



DITCH WITCH 420SX, 410SX, 100SX, ZAHN® R300, ZAHN® R230

VIBRATORY PLOWS



 **Ditch Witch**[®]
ditchwitch.com

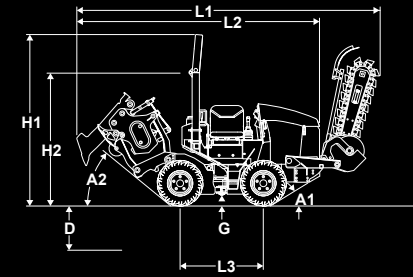
FEEL THE EARTH MOVE.



 **Ditch Witch**[®]
ditchwitch.com

DITCH WITCH 420SX PLOW

With the Ditch Witch® 420sx you'll experience the comfort of an operator's station designed with you in mind, and productivity unlike any vibratory plow you've ever used. In most conditions, the 420sx can plow in more product per minute than any other plow in its class. And, because you're sitting instead of walking, you can be more productive, too.



SPECIFICATIONS

DIMENSIONS	U.S.	METRIC
Length, min.	192 in	4.88 m
Height, max.	91 in	2.31 m
Width, max.	62 in	1.57 m

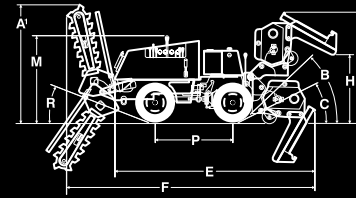


KEY FEATURES

- Superior productivity: In most conditions, the 420sx plows in more product per minute than any other plow in its class.
- Excellent ground-following capability for more accurate installations in uneven terrain.
- (Photograph A) Operator's console moves with the operator when the frame articulates, so controls are always in the same place in relation to the operator.
- 41-hp (30.5 kW) Deutz diesel engine helps provide superior productivity in a compact package, about the same size as a walk-behind model.
- (Photograph B) Improved headshaft design and large auger on the optional trenching attachment help make the 420sx a true production ride-on trencher.
- Increased ground speed and single, pilot-operated control for both the ground drive and steering make the 420sx vibratory plow easy and efficient to operate.
- Exclusive dual-speed attachment drive helps the operator respond to changing ground conditions, for optimal productivity in all soil types.
- Exclusive fold-down ROPS reduces the unit's overall height by 20 inches (510 mm) to briefly allow more clearance under tree limbs, eaves, and other low-hanging obstacles.
- Large-capacity (11-gallon/41.6-L) fuel tank allows you to work longer without stopping to refuel.
- Quick-disconnect attachment fittings make it easy to use optional trenching and drilling attachments, for greater versatility.

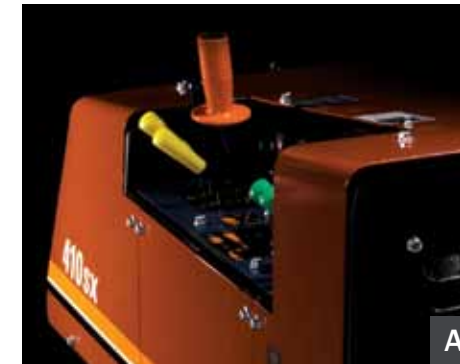
DITCH WITCH 410SX PLOW

The Ditch Witch® 410sx is the most outstanding articulated-steer vibratory drop plow in its horsepower class. Equipped with dozens of innovative features, the 410sx quickly and efficiently installs communication lines, natural gas and water services, or a complete underground sprinkler system without digging a trench. Need a trench? The 410sx can do that, too.



SPECIFICATIONS

DIMENSIONS	U.S.	METRIC
Length, min.	165 in	4.19 m
Height, max.	63.5 in	1.61 m
Width, max.	56 in	1.42 m

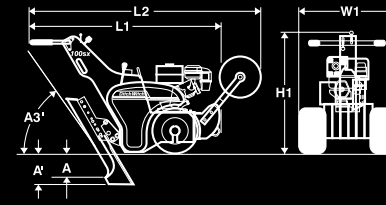


KEY FEATURES

- With a 45-net-hp (33.6-kW) Deutz diesel engine, the 410sx vibratory plow has the power you need for the most demanding conditions.
- Articulated-frame steering enables the 410sx to maneuver around trees and other obstacles.
- Oscillating rear axle keeps four-wheel drive engaged, for excellent traction and drawbar.
- (Photograph A) Easily accessible, easy-to-understand, color-coded controls; one lever controls ground speed, direction and steering.
- When attachment or ground drive is engaged, operator-presence system stops the engine if operator releases the control.
- Emissions-compliant engine is enclosed for quiet operation, and vibration-isolated to reduce operator fatigue.
- Optional front-mounted trencher attachment works as hard as many dedicated trenchers.
- Centerline digging attachment features an auger for fast spoils removal.
- Vibratory plow trolley automatically centers itself when the plow blade is raised from the ground while plowing or trenching; a manual lock secures the trolley during transport.
- Direct hydrostatic ground, plow and trencher drives require no chain adjustments.
- Pin joint bushings require no lubrication.
- (Photograph B) All Ditch Witch vibratory plows are backed by superior-quality service and support, available exclusively from your local Ditch Witch dealer.

DITCH WITCH 100SX PLOW

The Ditch Witch® 100sx does more than stand its ground against the competition. Its high-flotation tires give you the traction you need without manhandling the turf, and its quiet Honda® engine gives you the necessary power without assaulting your ears. With the 100sx, noise and vibration stay where they belong—below the surface.



SPECIFICATIONS

DIMENSIONS	U.S.	METRIC
Length, min.	67 in	1.7 m
Height, max.	40 in	1.02 m
Width, max.	35 in	889 mm

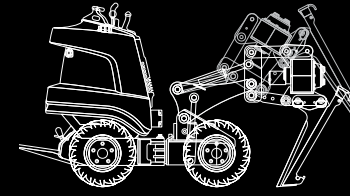


KEY FEATURES

- Designed to install power and communications lines up to one inch (25 mm) in diameter and natural gas, water service and sprinkler systems up to 0.75 inches (19 mm) in diameter.
- (Photograph A) All controls are color-coded and accessible from the operator's position for easy operation.
- Self-propelled design for better maneuverability.
- Feed and pull blades available for installing cable, pipe, and other material.
- Hydrostatic ground drive provides greater traction, maneuverability, and durability.
- Minimal maintenance requirements; easy access to service points.
- (Photograph B) Versatile plow blade can bury pipe and cable with up to 12 inches (305 mm) of cover.
- Compact size allows access through a standard yard gate.
- The Ditch Witch organization supports all of its products with superior-quality parts, service and training, all available from a worldwide network of Ditch Witch dealers.

THE ZAHN Plow

The Zahn® plow is a utility contractor's dream come true. With its extraordinary power, remarkable articulating ability and lightweight, compact size, you can install utility and communications cable and conduit in tight spaces, around troublesome obstacles, and under delicate turf.



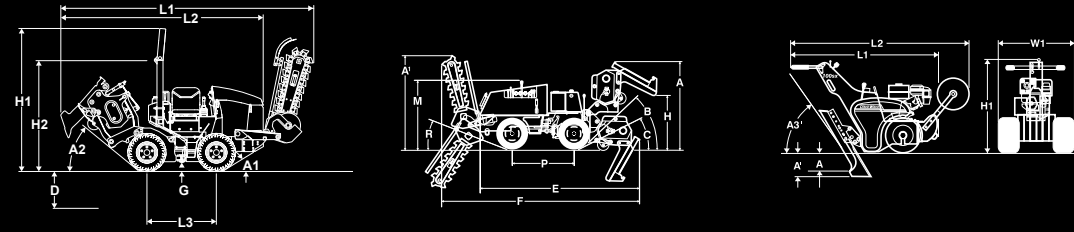
SPECIFICATIONS

DIMENSIONS	U.S.	METRIC
Length, min.	104.8 in	2.66 m
Height, max.	56 in	1.42 m
Width, max.	36 in	914 mm



KEY FEATURES

- Choice of two 4WD models, the R300 and R230, each featuring high-performance Kohler® engines with the power to tackle any job.
- Variable blade pitch allows operator to change the angle of the leading edge of the blade to be more or less aggressive, to match soil conditions.
- Accepts standard Ditch Witch® vibratory plow blades, eliminating the need to purchase new blades.
- Optional sod cutter and skid shoes provide greater versatility and minimize restoration.
- (Photograph A) Ergonomically designed operator's station features soft-touch, color-coded controls that are easy to learn and provide smooth, easy operation.
- (Photograph B) Optional reel carrier provides efficient installation of cable.
- Units have an exclusive traction-assist feature that provides extra drawbar on demand, enabling the operator to pull more and traverse soft ground with minimal slippage.
- Optional dual wheels or tracks provide even greater traction and stability, even on slopes; high-flotation tires or tracks distribute weight evenly, so the Zahn can traverse lawns and other delicate turf with minimal impact.
- Standard cruise control, which locks in operating speeds, reduces operator fatigue and increases productivity.



SPECIFICATIONS

420SX

410SX

100SX

DIMENSIONS	U.S.		METRIC		U.S.		METRIC		U.S.		METRIC	
HEIGHT												
MAXIMUM	91 IN		2.31 M		63.5 IN##		1.61 M##		40 IN		1.02 M	
MINIMUM	71 IN		1.8 M		49.5 IN		1.26 M		40 IN		1.02 M	
LENGTH, MIN.												
W/O TRENCHER	142 IN**		3.61 M**		132 IN**		3.35 M**		67 IN		1.7 M	
W/ TRENCHER	192 IN***		4.88 M***		165 IN***		4.19 M***		N/A			
WIDTH												
MAXIMUM	62 IN		1.57 M		56 IN		1.42 M		35 IN		889 MM	
MINIMUM	42.5 IN		1.08 M		36 IN		910 MM		32.5 IN		825.5 MM	
ANGLE OF APPROACH	25° ##				21° ##				33° *			
ANGLE OF DEPARTURE	22.5° **				17° **				9° *			
GROUND CLEARANCE, MAX.	5.5 IN		140 MM		7.8 IN		198 MM		4.1 IN		104 MM	
WHEEL BASE	46 IN		1.17 M		46 IN		1.17 M		N/A			
PLOW COVER DEPTH, MAX.	24 IN		610 MM		24 IN		610 MM		12 IN		305 MM	
WEIGHT												
BASIC UNIT*#	3782 LB		1715 KG		3370 LB		1529 KG		720 LB		326 KG	
TRENCHER	450 LB		204 KG		310 LB###		141 KG###		N/A			
OPERATION												
GROUND DRIVE SPEED												
FORWARD, MAX.	3.8 MPH		6.2 KM/H		2.7 MPH		4.3 KM/H		92 FPM		28 MPM	
REVERSE, MAX.	2.7 MPH		4.4 KM/H		1.4 MPH		2.3 KM/H		92 FPM		28 MPM	
MATERIAL INSTALLATION DIAMETER												
PULL BLADE, MAX.	2 IN		51 MM		3 IN		76 MM		0.88 IN		22 MM	
FEED BLADE, MAX.	1 IN		25 MM		1 IN		25 MM		0.5 IN		13 MM	
MATERIAL BEND RADIUS, FEED BLADE												
MAXIMUM	3 IN		76 MM		10 IN		254 MM		1 IN		25 MM	
MINIMUM	1.5 IN		38 MM		1.5 IN		38 MM		1 IN		25 MM	
PLOW BLADE WIDTH												
MAXIMUM	1.43 IN		36 MM		1.27 IN		32 MM		0.77 IN		20 MM	
MINIMUM	0.5 IN		13 MM		0.38 IN		10 MM		0.38 IN		10 MM	
PLOW BLADE DEPTH												
MAXIMUM	24 IN		610 MM		24 IN		610 MM		12 IN		305 MM	
MINIMUM	10 IN		254 MM		6 IN		152 MM		6 IN		152 MM	
POWER TRAIN												
ENGINE												
MODEL	DEUTZ F3L2011				DEUTZ D2009L04				HONDA - GX340			
FUEL	DIESEL				DIESEL				GASOLINE			
COOLING MEDIUM	INTEGRATED OIL COOLED				LIQUID				AIR			
ASPIRATION	NATURAL				NATURAL				NATURAL			
NUMBER OF CYLINDERS	3				4				1			
DISPLACEMENT	142 IN ³		2.3 L		140 IN ³		2.3 L		20.6 IN ³		337 ML	
BORE	3.7 IN		94 MM		3.5 IN		90 MM		3.23 IN		82 MM	
STROKE	4.4 IN		112 MM		3.5 IN		90 MM		2.52 IN		64 MM	
RATED SPEED	2300 RPM				2600 RPM				3600 RPM			
MANUFACTURER'S GROSS POWER RATING (PER SAE J1940 FOR GAS AND SAE J1995 FOR DIESEL)	41.4 HP		30.9 KW		48 HP		35.7 KW		11 HP		8.2 KW	
EMISSIONS COMPLIANCE	EPA TIER 2, CARB TIER 4I		EU STAGE IIIA		EPA TIER 4I		EU STAGE IIIA		N/A			
DRIVE TYPE												
GROUND	HYDROSTATIC				HYDROSTATIC				HYDROSTATIC			
PLOW	HYDRAULIC GEAR PUMP				HYDRAULIC GEAR PUMP				BELT W/ HAND CLUTCH			
TRENCHER	HYDRAULIC GEAR PUMP				HYDRAULIC GEAR PUMP				N/A			
AUXILIARY	HYDRAULIC GEAR PUMP				HYDRAULIC GEAR PUMP				N/A			
TIRES												
MAXIMUM	26 X 12-12				26 X 12-12				18 X 11-8			
MINIMUM	23 X 10.5-12				23 X 10.5-12				16 X 6.5-8			

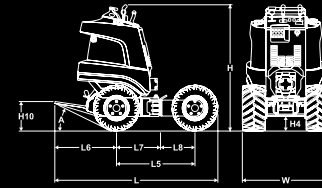
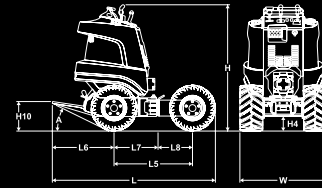
SPECIFICATIONS

420SX

410SX

100SX

HYDRAULIC SYSTEM	U.S.		METRIC		U.S.		METRIC		U.S.		METRIC	
GROUND DRIVE												
PRESSURE	3750 PSI		259 BAR		4000 PSI		276 BAR		2500 PSI		172 BAR	
FLOW RATE	24.7 GPM		90.8 L/MIN		16.8 GPM		63.8 L/MIN		2.2 GPM		8.3 L/MIN	
ATTACHMENT												
PRESSURE	3000 PSI		207 BAR		3000 PSI		207 BAR		N/A			
FLOW RATE	15.7 GPM		59.4 L/MIN		19.1 GPM		72.2 L/MIN		N/A			
AUXILIARY												
PRESSURE	2900 PSI		200 BAR		2000 PSI		138 BAR		N/A			
FLOW RATE	3.8 GPM		14.3 L/MIN		7.9 GPM		29.8 L/MIN		N/A			
FLUID CAPACITIES												
FUEL TANK	11.1 GAL		42 L		8.8 GAL		33.3 L		1.7 GAL		6.5 L	
HYDRAULIC RESERVOIR	9.7 GAL		36.7 L		14 GAL		53 L		3.5 GAL		13.2 L	
BATTERY												
SAE COLD CRANK RATING @ 0° F (-18° C)	800 AMPS				800 AMPS				N/A			
NOISE LEVELS												
OPERATOR SOUND PRESSURE (PER ISO 6394)	89 DBA				N/A				N/A			
EXTERIOR SOUND POWER (PER ISO 6393)	105 DBA				N/A				N/A			



SPECIFICATIONS

R300

R230

DIMENSIONS	U.S.	METRIC	U.S.	METRIC
HEIGHT				
MAXIMUM	58 IN	1.47 M	58 IN	1.47 M
MINIMUM	54 IN	1.37 M	54 IN	1.37 M
LENGTH, MIN.	104.8 IN**	2.66 M**	104.8 IN**	2.66 M**
WIDTH				
MAXIMUM	38 IN	940 MM	37 IN	940 MM
MINIMUM	36 IN	889 MM	35 IN	889 MM
ANGLE OF APPROACH	32° **		32° **	
ANGLE OF DEPARTURE	25°		25°	
GROUND CLEARANCE, MAX.	5.3 IN	135 MM	5.3 IN	135 MM
WHEEL BASE	34 IN	869 MM	34 IN	869 MM
PLOW COVER DEPTH, MAX.	18 IN	457 MM	18 IN	457 MM
WEIGHT, BASIC UNIT*#	2172 LB	985 KG	2172 LB	985 KG
OPERATION				
GROUND DRIVE SPEED				
FORWARD, MAX.	5 MPH	8 KM/H	5 MPH	8 KM/H
REVERSE, MAX.	5 MPH	8 KM/H	5 MPH	8 KM/H
MATERIAL INSTALLATION DIAMETER				
PULL BLADE, MAX.	3 IN	76 MM	3 IN	76 MM
FEED BLADE, MAX.	0.75 IN	19 MM	0.75 IN	19 MM
MATERIAL BEND RADIUS, FEED BLADE				
MAXIMUM	7.5 IN	191 MM	7.5 IN	191 MM
MINIMUM	1.5 IN	38 MM	1.5 IN	38 MM
PLOW BLADE WIDTH				
MAXIMUM	0.88 IN	22 MM	0.88 IN	22 MM
MINIMUM	0.38 IN	10 MM	0.38 IN	10 MM
PLOW BLADE DEPTH				
MAXIMUM	18 IN	457 MM	18 IN	457 MM
MINIMUM	6 IN	152 MM	6 IN	152 MM
POWER TRAIN				
ENGINE				
MODEL	KOHLER CH750S		KOHLER CH23S	
FUEL	GASOLINE		GASOLINE	
COOLING MEDIUM	AIR		AIR	
ASPIRATION	NATURAL		NATURAL	
NUMBER OF CYLINDERS	2		2	
DISPLACEMENT	45.6 IN ³	747 ML	41.1 IN ³	674 ML
BORE	3.3 IN	83 MM	3.15 IN	80 MM
STROKE	2.7 IN	69 MM	2.64 IN	67 MM
RATED SPEED	3600 RPM		3600 RPM	
MANUFACTURER'S GROSS POWER RATING (PER SAE J1940 FOR GAS AND SAE J1995 FOR DIESEL)	30 HP	22.4 KW	23 HP	17.2 KW
DRIVE TYPE				
GROUND	HYDROSTATIC		HYDROSTATIC	
PLOW	HYDRAULIC GEAR PUMP		HYDRAULIC GEAR PUMP	
AUXILIARY	HYDRAULIC GEAR PUMP		HYDRAULIC GEAR PUMP	
TIRES				
MAXIMUM	20 X 10-8		20 X 10-8	
MINIMUM	18 X 8.5-8		18 X 8.5-8	

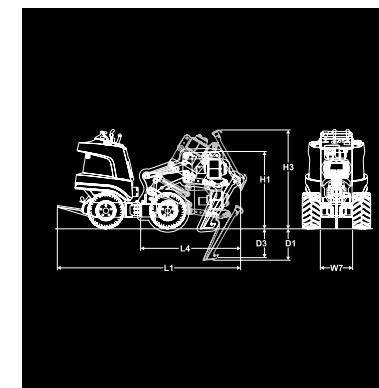
SPECIFICATIONS

R300

R230

	U.S.	METRIC	U.S.	METRIC
HYDRAULIC SYSTEM				
GROUND DRIVE				
PRESSURE	3500 PSI	241 BAR	3500 PSI	241 BAR
FLOW RATE	19.3 GPM	73 L/MIN	19.3 GPM	73 L/MIN
ATTACHMENT				
PRESSURE	3000 PSI	207 BAR	3000 PSI	207 BAR
FLOW RATE	12 GPM	46 L/MIN	12 GPM	46 L/MIN
AUXILIARY				
PRESSURE	3000 PSI	207 BAR	3000 PSI	207 BAR
FLOW RATE	6 GPM	23 L/MIN	6 GPM	23 L/MIN
FLUID CAPACITIES				
FUEL TANK	10.9 GAL	41.3 L	10.9 GAL	41.3 L
HYDRAULIC RESERVOIR	7.7 GAL	29.1 L	7.7 GAL	29.1 L
BATTERY				
SAE COLD CRANK RATING @ 0° F (-18° C)	200 AMPS		200 AMPS	
NOISE LEVELS				
OPERATOR SOUND PRESSURE (PER ISO 6394)	90 DBA		90 DBA	
EXTERIOR SOUND POWER (PER ISO 6393)	103 DBA		102 DBA	

ZAHN VIBRATORY PLOW



DIMENSIONS	U.S.	METRIC
L MOBILE LENGTH	104.8 IN	2.66 M
L1 TIE-DOWN LENGTH	101.8 IN	2.59 M
L4 ATTACHMENT LENGTH	55.5 IN	1.41 M
H MOBILE HEIGHT	56 IN	1.42 M
H1 TIE-DOWN HEIGHT	43 IN	1.09 M
H3 MAX ATTACHMENT HEIGHT	56 IN	1.41 M
D1 OPERATING DEPTH	20 IN	508 MM
D3 COVER DEPTH	18 IN	457 MM
W WIDTH	36 IN	914 MM
W7 ATTACHMENT WIDTH	18 IN	457 MM
A ANGLE OF DEPARTURE	25°	
A1 ANGLE OF APPROACH	30°	
UNIT MASS	1839 LB	834.2 KG
ATTACHMENT MASS W/BLADE	348 LB	157.9 KG
OPERATION		
PLOW VIBRATOR FORCE @ 1600 RPM	4600 LB	20.46 KN
MAXIMUM MATERIAL DIAMETER		
PULLED	3 IN	76 MM
FED	1 IN	25 MM



THE CHARLES MACHINE WORKS, INC. DITCH WITCH WORLDWIDE HEADQUARTERS PERRY, OK 73077-0066 U.S.A.

TOLL FREE 800 654 6481 PHONE 580 336 4402 FAX 580 336 3458 INTERNATIONAL FAX 580 572 3561

FOR INFORMATION ABOUT EASY FINANCING WITH A DITCH WITCH PLATINUM PLUS ACCOUNT

AND TO FIND THE DEALER NEAREST YOU, VISIT DITCHWITCH.COM.

GROUNDBREAKING™ EQUIPMENT FROM THE COMPANY THAT LAUNCHED THE INDUSTRY

COMPACT UTILITY | TRENCHERS | HDD | ELECTRONICS



Know what's below.
Call before you dig.

©2010 The Charles Machine Works, Inc.

CERTIFIED QUALITY
MANAGEMENT SYSTEM
ISO 9001:2000

LFCMWC144101-0810-01