



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

VIBRATORY PLOWS



 **Ditch Witch**[®]
ditchwitch.com

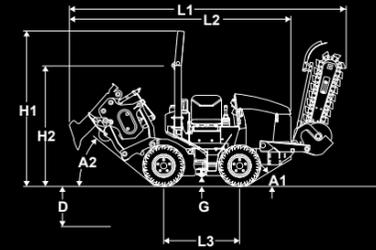
FEEL THE EARTH MOVE.



 **Ditch Witch**[®]
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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 |

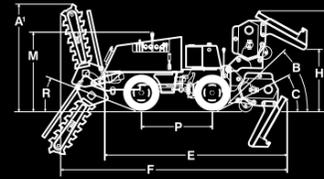


KEY FEATURES

- 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 |

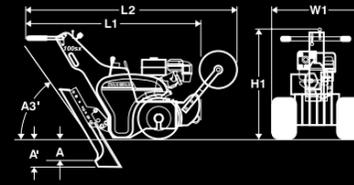


KEY FEATURES

- 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 |

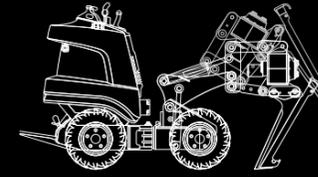


KEY FEATURES

- 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.



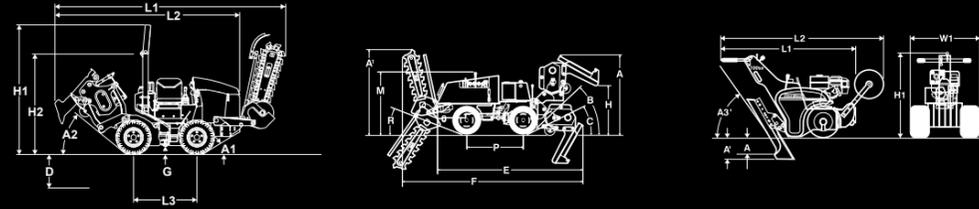
SPECIFICATIONS

| 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 | |

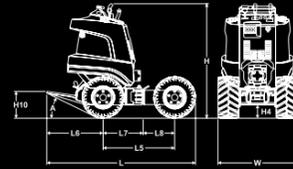
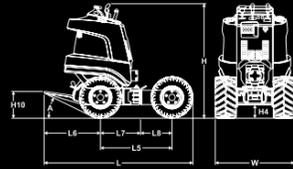
SPECIFICATIONS

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 | |

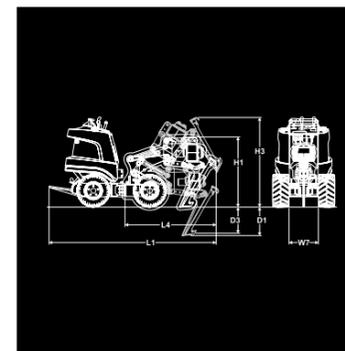
SPECIFICATIONS

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

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