



**NORTHSTAR
HYDRAULICS INC**

PRODUCT CATALOGUE

2025

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ABOUT US



NorthStar Hydraulics is a proudly Canadian-owned and operated company based in Ontario, delivering high-performance hydraulic cylinders to industries that power the backbone of our economy — agriculture, construction, transportation, and heavy industrial applications.



We understand the demands of modern equipment because we work directly with the people who use it. Our cylinders are designed to handle high pressure, tough environments, and non-stop workloads. Each product is engineered with strength, durability, and precision in mind — built to keep your machinery working hard, day in and day out.



Our cylinders are all manufactured to strict quality standards using advanced CNC machining and tested under ISO 9001:2015 and ISO 14001:2015 protocols. We maintain local stock and ship directly from our Ontario warehouse, offering fast turnaround times, competitive pricing, and responsive service.

OEM MANUFACTURING



At NorthStar Hydraulics, we specialize in the design and supply of custom-engineered hydraulic cylinders built to meet the demanding requirements of original equipment manufacturers. With stringent quality control and precision manufacturing, our components are crafted to deliver performance, durability, and consistency in the field.



From construction and agriculture to transportation and municipal equipment, NorthStar cylinders are trusted by OEMs to perform in high-pressure, high-duty environments. We offer flexible volumes, reliable lead times, and collaborative engineering support for long-term partnerships.

Cylinder bore diameter	1 inch to 8 inches
Cylinder rod diameter	0.5 inch to 5 inch rod
Cylinder stroke length	1 inch to 120 inches
Operating pressure	1,500 psi to 5000 psi
Hydraulic rod options	· Chrome plated · Double chrome plated · Triple chrome · Nickel chrome · Stainless steel · Induction hardened options
Mounting options	Any custom flanges your application may need
Cylinder life span	Made up to the customer's requirements (including extended cylinder life)
Temperature range	-65 F to +300 F
Cylinder cushions	Fixed and adjustable cushions, rods, and welded side cushions
Private label	Available upon request. Branded according to customer's needs
Packaging	Cardboard, boxes, and bubble wrap to custom logo and engraving options
Paint and finish	Standard, automobile, and high-temperature options for any paint of any ral color
Cylinder integrations	· Check pilot valves · Counterbalance valves · Solenoid controls · And more

SKU AND CYLINDER - CROSS REFERENCE

CYLINDER		PHOTO	CODE
ADJUSTABLE CLEVIS			AC
DUMP HOIST			HT
SINGLE ACTING TELESCOPIC CYLINDER	CUSTOM HOIST / PARKER		SAT
	FRONT END		FE, FC, FEE 
	7 TON AND 12 TON		HTC
DOUBLE ACTING TELESCOPIC CYLINDER			DAT 
TIE ROD	2.5 AND 3.0		TR2.5 AND TR3.0
WELDED CLEVIS			WC
CROSS TUBE			WT
SNOW PLOW			-SP-
PISTON ROD	SINGLE/DOUBLE ACTING		

HOW WE WORK

Whether you're ordering from our standard product line or need a custom hydraulic solution, you can:

- Browse our catalog or website for stocked cylinders
- Contact us directly for custom builds or bulk inquiries
- Submit orders via phone, email, or online

We confirm every order with detailed specs, pricing, and lead time so you know exactly what to expect.



All NorthStar cylinders are manufactured in ISO-certified facilities using high-grade materials and CNC precision machining. Each unit undergoes:

- Rigorous quality inspections
- Pressure testing up to rated PSI
- Seal integrity and paint finish checks

We work closely with our factory teams to maintain consistency, durability, and performance in every product.



We keep a wide range of popular cylinders in stock at our Ontario warehouse—so you get what you need, fast.

IN STOCK

- Same-day shipping applies to most in-stock items ordered before 3:30 PM EST
- You'll receive tracking and delivery updates as soon as your order leaves our facility

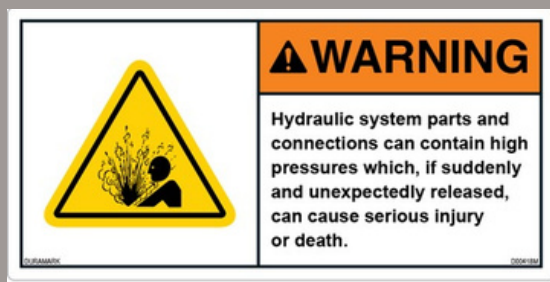
CUSTOM

- Lead times generally range from 6-8 weeks, depending on build complexity
- We manage freight, customs clearance, and logistics from overseas to your door
- Every order is fully tracked and supported by our team

PRODUCT SAFETY

Protect Yourself. Protect Your Equipment.

- Hydraulic systems operate under high pressure and temperature — safety must be a top priority. Please follow these precautions whenever installing, maintaining, or working around hydraulic cylinders and power units.
- Wear proper personal protection. Safety goggles, gloves, and durable clothing should always be worn when working with hydraulic equipment.
- Avoid exposure to high-pressure fluid. Never discharge hydraulic oil into the open air while under pressure. Pressurized fluid can cause serious injury, including skin penetration.
- Beware of hot surfaces. Hydraulic fluid and system components can reach temperatures that cause burns. Use thermal gloves when needed.
- Confirm system is depressurized. Before performing maintenance, fully relieve hydraulic pressure and isolate energy sources. Lockout/Tagout procedures must be followed.
- Never modify hydraulic cylinders. Do not weld, grind, drill, or otherwise alter a cylinder's original design. Any unauthorized modification may compromise safety and void warranty.
- Avoid heat sources. Do not apply heat (torches, grinders, etc.) to sealed cylinders. If heating is required for any purpose, the cylinder must be emptied of all oil. Operate within rated
- specs. Never exceed the rated pressure of a cylinder, power unit, hose, or fitting. Doing so may lead to failure or injury. Use proper components. Only use hoses and fittings rated for
- your system's pressure and temperature range. Caution: power units get hot. Solenoids and motor housings may become extremely hot during operation. Use heat-resistant gloves if
- contact is required. Responsibility for safe use. NorthStar Hydraulics is not liable for misuse, improper installation, or operation outside of product specifications. Always consult with a
- qualified technician for repairs or system troubleshooting. Safety isn't optional — it's built into everything we do.
-



CYLINDER STORAGE & **MAINTENANCE** GUIDELINES

Chrome Rod Protection Guidelines

Why Chrome Matters:

- Hard chrome plating is commonly used on hydraulic cylinder rods to enhance wear resistance and provide a solid layer of corrosion protection. Typically, the chrome thickness ranges from 0.0005" to 0.001", depending on the application. While chrome itself does not corrode, the underlying metal can, especially if moisture or oxygen penetrates through micro-cracks in the plating, a natural characteristic of hard chrome.
- Once installed and in service, the hydraulic fluid acts as an additional protective barrier. But during periods of inactivity — especially when equipment is stored outdoors or held in inventory — rods are more vulnerable to corrosion. That's when proper storage preparation becomes critical.

Protecting Chrome Rods on New Equipment

Follow these steps to prevent corrosion and preserve cylinder longevity:

1. **Identify Exposed Chrome:** Park the equipment in its storage position and locate all visible chrome rod surfaces.
2. **Clean the Surface:** Wipe down exposed rods using a dry cloth or one lightly dampened with an approved solvent. Remove all dust and contaminants.
3. **Apply Rust Inhibitor:** Mix 60% oil-based rust preventative with 40% kerosene (or No. 1 fuel oil). Use a cloth dipped in this solution to apply a thin, even coating over all exposed chrome surfaces.
4. **Periodic Inspection:** Check rod surfaces every six months. Reapply the rust preventative as needed.
5. **Re-treat After Movement:** If equipment is moved and the rods stroke, repeat the cleaning and reapplication steps before putting it back into storage.

Storing Used Equipment

Older or used equipment should follow the same procedure, with extra care taken when cleaning:

- Use plastic or copper wool with solvent (never sandpaper or abrasives) to gently clean rod surfaces.
- Inspect for chrome damage, such as pitting or flaking.
- If damage is present, apply corrosion protection more frequently.

Pro Tip: Consistent rust prevention isn't just about appearance — it extends the life of your hydraulic cylinders and reduces costly downtime from premature rod failure.

ADJUSTABLE TYPE

CLEVIS



Type:	Adjustable Hydraulic Cylinder
Action:	Double Acting
Rod End:	Ductile Iron, thread female clevis
Base End:	Casting-steel welding with tube, pins and clips included.
Bore:	1.50" to 4.00"
Stroke:	4" to 36"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3000 PSI
Application:	Tractors & Harvesting Equipment



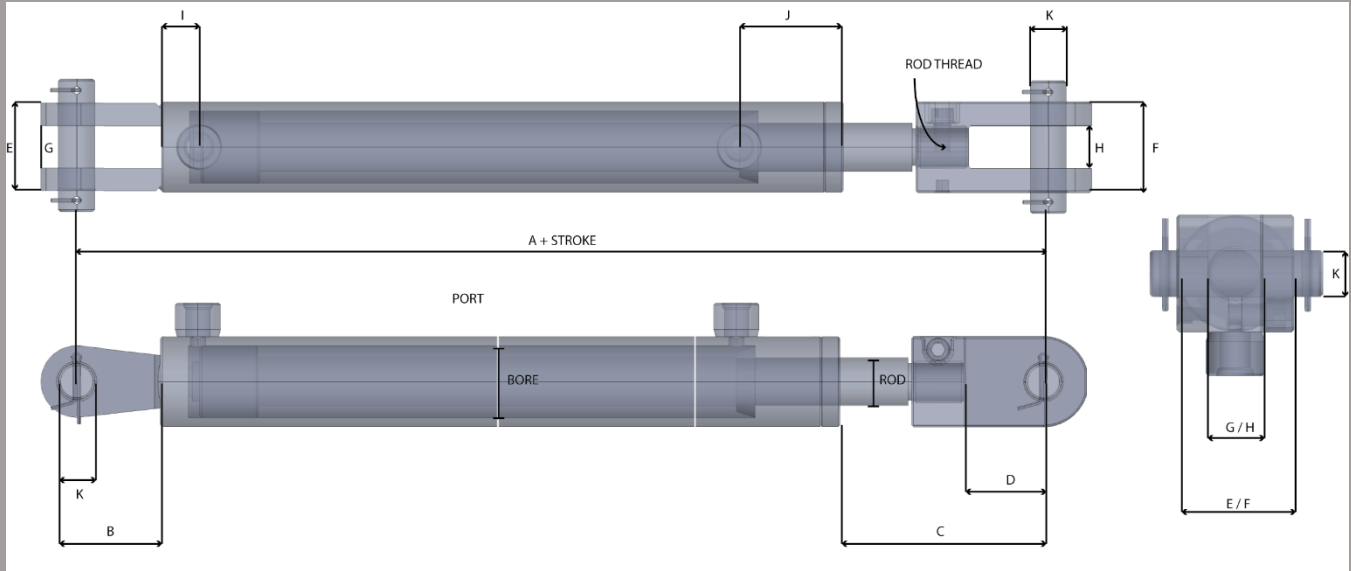
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**1 YEAR
WARRANTY**





*ALL VALUES ARE IN INCHES

**ALL NUMBERS GIVEN ARE NOMINAL VALUES AND SHOULD BE USED FOR REFERENCE ONLY. ALL PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

BORE	ROD	ROD THREAD	PORTS	A	B	C	D	E	F	G	H	I	J	K
1.50	1.000"	7/8-14 UNF	SAE 6	10.25"	1.625"	4.500"	1.625"	1.750"	2.000"	0.875"	0.875"	0.938"	1.875"	0.750"
2.00	1.125"	1 1/8-12 UNF	SAE 8	10.25"	2.125"	3.625"	2.125"	2.125"	2.504"	1.125"	1.165"	0.812"	2.062"	1.000"
2.50	1.250"	1 1/8-12 UNF	SAE 8	10.25"	2.125"	3.625"	2.125"	2.125"	2.504"	1.125"	1.165"	0.812"	2.062"	1.000"
3.00	1.500"	1 1/4-12 UNF	SAE 8	10.25"	1.875"	3.625"	2.125"	2.625"	2.717"	1.125"	1.165"	0.875"	2.188"	1.000"
3.50	1.750"	1 1/4-12 UNF	SAE 8	10.25"	1.875"	3.625"	2.125"	2.625"	2.717"	1.125"	1.165"	0.938"	2.188"	1.000"
4.00	2.000"	1 1/2-12 UNF	SAE 8	10.25"	1.750"	3.625"	2.125"	2.625"	2.717"	1.125"	1.165"	1.000"	2.188"	1.000"

For 8.00" ASAE Stroke: A = 12.25"

For 8.00" ASAE Stroke: E = 6.50" (1.50" to Bore) E = 5.62" (2.00 to 4.00" Bore)

1.5" BORE ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI								
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-1504-N5	1.5" X 4"	14 1/4"	18 1/4"	1"	3/4"	SAE 6	5300	10
AC-1506-N5	1.5" X 6"	16 1/4"	22 1/4"				5300	11
AC-1508-N5	1.5" X 8"	18 1/4"	26 1/4"				5300	12
AC-1508-ASAE-N5	1.5" X 8"	20 1/4"	28 1/4"				5300	13
AC-1510-N5	1.5" X 10"	20 1/4"	30 1/4"				5300	13
AC-1512-N5	1.5" X 12"	22 1/4"	34 1/4"				5300	15
AC-1514-N5	1.5" X 14"	24 1/4"	38 1/4"				5300	16
AC-1516-N5	1.5" X 16"	26 1/4"	42 1/4"				5200	17
AC-1518-N5	1.5" X 18"	28 1/4"	46 1/4"				4400	18
AC-1520-N5	1.5" X 20"	30 1/4"	50 1/4"				3700	20
AC-1524-N5	1.5" X 24"	34 1/4"	58 1/4"				2700	22
AC-1528-N5	1.5" X 28"	38 1/4"	66 1/4"				2100	25
AC-1530-N5	1.5" X 30"	40 1/4"	70 1/4"				1900	26
AC-1532-N5	1.5" X 32"	42 1/4"	74 1/4"				1700	27
AC-1534-N5	1.5" X 34"	44 1/4"	78 1/4"				1500	28
AC-1536-N5	1.5" X 36"	46 1/4"	82 1/4"				1300	29

2.0" BORE		ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-2004-NS	2" X 4"	14 1/4"	18 1/4"	1 1/8"	1"	SAE 8	9400	16
AC-2006-NS	2" X 6"	16 1/4"	22 1/4"				9400	17
AC-2008-NS	2" X 8"	18 1/4"	26 1/4"				9400	19
AC-2008-ASAE-NS	2" X 8"	20 1/4"	28 1/4"				9400	19
AC-2010-NS	2" X 10"	20 1/4"	30 1/4"				9400	20
AC-2012-NS	2" X 12"	22 1/4"	34 1/4"				9400	22
AC-2014-NS	2" X 14"	24 1/4"	38 1/4"				9400	23
AC-2016-NS	2" X 16"	26 1/4"	42 1/4"				8400	25
AC-2018-NS	2" X 18"	28 1/4"	46 1/4"				7000	27
AC-2020-NS	2" X 20"	30 1/4"	50 1/4"				5900	28
AC-2024-NS	2" X 24"	34 1/4"	58 1/4"				4400	31
AC-2030-NS	2" X 30"	40 1/4"	70 1/4"				3000	36
AC-2036-NS	2" X 36"	46 1/4"	82 1/4"				2200	41

2.5" BORE		ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-2504-NS	2.5" X 4"	14 1/4"	18 1/4"	1 1/4"	1"	SAE 8	14700	19
AC-2506-NS	2.5" X 6"	16 1/4"	22 1/4"				14700	20
AC-2508-NS	2.5" X 8"	18 1/4"	26 1/4"				14700	22
AC-2508-ASAE-NS	2.5" X 8"	20 1/4"	28 1/4"				14700	23
AC-2510-NS	2.5" X 10"	20 1/4"	30 1/4"				14700	24
AC-2512-NS	2.5" X 12"	22 1/4"	34 1/4"				14700	26
AC-2514-NS	2.5" X 14"	24 1/4"	38 1/4"				14700	28
AC-2516-NS	2.5" X 16"	26 1/4"	42 1/4"				12800	30
AC-2518-NS	2.5" X 18"	28 1/4"	46 1/4"				10700	32
AC-2520-NS	2.5" X 20"	30 1/4"	50 1/4"				9100	34
AC-2524-NS	2.5" X 24"	34 1/4"	58 1/4"				6700	38
AC-2530-NS	2.5" X 30"	40 1/4"	70 1/4"				4600	44
AC-2536-NS	2.5" X 36"	46 1/4"	82 1/4"				3400	49

3.0" BORE		ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-3004-NS	3" X 4"	14 1/4"	18 1/4"	1 1/2"	1"	SAE 8	21200	24
AC-3006-NS	3" X 6"	16 1/4"	22 1/4"				21200	26
AC-3008-NS	3" X 8"	18 1/4"	26 1/4"				21200	29
AC-3008-ASAE-NS	3" X 8"	20 1/4"	28 1/4"				21200	29
AC-3010-NS	3" X 10"	20 1/4"	30 1/4"				21200	31
AC-3012-NS	3" X 12"	22 1/4"	34 1/4"				21200	33
AC-3014-NS	3" X 14"	24 1/4"	38 1/4"				21200	36
AC-3016-NS	3" X 16"	26 1/4"	42 1/4"				21200	38
AC-3018-NS	3" X 18"	28 1/4"	46 1/4"				21200	41
AC-3020-NS	3" X 20"	30 1/4"	50 1/4"				18800	43
AC-3024-NS	3" X 24"	34 1/4"	58 1/4"				14000	48
AC-3030-NS	3" X 30"	40 1/4"	70 1/4"				9600	56
AC-3036-NS	3" X 36"	46 1/4"	82 1/4"				7000	63

3.5" BORE		ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-3504-N5	3.5" X 4"	14 1/4"	18 1/4"	1 3/4"	1"	SAE 8	28800	29
AC-3506-N5	3.5" X 6"	16 1/4"	22 1/4"				28800	32
AC-3508-N5	3.5" X 8"	18 1/4"	26 1/4"				28800	35
AC-3508-ASAE-N5	3.5" X 8"	20 1/4"	28 1/4"				28800	36
AC-3510-N5	3.5" X 10"	20 1/4"	30 1/4"				28800	38
AC-3512-N5	3.5" X 12"	22 1/4"	34 1/4"				28800	41
AC-3514-N5	3.5" X 14"	24 1/4"	38 1/4"				28800	44
AC-3516-N5	3.5" X 16"	26 1/4"	42 1/4"				28800	47
AC-3518-N5	3.5" X 18"	28 1/4"	46 1/4"				28800	50
AC-3520-N5	3.5" X 20"	30 1/4"	50 1/4"				28800	53
AC-3524-N5	3.5" X 24"	34 1/4"	58 1/4"				26000	59
AC-3530-N5	3.5" X 30"	40 1/4"	70 1/4"				17900	68
AC-3536-N5	3.5" X 36"	46 1/4"	82 1/4"				13000	77

4.0" BORE		ADJUSTABLE CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
AC-4004-N5	4" X 4"	14 1/4"	18 1/4"	2"	1"	SAE 8	37600	35
AC-4006-N5	4" X 6"	16 1/4"	22 1/4"				37600	38
AC-4008-N5	4" X 8"	18 1/4"	26 1/4"				37600	42
AC-4008-ASAE-N5	4" X 8"	20 1/4"	28 1/4"				37600	43
AC-4010-N5	4" X 10"	20 1/4"	30 1/4"				37600	46
AC-4012-N5	4" X 12"	22 1/4"	34 1/4"				37600	49
AC-4014-N5	4" X 14"	24 1/4"	38 1/4"				37600	53
AC-4016-N5	4" X 16"	26 1/4"	42 1/4"				37600	57
AC-4018-N5	4" X 18"	28 1/4"	46 1/4"				37600	60
AC-4020-N5	4" X 20"	30 1/4"	50 1/4"				37600	64
AC-4024-N5	4" X 24"	34 1/4"	58 1/4"				37600	71
AC-4030-N5	4" X 30"	40 1/4"	70 1/4"				30500	82
AC-4036-N5	4" X 36"	46 1/4"	82 1/4"				22200	93

WELDED TYPE

CLEVIS



Type:	Welded Hydraulic Cylinder
Action:	Double Acting
Rod End:	Welded Steel Clevis Item
Base End:	Welded Steel Clevis End Mount, pins and clips included.
Bore:	2.00" to 4.00"
Stroke:	4" to 48"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3000 PSI
Application:	Tractors & Harvesting Equipment



**SAME DAY
SHIPPING**

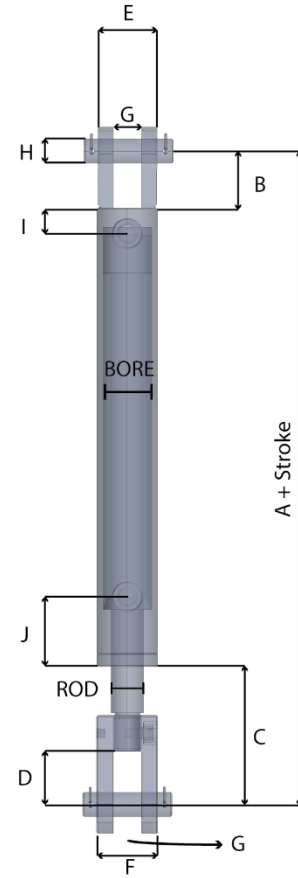
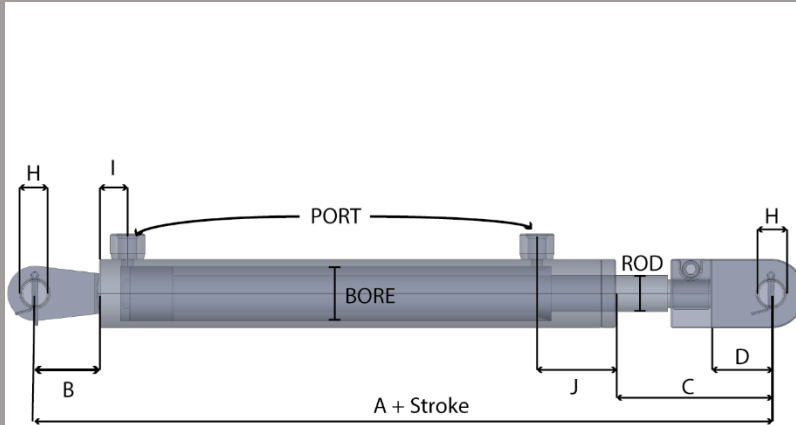


**1 YEAR
WARRANTY**



ORDER NOW





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WELDED CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI														
BORE	ROD	ROD THREAD	PORTS	A	B	C	D	E	F	G	H	I	J	K
2.00"	1.25"	SAE 6	10.25"	2.125"	3.72"	2.125"	2.125"	2.125"	1.125"	1.000"	0.894"	1.937"	2.00"	1.25"
2.50"	1.50"	SAE 8	10.25"	2.125"	3.53"	2.125"	2.125"	2.125"	1.125"	1.000"	0.894"	1.925"	2.50"	1.50"
3.00"	1.50"	SAE 8	10.25"	2.125"	3.24"	2.125"	2.125"	2.125"	1.125"	1.000"	1.071"	2.264"	3.00"	1.50"
3.50"	1.75"	SAE 8	10.25"	2.125"	3.18"	2.125"	2.386"	2.386"	1.125"	1.000"	1.071"	2.165"	3.50"	1.75"
4.00"	2.00"	SAE 8	10.25"	2.125"	3.44"	2.125"	2.386"	2.386"	1.125"	1.000"	1.071"	2.047"	4.00"	2.00"

For 8" ASAE Stroke: A = 12.25

2.0" BORE		WELDED CLEVIS DOUBLE-ACTING HYDRAULIC CYLINDER - 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WC-2004-NS	2" X 4"	14 1/4"	18 1/4"	1 1/4"	1"	SAE 6	9400	14
WC-2006-NS	2" X 6"	16 1/4"	22 1/4"				9400	16
WC-2008-NS	2" X 8"	18 1/4"	26 1/4"				9400	17
WC-2008-ASAE-NS	2" X 8"	20 1/4"	28 1/4"				9400	18
WC-2010-NS	2" X 10"	20 1/4"	30 1/4"				9400	19
WC-2012-NS	2" X 12"	22 1/4"	34 1/4"				9400	21
WC-2014-NS	2" X 14"	24 1/4"	38 1/4"				9400	23
WC-2016-NS	2" X 16"	26 1/4"	42 1/4"				9400	25
WC-2018-NS	2" X 18"	28 1/4"	46 1/4"				9400	26
WC-2020-NS	2" X 20"	30 1/4"	50 1/4"				9100	28
WC-2024-NS	2" X 24"	34 1/4"	58 1/4"				6700	31
WC-2028-NS	2" X 28"	38 1/4"	66 1/4"				5200	35
WC-2030-NS	2" X 30"	40 1/4"	70 1/4"				4600	36
WC-2032-NS	2" X 32"	42 1/4"	74 1/4"				4100	38
WC-2034-NS	2" X 34"	44 1/4"	78 1/4"				3700	40
WC-2036-NS	2" X 36"	46 1/4"	82 1/4"				3400	42
WC-2040-NS	2" X 40"	50 1/4"	90 1/4"				2800	45
WC-2048-NS	2" X 48"	58 1/4"	106 1/4"				2000	52

2.5" BORE		WELDED CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WC-2504-NS	2.5" X 4"	14 1/4"	18 1/4"	1 1/2"	1"	SAE 8	14700	18
WC-2506-NS	2.5" X 6"	16 1/4"	22 1/4"				14700	20
WC-2508-NS	2.5" X 8"	18 1/4"	26 1/4"				14700	23
WC-2508-ASAE-NS	2.5" X 8"	20 1/4"	28 1/4"				14700	24
WC-2510-NS	2.5" X 10"	20 1/4"	30 1/4"				14700	25
WC-2512-NS	2.5" X 12"	22 1/4"	34 1/4"				14700	27
WC-2514-NS	2.5" X 14"	24 1/4"	38 1/4"				14700	29
WC-2516-NS	2.5" X 16"	26 1/4"	42 1/4"				14700	32
WC-2518-NS	2.5" X 18"	28 1/4"	46 1/4"				14700	34
WC-2520-NS	2.5" X 20"	30 1/4"	50 1/4"				14700	36
WC-2524-NS	2.5" X 24"	34 1/4"	58 1/4"				14000	40
WC-2528-NS	2.5" X 28"	38 1/4"	66 1/4"				10800	45
WC-2530-NS	2.5" X 30"	40 1/4"	70 1/4"				9600	47
WC-2532-NS	2.5" X 32"	42 1/4"	74 1/4"				8600	49
WC-2534-NS	2.5" X 34"	44 1/4"	78 1/4"				7700	52
WC-2536-NS	2.5" X 36"	46 1/4"	82 1/4"				7000	54
WC-2540-NS	2.5" X 40"	50 1/4"	90 1/4"				5800	58
WC-2548-NS	2.5" X 48"	58 1/4"	106 1/4"				4200	67

3.0" BORE		WELDED CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WC-3004-NS	3" X 4"	14 1/4"	18 1/4"	1 1/2"	1"	SAE 8	21200	22
WC-3006-NS	3" X 6"	16 1/4"	22 1/4"				21200	24
WC-3008-NS	3" X 8"	18 1/4"	26 1/4"				21200	27
WC-3008-ASAE-NS	3" X 8"	20 1/4"	28 1/4"				21200	28
WC-3010-NS	3" X 10"	20 1/4"	30 1/4"				21200	29
WC-3012-NS	3" X 12"	22 1/4"	34 1/4"				21200	31
WC-3014-NS	3" X 14"	24 1/4"	38 1/4"				21200	34
WC-3016-NS	3" X 16"	26 1/4"	42 1/4"				21200	36
WC-3018-NS	3" X 18"	28 1/4"	46 1/4"				21200	39
WC-3020-NS	3" X 20"	30 1/4"	50 1/4"				18800	41
WC-3024-NS	3" X 24"	34 1/4"	58 1/4"				14000	46
WC-3028-NS	3" X 28"	38 1/4"	66 1/4"				10800	51
WC-3030-NS	3" X 30"	40 1/4"	70 1/4"				9600	53
WC-3032-NS	3" X 32"	42 1/4"	74 1/4"				8600	56
WC-3034-NS	3" X 34"	44 1/4"	78 1/4"				7700	58
WC-3036-NS	3" X 36"	46 1/4"	82 1/4"				7000	61

3.5" BORE		WELDED CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WC-3504-NS	3.5" X 4"	14 1/4"	18 1/4"	1 3/4"	1"	SAE 8	28800	27
WC-3506-NS	3.5" X 6"	16 1/4"	22 1/4"				28800	30
WC-3508-NS	3.5" X 8"	18 1/4"	26 1/4"				28800	34
WC-3508-ASAE-NS	3.5" X 8"	20 1/4"	28 1/4"				28800	35
WC-3510-NS	3.5" X 10"	20 1/4"	30 1/4"				28800	36
WC-3512-NS	3.5" X 12"	22 1/4"	34 1/4"				28800	39
WC-3514-NS	3.5" X 14"	24 1/4"	38 1/4"				28800	42
WC-3516-NS	3.5" X 16"	26 1/4"	42 1/4"				28800	46
WC-3518-NS	3.5" X 18"	28 1/4"	46 1/4"				28800	49
WC-3520-NS	3.5" X 20"	30 1/4"	50 1/4"				28800	52
WC-3524-NS	3.5" X 24"	34 1/4"	58 1/4"				26000	58
WC-3528-NS	3.5" X 28"	38 1/4"	66 1/4"				20100	64
WC-3530-NS	3.5" X 30"	40 1/4"	70 1/4"				17900	67
WC-3532-NS	3.5" X 32"	42 1/4"	74 1/4"				16000	70
WC-3534-NS	3.5" X 34"	44 1/4"	78 1/4"				14400	73
WC-3536-NS	3.5" X 36"	46 1/4"	82 1/4"				13000	76

4.0" BORE		WELDED CLEVIS DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WC-4004-NS	4" X 4"	14 1/4"	18 1/4"	2"	1"	SAE 8	37600	33
WC-4006-NS	4" X 6"	16 1/4"	22 1/4"				37600	37
WC-4008-NS	4" X 8"	18 1/4"	26 1/4"				37600	42
WC-4008-ASAE-NS	4" X 8"	20 1/4"	28 1/4"				37600	43
WC-4010-NS	4" X 10"	20 1/4"	30 1/4"				37600	44
WC-4012-NS	4" X 12"	22 1/4"	34 1/4"				37600	48
WC-4014-NS	4" X 14"	24 1/4"	38 1/4"				37600	52
WC-4016-NS	4" X 16"	26 1/4"	42 1/4"				37600	55
WC-4018-NS	4" X 18"	28 1/4"	46 1/4"				37600	59
WC-4020-NS	4" X 20"	30 1/4"	50 1/4"				37600	63
WC-4024-NS	4" X 24"	34 1/4"	58 1/4"				37600	70
WC-4028-NS	4" X 28"	38 1/4"	66 1/4"				34300	77
WC-4030-NS	4" X 30"	40 1/4"	70 1/4"				30500	81
WC-4032-NS	4" X 32"	42 1/4"	74 1/4"				27300	85
WC-4034-NS	4" X 34"	44 1/4"	78 1/4"				24600	89
WC-4036-NS	4" X 36"	46 1/4"	82 1/4"				22200	92

WELDED TYPE

CROSS TUBE TYPE

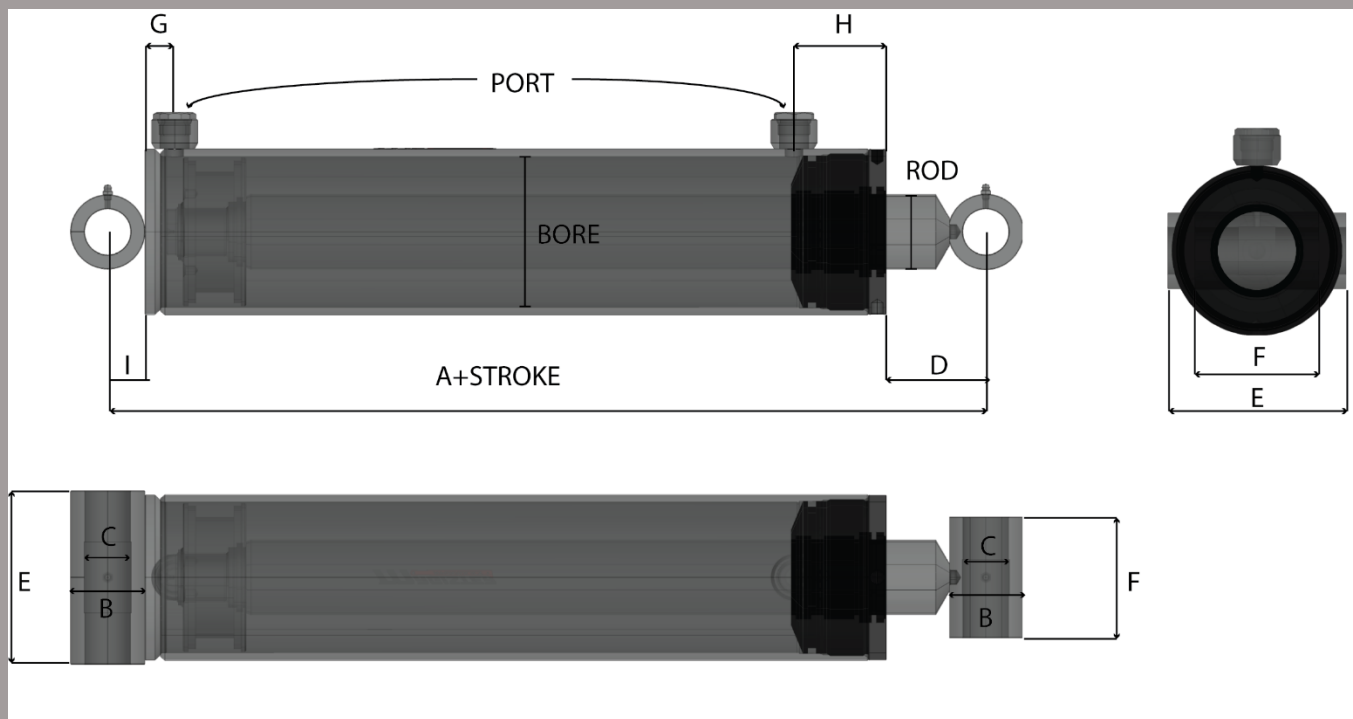


Type:	Welded Hydraulic Cylinder
Action:	Double Acting
Rod End:	Welded Cross Tube
Base End:	Welded Cross Tube
Bore:	1.50" to 5.00"
Stroke:	4" - 48"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3000 PSI
Application:	Construction & Agricultural Machinery



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WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER - 3000 PSI											
BORE	ROD	PORT	A	B	C	D	E	F	G	H	I
1.50"	1.00"	SAE 4	8.00"	1.25"	0.764"	2.913"	2.25"	2.00"	0.929"	2.129"	0.625"
2.00"	1.25"	SAE 6	8.00"	1.50"	1.015"	2.844"	2.75"	2.25"	0.894"	1.937"	0.750"
2.50"	1.50"	SAE 8	8.00"	1.50"	1.015"	2.654"	3.25"	2.25"	0.894"	1.925"	0.750"
3.00"	1.50"	SAE 8	8.00"	1.50"	1.015"	2.301"	3.75"	2.25"	1.012"	2.244"	0.750"
3.50"	1.75"	SAE 8	10.00"	2.00"	1.265"	3.980"	4.25"	2.25"	1.012"	2.248"	1.000"
4.00"	2.00"	SAE 8	10.00"	2.25"	1.515"	3.934"	4.75"	2.50"	1.012"	2.244"	1.126"
5.00"	2.50"	3/4NPT	11.00"	2.50"	1.515"	2.750"	5.75"	4.00"	1.500"	2.272"	0.787"

1.5" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-1504-NS	1.5" X 4"	12"	16"	1"	3/4"	SAE 4	5300	8
WT-1506-NS	1.5" X 6"	14"	20"				5300	9
WT-1508-NS	1.5" X 8"	16"	24"				5300	10
WT-1510-NS	1.5" X 10"	18"	28"				5300	12
WT-1512-NS	1.5" X 12"	20"	32"				5300	13
WT-1514-NS	1.5" X 14"	22"	36"				5300	14
WT-1516-NS	1.5" X 16"	24"	40"				5300	15
WT-1518-NS	1.5" X 18"	26"	44"				4800	17
WT-1520-NS	1.5" X 20"	28"	48"				4000	18
WT-1524-NS	1.5" X 24"	32"	56"				3000	20

2.0" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-2004-NS	2" X 4"	12"	16"	1 1/4"	1"	SAE 6	9400	12
WT-2006-NS	2" X 6"	14"	20"				9400	13
WT-2008-NS	2" X 8"	16"	24"				9400	15
WT-2010-NS	2" X 10"	18"	28"				9400	17
WT-2012-NS	2" X 12"	20"	32"				9400	19
WT-2014-NS	2" X 14"	22"	36"				9400	20
WT-2016-NS	2" X 16"	24"	40"				9400	22
WT-2018-NS	2" X 18"	26"	44"				9400	24
WT-2020-NS	2" X 20"	28"	48"				9400	25
WT-2024-NS	2" X 24"	32"	56"				7300	29
WT-2028-NS	2" X 28"	36"	64"				5600	32
WT-2030-NS	2" X 30"	38"	68"				4900	34
WT-2032-NS	2" X 32"	40"	72"				4400	35
WT-2036-NS	2" X 36"	44"	80"				3500	39
WT-2040-NS	2" X 40"	48"	88"				2900	42
WT-2048-NS	2" X 48"	56"	104"				2100	49

2.5" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-2504-NS	2.5" X 4"	12"	16"	1 1/2"	1"	SAE 8	14700	16
WT-2506-NS	2.5" X 6"	14"	20"				14700	18
WT-2508-NS	2.5" X 8"	16"	24"				14700	20
WT-2510-NS	2.5" X 10"	18"	28"				14700	22
WT-2512-NS	2.5" X 12"	20"	32"				14700	24
WT-2514-NS	2.5" X 14"	22"	36"				14700	27
WT-2516-NS	2.5" X 16"	24"	40"				14700	29
WT-2518-NS	2.5" X 18"	26"	44"				14700	31
WT-2520-NS	2.5" X 20"	28"	48"				14700	33
WT-2524-NS	2.5" X 24"	32"	56"				14700	38
WT-2528-NS	2.5" X 28"	36"	64"				11600	42
WT-2530-NS	2.5" X 30"	38"	68"				10300	45
WT-2532-NS	2.5" X 32"	40"	72"				9200	47
WT-2536-NS	2.5" X 36"	44"	80"				7400	51
WT-2540-NS	2.5" X 40"	48"	88"				6100	56
WT-2548-NS	2.5" X 48"	56"	104"				4400	65

3.0" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-3004-NS	3" X 4"	12"	16"	1 1/2"	1"	SAE 8	21200	19
WT-3006-NS	3" X 6"	14"	20"				21200	22
WT-3008-NS	3" X 8"	16"	24"				21200	24
WT-3010-NS	3" X 10"	18"	28"				21200	27
WT-3012-NS	3" X 12"	20"	32"				21200	29
WT-3014-NS	3" X 14"	22"	36"				21200	32
WT-3016-NS	3" X 16"	24"	40"				21200	34
WT-3018-NS	3" X 18"	26"	44"				21200	36
WT-3020-NS	3" X 20"	28"	48"				20700	39
WT-3024-NS	3" X 24"	32"	56"				15200	44
WT-3028-NS	3" X 28"	36"	64"				11600	49
WT-3030-NS	3" X 30"	38"	68"				10300	51
WT-3032-NS	3" X 32"	40"	72"				9200	53
WT-3036-NS	3" X 36"	44"	80"				7400	58
WT-3040-NS	3" X 40"	48"	88"				6100	63
WT-3048-NS	3" X 48"	56"	104"				4400	73

3.5" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-3504-NS	3.5" X 4"	14"	18"	1 3/4"	1 1/4"	SAE 8	28800	27
WT-3506-NS	3.5" X 6"	16"	22"				28800	30
WT-3508-NS	3.5" X 8"	18"	26"				28800	33
WT-3510-NS	3.5" X 10"	20"	30"				28800	36
WT-3512-NS	3.5" X 12"	22"	34"				28800	39
WT-3514-NS	3.5" X 14"	24"	38"				28800	42
WT-3516-NS	3.5" X 16"	26"	42"				28800	45
WT-3518-NS	3.5" X 18"	28"	46"				28800	48
WT-3520-NS	3.5" X 20"	30"	50"				28800	51
WT-3524-NS	3.5" X 24"	34"	58"				26200	57
WT-3528-NS	3.5" X 28"	38"	66"				20200	63
WT-3530-NS	3.5" X 30"	40"	70"				18000	66
WT-3532-NS	3.5" X 32"	42"	74"				16100	69
WT-3536-NS	3.5" X 36"	46"	82"				13100	75
WT-3540-NS	3.5" X 40"	50"	90"				10900	81
WT-3548-NS	3.5" X 48"	58"	106"				7800	94

4.0" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-4004-NS	4" X 4"	14"	18"	2"	1 1/2"	SAE 8	37600	34
WT-4006-NS	4" X 6"	16"	22"				37600	38
WT-4008-NS	4" X 8"	18"	26"				37600	41
WT-4010-NS	4" X 10"	20"	30"				37600	45
WT-4012-NS	4" X 12"	22"	34"				37600	49
WT-4014-NS	4" X 14"	24"	38"				37600	52
WT-4016-NS	4" X 16"	26"	42"				37600	56
WT-4018-NS	4" X 18"	28"	46"				37600	59
WT-4020-NS	4" X 20"	30"	50"				37600	63
WT-4024-NS	4" X 24"	34"	58"				37600	70
WT-4028-NS	4" X 28"	38"	66"				34600	78
WT-4030-NS	4" X 30"	40"	70"				30700	81
WT-4032-NS	4" X 32"	42"	74"				27500	85
WT-4036-NS	4" X 36"	46"	82"				22400	92
WT-4040-NS	4" X 40"	50"	90"				18600	99
WT-4048-NS	4" X 48"	58"	106"				13400	114

5.0" BORE		WELDED CROSS TUBE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
WT-5004-NS	5" X 4"	15"	19"	2 1/2"	1 1/2"	3/4 NPT	58900	64
WT-5006-NS	5" X 6"	17"	23"				58900	69
WT-5008-NS	5" X 8"	19"	27"				58900	75
WT-5010-NS	5" X 10"	21"	31"				58900	80
WT-5012-NS	5" X 12"	23"	35"				58900	85
WT-5014-NS	5" X 14"	25"	39"				58900	90
WT-5016-NS	5" X 16"	27"	43"				58900	96
WT-5018-NS	5" X 18"	29"	47"				58900	101
WT-5020-NS	5" X 20"	31"	51"				58900	106
WT-5024-NS	5" X 24"	35"	59"				58900	116
WT-5028-NS	5" X 28"	39"	67"				58900	126
WT-5030-NS	5" X 30"	41"	71"				58900	131
WT-5032-NS	5" X 32"	43"	75"				58900	136
WT-5036-NS	5" X 36"	47"	83"				52100	147
WT-5040-NS	5" X 40"	51"	91"				43400	157
WT-5048-NS	5" X 48"	59"	107"				31500	177

WELDED TYPE

DUMP HOIST



Type:	Welded Hydraulic Cylinder
Action:	Double Acting
Rod End:	Heavy-Duty Rod with Through-Hole for Pin Attachment
Base End:	Mounting Flange is a One Solid Machined Piece
Bore:	5.00" and 6.00"
Stroke:	15.75", 16", 20" and 21.5"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3500 PSI
Application:	Dump Trailers & Various Hoist Equipment



**SAME DAY
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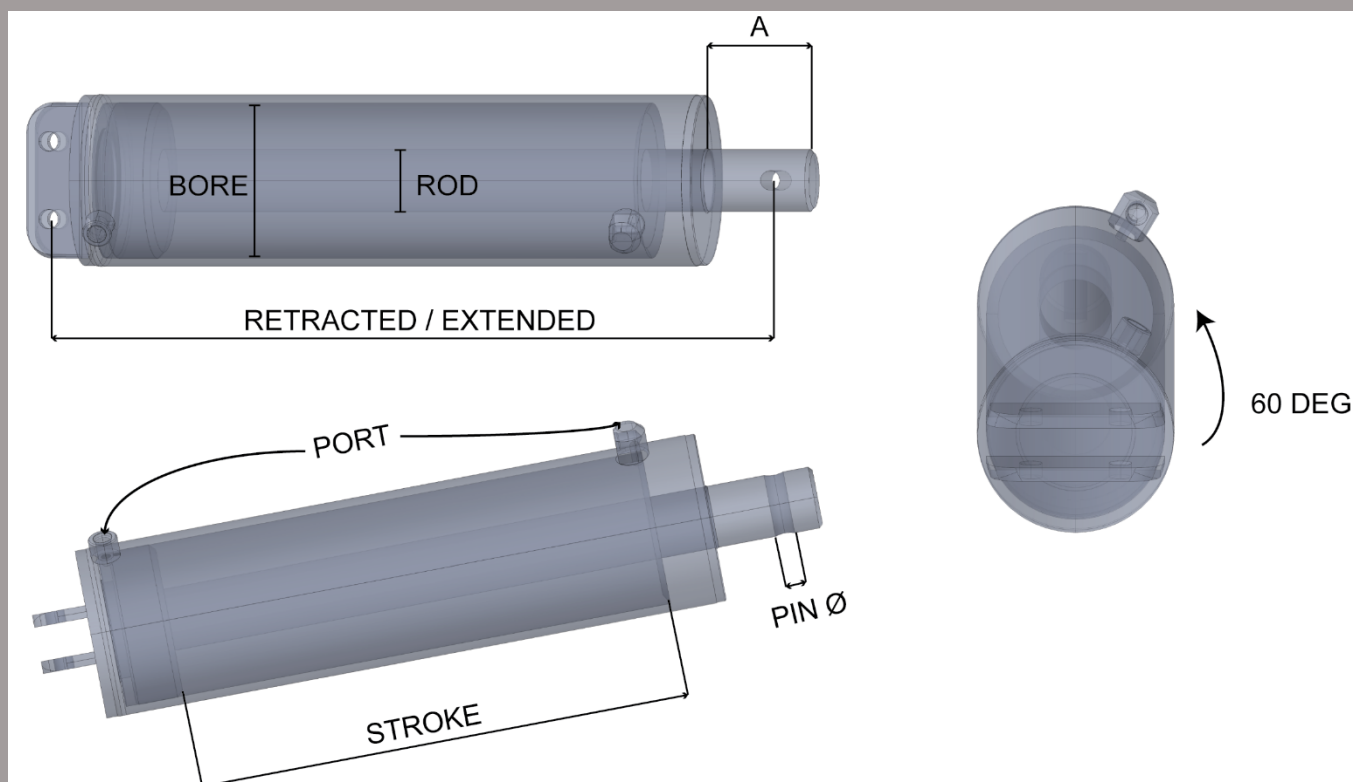


**1 YEAR
WARRANTY**



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5" BORE	DUMP HOIST WELDED DOUBLE ACTING HYDRAULIC CYLINDER - 3500 PSI										
SKU	Bore	Stroke	Rod Ø	Retracted	Extended	A	Pin Ø (Base)	Pin Ø (rod)	Port Size	Column Load (LBs)	Weight (LBs)
HT 5X15.75	5"	15.75"	2"	23.5"	39.25"	3.5"	0.63"	0.63"	SAE 6	57,700	66
HT 5X16	5"	16"	2.5"	25"	41"	3.125"	1.262"	1.262"	3/8-18 NPT	57,724	80
HT 5X20	5"	20"	2"	27.5"	47.5"	3.2"	0.63"	0.63"	SAE 6	57,700	74
HT 5X21.5	5"	21.5"	2"	29.37"	50.87"	3.57"	0.63"	0.63"	SAE 6	57,700	78

TELESCOPIC TYPE

BLEEDERLESS - PARKER / CUSTOM

HOIST



Type:	Hydraulic Cylinder
Action:	Single Acting
Rod End:	Options include pin-eye drilled thru, clevis, and threaded ends
Base End:	Cross tube, trunnion, flange, and other common OEM-style options
Stages	2 to 4 moving stages
Nominal stage OD range:	4 to 8
Rod:	Standard Chrome Plated Rod Steel 1045
Application:	Dump trailers, tipping bodies, and other OEM hoist equipment
Replacement	Hyco®, Parker®, Hyva®, Custom Hoist®, and other standard SAT models



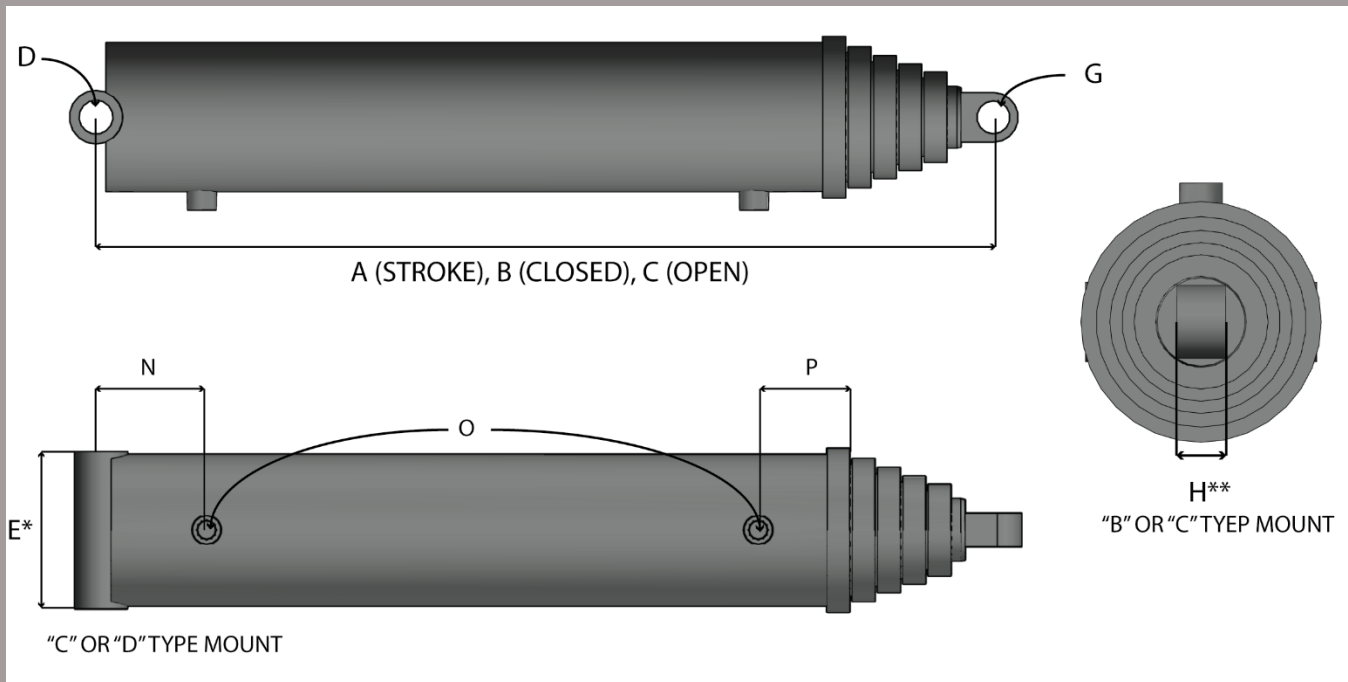
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**1 YEAR
WARRANTY**





EXAMPLES OF PARKER CYLINDER CODES

S42CC-19-40

S - SINGLE ACTING TELESCOPIC (SAT)
 SD - DOUBLE ACTING TELESCOPIC (DAT)
 4 - NUMBER OF MOVING STAGES OR SLEEVES IN TELESCOPIC CYLINDER
 2 - MOUNTING OPTION ON BODY/BASE END OF CYLINDER
 C - MOUNTING OPTION ON ROD / PLUNGER END OF CYLINDER
 C - MODIFICATION OR DESIGN VARIATION
 19 - LENGTH OF CYLINDER STROKE IN INCHES

MOUNTING OPTIONS																
CODE LETTER		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
MOUNT		PLAIN - NO MOUNT	PIN EYE DRILLED THRU MOUNT	PIN EYE DRILLED THRU LUG	CROSS TUBE	THREADED	DRILLED AND TAPPED	FLANGE MOUNT AT BASE	FLANGE MOUNT MID-BODY	FOOT/PAD MOUNT	CENTERLINE MOUNT	DOUBLE LUG CLEVIS MOUNT	TRUNNION MOUNT	ROD END DRILLED AND TAPPED	BALL MOUNT	SOCKET MOUNT
MOUNT LOCATION	BODY	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	ROD	✓	✓	✓	✓	✓	✓					✓		✓	✓	✓

*ALL VALUES ARE IN INCHES

**ALL NUMBERS GIVEN ARE NOMINAL VALUES AND SHOULD BE USED FOR REFERENCE ONLY. ALL PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

2 STAGE			BLEEDERLESS-CUSTOM HOIST/PARKER SINGLE ACTING HYDRAULIC CYLINDER										
Model	NOMINAL STAGE OD	NUMBER STAGES	A STROKE	B CLOSED	C OPEN	D PIN	E WIDTH	G PIN	H WIDTH	N LOCATION	O SIZE	P LOCATION	WEIGHT LBS
SAT42CC-19-40	4	2	40.00	32.44	72.44	1.50	2.00	1.50	2.00	14"	3/4" NPT		52
SAT52CC-41-54.62	5	2	54.62	38.00	92.62	2.50	3.62	2.50	3.62	3.88"	1" NPT		120
SAT52CC-41-67.25	5	2	67.25	46.81	114.06	2.50	3.62	2.50	3.62	3.88"	1" NPT		145
SAT52DB-9-67.50	5	2	67.50	46.75	114.25	3.00	5.50	2.00	3.00	20"	1" NPT		135

3 STAGE			BLEEDERLESS-CUSTOM HOIST/PARKER SINGLE ACTING HYDRAULIC CYLINDER										
Model	NOMINAL STAGE OD	NUMBER STAGES	A STROKE	B CLOSED	C OPEN	D PIN	E WIDTH	G PIN	H WIDTH	N LOCATION	O SIZE	P LOCATION	WEIGHT LBS
SAT43DB-3-75	4	3	75.00	33.88	108.88	2.00	5.00	1.25	1.69		3/4" NPT	19"	85
SAT53DB-13-60	5	3	60.00	30.00	90.00	2.00	6.00	1.50	2.63		1" NPT	19"	120
SAT53DB-18-90	5	3	90.00	39.75	129.75	2.00	6.00	1.50	2.63		1" NPT	19"	200
SAT53DC-65-104	5	3	104.00	47.69	151.69	2.00	7.00	1.75	2.00		1" NPT	15.50"	175
SAT53DC-65-107	5	3	107.56	48.38	155.94	2.00	7.00	1.75	2.00		1" NPT	9.94"	178
SAT53DC-65-120	5	3	120.13	53.06	173.19	2.00	7.00	1.75	2.00		1" NPT	15.50"	195
SAT53DC-65-126	5	3	126.63	54.56	181.19	2.00	7.00	1.75	2.00		1" NPT	16.12"	205
SAT53DC-66-72	5	3	72.00	37.19	109.19	2.00	7.00	1.63	1.50	19.50"	1" NPT		165
SAT53DC-66-84	5	3	84.00	41.19	125.19	2.00	7.00	1.63	1.50	19.50"	1" NPT		170
SAT53DC-68-105	5	3	105.00	48.50	153.50	2.00	7.75	1.75	1.50	24.81"	1" NPT		170
SAT53DC-68-120	5	3	120.00	52.50	172.50	2.00	7.75	1.75	1.50	24.81"	1" NPT		220
SAT53DC-68-123	5	3	123.00	54.50	177.50	2.00	7.75	1.75	1.50	24.81"	1" NPT		232
SAT53DC-68-99	5	3	99.00	46.50	145.50	2.00	7.75	1.75	1.50	24.81"	1" NPT		165
SAT63DC-101-104	6	3	103.94	47.00	150.94	2.00	7.00	2.00	2.00	20.81"	1" NPT		250
SAT63DC-101-107	6	3	107.56	48.38	155.94	2.00	7.00	2.00	2.00	20.81"	1" NPT		256
SAT63DC-101-120	6	3	120.06	52.62	172.68	2.00	7.00	2.00	2.00	20.81"	1" NPT		275
SAT63DC-101-126	6	3	126.31	54.56	180.87	2.00	7.00	2.00	2.00	20.81"	1" NPT		285
SAT63DC-101-140	6	3	140.25	59.81	200.06	2.00	7.00	2.00	2.00	20.81"	1" NPT		310
SAT63DC-101-150	6	3	149.88	63.00	212.88	2.00	7.00	2.00	2.00	20.81"	1" NPT		325
SAT63DC-101-86	6	3	86.75	40.88	127.63	2.00	7.00	2.00	2.00	20.81"	1" NPT		225
SAT63DC-101-92	6	3	92.00	45.00	137.00	2.00	7.00	2.00	2.00	20.81"	1" NPT		195
SAT63DC-102-120	6	3	120.00	53.50	173.50	2.38	8.00	2.19	1.50	24.91"	1" NPT		270
SAT63DC-102-126	6	3	126.00	55.50	181.50	2.38	8.00	2.19	1.50	24.91"	1" NPT		275
SAT63DC-102-138	6	3	138.00	59.50	197.50	2.38	8.00	2.19	1.50	24.91"	1" NPT		300
SAT63DC-102-150	6	3	150.00	66.00	216.00	2.38	8.00	2.19	1.50	24.91"	1" NPT		330
SAT63DC-102-162	6	3	162.00	67.50	229.50	2.38	8.00	2.19	1.50	24.91"	1" NPT		330
SAT63DC-79-67	6	3	67.00	36.50	103.50	3.00	7.88	1.75	1.50	20.50"	1" NPT		180
SAT63DC-96-130	6	3	130.00	56.00	186.00	2.00	7.00	2.00	2.00	20.81"	1" NPT		295
SAT63DC-96-82.50	6	3	82.50	43.56	126.06	2.00	7.00	2.00	2.00	20.81"	1" NPT		230
SAT63DC-97-111	6	3	111.00	49.94	160.94	2.00	7.00	2.00	2.00	3.81"	1" NPT	24"	270
SAT63DC-97-123	6	3	123.00	54.94	177.94	2.00	7.00	2.00	2.00	3.81"	1" NPT	29"	285
SAT73DC-66-110	7	3	110.63	50.06	160.69	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	335
SAT73DC-66-120	7	3	120.00	53.12	173.12	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	360
SAT73DC-66-124	7	3	124.88	54.81	179.69	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	370
SAT73DC-66-129	7	3	129.00	56.50	185.50	2.00	8.25	2.00	2.00	8.56"	1" NPT	4.62"	385
SAT73DC-66-140	7	3	140.44	60.00	200.44	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	400
SAT73DC-66-150	7	3	150.00	63.50	213.50	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	420

4 STAGE			BLEEDERLESS-CUSTOM HOIST SINGLE ACTING HYDRAULIC CYLINDER										
Model	NOMINAL STAGE OD	NUMB ER STAG ES	A STROKE	B CLOSED	C OPEN	D PIN	E WIDTH	G PIN	H WIDTH	N LOCATIO N	O SIZE	P LOCATION	WEIGHT LBS
SAT64DB-12-135	6	4	135.00	47.19	182.19	1.75	8.00	1.50	2.69			5.50"	275
SAT64DB-12-156	6	4	156.00	53.19	209.19	1.75	8.00	1.50	2.69			5.50"	293
SAT64DC-14-156	6	4	156.00	53.62	209.62	2.00	7.25	2.00	1.75	6.31"	1" NPT		310
SAT64DC-15-157	6	4	157.00	58.56	215.56	1.50	7.00	1.50	2.00	4.31"	1" NPT		310
SAT74DC-74-120	7	4	120.00	44.12	164.12	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	325
SAT74DC-74-135	7	4	135.00	48.44	183.44	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	375
SAT74DC-74-140	7	4	140.00	49.75	189.75	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	365
SAT74DC-74-156	7	4	156.00	53.75	209.75	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	388
SAT74DC-74-161	7	4	161.75	55.31	217.06	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	405
SAT74DC-74-180	7	4	180.00	61.12	241.12	2.00	8.25	2.00	2.00	7.06"	1" NPT	4.62"	430
SAT84DC-40-170	8	4	170.00	57.25	227.25	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	570
SAT84DC-66-140	8	4	140.00	49.75	189.75	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	488
SAT84DC-66-148	8	4	147.75	51.50	199.25	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	515
SAT84DC-66-156	8	4	156.00	53.75	209.75	2.00	9.50	2.00	2.00	5.56"	1" NPT	5.62"	535
SAT84DC-66-161	8	4	160.00	55.75	215.75	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	555
SAT84DC-66-170	8	4	170.00	57.25	227.25	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	568
SAT84DC-66-180	8	4	180.00	59.75	239.75	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	591
SAT84DC-66-188	8	4	188.00	61.75	249.75	2.00	9.50	2.00	2.00	6.50"	1" NPT	5.62"	610

PIN TO PIN MOUNT CYLINDER

DEFINITION

Pin-to-Pin cylinders have a pivot pin at both the base end and the rod end. This allows the cylinder to pivot freely at both connection points as it extends and retracts.

ADVANTAGES

- Easy installation and removal with simple pin connections
- Ideal for applications with changing alignment during operation
- Compact design for limited space applications
- Handles high side loads when paired with spherical bearings

APPLICATION

- Dump trailers and trucks (front-end hoist cylinders)
- Agricultural equipment lift arms
- Mobile equipment with pivoting linkages



TRUNNION MOUNT CYLINDER

DEFINITION

A Trunnion mount uses pivot pins fixed to the cylinder body rather than the ends. These pins are positioned either at the mid-section (mid-trunnion) or near the base/rod ends, allowing the cylinder body to rotate in fixed trunnion brackets

APPLICATION

- Industrial presses
- Material handling booms
- OEM equipment where mounting clearance is critical



ADVANTAGES

- Reduces bending loads on the piston rod by keeping the load path aligned
- Ideal for applications where the cylinder body must pivot but space is limited at the ends
- Allows for longer stroke lengths without excessive side load

Feature	Pin-to-Pin Mount	Trunnion Mount
Pivot Location	At base and rod ends	On the cylinder body (mid or end)
Installation	Simple pin insertion	Requires trunnion brackets
Side Load Capacity	Moderate (higher with spherical bearings)	Higher due to better load alignment
Space Requirements	More length needed	Shorter overall mounting length
Common Use	Dump trailers, ag equipment	Industrial presses, long-stroke booms

TELESCOPIC TYPE

FEE FRONT EYE (PIN TO PIN)

Type:	Front-End Telescopic Hydraulic Cylinder
Action:	Single Acting
Rod End:	Piston eye with cross pin
Base End:	Bottom eye with cross pin
Stages	3 to 5 moving stages
Nominal stage OD range:	5" to 9"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3500 PSI
Application:	Dump trailers, tipper trucks, agricultural and vocational hauling
Replacement	HYVA® FEE-type front-end cylinders



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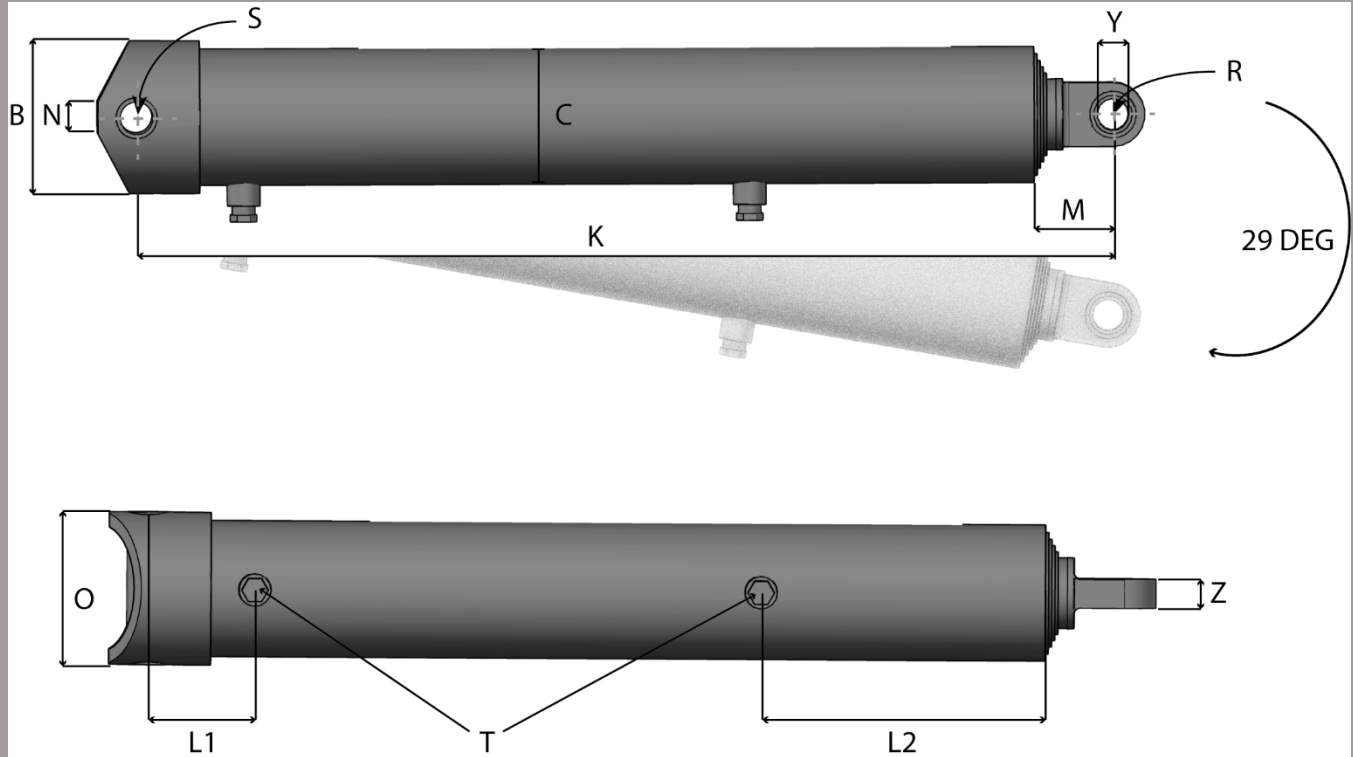


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3 STAGE			FRONT EYE (PIN TO PIN) SINGLE ACTING TELESCOPIC HYDRAULIC CYLINDER - 3500 PSI															
Model	LBS	K*	Total Gal.	O	B	C	L1	L2	Z	M*	S	T	N	Y	R	Last stage	Stroke	Max PSI
SAT A5-3-83-FEE	163	42.31	4.2	6.63	5.69	5.13	13	-	1.63	4	2.19	1	2.13	2	2.06	2.83	83.2	3626
SAT A6-3-83-FEE	196	42.31	5.8	7	6.56	5.63	13	-	1.63	4	2.19	1	2.13	2	2.06	3.58	83.2	3626
SAT A6-3-96-FEE	236	51.19	7.1	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	96	3626
SAT A6-3-101-FEE	223	48.25	7.1	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	100.9	3626
SAT A6-3-110-FEE	236	51.19	7.7	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.13	2	2.06	3.58	109.6	3626
SAT A6-3-119-FEE	249	54.13	8.5	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	118.6	3626
SAT A6-3-124-FEE-HD	262	57.06	9.0	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.13	2	2.06	3.58	123.6	3626
SAT A6-3-134-FEE-HD	278	60.44	9.5	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.13	2	2.06	3.58	133.7	3626
SAT A7-3-110-FEE	282	51.19	10.6	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.13	2	2.06	4.33	109.6	3626
SAT A7-3-119-FEE-SKE	300	53.13	11.4	8.25	7.38	6.69	13	17.69	1.63	3	2.19	1	2.06	2	1.77	4.33	118.6	3626
SAT A7-3-127-FEE-SKE	315	56.13	12.4	8.25	7.38	6.69	13	17.69	1.63	3	2.19	1	2.06	2	1.77	4.33	127.3	3626
SAT A7-3-137-FEE	333	60.44	13.2	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	137.5	3626
SAT A7-3-147-FEE	351	63.56	14.3	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	146.8	3626

4 STAGE			FRONT EYE (PIN TO PIN) SINGLE ACTING TELESCOPIC HYDRAULIC CYLINDER - 3500 PSI															
Model	LBS	K*	Total Gal.	O	B	C	L1	L2	Z	M *	S	T	N	Y	R	Last stage	Stroke	Max PSI
SAT A6-4-158-FEE	278	54.13	9.8	7	6.56	5.88	13	17.69	1.63	4	2.19	1	2.06	2	2.06	2.83	158.4	3626
SAT A7-4-135-FEE	298	48.25	11.4	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.13	2	2.06	3.58	134.8	3626
SAT A7-4-146-FEE	315	51.19	12.4	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	146.4	3626
SAT A7-4-158-FEE	333	54.13	13.5	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.13	2	2.06	3.58	158.4	3626
SAT A7-4-170-FEE	353	57.06	14.3	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	170	3626
SAT A7-4-183-FEE	373	60.44	15.6	8.25	7.38	6.69	13	17.69	1.63	4	2.19	1	2.06	2	2.06	3.58	183.6	3626
SAT A8-4-146-FEE	379	51.31	16.6	9.44	8.25	7.56	11.69	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	146.4	3626
SAT A8-4-158-FEE	401	54.31	18.0	9.44	8.25	7.56	6.69	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	158.4	3626
SAT A8-4-170-FEE	423	57.25	19.3	9.44	8.25	7.56	6.69	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	170	3626
SAT A8-4-183-FEE	448	60.56	20.6	9.44	8.25	7.56	6.69	17.69	1.63	4	2.19	1	2.06	2	2.06	4.33	183.6	3626

5 STAGE			FRONT EYE (PIN TO PIN) SINGLE ACTING TELESCOPIC HYDRAULIC CYLINDER – 3500 PSI															
Model	LBS	K*	Total Gal.	O	B	C	L1	L2	Z	M*	S	T	N	Y	R	Last stage	Stroke	Max PSI
SAT A8-5-169-FEE	465	50.25	22.2	9.44	9.25	8.44	6.69	17.69	1.63	5.38	2.38	1	2.06	2	2.06	4.33	168.7	3626
SAT A8-5-190-FEE	522	54.81	25.4	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.13	2	2.06	4.33	190.3	3626
SAT A8-5-213-FEE	551	57.75	28.0	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	212.7	3626
SAT A8-5-222-FEE	567	59.50	29.1	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	221.7	3626
SAT A8-5-230-FEE	582	61.13	30.1	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	229.7	3626
SAT A8-5-245-FEE	613	64.25	32.2	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	245.2	3191
SAT A8-5-255-FEE	639	67	33.5	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	255.2	2756
SAT A8-5-255-FEE-LKE	642	68.13	33.5	9.44	9.25	8.44	6.69	17.69	1.63	5.06	2.38	1	2.06	2	2.06	4.33	255.5	2756
SAT A8-5-269-FEE	666	69.75	35.4	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	268.7	2756
SAT A8-5-269-FEE-LKE	668	70.88	35.4	9.44	9.25	8.44	6.69	17.69	1.63	5.06	2.38	1	2.06	2	2.06	4.33	268.7	2756
SAT A8-5-279-FEE-LK	694	77.63	36.7	9.44	9.25	8.44	6.69	17.69	1.63	9.50	2.38	1	2.06	2	2.06	4.33	279.1	2466
SAT A8-5-281-FEE	690	72.13	36.7	9.44	9.25	8.44	6.69	17.69	1.63	4	2.38	1	2.06	2	2.06	4.33	280.7	2466
SAT A9-5-230-FEE	697	61.13	38.6	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	229.7	3191
SAT A9-5-245-FEE	734	64.25	41.2	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	245.2	3191
SAT A9-5-255-FEE	765	67	43.1	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	255.2	3191
SAT A9-5-269-FEE	796	69.75	45.2	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	268.7	3191
SAT A9-5-269-FEE-LK	802	75.69	45.2	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	268.7	2756
SAT A9-5-279-FEE-LK	829	77.63	47.0	10.63	10.19	9.44	6.69	17.69	2.06	9.50	2.50	1	2.06	2	2.44	5.08	279.1	2756
SAT A9-5-281-FEE	825	72.13	47.3	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	280.7	2756
SAT A9-5-299-FEE-LK	893	82.75	50.5	10.63	10.19	9.44	6.69	17.69	2.06	9.13	2.50	1	2.06	2	2.44	5.08	299.1	2466
SAT A9-5-300-FEE	886	77.63	50.5	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	300.2	2466
SAT A9-5-320-FEE	933	81.56	53.9	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	320.2	2176
SAT A9-5-336-FEE	981	85.88	56.5	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	335.7	1958
SAT A9-5-336-FEE-LK	983	87.06	56.5	10.63	10.19	9.44	6.69	17.69	2.06	4	2.50	1	2.06	2	2.44	5.08	335.7	1958

TELESCOPIC TYPE

FRONT END WITH OUTER COVER

(TRUNNION MOUNT)

Type:	Front-End Telescopic Hydraulic Cylinder
Action:	Single Acting
Stages	3 - 5
Rod end:	Trunnion mount
Base end:	Trunnion mount
Nominal Stroke	100" - 194"
Rod:	Standard Chrome Plated Rod Steel 1045
Application:	HYVA FC replacement



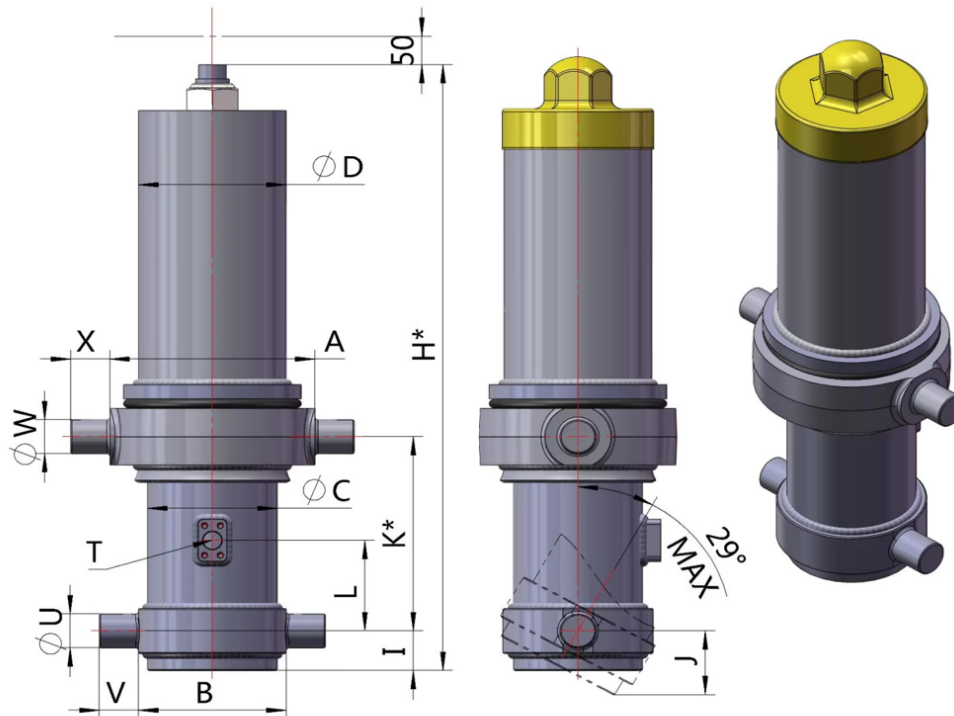
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* incl. 20 [-5; +30] mm pull out.

FRONT END SINGLE ACTING TELESCOPIC CYLINDER WITH OUTER COVER

MODEL	PRESSURE (BAR)	MAX THRUST (KN)	A	B	C	D	H	I	J	K	L	T	U	V	W	X
SAT 129-3-3460-FC	190	248.2	340	201	151	219	1484	60	91	343	160	1"SAE	60	65	60	65
SAT 129-3-3880-FC	190	248.2	340	201	151	219	1644	60	91	343	160	1"SAE	60	65	60	65
SAT 129-3-4270-FC	190	248.2	340	201	151	219	1744	60	91	343	160	1"SAE	60	65	60	65
SAT 129-4-4280-FC	190	248.2	340	201	151	219	1339	60	91	343	160	1"SAE	60	65	60	65
SAT 129-4-4620-FC	190	248.2	340	201	151	219	1484	60	91	343	160	1"SAE	60	65	60	65
SAT 129-4-5180-FC	190	248.2	340	201	151	219	1644	60	91	343	160	1"SAE	60	65	60	65
SAT 149-3-3880-FC	190	331.2	340	201	171	245	1644	60	96	343	160	1"SAE	60	65	60	65
SAT 149-3-4270-FC	190	331.2	340	201	171	245	1774	60	96	343	160	1"SAE	60	65	60	65
SAT 149-4-4280-FC	190	331.2	340	201	171	245	1399	60	96	343	160	1"SAE	60	65	60	65
SAT 149-4-4620-FC	190	331.2	340	201	171	245	1484	60	96	343	160	1"SAE	60	65	60	65
SAT 149-4-4940-FC	190	331.2	340	201	171	245	1564	60	96	343	160	1"SAE	60	65	60	65
SAT 149-4-5180-FC	190	331.2	340	201	171	245	1644	60	96	343	160	1"SAE	60	65	60	65
SAT 149-4-5460-FC	190	331.2	340	201	171	245	1714	60	96	343	160	1"SAE	60	65	60	65
SAT 169-4-4280-FC	190	426	340	245	192	245	1394	65	106	343	160	1"SAE	60	65	60	65
SAT 169-4-4620-FC	190	426	340	245	192	245	1479	65	106	343	160	1"SAE	60	65	60	65
SAT 169-4-4940-FC	190	426	340	245	192	245	1559	65	106	343	160	1"SAE	60	65	60	65
SAT 169-4-5180-FC	190	426	340	245	192	245	1639	65	106	343	160	1"SAE	60	65	60	65
SAT 169-4-5460-FC	190	426	340	245	192	245	1709	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-5355-FC	190	426	340	245	192	245	1394	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-5780-FC	190	426	340	245	192	245	1479	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-6180-FC	190	426	340	245	192	245	1559	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-6830-FC	190	426	340	245	192	245	1709	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-7130-FC	190	426	340	245	192	245	1769	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-7630-FC	170	381.2	340	245	192	245	1899	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-8130-FC	170	381.2	340	245	192	245	1999	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-9030-FC	150	336.3	340	245	192	245	2209	65	106	343	160	1"SAE	60	65	60	65
SAT 169-5-9530-FC	135	302.7	340	245	192	245	2309	65	106	343	160	1"SAE	60	65	60	65
SAT 191-4-5460-FC	190	544.1	360	245	215	273	1712	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-5780-FC	190	544.1	360	245	215	273	1482	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-6180-FC	190	544.1	360	245	215	273	1562	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-7130-FC	190	544.1	360	245	215	273	1772	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-7630-FC	190	544.1	360	245	215	273	1902	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-8130-FC	190	544.1	360	245	215	273	2002	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-9030-FC	170	486.8	360	245	215	273	2212	70	116	343	160	1"SAE	60	65	60	65
SAT 191-5-9530-FC	150	430	360	245	215	273	2312	70	116	343	160	1"SAE	60	65	60	65
SAT 214-5-9030-FC	170	611.1	360	270	242	273	2197	85	135	343	160	1"SAE	65	65	60	65
SAT 214-5-9530-FC	150	539.2	360	270	242	273	2297	85	135	343	160	1"SAE	65	65	60	65
SAT 214-5-12200-FC	150	539.2	360	270	242	273	2967	85	135	343	160	1"SAE	65	65	60	65

TELESCOPIC TYPE

FRONT END WITH SINGLE EYE

(TRUNNION BASE)



Type:	Front-End Telescopic Hydraulic Cylinder
Action:	Single Acting
Stages	3 - 5
Rod end:	Pin mount
Base end:	Trunnion mount
Nominal Stroke	100" - 194"
Rod:	Standard Chrome Plated Rod Steel 1045
Application:	HYVA FE replacement



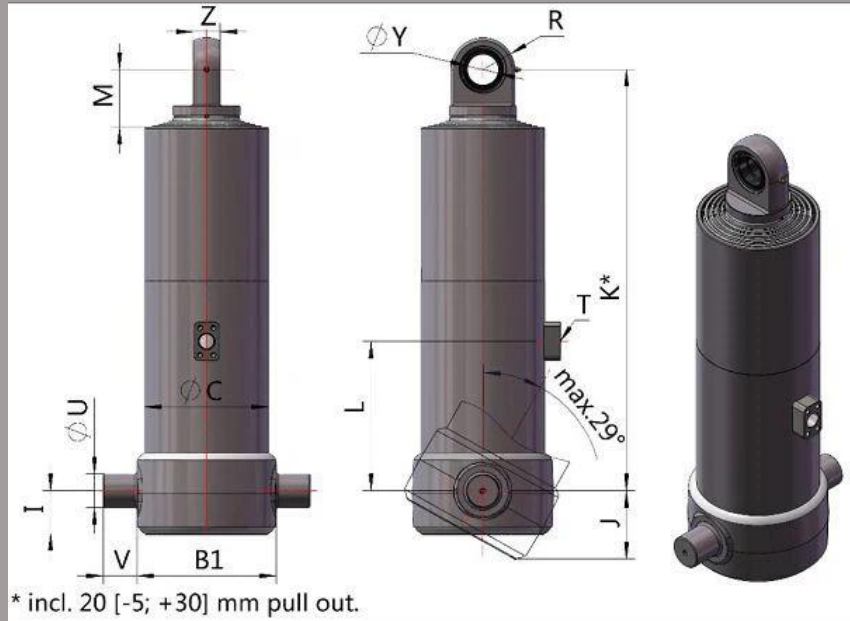
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FRONT END SINGLE ACTING TELESCOPIC CYLINDER WITH SINGLE EYE

MODEL	PRESSURE (BAR)	MAX TRHUST (KN)	B1	C	I	J	K	M	R	L	T	U	V	Y	Z
SAT 110-3-3205-FE	190	180.5	163	129	60	91	1449	100	52	160	I"SAE	60	65	50	42
SAT 110-3-3460-FE	190	180.5	163	129	60	91	1609	100	52	160	I"SAE	60	65	50	42
SAT 129-3-3460-FE	190	248.2	201	151	60	91	1449	100	52	160	I"SAE	60	65	50	42
SAT 129-3-3880-FE	190	248.2	201	151	60	91	1609	100	52	160	I"SAE	60	65	50	42
SAT 149-3-2900-FE	190	331.2	201	171	60	96	1320	135	52	160	I"SAE	60	65	50	42
SAT 149-3-3200-FE	190	331.2	201	171	60	96	1420	135	52	160	I"SAE	60	65	50	42
SAT 149-3-3500-FE	190	331.2	201	171	60	96	1520	135	52	160	I"SAE	60	65	50	42
SAT 149-3-3880-FE	190	331.2	201	171	60	96	1644	135	52	160	I"SAE	60	65	50	42
SAT 149-3-4280-FE	190	331.2	201	171	60	96	1777	135	52	160	I"SAE	60	65	50	42
SAT 149-4-4280-FE	190	331.2	201	171	60	96	1450	160	52	160	I"SAE	60	65	50	42
SAT 149-4-4620-FE	190	331.2	201	171	60	96	1484	135	52	160	I"SAE	60	65	50	42
SAT 149-4-4940-FE	190	331.2	201	171	60	96	1529	100	52	160	I"SAE	60	65	50	42
SAT 169-4-4280-FE	190	426	245	192	65	106	1394	135	52	160	I"SAE	60	65	50	42
SAT 169-4-4620-FE	190	426	245	192	65	106	1479	135	52	160	I"SAE	60	65	50	42
SAT 169-4-4940-FE	190	426	245	192	65	106	1529	100	52	160	I"SAE	60	65	50	42
SAT 169-4-5180-FE	190	426	245	192	65	106	1604	100	52	160	I"SAE	60	65	50	42
SAT 169-5-5355-FE	190	426	245	192	65	106	1394	100	52	160	I"SAE	60	65	50	42
SAT 169-5-5780-FE	190	426	245	192	65	106	1459	100	52	160	I"SAE	60	65	50	42
SAT 169-5-6180-FE	190	426	245	192	65	106	1497	100	52	160	I"SAE	60	65	50	42
SAT 169-5-6830-FE	190	426	245	192	65	106	1674	100	52	160	I"SAE	60	65	50	42
SAT 169-5-7130-FE	190	426	245	192	65	106	1734	100	52	160	I"SAE	60	65	50	42
SAT 169-5-7630-FE	170	381.2	245	192	65	106	1834	100	52	160	I"SAE	60	65	50	42
SAT 169-5-8130-FE	170	381.2	245	192	65	106	1934	100	52	160	I"SAE	60	65	50	42
SAT 191-5-6180-FE	190	544.1	245	215	70	116	1527	100	52	160	I"SAE	60	65	50	42
SAT 191-5-7130-FE	190	544.1	245	215	70	116	1717	100	52	160	I"SAE	60	65	50	42
SAT 191-5-7630-FE	190	544.1	245	215	70	116	1817	100	52	160	I"SAE	60	65	50	42
SAT 191-5-9030-FE	150	429.6	245	215	70	116	2177	100	52	160	I"SAE	60	65	50	42
SAT 214-5-7130-FE	190	683	270	242	85	135	1722	100	62	160	I"SAE	65	65	60	52
SAT 214-5-7630-FE	170	611.1	270	242	85	135	1857	100	62	160	I"SAE	65	65	60	52

TELESCOPIC TYPE

7 TON AND 12 TON



Type:	Telescopic Hydraulic Cylinder
Action:	Single Acting
Rod End:	Drilled pinhole
Base End:	Pin mount or clevis
Stages	3 moving stages
Nominal stage OD range:	5" to 9"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	3000 PSI
Application:	Dump trucks, trailers, and tipping equipment with rated lifting capacities of 7 to 12 ton



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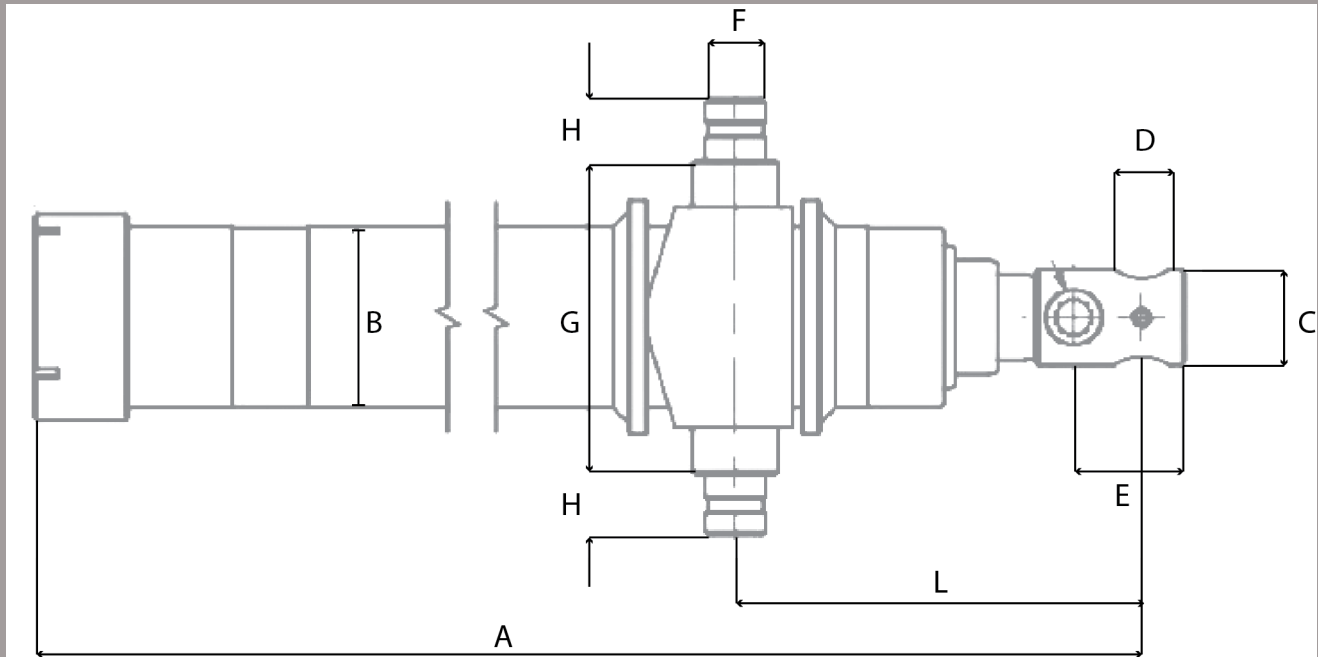


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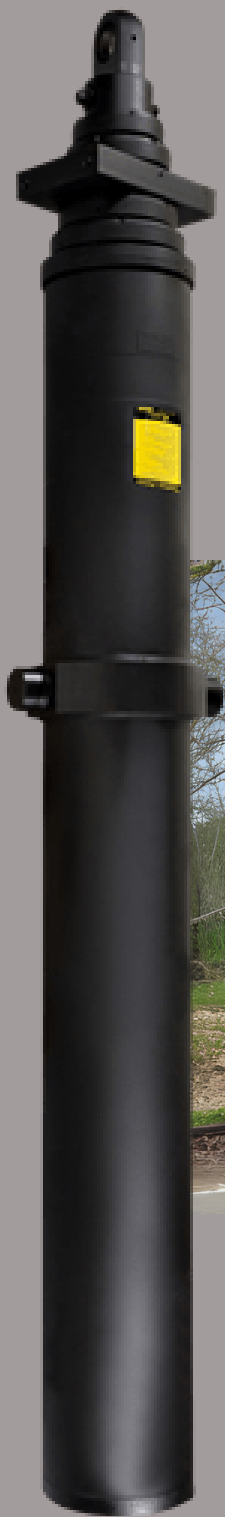
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7 TON		INVERSE SINGLE ACTING TELESCOPIC CYLINDER									
MODEL	STROKE	A (")	B (")	C (")	D (")	E (")	F (")	G (")	H (")	L (")	WEIGHT (KGS)
HTC-07833	78	35.5	3.75	2	1.063	2.5	1.25	6.5	1.25	7	37
HTC-09033	90	39.5	3.75	2	1.063	3.0	1.25	6.5	1.25	7	41
HTC-10833	108	45	3.75	2	1.063	3.0	1.25	6.5	1.25	7	46

12 TON		INVERSE SINGLE ACTING TELESCOPIC CYLINDER									
MODEL	STROKE	A (")	B (")	C (")	D (")	E (")	F (")	G (")	H (")	L (")	WEIGHT (KGS)
HTC-07843	78	34.75	4.4	2	1.063	2.25	1.5	7.5	1.5	7	48
HTC-09043	90	38.75	4.4	2	1.063	2.25	1.5	7.5	1.5	7	52
HTC-10843	108	44.75	4.4	2	1.063	2.25	1.5	7.5	1.5	7	59
HTC-12043	120	48.75	4.4	2	1.063	2.25	1.5	7.5	1.5	7	64
HTC-14443	144	56.78	4.4	2	1.063	2.25	1.5	7.5	1.5	7	74

TELESCOPIC TYPE

DOUBLE ACTING CYLINDER



Type:	Telescopic Hydraulic Cylinder
Action:	Double Acting
Rod End:	Configurable (piston eye, clevis, trunnion, or custom per application)
Base End:	Configurable (cross tube, trunnion, flange, or custom)
Bore:	2.50" to 10.50"
Stroke:	Up to 500"
Tubing:	High-strength D.O.M. (Drawn Over Mandrel)
Pressure:	2000 PSI



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CLEVIS TYPE

TIE-ROD



Type:	Welded Tie Rod Hydraulic Cylinder
Action:	Double Acting
Rod End:	Screw-on Ductile Iron Clevis Item
Base End:	Ductile Iron Clevis Item
Bore:	2.00" to 4.00"
Stroke:	4" to 60"
Rod:	Standard Chrome Plated Rod Steel 1045
Pressure:	2500 and 3000 PSI
Application:	Low-pressure Agriculture & Construction equipment



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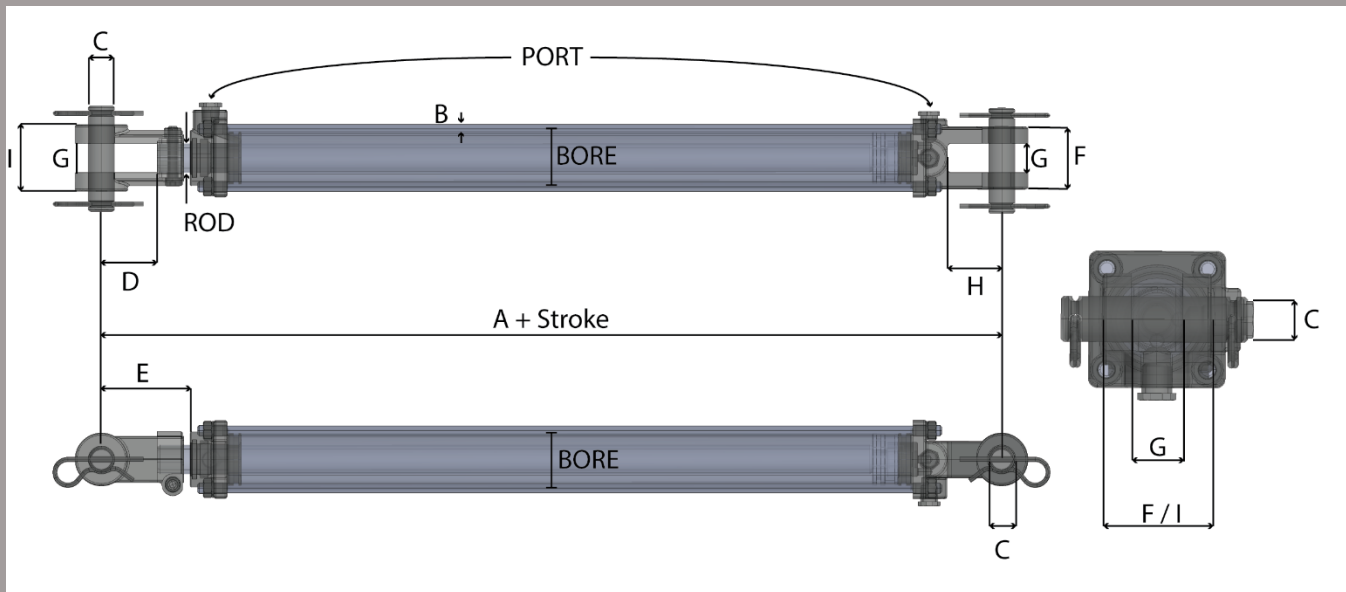


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2500 PSI		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER									
BORE	ROD THREAD	PORTS	A	B	C	D	E	F	G	H	I
2.00"	1 1/8-12 UNF	3/8 NPT	10.25"	M10	1.0"	2.125"	3.502"	2.50"	1.165"	2.008"	2.504"
2.50"	1 1/8-12 UNF	3/8 NPT	10.25"	M10	1.0"	2.125"	3.502"	2.50"	1.165"	2.008"	2.504"
3.00"	1 1/4-12 UNF	1/2 NPT	10.25"	M12	1.0"	2.125"	3.502"	2.56"	1.165"	2.008"	2.717"
3.50"	1 1/4-12 UNF	1/2 NPT	10.25"	M14	1.0"	2.125"	3.502"	2.56"	1.165"	2.008"	2.717"
4.00"	1 1/4-12 UNF	1/2 NPT	10.25"	M16	1.0"	2.125"	3.502"	2.76"	1.165"	2.008"	2.717"

For 8.00" ASAE STROKE: A= 12.25"

For 16.00" ASAE STROKE: A= 15.50" , C= 1.25"

For TR2.5-3516-ASAE-NS , Rod diameter is 1.50"

For TR2.5-4016-ASAE-NS, Rod diameter is 2.00"

3000 PSI		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER									
BORE	ROD THREAD	PORTS	A	B	C	D	E	F	G	H	I
2.00"	1 1/8-12 UNF	SAE 8	10.25"	M10	1.0"	2.125"	3.502"	2.50"	1.165"	2.008"	2.504"
2.50"	1 1/8-12 UNF	SAE 8	10.25"	M10	1.0"	2.125"	3.502"	2.50"	1.165"	2.008"	2.504"
3.00"	1 1/4-12 UNF	SAE 8	10.25"	M12	1.0"	2.125"	3.502"	2.56"	1.165"	2.008"	2.717"
3.50"	1 1/4-12 UNF	SAE 8	10.25"	M14	1.0"	2.125"	3.502"	2.56"	1.165"	2.008"	2.717"
4.00"	1 1/4-12 UNF	SAE 8	10.25"	M16	1.0"	2.125"	3.502"	2.76"	1.165"	2.008"	2.717"

For 8.00" ASAE STROKE: A= 12.25"

For 16.00" ASAE STROKE: A= 15.50" , C= 1.25"

For TR3.0-4016-ASAE-NS, Rod diameter is 2.00"

2.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 2500 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR2.5-2004-NS	2"×4"	14 1/4"	18 1/4"	1 1/8"	1"	3/8 NPT"	7850	16
TR2.5-2006-NS	2"×6"	16 1/4"	22 1/4"				7850	17
TR2.5-2008-NS	2"×8"	18 1/4"	26 1/4"				7850	19
TR2.5-2008-ASAE-NS	2"×8"	20 1/4"	28 1/4"				7850	20
TR2.5-2010-NS	2"×10"	20 1/4"	30 1/4"				7850	20
TR2.5-2012-NS	2"×12"	22 1/4"	34 1/4"				7850	22
TR2.5-2014-NS	2"×14"	24 1/4"	38 1/4"				7850	24
TR2.5-2016-NS	2"×16"	26 1/4"	42 1/4"				7850	25
TR2.5-2018-NS	2"×18"	28 1/4"	46 1/4"				7850	27
TR2.5-2020-NS	2"×20"	30 1/4"	50 1/4"				6950	28
TR2.5-2024-NS	2"×24"	34 1/4"	58 1/4"				5180	31
TR2.5-2030-NS	2"×30"	40 1/4"	70 1/4"				3570	36
TR2.5-2036-NS	2"×36"	46 1/4"	82 1/4"				2610	41
TR2.5-2040-NS	2"×40"	50 1/4"	90 1/4"				1700	44
TR2.5-2048-NS	2"×48"	58 1/4"	106 1/4"				1570	49

2.5" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 2500 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR2.5-2504-NS	2.5"×4"	14 1/4"	18 1/4"	1 1/8"	1"	3/8 NPT	12200	19
TR2.5-2506-NS	2.5"×6"	16 1/4"	22 1/4"				12200	21
TR2.5-2508-NS	2.5"×8"	18 1/4"	26 1/4"				12200	22
TR2.5-2508-ASAE-NS	2.5"×8"	20 1/4"	28 1/4"				12200	23
TR2.5-2510-NS	2.5"×10"	20 1/4"	30 1/4"				12200	24
TR2.5-2512-NS	2.5"×12"	22 1/4"	34 1/4"				12200	26
TR2.5-2514-NS	2.5"×14"	24 1/4"	38 1/4"				10300	28
TR2.5-2516-NS	2.5"×16"	26 1/4"	42 1/4"				8400	29
TR2.5-2518-NS	2.5"×18"	28 1/4"	46 1/4"				7000	32
TR2.5-2520-NS	2.5"×20"	30 1/4"	50 1/4"				5900	34
TR2.5-2524-NS	2.5"×24"	34 1/4"	58 1/4"				4400	38
TR2.5-2530-NS	2.5"×30"	40 1/4"	70 1/4"	1 1/4"			4400	43
TR2.5-2536-NS	2.5"×36"	46 1/4"	82 1/4"				3400	49
TR2.5-2540-NS	2.5"×40"	50 1/4"	90 1/4"				2700	54
TR2.5-2548-NS	2.5"×48"	58 1/4"	106 1/4"				2000	60

3.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 2500 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR2.5-3004-NS	3"x4"	14 1/4"	18 1/4"	1 1/4"	1"	1/2 NPT	17600	24
TR2.5-3006-NS	3"x6"	16 1/4"	22 1/4"				17600	26
TR2.5-3008-NS	3"x8"	18 1/4"	26 1/4"				17600	28
TR2.5-3008-ASAE-NS	3"x8"	20 1/4"	28 1/4"				17600	29
TR2.5-3010-NS	3"x10"	20 1/4"	30 1/4"				17600	30
TR2.5-3012-NS	3"x12"	22 1/4"	34 1/4"				17600	33
TR2.5-3014-NS	3"x14"	24 1/4"	38 1/4"				15700	35
TR2.5-3016-NS	3"x16"	26 1/4"	42 1/4"				12800	37
TR2.5-3016-ASAE-NS	3"x16"	31 1/2"	47 1/2"		1 1/4"		9200	42
TR2.5-3018-NS	3"x18"	28 1/4"	46 1/4"		1"		11300	42
TR2.5-3020-NS	3"x20"	30 1/4"	50 1/4"	9200			44	
TR2.5-3024-NS	3"x24"	34 1/4"	58 1/4"	6700			49	
TR2.5-3030-NS	3"x30"	40 1/4"	70 1/4"	9600			57	
TR2.5-3036-NS	3"x36"	46 1/4"	82 1/4"	7000			65	
TR2.5-3040-NS	3"x40"	50 1/4"	90 1/4"	5700			70	
TR2.5-3048-NS	3"x48"	58 1/4"	106 1/4"	3900			80	

3.5" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 2500 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR2.5-3504-NS	3.5"x4"	14 1/4"	18 1/4"	1 1/4"	1"	1/2 NPT	24000	29
TR2.5-3506-NS	3.5"x6"	16 1/4"	22 1/4"				24000	32
TR2.5-3508-NS	3.5"x8"	18 1/4"	26 1/4"				24000	34
TR2.5-3508-ASAE-NS	3.5"x8"	20 1/4"	28 1/4"				24000	35
TR2.5-3510-NS	3.5"x10"	20 1/4"	30 1/4"				24000	37
TR2.5-3512-NS	3.5"x12"	22 1/4"	34 1/4"				19600	39
TR2.5-3514-NS	3.5"x14"	24 1/4"	38 1/4"				15700	42
TR2.5-3516-NS	3.5"x16"	26 1/4"	42 1/4"				12800	44
TR2.5-3516-ASAE-NS	3.5"x16"	31 1/2"	47 1/2"	1 1/2"	1 1/4"		21100	50
TR2.5-3518-NS	3.5"x18"	28 1/4"	46 1/4"	1 1/4"	1"		10700	47
TR2.5-3520-NS	3.5"x20"	30 1/4"	50 1/4"	9100			49	
TR2.5-3524-NS	3.5"x24"	34 1/4"	58 1/4"	14000			58	
TR2.5-3530-NS	3.5"x30"	40 1/4"	70 1/4"	9600			66	
TR2.5-3536-NS	3.5"x36"	46 1/4"	82 1/4"	7000			74	
TR2.5-3540-NS	3.5"x40"	50 1/4"	90 1/4"	5800			80	
TR2.5-3548-NS	3.5"x48"	58 1/4"	106 1/4"	3900			91	

4.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 2500 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR2.5-4004-NS	4"x4"	14 1/4"	18 1/4"	1 1/2"	1"	1/2 NPT	31400	33
TR2.5-4006-NS	4"x6"	16 1/4"	22 1/4"				31400	36
TR2.5-4008-NS	4"x8"	18 1/4"	26 1/4"				31400	38
TR2.5-4008-ASAE-NS	4"x8"	20 1/4"	28 1/4"				31400	39
TR2.5-4010-NS	4"x10"	20 1/4"	30 1/4"				31400	41
TR2.5-4012-NS	4"x12"	22 1/4"	34 1/4"				31400	44
TR2.5-4014-NS	4"x14"	24 1/4"	38 1/4"				31400	46
TR2.5-4016-NS	4"x16"	26 1/4"	42 1/4"				26700	49
TR2.5-4016-ASAE-NS	4"x16"	31 1/2"	47 1/2"	2"	1 1/4"		31400	63
TR2.5-4018-NS	4"x18"	28 1/4"	46 1/4"	1 1/2"	1"		22300	55
TR2.5-4020-NS	4"x20"	30 1/4"	50 1/4"				18800	58
TR2.5-4024-NS	4"x24"	34 1/4"	58 1/4"				14000	64
TR2.5-4024-175-NS	4"x24"	34 1/4"	58 1/4"	1 3/4"			26000	68
TR2.5-4024-200-NS	4"x24"	34 1/4"	58 1/4"	2"			31400	73
TR2.5-4030-NS	4"x30"	40 1/4"	70 1/4"				30500	84
TR2.5-4036-NS	4"x36"	46 1/4"	82 1/4"				22200	95
TR2.5-4040-NS	4"x40"	50 1/4"	90 1/4"				18200	103
TR2.5-4048-NS	4"x48"	58 1/4"	106 1/4"				13200	118

2.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-2004-NS	2"×4"	14 1/4"	18 1/4"	1 1/8"	1"	SAE8	9420	16
TR3.0-2006-NS	2"×6"	16 1/4"	22 1/4"				9420	17
TR3.0-2008-NS	2"×8"	18 1/4"	26 1/4"				9420	19
TR3.0-2008-ASAE-NS	2"×8"	20 1/4"	28 1/4"				9420	20
TR3.0-2010-NS	2"×10"	20 1/4"	30 1/4"				9420	20
TR3.0-2012-NS	2"×12"	22 1/4"	34 1/4"				9420	22
TR3.0-2014-NS	2"×14"	24 1/4"	38 1/4"				9420	24
TR3.0-2016-NS	2"×16"	26 1/4"	42 1/4"				9420	25
TR3.0-2018-NS	2"×18"	28 1/4"	46 1/4"				8310	27
TR3.0-2020-NS	2"×20"	30 1/4"	50 1/4"				7050	28
TR3.0-2022-NS	2"×22"	32 1/4"	54 1/4"				6050	30
TR3.0-2024-NS	2"×24"	34 1/4"	58 1/4"				5250	31
TR3.0-2030-NS	2"×30"	40 1/4"	70 1/4"				3610	36
TR3.0-2036-NS	2"×36"	46 1/4"	82 1/4"				2630	41

2.5" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-2504-NS	2.5"×4"	14 1/4"	18 1/4"	1 1/8"	1"	SAE8	14720	19
TR3.0-2506-NS	2.5"×6"	16 1/4"	22 1/4"				14720	21
TR3.0-2508-NS	2.5"×8"	18 1/4"	26 1/4"				14720	22
TR3.0-2508-ASAE-NS	2.5"×8"	20 1/4"	28 1/4"				14720	23
TR3.0-2510-NS	2.5"×10"	20 1/4"	30 1/4"				14720	24
TR3.0-2512-NS	2.5"×12"	22 1/4"	34 1/4"				14720	26
TR3.0-2514-NS	2.5"×14"	24 1/4"	38 1/4"	1 1/4"			14720	28
TR3.0-2516-NS	2.5"×16"	26 1/4"	42 1/4"				14720	29
TR3.0-2518-NS	2.5"×18"	28 1/4"	46 1/4"				12790	32
TR3.0-2520-NS	2.5"×20"	30 1/4"	50 1/4"				10840	34
TR3.0-2524-NS	2.5"×24"	34 1/4"	58 1/4"				8070	38
TR3.0-2528-NS	2.5"× 28"	38 1/4"	66 1/4"				6240	40
TR3.0-2530-NS	2.5"×30"	40 1/4"	70 1/4"				5550	43
TR3.0-2536-NS	2.5"×36"	46 1/4"	82 1/4"				4050	49
TR3.0-2548-NS	2.5"×48"	58 1/4"	106 1/4"				2430	60

3.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-3004-NS	3"×4"	14 1/4"	18 1/4"	1 1/4"	1"	SAE8	21200	24
TR3.0-3006-NS	3"×6"	16 1/4"	22 1/4"				21200	26
TR3.0-3008-NS	3"×8"	18 1/4"	26 1/4"				21200	28
TR3.0-3008-ASAE-NS	3"×8"	20 1/4"	28 1/4"				21200	29
TR3.0-3010-NS	3"×10"	20 1/4"	30 1/4"				21200	30
TR3.0-3012-NS	3"×12"	22 1/4"	34 1/4"				21200	33
TR3.0-3014-NS	3"×14"	24 1/4"	38 1/4"	1 1/2"	1 1/4"		21200	35
TR3.0-3016-NS	3"×16"	26 1/4"	42 1/4"				21200	37
TR3.0-3016-ASAE-NS	3"×16"	31 1/2"	47 1/2"				21200	42
TR3.0-3018-NS	3"×18"	28 1/4"	46 1/4"				21200	42
TR3.0-3020-NS	3"×20"	30 1/4"	50 1/4"				21200	44
TR3.0-3024-NS	3"×24"	34 1/4"	58 1/4"				16580	49
TR3.0-3030-NS	3"×30"	40 1/4"	70 1/4"	1"	11410		57	
TR3.0-3036-NS	3"×36"	46 1/4"	82 1/4"		8330		65	
TR3.0-3048-NS	3"×48"	58 1/4"	106 1/4"		4990		75	
TR3.0-3060-NS	3"×60"	70 1/4"	130 1/4"		3320		93	

3.5" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-3504-NS	3.5"×4"	14 1/4"	18 1/4"	1 1/2"	1"	SAE8	28860	29
TR3.0-3506-NS	3.5"×6"	16 1/4"	22 1/4"				28860	32
TR3.0-3508-NS	3.5"×8"	18 1/4"	26 1/4"				28860	34
TR3.0-3508-ASAE-NS	3.5"×8"	20 1/4"	28 1/4"				28860	35
TR3.0-3510-NS	3.5"×10"	20 1/4"	30 1/4"				28860	37
TR3.0-3512-NS	3.5"×12"	22 1/4"	34 1/4"				28860	39
TR3.0-3514-NS	3.5"×14"	24 1/4"	38 1/4"				28860	42
TR3.0-3516-NS	3.5"×16"	26 1/4"	42 1/4"				28860	44
TR3.0-3516-ASAE-NS	3.5"×16"	31 1/2"	47 1/2"		1 1/4"		22350	50
TR3.0-3518-NS	3.5"×18"	28 1/4"	46 1/4"		1"		26730	47
TR3.0-3520-NS	3.5"×20"	30 1/4"	50 1/4"				22660	49
TR3.0-3524-NS	3.5"×24"	34 1/4"	58 1/4"				16880	58
TR3.0-3530-NS	3.5"×30"	40 1/4"	70 1/4"				11610	66
TR3.0-3536-NS	3.5"×36"	46 1/4"	82 1/4"				8480	74
TR3.0-3548-NS	3.5"×48"	58 1/4"	106 1/4"				5080	91

4.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-4004-NS	4"x4"	14 1/4"	18 1/4"	1 1/2"	1"	SAE8	37690	33
TR3.0-4006-NS	4"x6"	16 1/4"	22 1/4"				37690	36
TR3.0-4008-NS	4"x8"	18 1/4"	26 1/4"				37690	38
TR3.0-4008-ASAE-NS	4"x8"	20 1/4"	28 1/4"				37690	39
TR3.0-4010-NS	4"x10"	20 1/4"	30 1/4"				37690	41
TR3.0-4012-NS	4"x12"	22 1/4"	34 1/4"				37690	44
TR3.0-4014-NS	4"x14"	24 1/4"	38 1/4"				37690	46
TR3.0-4016-NS	4"x16"	26 1/4"	42 1/4"	1 3/4"	1 1/4"		37690	49
TR3.0-4016-ASAE-NS	4"x16"	31 1/2"	47 1/2"	2"			37690	63
TR3.0-4018-NS	4"x18"	28 1/4"	46 1/4"	1 3/4"	1"		37690	66
TR3.0-4020-NS	4"x20"	30 1/4"	50 1/4"				37690	70
TR3.0-4024-NS	4"x24"	34 1/4"	58 1/4"	2"			37690	79
TR3.0-4026-NS	4"x26"	36 1/4"	62 1/4"				37690	84
TR3.0-4030-NS	4"x30"	40 1/4"	70 1/4"				36070	92
TR3.0-4036-NS	4"x36"	46 1/4"	82 1/4"				26340	98
TR3.0-4048-NS	4"x48"	58 1/4"	106 1/4"				15790	123

5.0" BORE		TIE ROD CLEVIS TYPE DOUBLE ACTING HYDRAULIC CYLINDER – 3000 PSI						
PART NUMBER	BORE & STROKE	DIMENSIONS		ROD DIAMETER	PIN SIZE	PORTS	COLUMN LOADS (LBS)	WEIGHT (LBS)
		RETRACTED	EXTENDED					
TR3.0-5004-NS	5"x4"	16 1/4"	20 1/4"	2"	1 1/4"	SAE12	58900	71
TR3.0-5006-NS	5"x6"	18 1/4"	24 1/4"				58900	76
TR3.0-5008-ASAE-NS	5"x8"	22 1/4"	30 1/4"				58900	81
TR3.0-5010-NS	5"x10"	22 1/4"	30 1/4"				58900	86
TR3.0-5012-NS	5"x12"	24 1/4"	36 1/4"				58900	91
TR3.0-5014-NS	5"x14"	26 1/4"	40 1/4"				58900	96
TR3.0-5016-NS	5"x16"	28 1/4"	44 1/4"				58900	101
TR3.0-5016-ASAE-NS	5"x16"	31 1/2"	47 1/2"				58900	104
TR3.0-5018-NS	5"x18"	30 1/4"	48 1/4"				58900	106
TR3.0-5020-NS	5"x20"	32 1/4"	52 1/4"				58900	112
TR3.0-5024-NS	5"x24"	36 1/4"	60 1/4"	2 1/4"			58900	122
TR3.0-5030-NS	5"x30"	42 1/4"	72 1/4"				56340	137
TR3.0-5036-NS	5"x36"	48 1/4"	84 1/4"				41380	153
TR3.0-5048-NS	5"x 48"	60 1/4"	108 1/4"				25020	163

WELDED TYPE

SNOW PLOW



Type:	Welded Hydraulic Cylinder
Action:	Single Acting
Rod End:	Drilled Pinhole
Base End:	Through-hole for Pin Attachment
Bore:	1 3/4" - 2 1/4"
Stroke:	6" - 16"
Rod:	1.5" - 2 "
Pressure:	2,500 PSI
Application:	Snow plows, skid steers, utility vehicles, truck-mounted blade systems
Replacement	Direct replacements for Western®, Fisher®, Meyer®, Monarch®, and Arctic® cylinders



**SAME DAY
SHIPPING**

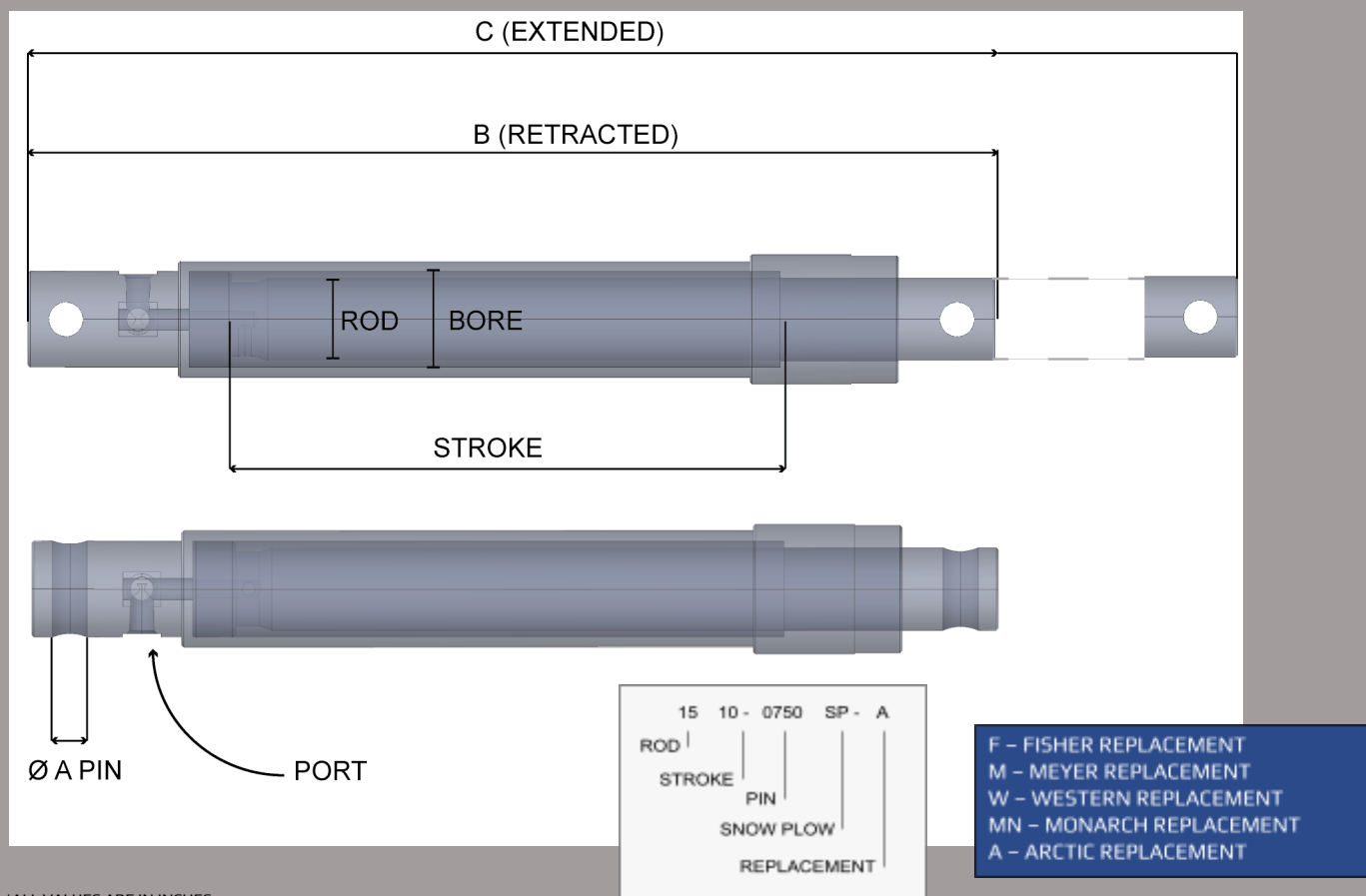


**1 YEAR
WARRANTY**



ORDER NOW





*ALL VALUES ARE IN INCHES

**ALL NUMBERS GIVEN ARE NOMINAL VALUES AND SHOULD BE USED FOR REFERENCE ONLY. ALL PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

1.75" BORE		SNOW PLOW SINGLE ACTING HYDRAULIC CYLINDER - 2500 PSI						
MODEL	BORE SIZE	STROKE	RETRACTED	EXTENDED	MAX FORCE (LBS)	PORT	PIN	WEIGHT (LBS)
1510-0750SP-A	1 3/4"	10"	17"	27"	6010	1/4" NPT	3/4"	13
1512-0750SP-A	1 3/4"	12"	19"	31"	6010	1/4" NPT	3/4"	15
1510-1000SP-F	1 3/4"	10"	17 1/4"	27 1/4"	6010	1/4" NPT	1"	13
1512-1000SP-F	1 3/4"	12"	19 1/4"	31 1/4"	6010	1/4" NPT	1"	15
1506-0625SP-M	1 3/4"	6"	12 3/8"	18 3/8"	6010	1/4" NPT	5/8"	10
1510-0625SP-M	1 3/4"	10"	16 3/16"	26 3/16"	6010	1/4" NPT	5/8"	13
1512-0625SP-M	1 3/4"	12"	18"	30"	6010	1/4" NPT	5/8"	14
1506-0750SP-W	1 3/4"	6"	13"	19"	6010	1/4" NPT	3/4"	10
1508-0750SP-W	1 3/4"	8"	15 1/4"	23 1/4"	6010	1/4" NPT	3/4"	12
1510-0750SP-W	1 3/4"	10"	17 1/4"	27 1/4"	6010	1/4" NPT	3/4"	13
1510-1000SP-W	1 3/4"	10"	17"	27"	6010	1/4" NPT	1"	13
SK-SP175150B		1 3/4" BORE X 1 1/2" ROD SEAL KIT						

2.25" BORE		SNOW PLOW SINGLE ACTING HYDRAULIC CYLINDER - 2500 PSI						
MODEL	BORE SIZE	STROKE	RETRACTED	EXTENDED	MAX FORCE (LBS)	PORT	PIN	WEIGHT (LBS)
2016-1250SP-F	2 1/4"	16"	23 1/4"	39 1/4"	9940	1/4" NPT	1 1/4"	28
2006-0750SP-W	2 1/4"	6"	13 3/16"	19 3/16"	9940	1/4" NPT	3/4"	17
2010-1000SP-W	2 1/4"	10"	17 1/4"	27 1/4"	9940	1/4" NPT	1"	22
2016-1000SP-W	2 1/4"	16"	23 5/16"	39 5/16"	9940	1/4" NPT	1"	29
SK-SP225220B		2 1/4" BORE X 2" ROD SEAL KIT						

SINGLE/DOUBLE ACTING

PISTON ROD CYLINDER



Type:	Rod Hydraulic Cylinder
Action:	Single or Double Acting
Rod End:	Configurable (piston eye, clevis, trunnion, or custom per application)
Base End:	Configurable (cross tube, trunnion, flange, or custom)
Bore:	2.50" to 10.50"
Stroke:	Up to 170"
Tubing:	High-strength D.O.M. (Drawn Over Mandrel)
Pressure:	3000 PSI



CONTACT NOW

SAME DAY
SHIPPING



1 YEAR
WARRANTY



RETURNS & EXCHANGES

RETURNS

At NorthStar Hydraulics, we stand behind the quality of our products—but we understand that returns can occasionally be necessary. If you're not completely satisfied, you may request a **Return Merchandise Authorization (RMA) within 45 days of receipt.**

- Returns made within 15 days may qualify for a full refund (excluding shipping), while those between 16 and 45 days are subject to a 20% restocking fee.
- All items must be unused, in original packaging, and include a valid RMA number.

Please note that special/custom orders, powered equipment that has been fueled, and clearance items are non-returnable. Return shipping is the customer's responsibility.



EXCHANGES

Need to swap your item for a different size or spec? We're happy to help.

Exchanges follow the same guidelines and timeframes as returns and must be initiated within 45 days of purchase.

Once we receive your returned item in original, saleable condition, we'll process your replacement order.

Any price differences, restocking fees, or additional shipping charges will be discussed and confirmed with you prior to fulfillment.

For expedited exchanges, we recommend placing a new order while your original item is being processed for return.





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HYDRAULICS INC**

***PRECISION
PERFORMANCE
RELIABILITY***

We specialize in the design and manufacturing of high-quality hydraulic cylinders and custom hydraulic components.



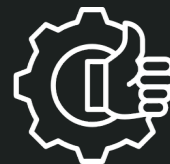
Competitive Pricing

By managing our own overseas production and streamlining distribution, we offer high-performance cylinders at competitive prices.



Quality Assurance

All products undergo rigorous testing to ensure safety, durability, and consistent performance under ISO 9001:2015 & ISO 14001:2015 certification



Customization

Need something specific? We work with clients to source or build cylinders tailored to your exact specifications.

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