor allows access to inaccessible spaces. Suggested uses include:

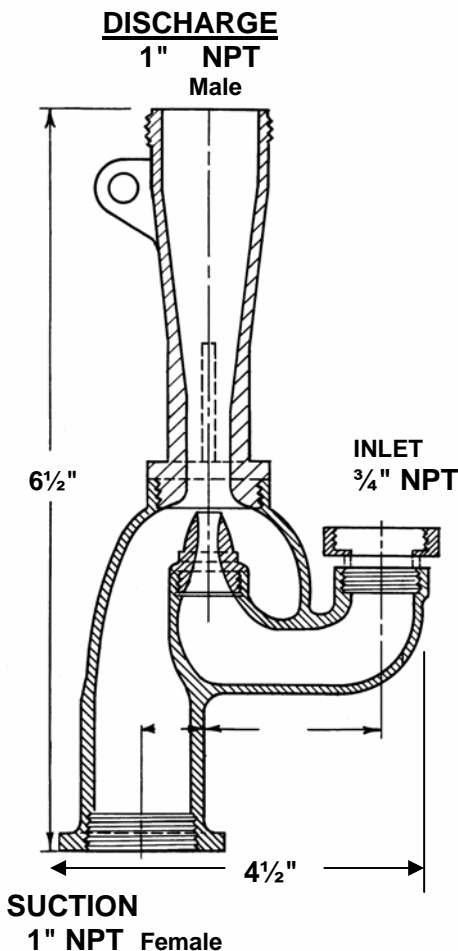


1. Keeping tank bottoms dry during tank or hold washing operations
2. Pumping water out of holds during firefighting operations
3. Regular or emergency pumping of liquids from ballast, bilge or cargo spaces
4. Powered by water pressure or the same liquid as suction fluid

This model can be lowered directly into the liquid to be suctioned. Or a length of suction hose can be attached. This model is available with an optional non-return valve and optional strainer. It can be furnished with hose barb couplings. BSP or NPT or JIS threads, Storz adapters or cam-lock quick coupling.

Standard Shipboard Portable Ejector Kit – includes the following

- 1 pc V.M. # 1316-1" Bronze Eductor with Bronze Nozzle
- 1 pc V.M. INLET HOSE – Fire "Motive Pressure" Hose, 75' (23M) x 1½" with brass (NH) couplings to attach to eductor inlet
- 1 pc V.M. SUCTION HOSE - Non-Collapsible PVC Full Vacuum Hose, 20' (6 M) x 1" with brass coupling for eductor suction
- 1 pc V.M. DISCHARGE HOSE – Mill-Type water discharge hose, Lay Flat type 75' (23 M) x 1½" with Brass coupling for eductor disch.
- 1 pc V.M. SPARE BRONZE NOZZLE



Flow Data	Suction Capacity	Suction Lift	Discharge Head	Motive Pressure	Motive Flow
	5-10 GPM 1 – 3 M3/H	Up to -20 Feet Up to -6 Meters	Up to 70 Feet Up to 22 Meters	50 -150 PSI 4 – 10 Bar	10 -20 GPM 3 – 6 M3/H
Materials of Construction	ITEM	Standard	OPTIONAL MATERIALS		
	BODY & DIFFUSER	Bronze	Stainless Steel, Ni-Alum, Aluminum,		
	Nozzle	Bronze	316 Stainless Steel,		
	Non-Return Valve	-----	Bronze, 316 Stainless Steel		
	Strainer	-----	Bronze, 316 Stainless Steel		
Connections	DESCRIPTION	STANDARD	Optional		
	INLET	¾" NPT Female Thread	BSP threads, Hose barb, cam-lock		
	SUCTION	1" NPT Female Thread	BSP threads, Hose barb, cam-lock		
	DISCHARGE	1" NPT Male Thread	BSP threads, Hose barb, cam-lock		

VM # 300-1½" TYGER

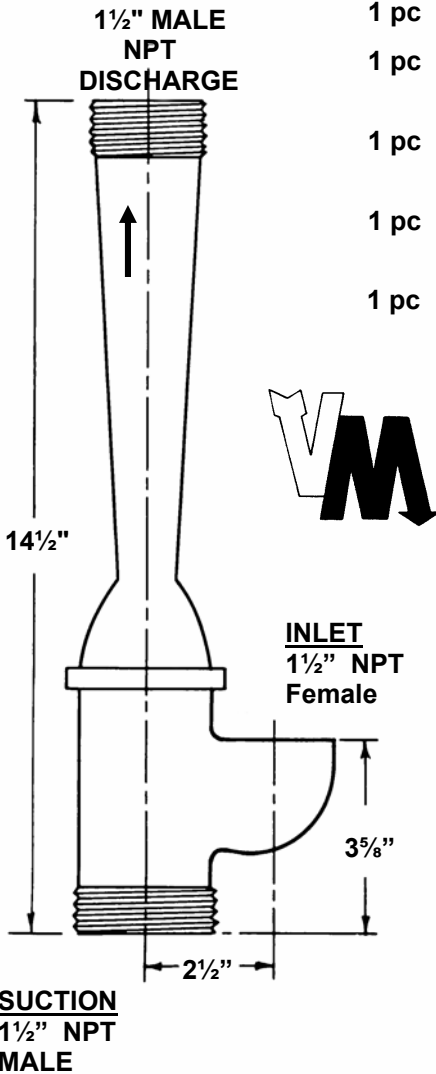
Portable Ejector Kit

The **V.M. # 300-1½" TYGER** portable eductor is constructed of high grade bronze, and is a small handy jet pump, useful for portable or permanent pumping jobs. Generally used for removal of liquids from Bilges, Barges, Tanks, Cargo Spaces, Chain Lockers, cofferdams, – wherever tanks or void spaces need to be completely emptied.

This model is widely used on Tankers, Bulk Carriers, Chemical Carriers, Oil & Drilling Platforms and Navy & Coast Guard vessels. The eductor also serves as an emergency pump that is always ready for action, as long as driving liquid under pressure is available. The Eductor can be lowered into the space to be pumped out. Or, the eductor can be used with a length of suction hose so that only the suction hose is put into the space to be pumped out. If steam is used as the motivating pressure, the inlet can be reduced to 1".

TYGER Portable Ejector Kit – includes...

- 1 pc **V.M. # 300-1½" Bronze Eductor with nozzle**
- 1 pc **INLET HOSE – Fire 'Motive Pressure' Hose, 75' (23 meters) x 1½" with brass couplings (NPT) to attach to eductor inlet.**
- 1 pc **SUCTION HOSE – Non-Collapsible PVC, Full Vacuum Hose 20' (6 Meters) x 1½" with brass couplings (NPT) for eductor suction.**
- 1 pc **DISCHARGE HOSE – Mill-Type water discharge hose, lay – flat type 75' (23 Mtr) x 1½" with brass coupling for eductor discharge.**
- 1 pc **SPARE BRONZE NOZZLE**
- 1 pc **SUCTION CHECK VALVE**



<u>Flow Data</u>	<u>Suction Capacity</u>	<u>Suction Lift</u>	<u>Discharge Head</u>	<u>Motive Pressure</u>	<u>Motive Flow</u>
	12 – 35 GPM 3 – 8 M3/HR	Up to -20 Feet Up to -6.0 Meters	Up to 80 Feet Up to 24 Meters	50 -150 PSI 4-10 Bar	10 -40 GPM 3 9 M3/HR.
<u>Materials of Construction</u>	<u>ITEM DESCRIPTION</u>	<u>Standard Eductor</u>	<u>OPTIONAL MATERIALS</u>		
	BODY & DIFFUSER Nozzle Non-Return Valve & Suction Strainer	Bronze Bronze Bronze	Stainless Steel, Aluminum, 316 Stainless Steel, Bronze, 316 Stainless Steel, Steel		
<u>CONNECTIONS</u>	<u>DESCRIPTION</u>	<u>STANDARD EDUCATOR</u>		<u>Optional Connections</u>	
	Inlet	1½"	NPT Female Thread	NST, BSP threads, Hose barb, cam-lock	
	SUCTION	1½"	NPT Female Thread	NST, BSP threads, Hose barb, cam-lock	
	DISCHARGE	1½"	NPT Male Thread	NST, BSP threads, Hose barb, cam-lock	

VM # 250-2"L TYGER

Portable Ejector Kit

The **V.M. # 250 - 2"L TYGER Portable Ejector** is used on board tankers, oil rigs, and vessels of all types. The portable ejector is used to remove liquids from tanks, sumps, pits, and cargo and ballast spaces. This small eductor allows access to inaccessible spaces. Suggested uses include:

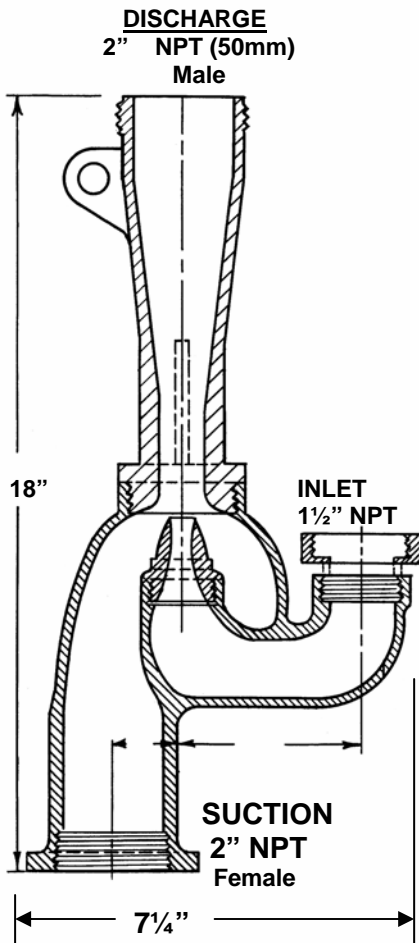


1. Keeping tank bottoms dry during tank or hold washing operations
2. Pumping water out of holds during firefighting operations
3. Regular or emergency pumping of liquids from ballast, bilge or cargo spaces
4. Powered by water pressure or the same liquid as suction fluid

This model can be lowered directly into the liquid to be suctioned. Or a length of suction hose can be attached. This model is available with an optional non-return valve and optional strainer. It can be furnished with hose barb couplings. BSP or NPT or JIS threads, Storz adapters or cam-lock quick coupling. The TYGER Ejector kit is complete with inlet, suction and discharge hoses and couplings.

TYGER Portable Ejector Kit – includes...

- 1 pc V.M. # 250-2"L Bronze Eductor with Monel Nozzle
- 1 pc V.M. INLET HOSE – Fire "Motive Pressure" Hose, 75' (23M) x 1½" with brass (NH) couplings for eductor inlet
- 1 pc V.M. SUCTION HOSE - Non-Collapsible PVC Full Vacuum Hose, 20' (6 M) x 1¼" with brass coupling for eductor suction
- 1 pc V.M. DISCHARGE HOSE – Mill-Type water discharge hose, Lay Flat type 75' (23 M) x 2" with Brass coupling for eductor discharge
- 1 pc V.M. SPARE MONEL NOZZLE



Flow Data	Suction Capacity	Suction Lift	Discharge Head	Motive Pressure	Motive Flow
	Up to 100 GPM Up to 23 M3/H	Up to -20 Feet Up to -6 Meters	Up to 110 Feet Up to 33 Meters	50 -150 PSI 3 – 10 Bar	80 -220 GPM 18 – 40 M3/H
Materials of Construction	ITEM DESCRIPTION	Standard	OPTIONAL MATERIALS		
	BODY & DIFFUSER	Bronze	Stainless Steel, Ni-Alum, Aluminum		
	Nozzle	Monel	316 Stainless Steel,		
	Non-Return Valve	-----	Bronze, 316 Stainless Steel		
	Strainer	-----	Bronze, 316 Stainless Steel		
Connections	DESCRIPTION	STANDARD EDUCTOR	Optional Connections		
	INLET	1½" NPT Female Thread	BSP threads, Hose barb, cam-lock		
	SUCTION	2" NPT Female Thread	BSP threads, Hose barb, cam-lock		
	DISCHARGE	2" NPT Male Thread	BSP threads, Hose barb, cam-lock		

VM # 1544-2½" TYGER Portable Ejector Kit

The **V.M. # 1544 - 2½" TYGER Portable Ejector** is used on board tankers, oil rigs, and vessels of all types. This Model is used on product tankers, bulk carriers, Navy & Coast Guard Vessels. It serves as an emergency pump that is Always ready for action, as long as driving liquid under pressure is available.

The portable ejector is used to remove liquids from tanks, sumps, pits, and cargo and ballast spaces. This small eductor allows access to inaccessible spaces. Suggested uses include:

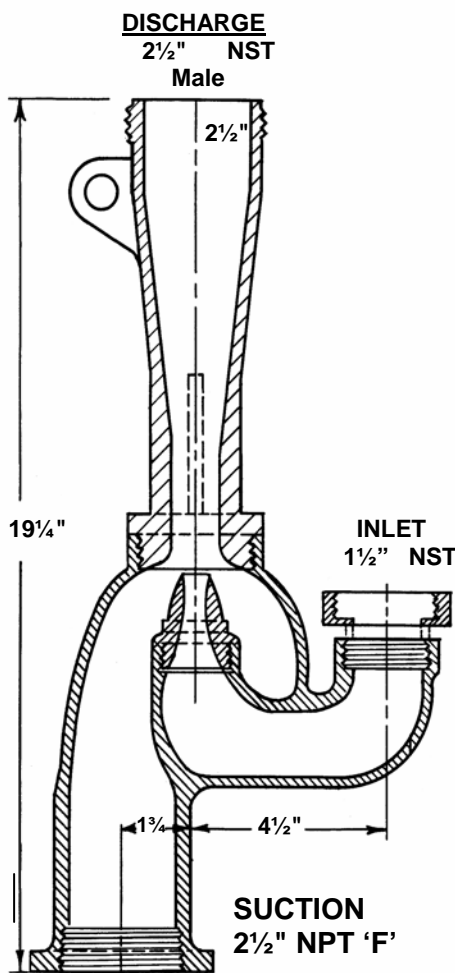
1. Keeping tank bottoms dry during tank or hold washing operations
2. Pumping water out of holds during firefighting operations
3. Regular or emergency pumping of liquids from ballast, bilge or cargo spaces
4. Powered by water pressure or the same liquid as suction fluid

This model can be lowered directly into the suction fluid. Or a length of suction hose can be attached. This model is available with an optional non-return valve and optional strainer. It can be furnished with hose barb couplings, BSP or NPT or JIS threads, Storz adapters or cam-lock quick coupling.

The TYGER Ejector kit is complete with inlet, suction and discharge hoses and couplings.

TYGER Portable Ejector Kit – includes...

- 1 pc **VM # 1544-2½" Bronze Eductor with Monel Nozzle**
- 1 pc **VM INLET HOSE** – Fire “Motive Pressure” Hose, 75’ (23Mtr) x 1½” with brass (NH) couplings to attach to eductor inlet
- 1 pc **VM SUCTION HOSE** - Non-Collapsible PVC Full Vacuum Hose, 20’ (6 Mtr.) x 2” with brass coupling for eductor suction.
- 1 pc **VM DISCHARGE HOSE** – Mill-Type water discharge hose, Lay Flat type 75’ (23 M) x 2½” with Brass coupling to attach to eductor discharge.
- 1 pc **VM SPARE MONEL NOZZLE / ON-OFF VALVE / STRAINER**



V.M. #1544-2 1/2" Portable Eductor Kit

Flow Data	Suction Capacity	Suction Lift	Discharge Head	Motive Pressure	Motive Flow
	Up to 120 GPM Up to 28 M3/H	Up to -20 Feet Up to -6 Meters	Up to 80 Feet Up to 25 Meters	50 -150 PSI 4 – 10 Bar	80 -120 GPM 20-28 M3/H

Materials of Construction	ITEM DESCRIPTION	Standard	OPTIONAL
	BODY & DIFFUSER	Bronze	Aluminum, Ni-Alum, 316 Stainless
	Nozzle	Monel	316 Stainless Steel,
	Non-Return Valve	-----	Bronze, 316 Stainless Steel
	Strainer	-----	Bronze, 316 Stainless Steel

Connections	DESCRIPTION	STANDARD EDUCTOR	Optional Connections
	INLET	1½” NST Female Thread	BSP threads, Hose barb, cam-lock
	SUCTION	2½” NPT Female Thread	BSP threads, Hose barb, cam-lock
	DISCHARGE	2½” NST Male Thread	BSP threads, Hose barb, cam-lock

VM TYGER-ATX-2 1/2"

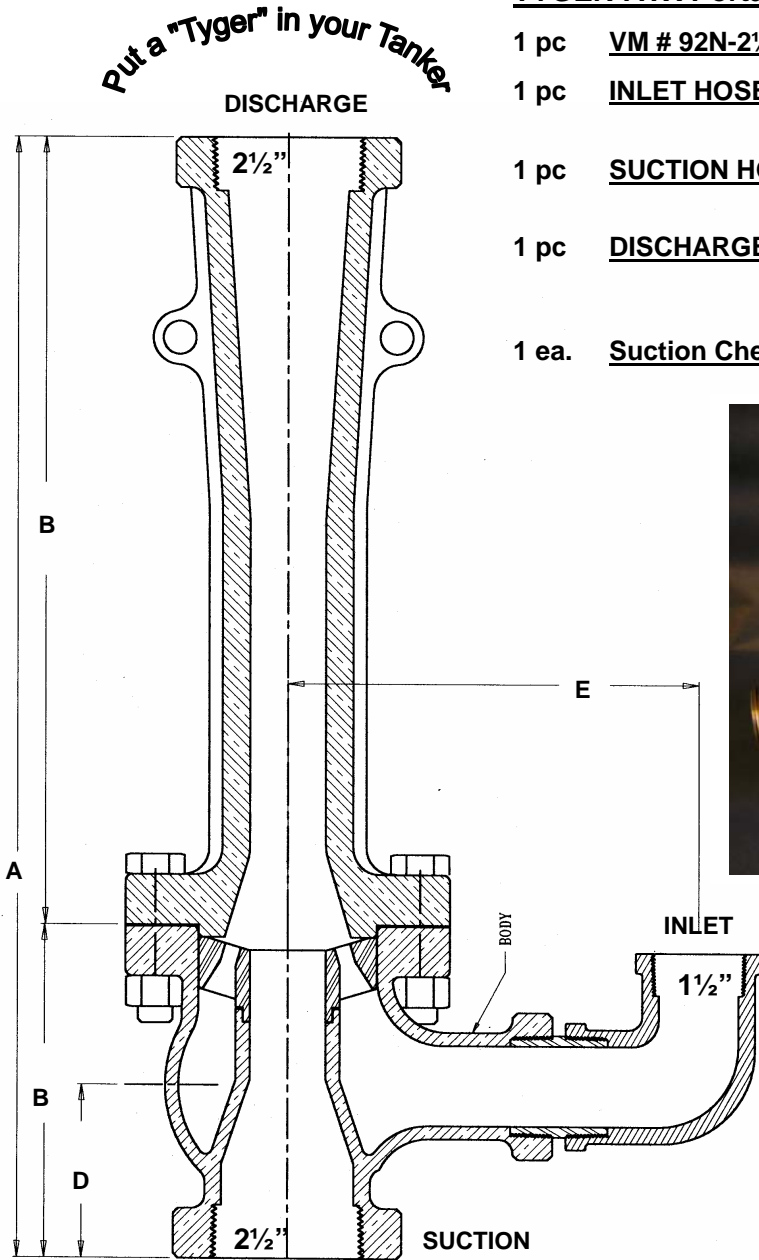
Multi-Jet Ejector Kit

The VM TYGER-ATX Portable Multi-Jet is used on board tankers, oil rigs and vessels of all types. The eductor is fitted with a multi-jet nozzle, which provides a straight through unrestricted suction path for superior no clog flow of liquid and solid mixtures. The TYGER ATX is excellent for cleaning sludge, muck, sand, grain, cement and coal.

The TYGER-ATX Ejector is used to remove slurries from tanks, sumps, pits, cargo and ballast spaces. This small and lightweight ejector allows access to inaccessible spaces for removal of many solids and liquid mixtures.

TYGER-ATX Portable Ejector Kit – includes:

- 1 pc VM # 92N-2 1/2" L Aluminum Eductor with Monel Nozzle
- 1 pc INLET HOSE – Fire “Motive Pressure” Hose, 75’ (23M) x 1 1/2” with brass (NPT) couplings for eductor inlet
- 1 pc SUCTION HOSE - Non-Collapsible PVC Full Vac. Hose, 20’ (6 M) x 1 1/2” with brass coupling for eductor suction
- 1 pc DISCHARGE HOSE – PVC (or) Heavy Duty EPDM Rubber Water Discharge Hose 75’ (23 M) x 2 1/2” with Brass coupling to eductor discharge.
- 1 ea. Suction Check Valve / Spare Nozzle / On – Off Ball Valve for shut off



SUGGESTED USES

1. Keeping tank bottoms dry during tank or hold washing operations
2. **Will handle slurries and solids in suspension**
3. Pumping water out of holds during firefighting operations
4. Regular or emergency pumping of liquids from ballast, bilge or cargo spaces
5. Powered by water pressure or the same liquid as suction fluid
6. This model can be lowered directly into the liquid to be suctioned.
7. Up to 20’ of suction hose can be attached.

Flow Data	Suction Capacity	Suction Lift	Discharge Head	Motive Pressure	Motive Flow
	Up to 154 GPM Up to 35 M3/H	Up to -20 Feet Up to -6 Meters	Up to 80 Feet Up to 25 Meters	50 -150 PSI 3 – 10 Bar	150 – 225 GPM 34 – 51 M3/H

Materials of Construction	Item	Standard Eductor	Optional Materials
	BODY & Diffuser	Aluminum	Bronze
	Nozzle	Monel	316 Stainless Steel, Monel
	Throat Wear Lining	316 Stainless Steel	

Dimensions	Inlet	1 1/2"	40	A	B	C	D	E	I	WT
	Suction	2 1/2"	65	21"	6 1/4	14 3/4	3 1/4	7 3/4	1 1/2	20 #
	Discharge	2 1/2"	65	533	159	374	82	197	38	9 kg

VM # 1554-4" TYGER

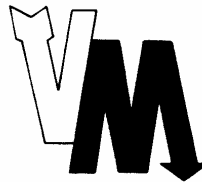
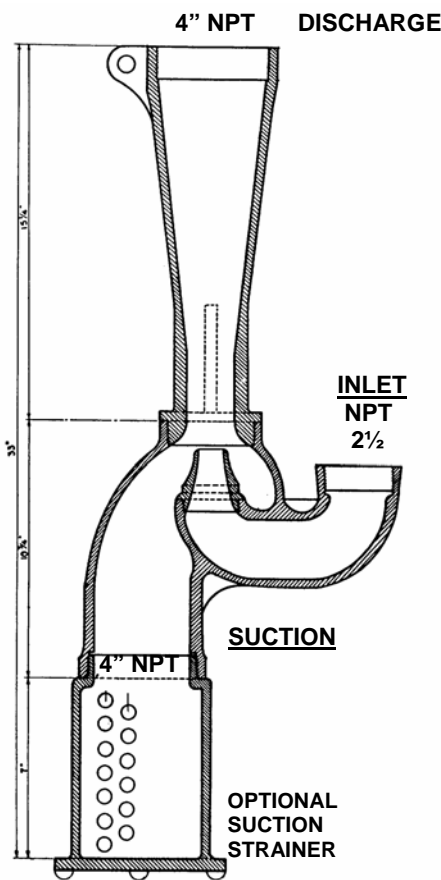
Portable Ejector Kit

The VM # 1554-4" Portable Ejector is used on board tankers, oil rigs, and vessels of all types. The portable ejector is used to remove liquids from tanks, sumps, pits, and cargo and ballast spaces. This eductor allows access to inaccessible spaces.

Suggested uses include:

1. Keeping tank bottoms dry during tank or hold washing operations
2. Pumping water out of holds during firefighting operations
3. Regular or emergency pumping of liquids in ballast, bilge or cargo.
4. Powered by water pressure or the same liquid as suction fluid

This model can be lowered directly into the liquid to be suctioned. Or a length of suction hose can be attached. This model is available with an optional non-return valve and optional strainer. It can be furnished with hose barb couplings. BSP or NPT or JIS threads, Storz adapters or cam-lock quick coupling.



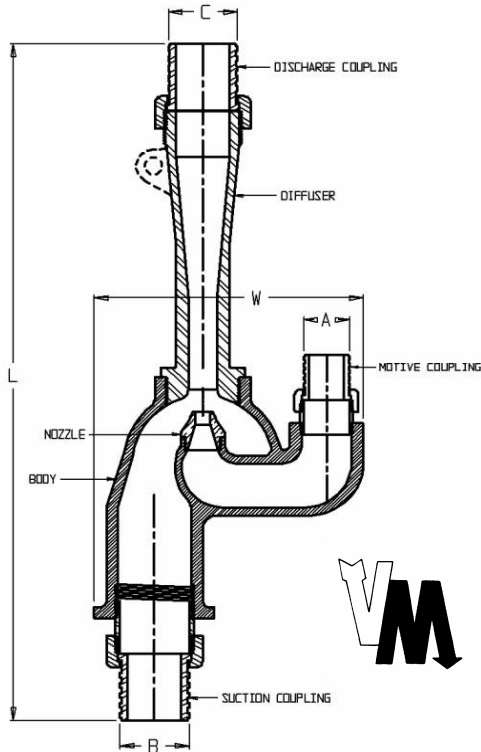
- TYGER Portable Ejector Kit – includes...**
- 1 pc. **V. M. # 1554-4" Bronze Eductor with Monel Nozzle & Spare Nozzle**
 - 1 pc. **INLET HOSE – Fire "Motive Pressure" Hose, 75' (23M) x 2 1/2" with brass (NPT) couplings to attach to eductor inlet**
 - 1 pc. **SUCTION HOSE - Non-Collapsible PVC Full Vacuum Hose, 20' (6 M) x 4" with brass coupling to attach to eductor suction.**
 - 1 pc. **DISCHARGE HOSE – PVC (or) Heavy Duty EPDM Rubber Water Discharge Hose 75' (23 M) x 4" with Brass coupling for eductor discharge.**

Flow Data	Suction Capacity	Suction Lift	Discharge Head	Motive Head	Motive Flow
	Up to 350 GPM	Up to -20 Feet	Up to 80 Feet	50 -150 PSI	200 – 350 GPM
	Up to 80 M3/H	Up to -6 Meters	Up to 24 Meters	4 – 10 Bar	45 – 80 M3/H

Materials of Construction	Item Description	Standard	Optional Materials
	BODY & Diffuser	Bronze	Stainless Steel, Aluminum,
	Nozzle	Monel	316 Stainless Steel,
	Non-Return Valve & Suction Strainer	-----	Bronze, 316 Stainless Steel

Connections	DESCRIPTION	STANDARD EDUCTOR	Optional Connections
	Inlet	2 1/2" NPT Female Thread	NST, BSP threads, Hose barb, cam-lock
	SUCTION	4" NPT Female Thread	NST, BSP threads, Hose barb, cam-lock
	DISCHARGE	4" NPT Female Thread	NST, BSP threads, Hose barb, cam-lock

VM TYGER Portable Ejector & Eductor Kits



VM 'TYGER' Portable Ejector kits are complete pumping kits for regular and emergency pumping of tanks & Holds.

Eductors and Ejectors are driven by water from the vessel fire main, or, by the same liquid that is being pumped.

Standard TYGER kit contains:

- 1 Bronze Ejector with bronze hose barb couplings
- 1 Inlet – Drive Pressure hose 75' (23 M) with coupling.
- 1 Suction hose – <non-collapsible> 20' (6 M) with coupling.
- 1 Discharge hose - <Mil-Type> 75' (23 M) with coupling.
- 1 Suction Check Valve
- 1 Spare nozzle
- 1 On – Off Ball Valve for shut off.

Suggested uses:

- Emergency pump for de-watering and damage control operations.
- Keeping tank bottoms dry during tank or hold washing operations.
- Keeping water out of holds during fire fighting operations.
- Regular or emergency pumping of liquids from ballast, bilge, chain lockers, cofferdams, void spaces and cargo spaces.

Operation:

Eductors are lowered into the space to be pumped out. Or, the eductor can be used with a length of suction hose so that only the suction hose is put into the liquid that is being pumped out.

A check valve is provided to prevent back flow when pressure is closed. A Ball valve is provided for on-off control during manned in tank operation. A suction strainer is provided to filter out debris.

VM Portable eductors and ejectors are used on board tankers, bulk carriers, chemical carriers, oil rigs, Naval vessels, and all vessels types . These portable ejectors are used to remove liquids from tanks, sumps, pits and cargo & ballast spaces. Eductors are a hand auxiliary pump always ready and on hand for emergency and routine pumping jobs.



TYGER PORTABLE EDUCTOR KITS

SIZE	V.M. Model #	A Motive	B Suction	C Discharge	L	W	Suction Cap.(max.)	TYPE
¾ x 1 x 1½	1316-1" TYGER	¾"	1"	1½"	10"	6"	10 GPM	Liquids
1½ x 1½ x 1½	300-1½" TYGER	1½"	1½"	1½"	14½"	6½"	35 GPM	Liquids
1½ x 2 x 2	200-2"L TYGER	1½"	2"	2"	24"	11"	110 GPM	High Head
1½ x 2½ x 2½	1544-2½" TYGER	1½"	2½"	2½"	31"	9"	120 GPM	Liquids
1½ x 2½ x 2½	TYGER-ATX-2½"	1½"	2½"	2½"	25"	12"	154 GPM	Solids
2½ x 4 x 4	1554-4" TYGER	2½"	4"	4"	32"	13"	350 GPM	Liquids

PUMP IT DRY – WITH V.M. EDUCTORS

PUT A 'TYGER' IN YOUR TANKER