

Checklist for Claims of Beneficial Use Received at CSG Counter

Application #:	WRD Reviewer:
Transfer #:	
Date Received:	
CWRE Name:	
Priority Date (s):	

Fees Required:

- YES NO A fee of \$230 must accompany this form for permits with priority dates of July 9, 1987, or later.
- YES NO A fee of \$230 must accompany this form for any transfers including a water right with a priority date of July 9, 1987, or later.
 Example – A transfer involves 5 rights and one of the rights has a priority date of July 9, 1987, or later, the fee is required.

Fill in App or Transfer Number

Map Review:

- Map on polyester film (OAR 690-014-0170(1) & 310-0050(1)(b))
- Application & permit #; or transfer # (OAR 690-014-0100(1))
- Disclaimer (OAR 690-014-0170(5))
- North arrow (OAR 690-310-0050(2)(c))
- CWRE stamp and signature (OAR 690-014 & 310-0050)
- Appropriate scale (1" = 1320', 1" = 400', or the original full-size scale of the county assessor map) (014 & 310)
- Township, range, section, and tax lot numbers (OAR 690-310-0050(4))

Report Review:

- On form provided by the Department (OAR 690-014-0100(1))
- Application & permit #; or transfer # (OAR 690-014)
- Ownership information (OAR 690-014)
- Date of survey (OAR 690-014)
- Person interviewed (OAR 690-014)
- County (OAR 690-014)
- CWRE stamp and signature (OAR 690-014-0100)
- Signature(s) of all permittee of transfer holder (OAR 690-014-0100)

MONEY SLIP

DATE: _____ RECEIPT #: _____

RECEIVED FROM: _____ APPLICATION PERMIT TRANSFER

CASH CHECK # _____ OTHER (IDENTIFY) _____ TOTAL RECD \$ _____

1083 TREASURY 4178 MISC CASH ACCT.

0407 COPIES _____ \$ _____
 OTHER: (IDENTIFY) _____ \$ _____

0243 Instream Lease _____ 0244 Muni Water Mgmt. Plan _____ 0245 Cons. Water _____

1083 TREASURY 4270 WRD OPERATING ACCT.

MISCELLANEOUS

0407 COPY & TAPE FEES 4611 \$ _____

0410 RESEARCH FEES \$ _____

0409 MISC REVENUE (IDENTIFY) \$ _____

TC162 DEPOSIT LIAB. (IDENTIFY) \$ _____

0240 EXTENSION OF TIME \$ _____

WATER RIGHTS

0201 SURFACE WATER EXAM FEE \$ _____ RECORD FEE \$ _____

0203 GROUND WATER \$ _____ 0204 \$ _____

0205 TRANSFER \$ _____

WELL CONSTRUCTION

0218 WELL DRILL CONSTRUCTOR EXAM FEE \$ _____ RECORD FEE \$ _____

LANDOWNER'S PERMIT \$ _____ 0219 \$ _____

OTHER (IDENTIFY) COBU \$ 230.00 0220 \$ _____

0607 TREASURY 0487 HYDROELECTRIC

0233 POWER LICENSE FEE (FWWRD) LIC NUMBER _____ \$ _____

0231 HYDRO LICENSE FEE (FWWRD) _____ \$ _____

HYDRO APPLICATION \$ _____

SPECIAL INSTRUCTIONS:

RETURN TO APPLICANT -- LETTER ATTACHED

Groundwater File Review:

- Pump Test not required (Priority Date prior to December 20, 1988) *If no, include pump test flyer w/acknowledgment letter
- Pump Test required (Priority Date on or after December 20, 1988)
- Pump Test submitted
- Pump Test not submitted

**CLAIM OF
BENEFICIAL USE
for Transfer New or Additional
POD Only**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

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Not Req. → A fee of \$230 must accompany this form for any Transfer final orders including a water right with a priority date of July 9, 1987, or later.

Example – A transfer involves 5 rights and one of the rights has a priority date of July 9, 1987, or later, the fee is required.

A separate form shall be completed for each transfer.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:

<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

A claim of beneficial use includes both this report and a map. If the map is being mailed separately from this form, please include a note with this form indicating such.

If you have questions regarding the completion of this form, please call 503-979-9103.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see:

<https://www.oregon.gov/OWRD/programs/WaterRights/RA/Pages/default.aspx>

SECTION 1

GENERAL INFORMATION

Type of Authorized Change

This Claim is being submitted for a transfer where the only authorized change was a change in either point(s) of diversion or additional point(s) of diversion, or a combination of both. **YES NO**

If additional changes were authorized, you will need to select a different form.

1. File Information

APPLICATION #

T-12477

OWRD

2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME Steven M. Self		PHONE NO. 503-706-4415	ADDITIONAL CONTACT No. --
ADDRESS 226 N. Page St. (Property Address)			
CITY Portland	STATE OR	ZIP 97227	E-MAIL tosmself@gmail.com

If the current property owner is not the transfer holder of record, it is recommended that an assignment be filed with the Department. **Each** transfer holder of record must sign this form.

3. Transfer holder of record (this may, or may not, be the current property owner)

TRANSFER HOLDER OF RECORD Steven M. Self			
ADDRESS 226 N. Page Street			
CITY Portland	STATE OR	ZIP 97227	

4. Date of Site Inspection:

July 16, 2021/Sept.7,2021

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Tyler Fields	7/16/21-9/7/21	Project Manager

6. County:

Jackson

7. If any property described in the place of use of the transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(5)):

OWNER OF RECORD Steven M. Self			
ADDRESS 226 N. Page St.			
CITY Portland	STATE OR	ZIP 97227	

Add additional tables for owners of record as needed

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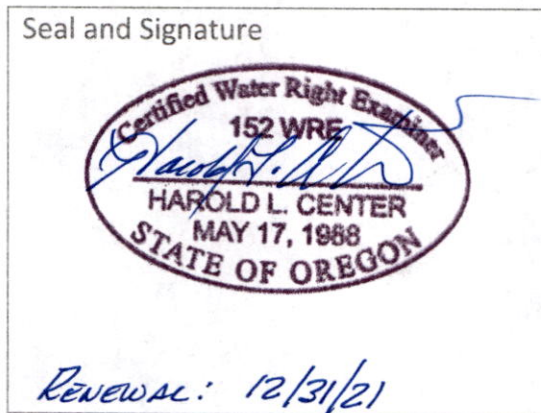
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SECTION 2
SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME Harold L. Center		PHONE NO. 541-535-6108	ADDITIONAL CONTACT NO. --	
ADDRESS 2604 David Lane				
CITY Medford	STATE OR	ZIP 97504	E-MAIL center1071@gmail.com	

Transfer Holder of Record Signature or Acknowledgement

Each transfer holder of record must sign this form in the space provided below.

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	TITLE	DATE
	Steven M. Self	Owner	9/15/21

SECTION 3
CLAIM DESCRIPTION

Note: The Claim only needs to describe the new or additional point(s) of diversion. This Claim does not need to provide information for the original point(s) of diversion unless the original point of diversion is either a new or additional point of diversion on another right involved in this transfer.

1. New or additional point of diversion name or number:

POINT OF DIVERSION (POD) NAME OR NUMBER (CORRESPOND TO MAP)	SOURCE
P.O.D. No. 1	Ruch Gulch, Thompson Ck. Sturgis/Carberry/O'Brian Ck., Big Miller Lake Res.

2. Variations:

Was the use developed differently from what was authorized by the transfer final order, YES NO or extension final? If yes, describe below.

(e.g. "The order allowed three new/additional points of diversion. The water user only developed one of the points.")

--

3. Claim Summary:

NEW OR ADDITIONAL POD NAME OR #	MAXIMUM RATE AUTHORIZED IN ORDER	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED
P.O.D. No. 1	0.16 CFS/71.81 GPM	0.176 CFS	Not able to measure due to drought.

**SECTION 4
SYSTEM DESCRIPTION**

Are there multiple new or additional Points of Diversion (POD)s? YES NO

If "YES" you will need to copy and complete a separate Section 4 for each POD.

POD Name or Number this section describes (only needed if there is more than one):

P.O.D. #1

A. POD System Information

Provide the following information concerning the point of diversion. Information provided must describe the equipment used to appropriate water from the point of diversion.

1. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Munro	LP 300 B	34720J2	Centrifugal	2"	2"

2. Motor Information

MANUFACTURER	HORSEPOWER
Munro	3 HP

3. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
3.0 HP	No Gage	5'	108	0.178

4. Provide pump calculations:

$$Q = \frac{3 \times 6.61}{113} = 0.176 \text{ CFS (78.76 gpm)}$$

5. Measured Pump Capacity (using meter if meter was present and system was operating) **

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
001.103 *	001.104	4'56"	0.176

*Meter Reading in Acre Feet

Reminder: For pump calculations use the reference information at the end of this document.

B. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the diversion involve a gravity flow pipe? YES NO

If "NO", items 2 through 4 relating to this section may be deleted.

**SECTION 4
SYSTEM DESCRIPTION**

Are there multiple new or additional Points of Diversion (POD)s?

YES NO

If "YES" you will need to copy and complete a separate Section 4 for each POD.

POD Name or Number this section describes (only needed if there is more than one):

Bulge

A. POD System Information

Provide the following information concerning the point of diversion. Information provided must describe the equipment used to appropriate water from the point of diversion.

1. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Hallmark Ind.	MA0414	Not Available	Submersible	1.25"	1.25"

2. Motor Information

MANUFACTURER	HORSEPOWER
Hallmark Industries	1.0

3. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
1	40	-0-	10	

4. Provide pump calculations:

$Q = 1 \times \frac{7.04}{10+63.5} = \frac{7.04}{73.5} = 0.096'$ (43 gpm) * Assume PSI for Drip @ 25 PSI
 ** NOTE – Irrigation is also by gravity from Bulge.

5. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
N/A - see 5-A	N/A	N/A	N/A

Reminder: For pump calculations use the reference information at the end of this document.

**SECTION 5
CONDITIONS**

All conditions contained in the transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Describe how the water user has complied with each of the development timelines established in the transfer final order and any extensions of time issued for the transfer:

	DATE FROM TRANSFER	DATE THE NEW AND/OR ADDITIONAL POD(S) WERE READY FOR USE <i>*THIS DATE MUST FALL BETWEEN THE "ISSUANCE DATE" AND THE "COMPLETENESS DATE"</i>
ISSUANCE DATE	Sept. 21, 2017	
COMPLETENESS DATE FROM ORDER (C)	Oct. 1, 2018	See No. 2 – Extension of Time to Oct. 1, 2021

* MUST BE WITHIN PERIOD BETWEEN TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETE THE CHANGE

2. Is there an extension final order(s)?

YES NO

If "NO", you may delete the following table.

If for a transfer extension order, provide the following information:

VOLUME	PAGE	DATE EXTENDED TO
114	129	Oct. 1, 2021

3. Measurement Conditions:

a. Does the transfer final order, or any extension final order require the installation of a meter or other approved measuring device?

YES NO

If "NO", items b through f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion.

b. Has a meter been installed?

YES NO

c. Meter Information

POD NAME OR #	MANUFACTURER	SERIAL #	CONDITION (WORKING OR NOT)	CURRENT METER READING	DATE INSTALLED
1	NETAFIM	21-50063214	Working	001.003	001.004

4. Recording and reporting conditions

a. Is the water user required to report the water use to the Department? **OWRD** YES NO

5. Fish Screening

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion? YES NO

If "NO", items b through e relating to this section may be deleted.

Reminder: If fish screening devices were required, the COBU map must indicate their location in relation to the point of diversion.

b. Has the fish screening been installed? YES NO

c. When was the fish screening installed?

DATE	BY WHOM
6/2021	Landowner – Steve Self

Reminder: If the permit or transfer final order was issued on or after February 1, 2011, the fish screen is required to be approved by the Oregon Department of Fish and Wildlife regardless of the rate of diversion.

d. If the diversion involves a pump and the total diversion rate of all rights at the point of diversion is less than 225 gpm (0.5 cfs) and the permit was issued prior to February 1, 2011:

- Has the self-certification form previously been submitted to the Department? NA YES NO

If not, go to <https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>, complete and attach a copy of the 'ODFW Small Pump Screen Self Certification' form to this claim, and send a copy of it to the Oregon Department of Fish and Wildlife (ODFW).

Reminder: Failure to submit evidence of a timely installed fish screen may result in an unfavorable determination. The ODFW self certification form needs to have been previously submitted or be attached to this form.

e. If the diversion does not involve a pump or the total diversion rate of all rights at the point of diversion is 225 gpm (0.5 cfs) or greater:

- Has the ODFW approval been previously submitted? NA YES NO

If not, contact and work with ODFW to ensure compliance. To demonstrate compliance, provide signed documentation from ODFW. A form is available at:

<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

Reminder: Failure to submit evidence of a timely installed fish screen may result in an unfavorable determination. In order to receive a favorable approval, the ODFW/WRD "Fish Screen Inspection" form needs to have been previously submitted or be attached to this form.

6. By-pass Devices

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion? YES NO

If "NO", items b and c relating to this section may be deleted.

7. Other conditions required by the transfer final order or extension final order:

- a. Was the water user required to restore the riparian area if it was disturbed? YES NO
- b. Was a fishway required? YES NO
- c. Other conditions? YES NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

NONE

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**SECTION 6
ATTACHMENTS**

Provide a list of any additional documents you are attaching to this report:

ATTACHMENT NAME	DESCRIPTION
ODFW	7/15/21 Letter Approving Fish Screening
Pump Specifications	MUNRO LP Series – LP 300B
Hallmark Ind.-Rapidflo	Submersible MA0414X
Flow Meter	NETAFIM Water Flow Specifications – WRM Meter
Rivulis Drip Line	Pressure Compensating Drip Line
Naandanjain Sprinklers	Model 280 Overhead Sprinklers

**SECTION 7
CLAIM OF BENEFICIAL USE MAP**

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on polyester film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

For the purpose of this Claim, the map identifying the location of the place of use does not require a new survey. The location of the place of use identified on the Claim map should be based on the original right of record at the time the transfer final order was issued. In transfers approved for additional points of diversion, the original points must be identified the map based on the original right of record at the time the transfer final order was issued.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

Original place of use mapped with Trimble Pro X-R GPS, Supplemented with conventional survey methods for tie to PLSS Corner. Point of Diversion and place of use verified with Trimble GED-7X.

Area Irrigated Using: 16,200' + Feet of Rivulis Pressure compensating Drip Line installed for Primary Irrigation. Drip Lines are 0.17 gph on 12" spacing. 2 Naandanjain Model 280/280PG Overhead Portable Sprinklers are utilized to irrigate small pasture (0.8 Acre) and other misc. areas as needed.

Area irrigated direct from P.O.D. or into "Bulge" pond like storage at top of irrigated area. Water from bulge can either be pumped from the bulge or by gravity flow or both as needed.

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D5000 PC / D5000 PCAS

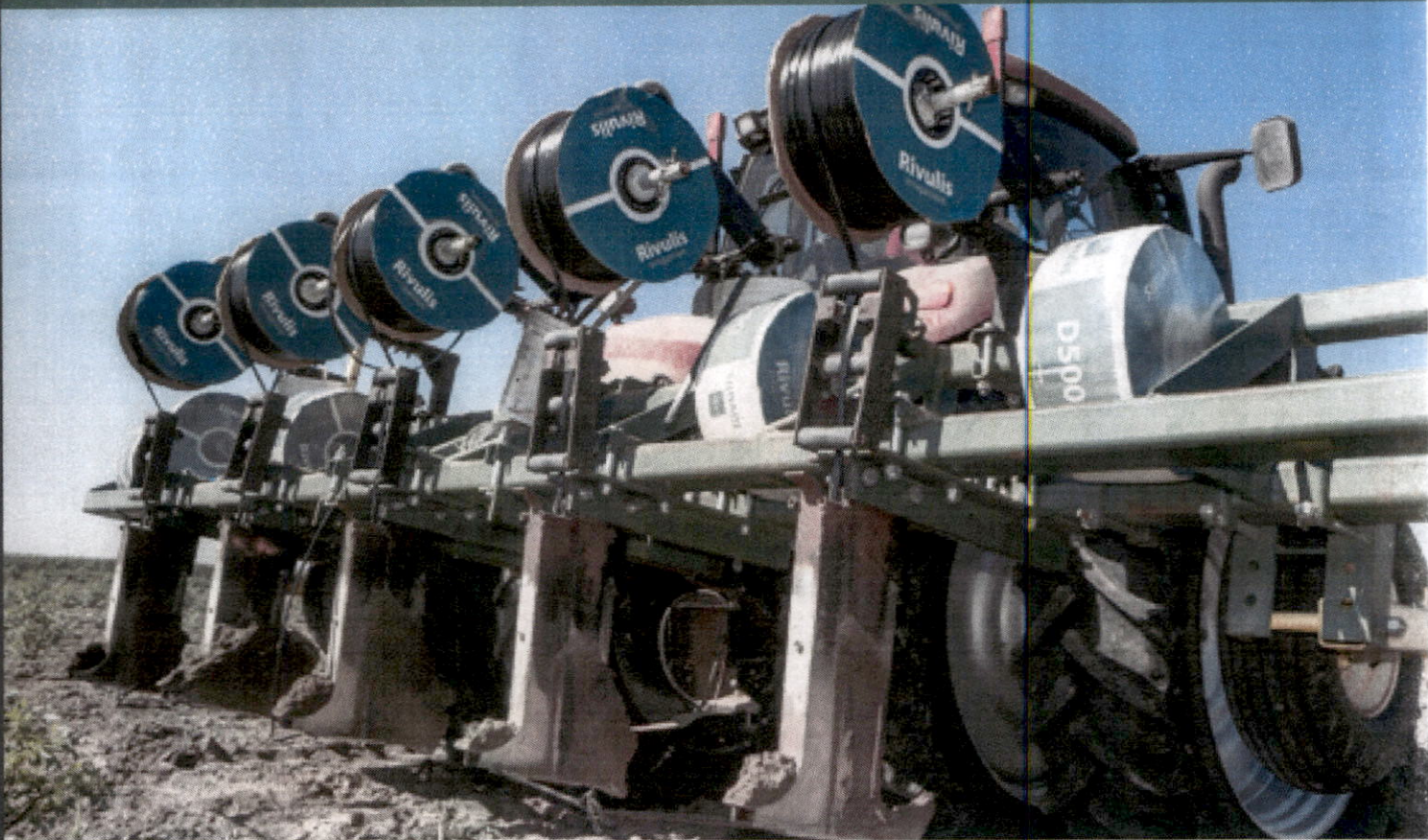
TRANSFER
T-12477
ATTACHMENTS
TO COBU
Report/claim

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EVOLUTION IN PRESSURE COMPENSATING DRIP TECHNOLOGY



D5000 PC / PCAS DRIP LINES

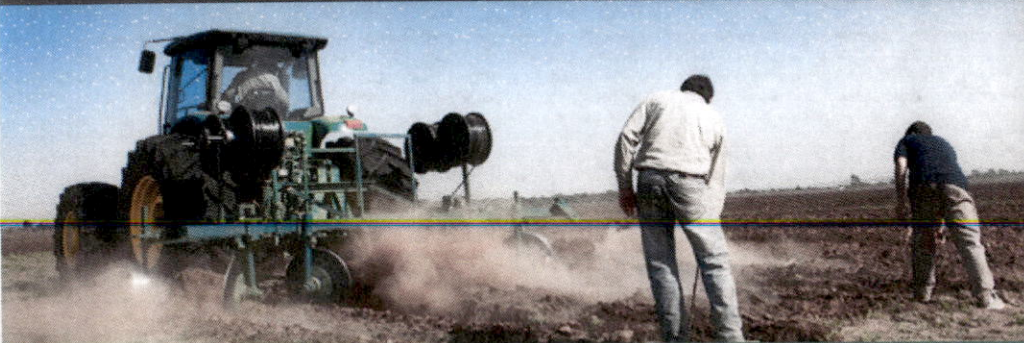
D5000 PC / PCAS

Pressure Compensating Drip Line (Thin To Heavy Wall)

Drip Line	D5000 PC
Mechanism	Silicone injected diaphragm with self-cleaning feature
Pressure compensating	✓
Anti-Siphon	D5000 PCAS Dripper (AS - Anti-Siphon)
Flow Rates	0.17, 0.26, 0.40, 0.53, 0.92 gph
Standard Dripper Spacings	Thin Wall - 8, 12, 18, 24 inch, Heavy Wall - 24, 30, 36, 42, 48
Nominal Drip Line Diameter	Thin and Medium Wall - 5/8", 7/8", 1" Heavy wall - 1.6, 1.8, 2.0 mm
Drip Line Wall Thickness	15, 25, 45, 47 mil
Outlet	Slit (15 mil wall thickness), hole (all other configurations)
Operating Pressure Range	7 to 51 psi (according to wall thickness)
Recommended Filtration	≤0.26 gph - 150 mesh, >0.27 gph - 120 mesh



 **Rivulis**



EVOLUTION: ADVANCEMENT OF PC DRIP TECHNOLOGY

D5000 PC Drip Line represents the most significant advancement in PC drip technology in the past decade. After many years of research, the D5000 PC Drip Line was launched and set a new standard in pressure compensating drip line technology.

On multiple levels, the D5000 PC Drip Line has been engineered to outperform all pressure compensating drip line on the market. Starting from the manufacturing process, where state-of-the-art quality controls are used to continually output high quality product, to the uniquely designed dripper that provides maximum resistance to clogging. All designed to provide growers with the best tool available to maximize ROI in the field.

Multi-Layer design • Self-cleaning mechanism • Optimized components

Traditional Drippers

Maximized Design



Small inlet filtration area
Narrow & short labyrinth
Small outlet area

Multi-zone inlet filters

Large labyrinth
Large Outlet Area

Modular-linear layout, reduced filtration area
Increased clogging risk, small outlet area

EVOLUTION: TOTAL DRIP DESIGN



Forty Independent Inlet Filters

Inlet filters are your first layer of protection against foreign particles. The D5000 PC features a unique multi-zone inlet area with 40 inlet filters to provide maximum protection against clogging and almost 300% more functional filtration area compared to main competitive product in the market.



Extra Wide Flow Labyrinth

Advanced engineering of the D5000 PC labyrinth provides the ultimate balance of incrementally reducing pressure while also forming high turbulence in the dripper to help ensure solids stay in suspension. Because the D5000 PC features one of the largest flow paths available it is the most plug resistant flow path in the industry.



Full Size Outlet Pool

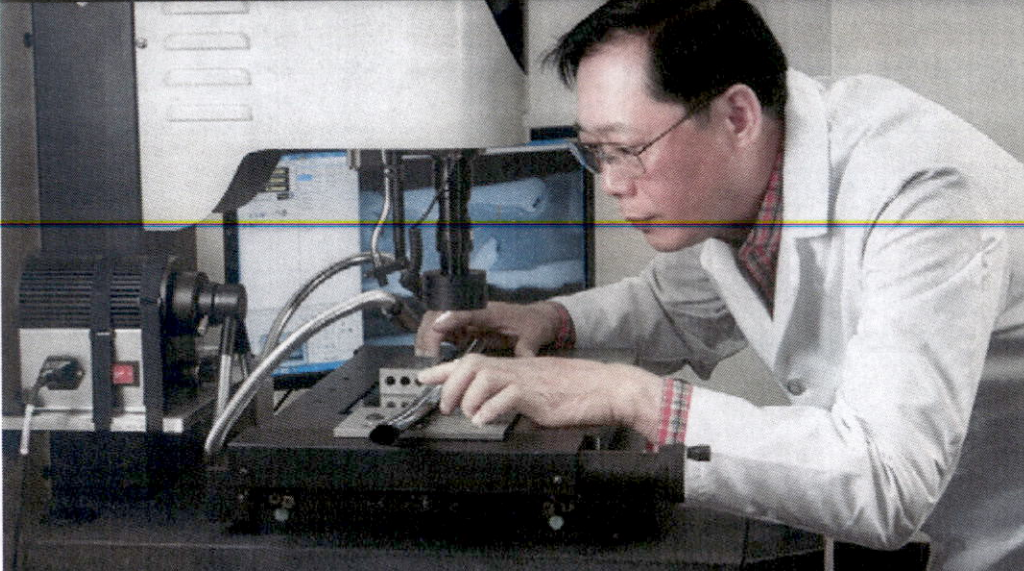
Dirt ingestion is a risk for all drip irrigation systems. The unique long outlet pool of the D5000 PC in conjunction with the raised wall design provides the maximum distance between the emitter outlet and the tube hole to help prevent dirt ingestion or suck-back. The full size pool also allows slit outlet in 15 mil configurations.

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The next evolution in pressure compensating drip technology.



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APPLICATIONS

- Subsurface or surface applications
- Agriculture, greenhouse and nursery applications
- Multi-Season use
- Ideal for undulating terrains

PRODUCT FEATURES AND BENEFITS

- Pressure compensating for precise and uniform flow rates along the entire length of the lateral and in undulating terrain. Allows for longer run lengths (up to 50% longer when compared to non-PC drip lines)
- Anti-Siphon mechanism prevents a vacuum from forming inside the lateral upon water shut down to resist soil ingestion (AS models only)
- Wide range of pressure regulation from 7 to 51 psi maintains a uniform flow rate regardless of the water pressure to optimize irrigation and maximize crop yields
- Wide range of flow rates, diameters and spacings to match the soil infiltration rate, optimize irrigation and deliver the precise amount of water and nutrients to the root zone to maximize crop yields
- Continuously self-flushing mechanism reduces clogging

EVOLUTION: PRECISION MANUFACTURING & QUALITY

IN-LINE MONITORING



A photo of every inserted dripper is taken (up to 7 per second) to ensure correct alignment in the drip line during production.

ROLL TESTING



Before dispatch, the D5000 PC must meet a number of stringent tests including flow test, tube analysis, weld strength and tensile strength tests.

AUTOMATED ASSEMBLY



Every dripper manufactured goes through a multi-stage automated testing process to ensure correct assembly.



D5000 PC Drip Line installed in the field and ready to be connected to a manifold.

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 OWRD

Drip Line Configuration Options: D5000 PC / PCAS

Nominal Diameter	Wall Thickness	I.D.	Flow Rate	Dripper Spacing	Outlet Type	Roll Length
	mil	in	gph	in		ft
Thin/Medium Wall Drip Lines						
5/8"	15	0.646	0.17	8, 12, 18, 24	Slit	2625
5/8"	15	0.646	0.26	8, 12, 18, 24	Slit	2625
5/8"	25	0.602	0.17	8, 12, 18, 24	Hole	2625
5/8"	25	0.602	0.26	8, 12, 18, 24	Hole	2625
7/8"	15	0.874	0.17	8, 12, 18, 24	Slit	2625
7/8"	15	0.874	0.26	8, 12, 18, 24	Slit	2625
7/8"	25	0.874	0.17	8, 12, 18, 24	Hole	2625
7/8"	25	0.874	0.26	8, 12, 18, 24	Hole	2625
Thick Wall Drip Lines						
16 mm	45	0.543	0.26, 0.53, 0.92	8, 12, 18, 24	Hole	1320
18 mm	45	0.622	0.40, 0.53, 0.92	24, 30, 36, 42, 48	Hole	1150
20 mm	47	0.693	0.40, 0.53, 0.92	24, 30, 36, 42, 48	Hole	1000

Packaging Information: D5000 PC / PCAS

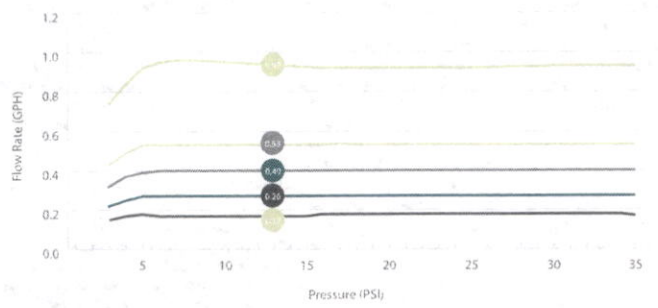
Diameter	Wall	Roll Length	Core Length	Disc Dia.	Roll Weight	Rolls per Pallet	Pallet Weight
	mil	ft	in	in	lbs		lbs
Thin/Medium Wall (packaged with core and disks)							
5/8"	15	2625	9.8	21.3	59	16	944
5/8"	25	2625	12.2	22.4	55	20	1100
7/8"	15	2625	12.2	22.4	66	20	1320
7/8"	25	2625	12.2	22.4	50	20	1000
Heavy Wall							
16 mm	45	1320	n/a	n/a	43	20	866
18 mm	45	1150	n/a	n/a	42	20	840
20 mm	47	1000	n/a	n/a	42	20	840



Technical/Design Information: D5000 PC / PCAS

Diameter	Wall	Flow Rate	Minimum Pressure for Regulation	Maximum Pressure	Drip Constant	Drip Exponent	Kd
	mil	gph	psi	psi	K	X	
Thin/Medium Wall Drip Line							
5/8"	15	0.17	7.1	31	0.17	0	0.50
5/8"	15	0.26	7.1	31	0.26	0	0.50
5/8"	25	0.17	7.1	36	0.17	0	0.52
5/8"	25	0.26	7.1	36	0.26	0	0.52
7/8"	15	0.17	7.1	26	0.17	0	0.13
7/8"	15	0.26	7.1	26	0.26	0	0.13
7/8"	25	0.17	7.1	36	0.17	0	0.13
7/8"	25	0.26	7.1	36	0.26	0	0.13
Thick Wall Drip Line							
16 mm	45	0.26	7.1	51	0.26	0	0.80
16 mm	45	0.53	7.1	51	0.53	0	0.80
16 mm	45	0.92	7.1	51	0.53	0	0.80
18 mm	45	0.40	7.1	51	0.40	0	0.52
18 mm	45	0.53	7.1	51	0.53	0	0.52
18 mm	45	0.92	7.1	51	0.53	0	0.52
20 mm	47	0.40	7.1	51	0.40	0	0.33
20 mm	47	0.53	7.1	51	0.53	0	0.33
20 mm	47	0.92	7.1	51	0.53	0	0.33

D5000 PC / PCAS Flow vs Pressure



Length of Run Data: D5000 PC / PCAS (0% Slope)

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Nominal Diameter	Wall Thickness	Dripper (Flow Rate)	Spacing Between Drippers (inch)					
			8	12	16	20	24	30
inch or mm	mil	gph	ft	ft	ft	ft	ft	ft
Thin/Medium Wall (Diameter In Inches)								
5/8"	15	0.17	732	1024	1286	1532	1759	2073
5/8"	15	0.26	551	774	974	1158	1332	1572
5/8"	15	0.40	423	594	748	892	1024	1211
5/8"	15	0.53	351	492	623	741	850	1004
5/8"	15	0.92	243	341	433	515	594	699
5/8"	25	0.17	719	1004	1266	1506	1726	2034
5/8"	25	0.26	538	755	951	1132	1299	1532
5/8"	25	0.40	413	581	732	873	1001	1181
5/8"	25	0.53	341	482	607	725	830	981
5/8"	25	0.92	239	336	424	505	581	686
7/8"	15	0.17	1362	1844	2270	2657	3015	3510
7/8"	15	0.26	1037	1404	1729	2024	2297	2677
7/8"	15	0.40	797	1083	1332	1562	1772	2064
7/8"	15	0.53	663	899	1109	1299	1473	1719
7/8"	15	0.92	459	623	768	902	1027	1198
7/8"	25	0.17	1585	2152	2651	3104	3520	4101
7/8"	25	0.26	1194	1621	1998	2343	2657	3097
7/8"	25	0.40	919	1247	1539	1804	2051	2388
7/8"	25	0.53	761	1037	1280	1499	1706	1988
7/8"	25	0.92	531	725	899	1053	1198	1398
1"	15	0.17	1522	2037	2493	2907	3287	3819
1"	15	0.26	1152	1545	1890	2205	2497	2900
1"	15	0.40	886	1191	1457	1703	1926	2238
1"	15	0.53	738	991	1214	1414	1601	1864
1"	15	0.92	512	692	846	988	1119	1306
1"	18	0.17	1686	2260	2766	3225	3648	4239
1"	18	0.26	1276	1713	2100	2448	2769	3219
1"	18	0.40	984	1319	1617	1886	2136	2484
1"	18	0.53	817	1099	1345	1568	1778	2067
1"	18	0.92	568	764	938	1096	1243	1447
Heavy Wall (Diameter In Millimeters)								
16 mm	45	0.17	650	919	1165	1394	1608	1906
16 mm	45	0.26	489	696	883	1056	1217	1447
16 mm	45	0.40	374	535	676	814	938	1115
16 mm	45	0.53	312	443	561	673	778	925
16 mm	45	0.92	276	387	489	584	673	794
18 mm	45	0.17	874	1225	1542	1836	2106	2485
18 mm	45	0.26	659	925	1167	1388	1594	1885
18 mm	45	0.40	505	711	898	1068	1228	1452
18 mm	45	0.53	419	590	744	886	1020	1206
18 mm	45	0.92	290	408	517	617	709	839
20 mm	47	0.17	1112	1542	1929	2280	2608	3068
20 mm	47	0.26	840	1168	1463	1732	1982	2329
20 mm	47	0.40	646	899	1125	1332	1526	1795
20 mm	47	0.53	535	745	932	1106	1266	1493
20 mm	47	0.92	371	517	648	769	882	1038

D5000 PC & PC/AS DRIP LINES



www.rivulis.com

This literature has been compiled for worldwide circulation and the descriptions, photos, and information are for general purpose use only. Please consult with an irrigation specialist and technical specifications for proper use of products. Because some products are not available in all regions, please contact your local dealer for details. Every effort has been used to ensure that product information, including data sheets, schematics, manuals and brochures are correct. However, information should be verified before making any decisions based on this information. Rivulis reserves the right to change specifications and the design of all products without notice.

Munro LP Series 3/4hp – 5hp

OWRD



Designed specifically for turf irrigation, this self-priming pump provides outstanding performance to horsepower ratio. Our LP Series is truly heavy duty, offering standard high-end features that our competitors only offer as pricey add-ons. Professionals trust the LP Series to deliver trouble-free performance.

- **Brass impeller** – durable and low maintenance with the longest life in its class
- **Silica carbide seal** – proven toughness stands up to less than ideal conditions
- **Cast iron body and internal components** – heavy duty for long-term performance and reliability

COMMON APPLICATIONS

- Residential turf irrigation: Drawing water from ponds, lakes, streams, cisterns and shallow wells
- Booster: Boost domestic water pressure for use in irrigation
- Water transfer

ADVANTAGES

Durable and long lasting – While many centrifugal turf irrigation pumps are made out of plastic, which wears and warps, cast iron construction and a brass impeller mean that our self-priming pumps are built to stand the test of time, even in difficult environments. Testing in tough conditions shows Munro LP series pumps last up to four times as long as typical competitors products.

Industry leading performance to horsepower – The proof is in our curves. In many cases a lower horsepower Munro LP pump will meet the same GPM performance that you'd expect to see only in higher horsepower pumps. With greater starting torque and an efficient run cycle, our pumps truly lead the pack.

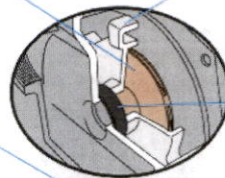
Easy to install and maintain – With two priming ports and a durable steel base plate, installing a Munro LP Series is a snap. When it's time to maintain or winterize the pump, you'll love our two drain valves. A stainless steel wear ring reduces oxidation and friction, minimizing wear and repairs. If you do have to service the pump, stainless steel bolts and a dry-socket design provide easy access.

BRASS IMPELLER – Longest life in its class. Offers greatest durability and reduces costly maintenance vs. plastic impellers.

BUILT-IN PRIMING & DRAIN PORTS – Added start-up and maintenance convenience, no extra parts to buy.

CAST IRON CONSTRUCTION – Designed for long term performance, season after season. No plastic case to warp or crack.

SENSOR PORT – Allows temperature monitoring to avoid costly maintenance issues.

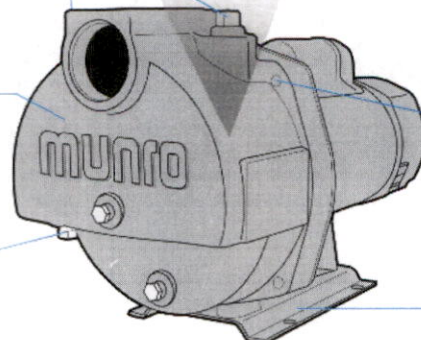


CAST IRON DIFFUSER – Assures durability for the life of the pump.

STAINLESS STEEL WEAR RING – Reduces springtime oxidation and impeller friction.

STAINLESS STEEL BOLTS – No more "busting knuckles" to remove bolts during maintenance.

STEEL BASE PLATE – Easiest, most stable mounting. With four handy bolt holes.

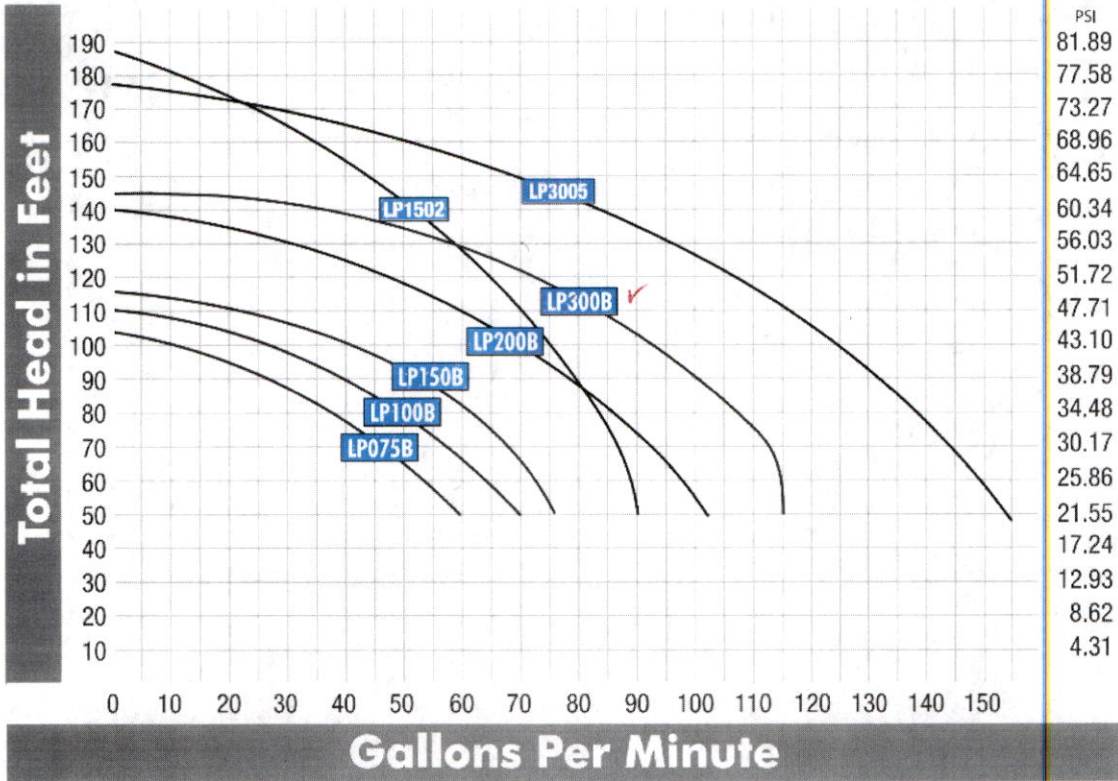


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Curves

HORSEPOWER RANGE: 3/4 - 5



Performance

HORSEPOWER RANGE: 3/4 - 3

HP	Capacity - U.S. Gallons per Minute Discharge Pressure (PSI) at 5' Suction Lift										Shut Off Pressure PSI	Model Number
	20	25	30	35	40	45 ✓	50	55	60			
3/4	63	53	43	33	25						45	LP075B
1	73	65	57	47	35	18					47	LP100B
1-1/2	75	70	68	60	48	35					49	LP150B
2	102	98	92	82	74	61	52	40			60	LP200B
3	115	114	112	105	100	88	72	56	30		61	LP300B

HORSEPOWER RANGE: 2

HP	Capacity - U.S. Gallons per Minute Discharge Pressure (PSI) at 5' Suction Lift										Shut Off Pressure PSI	Model Number
	20	30	40	50	60	70	80	90				
2			75	67	56	38					80	LP1502B

HORSEPOWER RANGE: 5

HP	Capacity - U.S. Gallons per Minute Discharge Pressure (PSI) at 5' Suction Lift										Shut Off Pressure PSI	Model Number	
	20	25	30	35	40	45	50	55	60	65			
5		150	145	137	132	123	110	98	85	67	47	75	LP3005B

Suction lift varies, depending upon elevation (altitude) and water temperatures. Max lift is 15 feet at 5000 feet elevation. Maximum case pressure is 150 PSI. 3 phase models available.

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TIPP CITY, OH 45371



LEESON ELECTRIC
WATKIN, WISCONSIN 53024-0241

CATALOG # 1110031.00 SERIAL 34720J2

PART U6K34DC35A

TYPE KD FRAME 56CZ

HP 3 SF 1.4 PH 1

HZ 60 RPM 3450

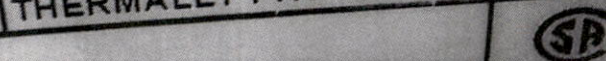
VOLTS 230

AMPS 13

TIME CONT ENCL DP FORM

CODE M INSUL CLASS F3 AMB 40 °C

THERMALLY PROTECTED AUTO



USE COPPER CONDUCTORS ONLY.
INSTALL MOTOR WITH VENTS DOWN.
ACCEPTABLE FOR FIELD WIRING

U6K34DC35A
SUITABLE FOR 1.25SF@208V



MOTOR ASSEMBLED IN MEXICO

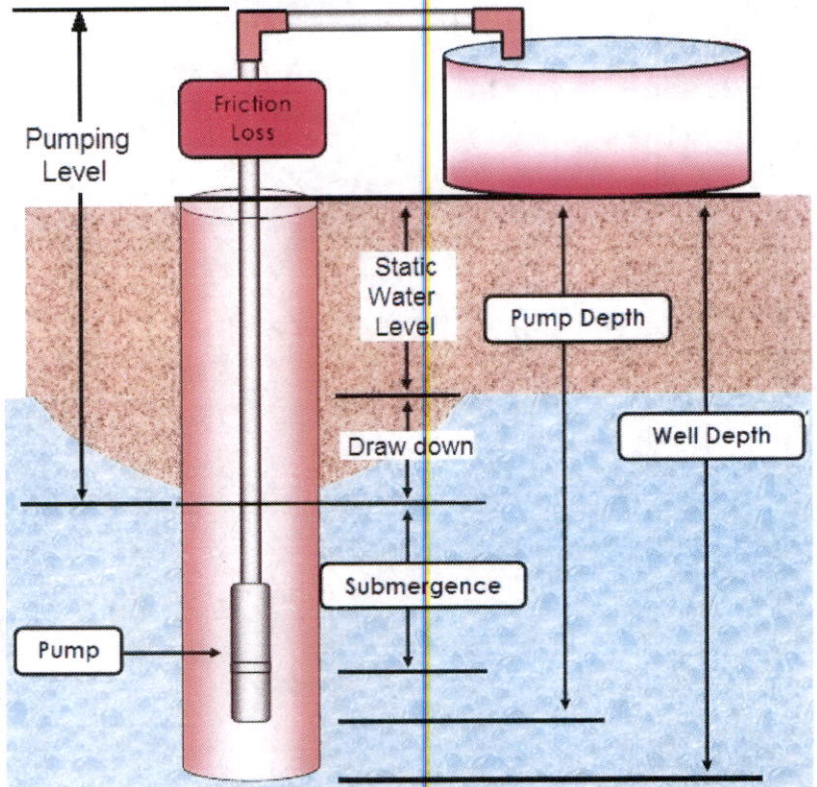


10011204

WARNING: READ INSTRUCTIONS CAREFULLY BEFORE USING THIS MOTOR

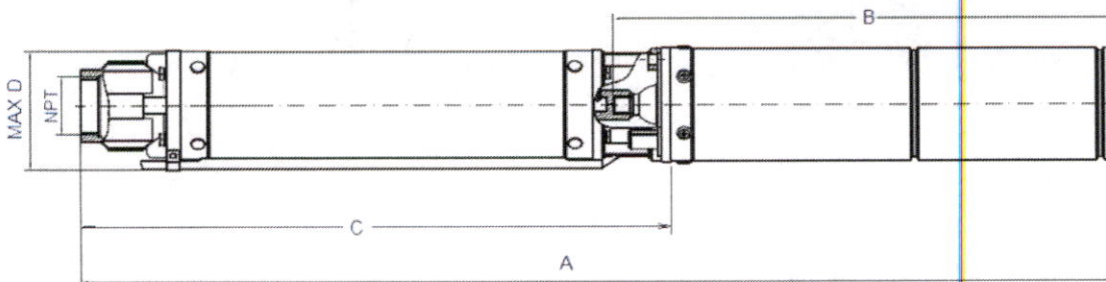
Performance and sizing chart

Pump series	MA 0343X series	MA 0414X series	MA 0419X series	MA 0431X series	MA 0459X series	MA 0460X series
Pump series	SSMA 0343X series	SSMA 0414X series	SSMA 0419X series	SSMA 0431X series	SSMA 0459X series	SSMA 0460X series
Pump's Max rated Head	150 (ft)	207 (ft)	400 (ft)	625 (ft)	247 (ft)	240 (ft)
Max pumping level for 20/40 psi setting	55 (ft)	114 (ft)	307 (ft)	530 (ft)	154 (ft)	147 (ft)
Max pumping level for 30/50 psi setting	33 (ft)	91 (ft)	284 (ft)	508 (ft)	131 (ft)	124 (ft)
Max pumping level for 40/60 psi setting	9 (ft)	68 (ft)	261 (ft)	486 (ft)	108 (ft)	101 (ft)
Fits min well casing ID (inch)	5	5	4	5	4	4



HALLMARK INDUSTRIES INC. PUMP DIMENSIONS (inch [mm])

	MA0343X-4	MA0343X-4A	MA0414X-7	MA0414X-7A	MA0460X-9	MA0460X-9A	MA0419X-12A	MA0431X-18A	MA0459X-14	MA0459X-14A
SS series	SS.MA0343X	SS.MA0343X	SS.MA0414X	SS.MA0414X	SS.MA0460X	SS.MA0460X	SS.MA0419X	SS.MA0431X	SS.MA0459X	SS.MA0459X
D MAX	4	4	3.8	3.8	3.8	3.8	3.8	4	3.3	3.3
NPT	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1	1
C (inch)	13.74	13.74	16.65	16.65	17.72	17.72	23.86	28.86	21.26	21.26
B (inch)	15.59	15.59	17.32	17.32	17.32	17.32	21.14	22.24	17.05	17.05
A (inch)	25.83	25.83	32.09	32.09	33.15	33.15	44.65	49.21	36.89	36.89



HALLMARK INDUSTRIES, INC.

Part #	Power			Flow M ³ /H	0	1.2	2	3.2	4	5.6	6.4	7.4	Weight
	HP	Volt	Amp	Flow GPM	0	5.3	8.8	14.1	17.6	24.7	28.2	32	(lbs)
MA0414X-7 SS.MA0414X-7-115	1	115	10.2	H (ft)	207	195	184	161	138	82	52	11	30
MA0414X-7A SS.MA0414X-7A-230	1	230	5.1	H (ft)	207	195	184	161	138	82	52	11	30

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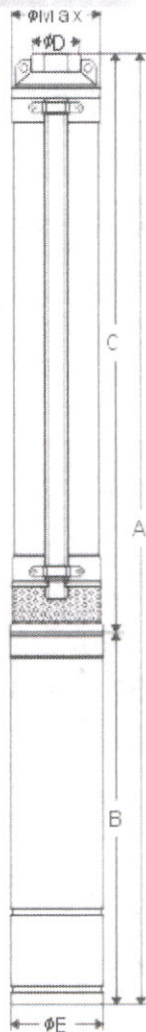
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A	B	C	D	E	MAX
32.1"	17.3"	16.7	1-1/4 NPT	3.5"	3.7"

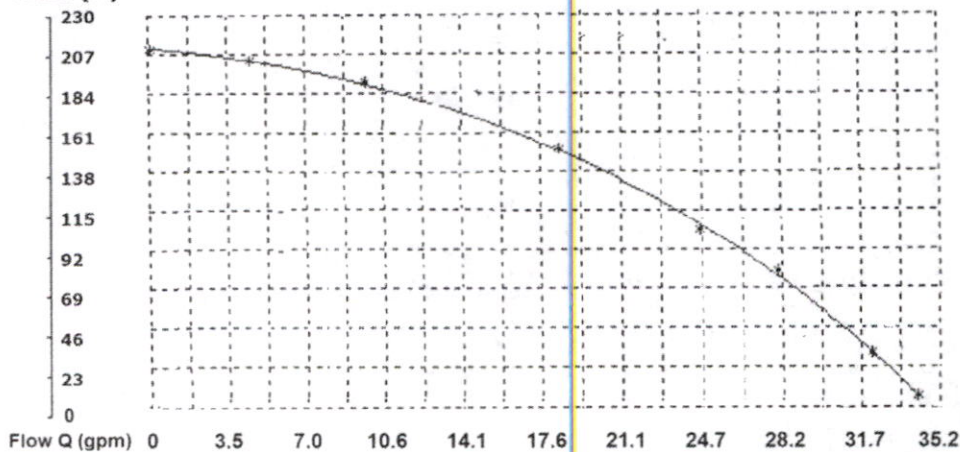
Features & Technical Specifications:

- 3.7" deep well submersible pump, 8 stage, 207 feet max head.
- Fits 4" ID or larger well casing.
- Patented impeller provides heavy duty high flow: 33 GPM. That is greater than almost all other 1 HP well pumps.
- Water temperature: (32 ~113°F)
- Trans medium's Ph: 6.5~ 8.5
- Solid stainless steel body with heavy duty cast iron or stainless discharge
- Industrial grade heavy duty, also good for home usage
- Built in capacitor start, and thermal protection for longer life and powerful start.
- Built in control box. This pump DOES NOT require an external control box!
- This pump uses high quality and high efficient motor.
- This is a 2 wire pump with 3-Wire (2 wires + ground wire)
- 10' long electric cord comes with this submersible deep well pump.
- 1¼" NPT discharge
- Designed to fit inside 4" ID or larger pipe/well casing
- Heavy-duty thermoplastic impellers, diffusers, and intake screen.
- High efficiency, hermetically sealed motor is thermally protected to prevent over-heating
- Submersible design eliminates the need for priming and creates quiet operation

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Head (ft)



Head vs. Flow Performance Curve

HALLMARK INDUSTRIES, INC.

WATER METERS

THE MOST RELIABLE AND ACCURATE WATER METERS

MEASUREMENT IS THE KEY TO GOOD, EFFECTIVE WATER MANAGEMENT

It is a fact that all crops are affected if irrigation is not consistent and accurate. The use of water meters ensures growers are able to measure and effectively manage the watering of their crops. Netafim Water Meters provide the confidence and assurance that the correct amount of water and fertilizer (nutrients) are being delivered to the crop maximizing yields and reducing energy costs.

- Measuring your irrigation water with a Water Meter is a more accurate way to deliver water to a crop.
- Water Meters monitor system performance and record total water applied.
- Water Meters ensure verification of water received versus water pumped or purchased.
- Provide accurate water measurement if required by private or governmental agency.

NETAFIM FAMILY OF WATER METERS



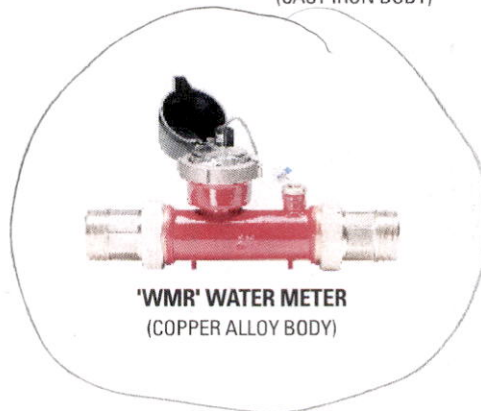
OCTAVE ULTRASONIC WATER METER
(CAST IRON BODY)



'IRT' WATER METER
(CAST IRON BODY)



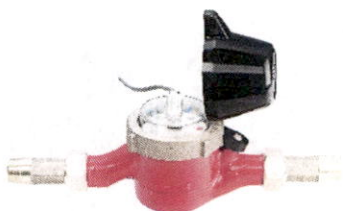
'WST' WATER METERS
(CAST IRON BODY)



'WMR' WATER METER
(COPPER ALLOY BODY)



HYDROMETER
(CAST IRON BODY)



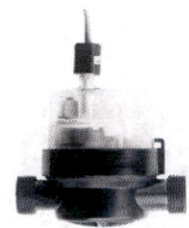
'M' WATER METER
(COPPER ALLOY BODY)



'M' WATER METER
(PLASTIC BODY)



FERTILIZER METER
(PVC BODY)



FERTILIZER METER
(PLASTIC BODY)

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APPLICATION & INSTALLATION CONSIDERATIONS

Determining the appropriate water meter for your application involves several requirements: Water Quality, Flow Range and Straight Pipe Installation Requirement. The following information will help with the selection of the right water meter for your site requirements.

WATER QUALITY

The quality of irrigation water is an important consideration when choosing the right water meter for your system. Netafim has a full line of water meters for accurate measuring in good or poor water conditions.

GOOD WATER CONDITIONS

- Water with minimal organic materials
- Well water with minimal sand

A water meter with a full diameter impeller is recommended for good water conditions.

POOR WATER CONDITIONS

- Water with moderate organic materials
- Well water with sand

A water meter with a paddle wheel is recommended for poor water conditions.

The water is measured with a paddle wheel located at the top of the water passage providing a free water passage eliminating clogging from debris. Paddle wheel water meters can also be used in good water conditions. However, water meters should always be installed downstream of a filter.

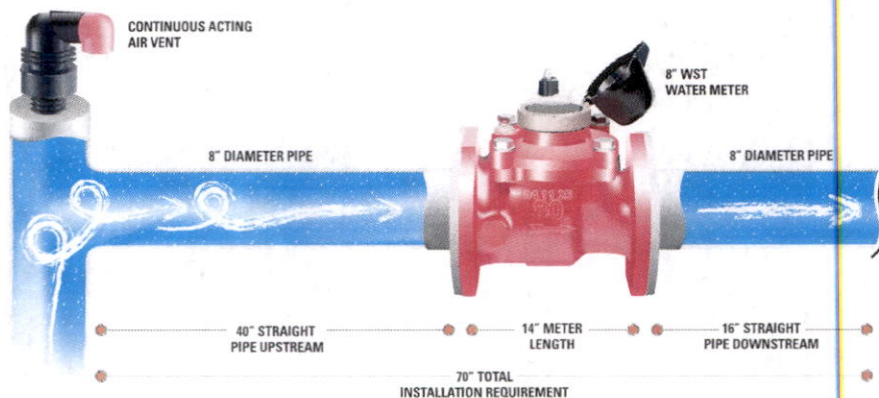
FLOW RANGE

Water meter functionality and accuracy is dependent on minimum and maximum flow ranges. Netafim water meters accurately measure water from a minimum of 0.9 GPM up to a maximum of 5,500 GPM.

STRAIGHT PIPE INSTALLATION REQUIREMENT

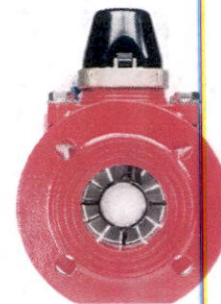
When water flows through a pipe, any transition through a fitting, elbow or change in pipe size causes turbulence in the water. In order to eliminate water turbulence, some water meters require straight pipe before and after the water meter. Straight pipe installation refers to the length of straight pipe needed before (upstream of the water meter) and after (downstream of the water meter). When the straight pipe installation requirement refers to D (diameter), this is the size of the water meter.

Continuous Acting Air Vents are used to remove air from the system for accurate metering. Proper air vent selection and placement within the system is required.

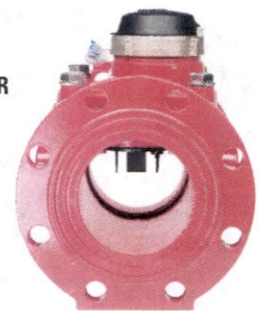


CONFIGURING STRAIGHT PIPE INSTALLATION EXAMPLE:

Water Meter:	8" WST
Upstream:	5 x 8" diameter meter = 40" (5 x D) 40" of straight pipe required upstream of the meter
Downstream:	2 x 8" diameter meter = 16" (2 x D) 16" of straight pipe required downstream of the meter
Meter Length:	14"
Total:	70" total installation requirement



FULL DIAMETER IMPELLER
(SIDE VIEW)



PADDLE WHEEL
(SIDE VIEW)

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OCTAVE ULTRASONIC WATER METERS

STRAIGHT PIPE REQUIREMENT: 2 D X 2 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
2"	0.25 GPM	250 GPM	16" TOTAL
3"	1 GPM	500 GPM	21" TOTAL
4"	1.5 GPM	1,000 GPM	25" TOTAL
6"	3 GPM	2,000 GPM	36" TOTAL
8"	5 GPM	3,500 GPM	46" TOTAL
10"	14 GPM	5,500 GPM	68" TOTAL
12"	14 GPM	5,500 GPM	68" TOTAL

'IRT' WATER METERS

STRAIGHT PIPE REQUIREMENT: 10 D X 5 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3"	45 GPM	500 GPM	54" TOTAL
4"	50 GPM	688 GPM	70" TOTAL
6"	65 GPM	1,375 GPM	102" TOTAL
8"	130 GPM	2,475 GPM	134" TOTAL
10"	300 GPM	4,125 GPM	166" TOTAL

'WST' WATER METERS

STRAIGHT PIPE REQUIREMENT: 5 D X 2 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3"	4.0 GPM	660 GPM	30" TOTAL
4"	8.0 GPM	1,266 GPM	38" TOTAL
6"	15 GPM	1,431 GPM	54" TOTAL
8"	38 GPM	2,475 GPM	70" TOTAL

'WST' WATER METERS

STRAIGHT PIPE REQUIREMENT: 10 D X 5 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
10"	44 GPM	4,125 GPM	168" TOTAL
12"	51 GPM	5,500 GPM	200" TOTAL

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HYDROMETERS

STRAIGHT PIPE REQUIREMENT: 0 D X 0 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
1.5"	4.4 GPM	55 GPM	6 15/16" TOTAL
2"	20 GPM	95 GPM	8 11/16" TOTAL
3"	53 GPM	220 GPM	11 1/4" TOTAL
4"	79 GPM	380 GPM	14 13/16" TOTAL
6"	198 GPM	860 GPM	9 11/16" TOTAL
8"	357 GPM	1,500 GPM	23 9/16" TOTAL



'WMR' WATER METERS

STRAIGHT PIPE REQUIREMENT: 10 D X 5 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
2"	8.8 GPM	110 GPM	44" TOTAL

'M' WATER METERS

STRAIGHT PIPE REQUIREMENT: 0 D X 0 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3/4" PLASTIC	0.9 GPM	14 GPM	11 1/4" TOTAL
3/4" IRON	0.9 GPM	14 GPM	11 1/4" TOTAL
1" PLASTIC	1.2 GPM	20 GPM	14 3/4" TOTAL
1" IRON	1.2 GPM	20 GPM	14 3/4" TOTAL
1 1/2" IRON	3.5 GPM	55 GPM	17 1/4" TOTAL

FERTILIZER METERS

STRAIGHT PIPE REQUIREMENT: 0 D X 0 D



SIZE	MINIMUM FLOW RATE	MAXIMUM FLOW RATE	INSTALLATION REQUIREMENT *
3/4"	0.3 GPM	2.2 GPM	4 3/8" TOTAL
1"	1.8 GPM	44 GPM	6" TOTAL

* Installation Requirement = Straight Pipe Upstream + Meter Length + Straight Pipe Downstream

± 2% Accuracy Rate for Minimum and Maximum Flow Rates for: Saddle Meter, 'IRT', 'WST', 'WMR', 'M' and Fertilizer Meters

± 1.5% Accuracy Rate for Minimum and Maximum Flow Rates for: Octave Ultrasonic Water Meters

WATER METER REGISTERS

Netafim registers are simple to operate while providing reliable and accurate readings. Features include:

- Hermetically sealed - guaranteed not to accumulate moisture or fog.
- Mounted in a dry compartment - no contact with the water.
- Instantaneous readings - easy to read.
- Removable - even when the meter is operating.
- Electrical output - driven by a magnetic coupling that activates a reed switch creating a pulsed output for communicating with control and monitoring equipment.
- Interchangeable and easily replaced with common tools.

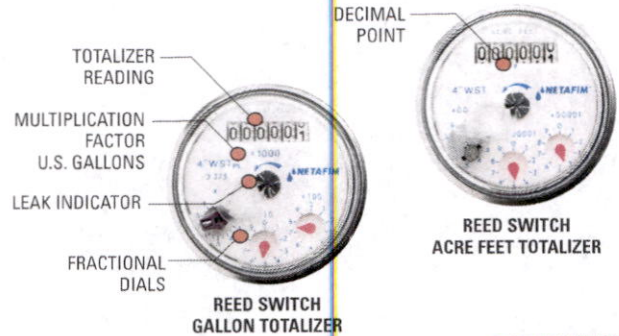
REED SWITCH REGISTER

GALLON OR ACRE FEET TOTALIZER

The Reed Switch Register has a low frequency pulse output for communicating with control and monitoring equipment. A leak indicator in the center of the dial registers the lowest flow through the meter. Flows are totalled in U.S. Gallons and each dial face indicates the multiplication factor (located directly under the totalizer reading) or flows are totalled in Acre Feet with the decimal point indicated in blue on the register. Three small fractional dials measure quantities smaller than the totalizer reading.

ELECTRICAL SPECIFICATIONS

- Maximum contact current: 50 mA
- Maximum contact voltage: 48 VDC



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ELECTRONIC (ER) DIGITAL REGISTER

GPM RATE OF FLOW WITH GALLON OR ACRE FEET TOTALIZER

Combines standard digital register features with dry pulse output capabilities. Clearly displays the rate of flow and volume readings in Gallons or Acre Feet. Mounted inside an IP68 stainless steel glass encapsulated cap. Multi-line digital LCD readout displays 9 digits for Total Volume in U.S. Gallons (U.S.G.) or Acre Feet and 4 digits for Rate of Flow in Gallons per Minute (GPM). It's programmable to a wide variety of pipe sizes. Register is interchangeable with common tools.

ELECTRICAL SPECIFICATIONS

- Minimum voltage: 3.6 VDC
- Maximum contact current: 200 mA
- Maximum contact voltage: 40 VDC
- Maximum distance between meter and control board: 65'

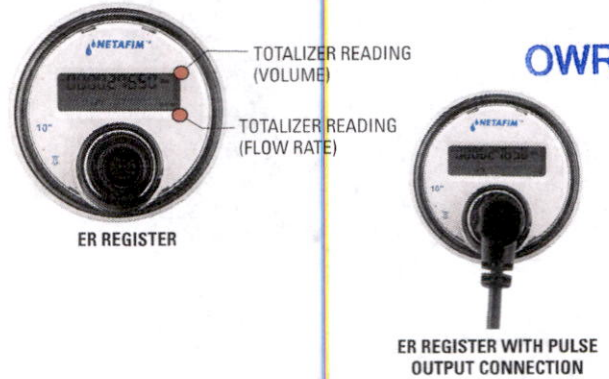


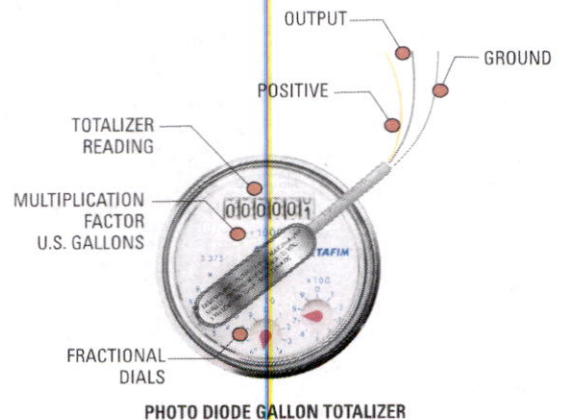
PHOTO DIODE REGISTER

GALLON TOTALIZER

A sensor combines an IR light source and a light sensitive diode in one package. Signals are created when the light beam created by the IR light is interrupted by a rotating element. The Photo Diode Register includes pulse output (open collector) for communicating with control and monitoring equipment. This register requires a constant supply of DC power. Flows are totalled in U.S. Gallons based on the multiplication factors indicated on the dial face.

ELECTRICAL SPECIFICATIONS

- Positive (Yellow wire): 20-30 mA through a resistor
- Output (Transparent wire): Open collector, max. load 2 mA
- Ground (Bare wire)



PULSE OUTPUT WITH PULSE REED SWITCH

The Pulse Reed Switch is activated by a magnet installed on a fractional dial. It acts as a 'dry contact' and consumes very little power. The reed switch sensor is installed in the transparent plastic cover over the register and can be mounted in any of three positions facing the pointer with the magnet.



NETAFIM USA
5470 E. HOME AVE.
FRESNO, CA 93727
CS 888 638 2346
www.netafimusa.com

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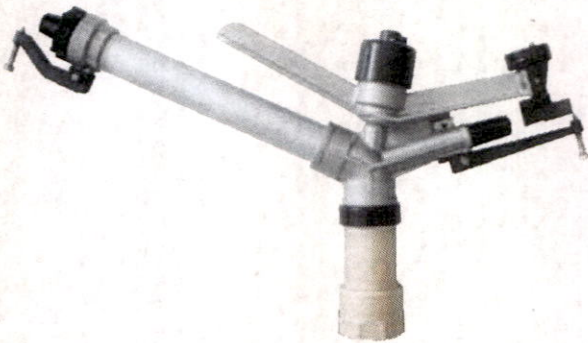
OWRD



280

280 PC

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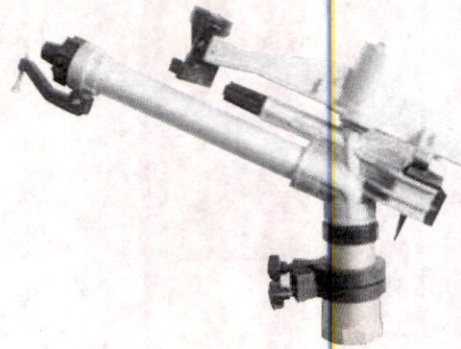
@ Pump

Overhead sprinklers

Giant sprinkler, 2" female

Applications: permanent and supplementary irrigation of sugarcane, maize, and cotton crops, pastures and plantations

- High water distribution with spacing up to 50 m
- Slow rotation at uniform speed
- Lightweight and easy to handle
- Adjustable diffuser screws for each nozzle allows stream breakage at low pressure conditions
- Non-clog straightening vane to ensure excellent coverage in windy conditions



UPPER

Overhead sprinklers

Full- and part-circle giant sprinkler, 2" female

Specifically designed for irrigation of field edges

Applications: permanent or mechanized irrigation of sugarcane fields, horse pastures, paddocks, arenas, feedlots, sod farms and for dust control

- Slow-return mechanism ensures safe operation
- Lightweight and easy to handle
- Adjustable diffuser screws allows stream breakage at low pressure conditions
- Interchangeable plastic nozzles
- Non-clog straightening vane for wider irrigation range and windresistance

280 PERFORMANCE TABLE

Nozzle color (mm)	P (bar)	Q (m ³ /h)	D (m)
12.0x8.0	1.5	9.50	40
	2.0	11.0	46
	3.0	13.40	54
	4.0	15.50	60
	5.0	17.30	65
14.0x8.0	2.0	13.80	50
	3.0	16.80	58
	4.0	19.50	64
16.0x8.0*	2.0	21.80	68
	3.0	26.00	74
	4.0	23.90	68
18.0x8.0	2.0	20.60	56
	3.0	26.00	66
	4.0	30.30	72
	5.0	33.60	80
20.0x8.0	2.0	24.60	58
	3.0	31.20	68
	4.0	36.30	76
	5.0	39.40	86
22.0x8.0	3.0	35.40	69
	4.0	40.90	78
	5.0	45.90	88
	6.0	50.30	93



*Standard nozzle

* Performance table prepared under laboratory conditions
* For windy conditions use closer spacing
* Recommended working pressure minimum 3.0 bar

280PC PERFORMANCE TABLE

Nozzle color (mm)	P (bar)	Q (m ³ /h)	D (m)
12.0x8.0	1.5	9.50	40
	2.0	11.0	46
	3.0	13.40	54
	4.0	15.50	60
	5.0	17.30	65
14.0x8.0	2.0	13.80	50
	3.0	16.80	58
	4.0	19.50	64
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	4.0	23.90	68
18.0x8.0	2.0	20.60	56
	3.0	26.00	66
	4.0	30.30	72
	5.0	33.60	80
20.0x8.0	2.0	24.60	58
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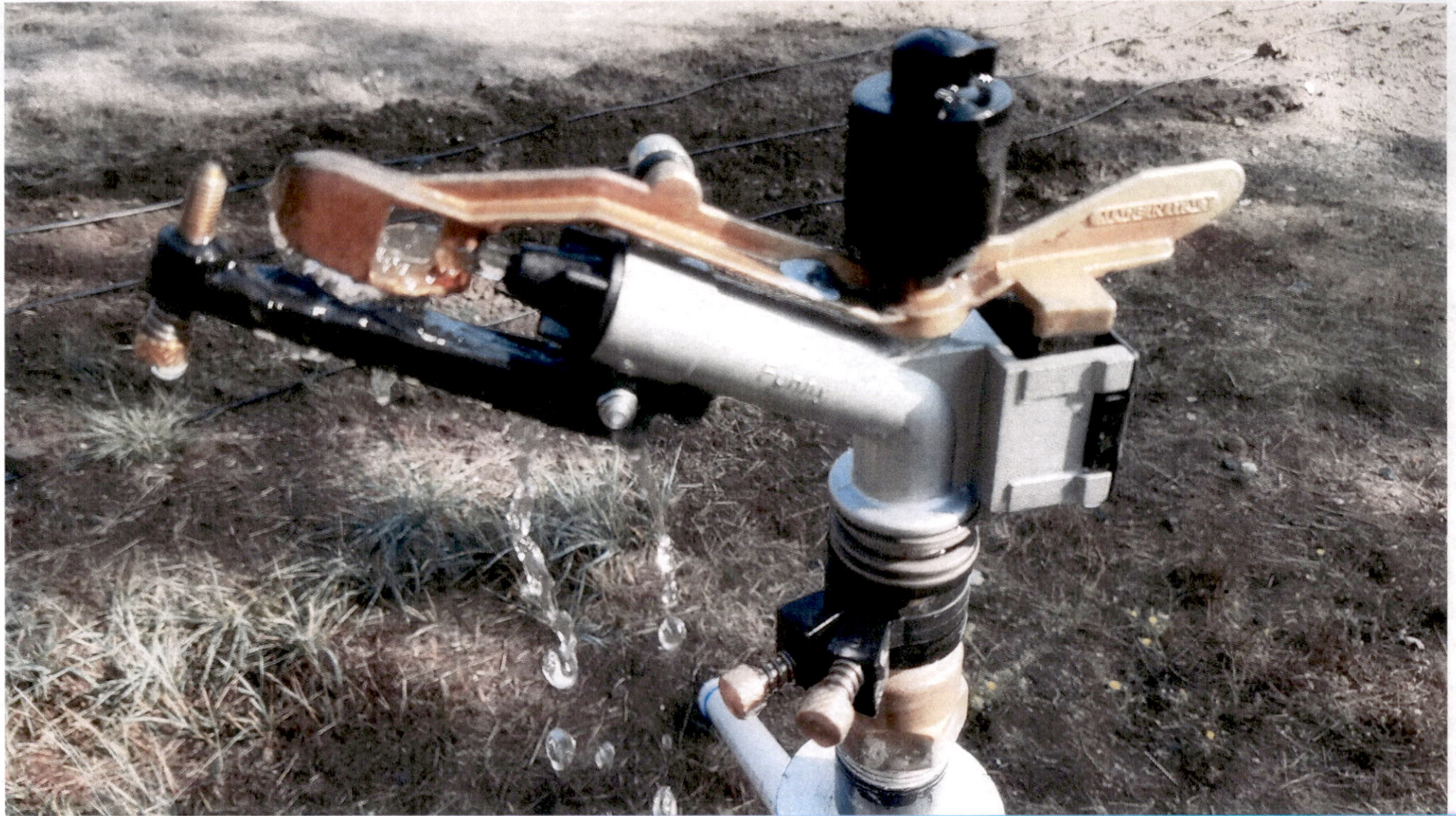
1 cubic Meter per hour (m³/h)
= 1,000 Liters Per Hour
= 264 gal/h = 4.4 gpm



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SOME "FUNNY"

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Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- Map on polyester film
- Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- Township, Range, Section, Donation Land Claims, and Government Lots
- If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- Locations of fish screens and/or fish by-pass devices in relationship to point of diversion
- Locations of meters and/or measuring devices in relationship to point of diversion or appropriation
- Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.) ***Not required for this type of Claim of Beneficial Use**
- Point(s) of diversion or appropriation (illustrated and coordinates)
- Tax lot boundaries and numbers
- Source illustrated if surface water
- Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- Application and permit number or transfer number – T-12477**
- North arrow
- Legend
- CWRE stamp and signature



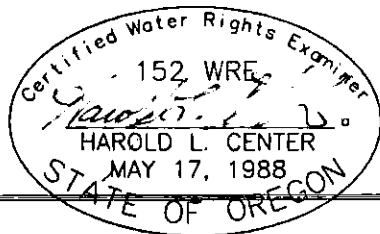
Scale: 1"=400'
Date: September 7, 2021

LEGEND

- Found Survey Monument
- Denotes Building
- - - Denotes Buried Pipeline Location Approximate
- ▣ Denotes Area Irrigated
- (M) Denotes Flow Meter
- (F) Denotes Fish Screen

Note: Fish Screen and Flow Meter
At Point of Diversion

This map was prepared for the purpose of identifying the location of a water right only and is not intended to provide legal dimensions or location of property ownership.

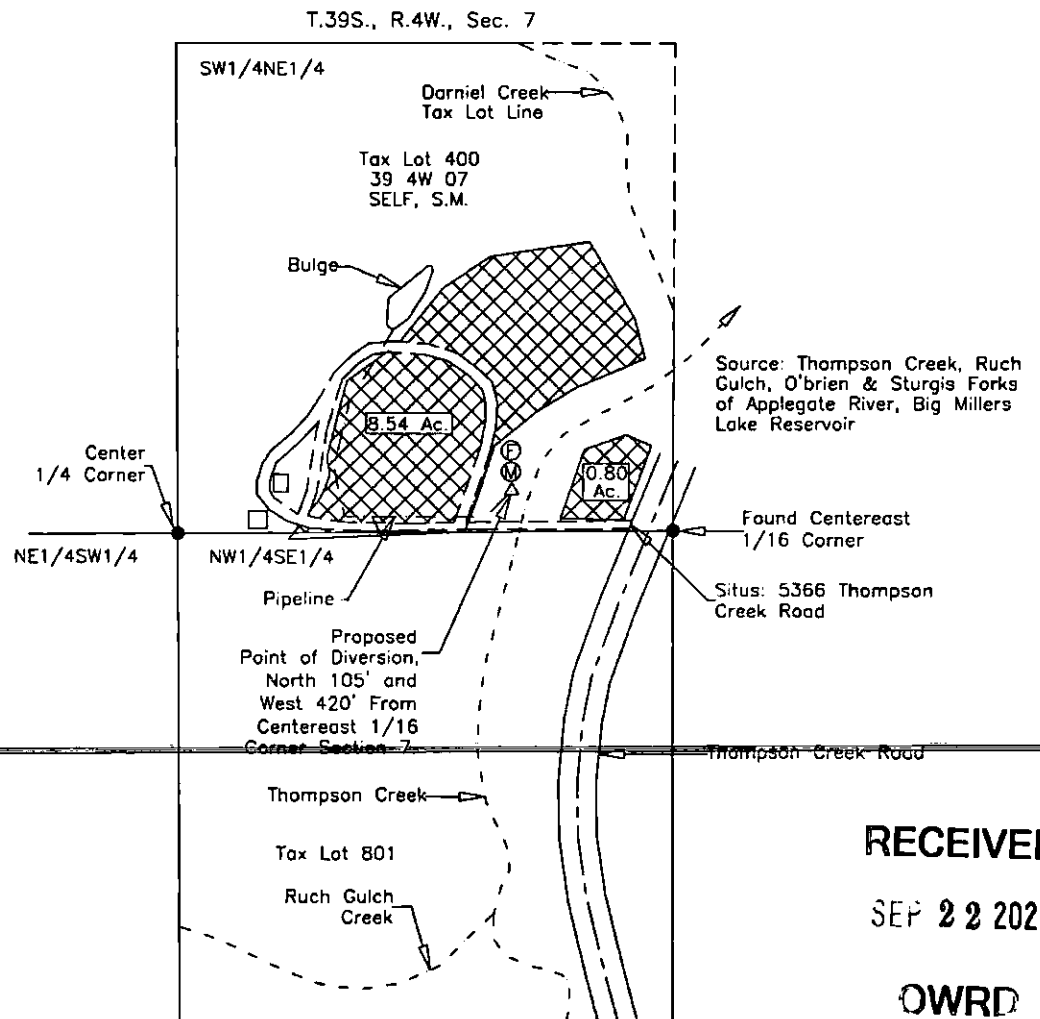


Renews: 12-31-21

HAROLD L. CENTER
2604 David Lane
Medford, OR. 97504
Phone 541-535-6108
Oregon Certificate No. 152
Project: Self_Thompson_21-16

CLAIM OF BENEFICIAL USE MAP – TRANSFER–T 12477
SW1/4NE1/4, SECTION 7, TAX LOT 400 MAP 39 4W 07
TOWNSHIP 39 SOUTH, RANGE 4 WEST, W.M.
JACKSON COUNTY, OREGON

FOR
STEVEN M. SELF
226 N. PAGE ST.
PORTLAND, OR 97227



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