

CLAIM OF BENEFICIAL USE

for Reservoir Permits by CWRE's (not self-certified)

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



A fee of \$345 must accompany application for permits with priority dates of July 9, 1987, or later.

Enter the date the priority date of the permit:
 October 27, 2023

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SECTION 1 GENERAL INFORMATION

1. File Information

APPLICATION # R-89409	PERMIT # (IF APPLICABLE) R-15632	PERMIT AMENDMENT # (IF APPLICABLE)
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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME ULRICH WINGENS		PHONE NO. (408) 307-7900	ADDITIONAL CONTACT NO.
ADDRESS P.O. 5038			
CITY SAM JOSE	STATE CA	ZIP 95150	E-MAIL "Inken Robrahn" <irobrahn@hotmail.com>

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

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

PERMIT HOLDER OF RECORD ULRICH <u>WINGENS</u>			
ADDRESS P.O. Box 5038			
CITY SAN JOSE	STATE CA	ZIP 95150	

ADDITIONAL PERMIT HOLDER OF RECORD			
ADDRESS			
CITY	STATE	ZIP	

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4. Date of Site Inspection: Aug. 12 and Dec. 23, 2025

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

NAME	DATE	ASSOCIATION WITH THE PROJECT
Joe Siri	Aug. 12, 2025	Renter

6. County: Wasco

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

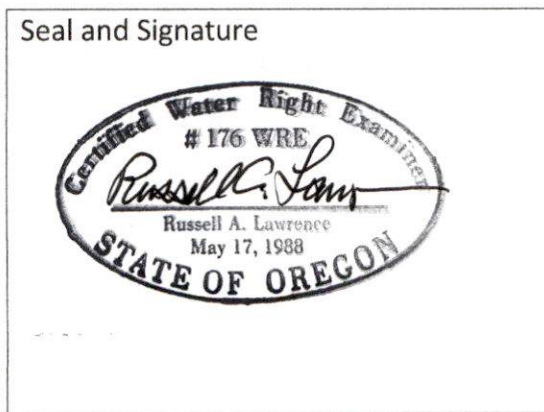
OWNER OF RECORD		
ADDRESS		
CITY	STATE	ZIP

Add additional tables for owners of record as needed

**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.



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CWRE NAME Russell A. Lawrence		PHONE No. (503) 781-4885	ADDITIONAL CONTACT No.	
ADDRESS 19478 S. STARVIEW LN				
CITY OREGON CITY	STATE OR	ZIP 97045	E-MAIL RUSS@STREAMFIX.COM	

Permit Holder(s) of Record Signature or Acknowledgement

Each permit or 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
<i>Ulrich Wings</i>	Ulrich Wings	owner	3-11-2026

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**SECTION 3
CLAIM DESCRIPTION**

1. Reservoir source and, if from surface water, the tributary:

RESERVOIR NAME OR NUMBER	SOURCE	TRIBUTARY
Mt. Ulka Reservoir	Unnamed spring	Gooseberry Spring Creek

2. Developed use(s), period of use, and acre foot (af) for each use:

RESERVOIR NAME OR NUMBER	USES	SEASON OR MONTHS WHEN WATER WAS APPROPRIATED FOR STORAGE	VOLUME STORED (AF)
Mt. Ulka Reservoir	Multiple	Jan. 1- Dec. 31	9.27
Total Quantity of Water Stored			9.27

3. Provide a general narrative description of the distribution works. This description must trace the water system from each point of diversion to the reservoir:

Water is pumped from the reservoir via a PTO pump then distributed in buried distribution system to the irrigated areas. This system consists of approximately 9300 feet of buried 4 inch PVC pipe with hydrants appropriately located to serve 8 growing areas. Seasonal irrigation is accomplished by 2 and 3 inch manually placed aluminum irrigation pipe and sprinkler heads configured to serve each irrigated area.

4. Variations:

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

(e.g. "The permit allowed the development of three reservoirs. The permit holder only developed one of the reservoirs." or "The permit allowed for the storage of 9 acre feet of water. The reservoir was developed to hold 5.2 acre feet.")

5. Claim Summary:

RESERVOIR NAME OR #	MAXIMUM STORAGE AUTHORIZED BY PERMIT (AF)	MAXIMUM STORAGE DEVELOPED (AF)
PSOS 1 C HAM Mt. Ulka Reservoir	8.0	9.27

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**SECTION 4
SYSTEM DESCRIPTION**

Are there multiple reservoirs?

NO

A. Reservoir Location

1. Is the reservoir on-channel?

NO

2. Provide dam outlet location and/or point of diversion(s).

TWP	RNG	MER	SEC	QQ	GLOT	DLC	MEASURED DISTANCES
2N	13E	WM	20	SW/NW & NW/SW			2487 feet South and 526 feet East of NW cor. Section 20, T2N, R 13 E, WM

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLOT), and Quarter-Quarters (QQ).

B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport the water from the point(s) of diversion to the reservoir.

1. Is a pump used?

YES If "NO" items

2 through item 5 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)
Famos	III 60		Centrifugal (PTO)

3. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *IF A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
		6 feet	Varies maximum approximately 30 feet	0.94

4. Provide pump calculations: See attached pump calculations sheet

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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)
5870372	5870984	2 minutes	0.82

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

6. Additional notes or comments related to the system: Distribution system is 4" buried PVC pipe with hydrants appropriate for field irrigation needs. Field piping is two and three inch coupled aluminum pipe seasonally placed appropriate for crop needs.

C. Gravity Flow Pipe

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

1. Does the system involve a gravity flow pipe? NO

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

D. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system? NO

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

E. Reservoir

1. Does the reservoir require the submittal of as-built plans and specifications? NO

If "YES", answer item 2; items 3 through 8 relating to this section may be deleted.

If "NO", skip items 2; answer items 3 through 8.

2. Complete the table:

3. If the reservoir stores less than 9.2 acre-feet of water or if the dam is less than 10 feet in height, and as-built plans and specifications are not required, complete the table and items 4 through 8.

MAXIMUM DEPTH	AVERAGE DEPTH	SURFACE AREA (IN ACRES)	VOLUME (IN ACRE FEET)
12.74 ft	8.83 ft.	1.05	9.27

4. Provide reservoir volume calculations:

The reservoir volume was determined using 1220 GPS and sonar depth survey shots of the reservoir bottom together with more than 50 GPS (x,y,z,) survey shots of surrounding ground. This data was then entered into ProgeCAD software, generating Triangulated Irregular Networks (TIN) for the reservoir bottom and shoreline. The two TIN were then used to calculate the reservoir volume using the software found in the ProgeCAD cogo software.

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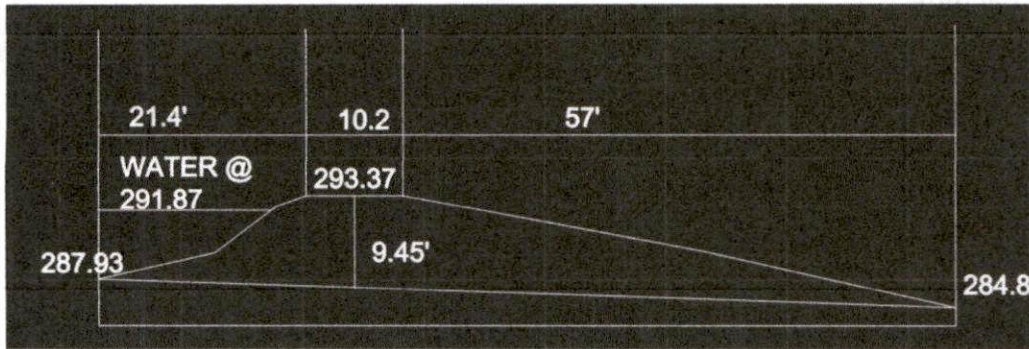
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5. Provide the following information concerning the physical characteristics of the dam:

CREST WIDTH (W)	DAM HEIGHT AT CENTERLINE (H)	DISTANCE FROM DOWNSTREAM TOP OF DAM TO DOWNSTREAM TOE (L)	DISTANCE FROM UPSTREAM TOP OF DAM TO UPSTREAM TOE (U)	WATER LEVEL AT INSPECTION	DOWN-STREAM SLOPE	UP-STREAM SLOPE
10.2 ft	9.45 ft	57 ft	21.4 ft	291.87	15%	25%

6. Provide a drawing showing the cross section of the dam at the maximum section indicating details and dimensions. The drawing should be drawn at a standard even scale.

Scale 1" = 20' horizontal and vertical



7. Describe the outlet works (size and type of the outlet conduit and location):

This reservoir has no outlet structure

8. Describe the emergency spillway (dimensions and location):

This reservoir has no emergency spillway nor is there evidence of it having ever overflowed during its 3+ decades existence.

**SECTION 5
CONDITIONS**

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

1. Time Limits:

Permits and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit or extension final order:

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	DATE FROM PERMIT	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	April 26, 2024		
BEGIN CONSTRUCTION (A)	Circa 1980	Circa 1980	Existing berm
COMPLETE CONSTRUCTION (B)	Circa 1980	Circa 1980	Existing berm
COMPLETE APPLICATION OF WATER (C)	Circa 1980	Circa 1980	Existing use since berm constructed

* must be within period between permit or any extension final order issuance and the date to completely apply water

2. Is there an extension final order(s)? **NO**

3. Measurement Conditions:

a. Does the permit, permit amendment, or any extension final order require the installation of a meter or approved measuring device? **NO**

None required, 'Director may require...' but no requirement stated in permit.

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

4. Recording and reporting conditions

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

If "NO", item b relating to this section may be deleted.

b. Have the reports been submitted? **YES NO**

If the reports have not been submitted, attach a copy of the reports if available.

6. Fish Screening

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

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

7. 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? **NO**

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

8. Other conditions required by permit, permit amendment final order, or extension final order

a. Was the water user required to restore the riparian area if it was disturbed? **YES**

b. Was a fishway required? **NO**

c. Was submittal of a letter from an engineer required prior to storage of water? **NO**

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d. Was submittal of a water management and conservation plan required?

NO

e. Other conditions?

YES

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

Condition 7 calls for riparian restoration. The ground disturbing work associated with this reservoir creation was completed several decades ago. Therefore, no physical ground disturbance has occurred in association with this permit.

Condition 9 waiver request attached

SECTION 6 ATTACHMENTS

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

ATTACHMENT NAME	DESCRIPTION
COBU map	Mylar map as required.
Condition 9 Waiver Request	Request to waiver Condition 9 of Permit R-15632
Pump Calculations	Explanation of how pump was evaluated
Famos III 60 Pump Curve	Pump curve

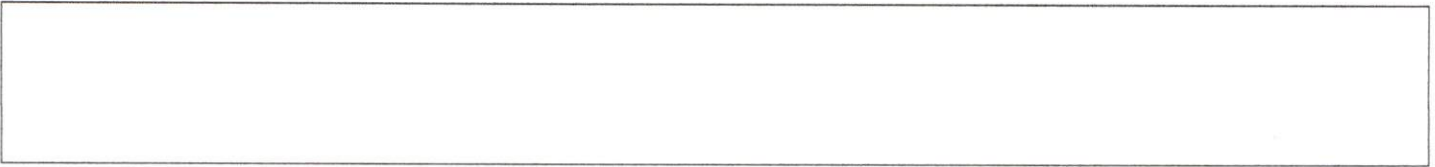
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SECTION 7

CLAIM OF BENEFICIAL USE MAP

This map was prepared from data gather from Google Earth (imagery August 31, 2025), GPS surveying equipment, land survey records and general field observations.



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.)

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

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Request: Applicant is requesting Conditions 9 of R-15632 be waived for this Claim of Beneficial Use.

Request for waiver of Condition 9, Permit R-15632

Condition 9 of Permit R-15632 calls for the installation of an 8 inch minimum pipe to facilitate draining this reservoir if needed. We are requesting a waiver of this condition.

Present condition of the reservoir: This reservoir has been created by constructing a berm across what appears to have been a spring fed wetland. The berm was constructed 3, or more, decades ago. There is no outlet for this reservoir. After careful inspection of the berm and nearby area we have not found reliable evidence of the reservoir having overflowed since its construction. Further, the immediate area at the lowest point of the downhill area of the berm appears to have been intensely cultivated for an extended period of time. There is no discernable evidence of any remnants of an old channel's location.

As the reservoir is pumped for irrigation purposes, around 0.67 CFS during an irrigation cycle (up to a full day), there is a discernable lowering of the reservoir. However, the reservoir soon recovers to its original surface elevation when pumping ceases. This suggests the reservoir, constructed over a now submerged spring, is likely connected to a larger aquifer. This further suggests attempting to drain the reservoir, either through pumping or gravity draining, would likely have an impact on other subsurface, and open water, wet areas in the vicinity. An inspection of Google Earth imagery in the area strongly suggests those conditions do indeed exist.

To install a pipe, and associated necessary valving, and to create a safe outlet drainage system (stable channel) would require physically penetrating a stable berm that has been in place for more than 3 decades and creating a channel through, or around an area that has likely been cultivated for nearly as long as the berm has been in place. The issues in doing so would likely be compounded by having to drain the reservoir's connected aquifer to install the pipe system.

Conclusion: This 30 plus year old reservoir is stable in its present condition. There is no evidence the reservoir has overtopped in its present condition. Since the reservoir is spring fed, there is not likely to be a significant sediment load contributing to its present formation/capacity. Installing a drain pipe as required in R-15632 Condition 9 is likely to create a point of instability in the present berm and to require ecological disturbance of present downstream conditions, including offsite riparian and channel disturbance if the required drainage system were to be activated.

Further the permit holder submitted an application for 1.3 acre feet of additional storage was submitted Feb. 11, 2026 with letters from water master, ODFW and Wasco County indicating the additional storage would not be a problem.

Russell Lawrence, P.E., M.Sc., Fluvial Geomorphologist, CWRE

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PUMP CALCULATIONS SHEET

This is a centrifugal pump powered by a tractor PTO. There is a meter, but no pressure gauge, on the pump system. Theoretical values are made using attached pump curves. Calculations are made using observed meter readings,

The curve for the pump model Famos III 60 indicates it can produce a maximum rate of 80 m³/hr @ 85 m head (0.78 cfs at 278 ft of head (120 psi))

The system components/requirements vary for each of the areas being irrigated. The components consist of four inch buried PVC distribution together with two and three inch manually placed coupled aluminum irrigation pipe configured for each irrigation area. The maximum distribution length is approximately 200 feet with 33 feet of elevation rise, the minimum 500 feet at level. The composition of the distribution system varies by irrigated area and seasonally.

Assuming 4" buried PVC pipe, maximum distance (5200 ft). friction loss in the pipes would be equivalent to 230 feet of head (100 psi). Minimum distance friction loss would be equivalent to 34 feet (15 psi)

There is a 3 inch meter in the system immediately adjacent to the pump which will contribute an additional 20 psi (9 feet) loss.

This results in a maximum head loss of (pipe friction loss + meter + elevation) or 230 + 9 + 39 = 278 feet. This falls within the capacity of this pump according to the pump curve. The minimum values for head loss (pipe friction loss + meter + elevation) 34 + 9 + 0 = 43 feet

For the purposes of this section of the COBU we are assuming an average head loss, i.e. (278 + 43)/2 = 139 feet.

Theoretical Q = 350 gpm (or 0.78 cfs), efficiency for a centrifugal pump = 6.61 (given), head (average) 139 feet. Substituting these values in the provided formula, and substituting as needed, HP = (head * Q)/efficiency, or (139 * 0.78)/ 6.61 = 16 HP.

The power source for this pump is a 50 hp tractor. With an assumed power loss of 11%, the tractor PTO is capable of delivering that needed to successfully operate the irrigation system. Using the given formula, at the values for irrigation delivery to the maximum distance area the maximum deliverable rate would be (Q = (HP * efficiency)/head) or (44.5 * 6.61)/201 = 1.46 cfs, nearly double the capacity of the pump. However, reaching this HP delivery to the PTO would likely exceed the allowed RPM rate for the pump..

Pump information taken from manufacturers pump curves and field observations.

Data
Observed Q = 306 GPM (0.68 cfs)
Pump Eff. = 6.61
HP = 42.5 (50 hp operating at 580 rpm – 85% PTO efficiency)
H varies by pipe run :: max use 230 ft
Friction loss in 4 inch PVC pipe = 4.4 feet per 100 feet run
Friction loss through 3" meter = 20 feet

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Observation made with shortest distribution pipe run (1180 feet) and maximum number of sprinkler heads (50). The field pipe is either 2 or 3 inch coupled aluminum irrigation pipe, depending on field requirements.

Manufacturer's pump curves (attached hereto) shows a maximum delivery rate for this pump at 80 m³/hr (350 gpm) at 70m (230 ft) of head.

Observed pump rate is 306 gpm (69.5 m³/hr), supplying 50 - 11/64 sprinkler nozzle via 1180 feet buried 4 inch PVC pipe plus field pipe. This is the maximum use rate for this COBU.

Field pipe: run 3 inch, Hazen roughness coeff C = 150, Q : 25 sprinklers/run @ 6 gpm/head, gpm for length = 150 gpm pipe diameter d = 3 inch, L= 750 feet (per line) 2 lines at a time

Apply Hazen Williams formula: $H_f = 0.00090914 (100/C)^{1.852} \times (Q^{1.825}/d^{4.866}) * L = 16 \text{ ft} \times 2 \text{ lines} = 32 \text{ ft}$

Operating pressure at nozzle (per manufacturer) 50 f t. Friction loss via buried transmission line = 61 ft

Nozzle pressure + distribution loss + meter loss + field pipe loss = approximate pump operating pressure

6 (suction lift) + 50 + 53 + 20 + 32 = 161 ft (49 m). This pressure, delivery rate well within capability of the PTO pump

Using OWRD formula

$$Q \text{ Pump} = \frac{(\text{horsepower})(\text{pump efficiency})}{(\text{total head in feet})} = Q \text{ in cfs}$$

Hp = 42.5

Pump Eff. = 6.61

Head (above) = 230

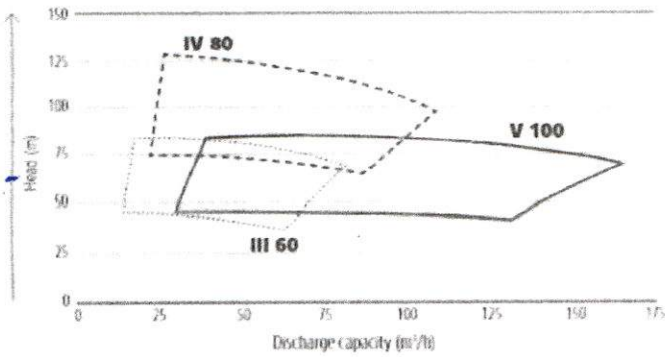
Q pump = (42.5 x 6.61)/230 = 1.3 cfs

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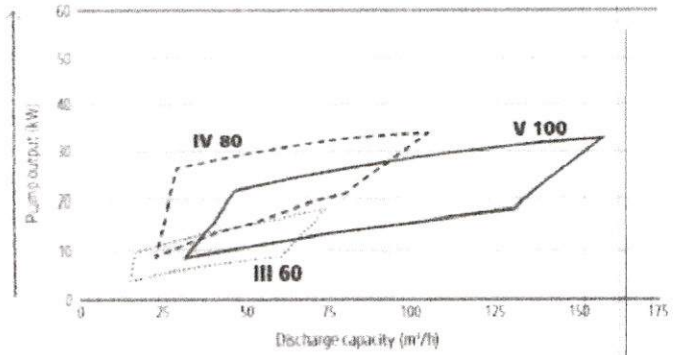
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Pressure and discharge range



The upper limit of the characteristic corresponds to the max. drive speed of 540 rpm.

Performance and discharge range



The motor output must be about 30 to 35% higher than the pump output. The PTO output corresponds to the required pump output.



Technical Data

FAMOS Model	PTO speed up to rpm	Discharge capacity up to m³/h	Head up to m	Suction connection DN	Delivery connection DN	Weight kg
III 60	540	80	85	65	50	48
IV 80	540	90	125	80	65	73
V 100	540	150	85	100	80	63

Model III 60 PUMP CURVE

300 GPM = 68 m³/hr
 306 GPM = 0.68 cfs

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