



Since 1969

Unnati®
SUBMERSIBLE PUMP



The key to growth in disperse is simple

*“Together we can do it
Together we have always done it”*

कम वॉल्टेज पर
चलने वाला पंप



**U
77
99**

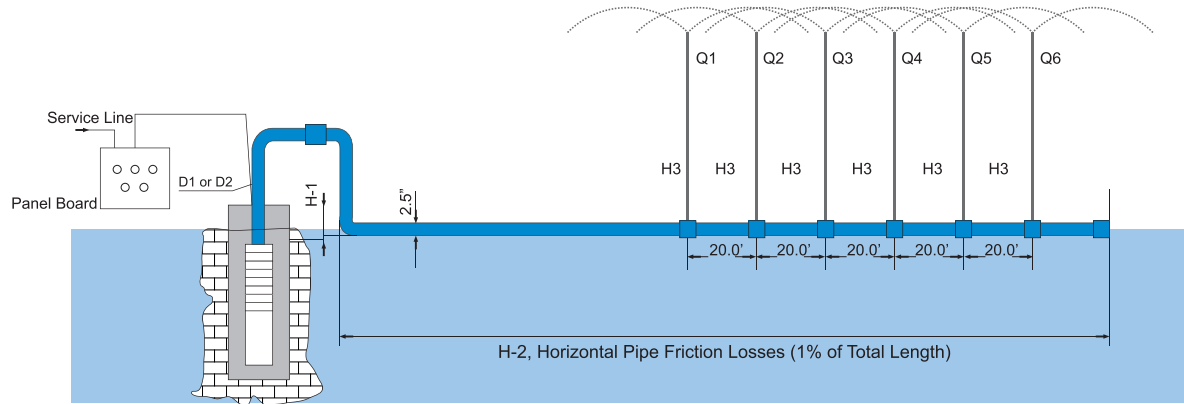
**PERFORMANCE VALUE
AT A GLANCE**

**PRODUCT RANGE U-77 (V3) & U-99 (V4) & UL-5/4
PER STAGE PERFORMANCE VALUE AT A GLANCE
PRICE LIST NO : 54**



Sr. No.	Pump Type	Model	Duty Point Head Per Stage	Duty Point Discharge			Head Range in Meter	Available HP Range
				LPS	LPM	M ³ /H		
1	U-77(OC/WF) SINGLE PHASE PREMIUM/KLASSIC	R3 - 5	3-Mtr	0.48	29	1.74	15 to 108	0.50 to 1.50
2		R3 - 7	3-Mtr	0.72	43	2.58	11 to 72	0.50 to 1.50
3		R3 - 10	3.5-Mtr	1.00	60	3.60	9 to 63	0.50 to 1.50
4	U-99 R/MF - SERIES (OC/WF) SINGLE PHASE PREMIUM/KLC	R - 6	4-Mtr	0.43	26	1.56	14 to 225	0.50 to 3.00
5		R - 8	4-Mtr	0.73	44	2.64	12 to 200	0.50 to 3.00
6		R - 11	4-Mtr	1.13	68	4.08	14 to 210	0.75 to 5.00
7		R - 16	4-Mtr	1.72	103	6.18	10 to 150	0.75 to 5.00
8		R - 20	4-Mtr	2.37	142	8.52	10 to 125	1.00 to 5.00
9		MF - 25	3.5-Mtr	2.52	151	9.06	11 to 88	1.50 to 5.00
10		MF - 35	4-Mtr	4.42	265	15.90	10 to 77	2.00 to 5.00
11		MF - 50	4-Mtr	4.72	283	16.98	8 to 50	2.00 to 5.00
12	U-99 (HR-SERIES) (OC / WF) SINGLE PHASE PREMIUM	HR - 7	5-Mtr	0.60	36	2.16	18 to 280	0.50 to 3.00
13		HR - 11	5-Mtr	0.90	54	3.24	21 to 238	0.75 to 4.00
14		HR - 13	5-Mtr	1.08	65	3.90	12 to 238	0.50 to 5.00
15		HR - 16	5-Mtr	1.53	92	5.52	9 to 210	0.50 to 5.00
16		HR - 20	5-Mtr	1.73	104	6.24	12 to 168	0.75 to 5.00
17	U-99 R/MF-SERIES (OC/WF) THREE PHASE PREMIUM/KLC	R - 6	4-Mtr	0.43	26	1.56	32 to 250	1.00 to 3.00
18		R - 8	4-Mtr	0.73	44	2.64	24 to 300	1.00 to 5.00
19		R - 11	4-Mtr	1.13	68	4.08	18 to 210	1.00 to 5.00
20		R - 16	4-Mtr	1.72	103	6.18	10 to 230	1.00 to 7.50
21		R - 20	4-Mtr	2.37	142	8.52	10 to 185	1.00 to 7.50
22		MF - 25	3.5-Mtr	2.52	151	9.06	7 to 132	1.00 to 7.50
23		MF - 35	4-Mtr	4.42	265	15.90	6 to 154	1.00 to 10.0
24		MF - 50	4-Mtr	4.72	283	16.98	8 to 77	2.00 to 7.50
25	U-99 (HR-SERIES) (OC / WF) THREE PHASE PREMIUM	HR - 7	5-Mtr	0.60	36	2.16	42 to 238	1.00 to 3.00
26		HR - 11	5-Mtr	0.90	54	3.24	27 to 350	1.00 to 6.00
27		HR - 13	5-Mtr	1.08	65	3.90	24 to 385	1.00 to 7.50
28		HR - 16	5-Mtr	1.53	92	5.52	18 to 308	1.00 to 6.00
29		HR - 20	5-Mtr	1.73	104	6.24	15 to 238	1.00 to 7.50

*Above 7.5 HP to 10.0 HP and above 60 Stage to 90 Stage in V4 is available on special requirement.



CONVERSION FACTORS

1 Imperial Gallon	= 4.546 Litres	1 Kg / Cm ²	= 10 MWC
1 Cubic foot (CFT)	= 28.32 Litres	1 Atmosphere	= 1.033 Kg / Cm ²
1 Cusec / 28.32 lps	= 1699 Litres / Minutes	1 Foot	= 0.3048 Metre
1 Cubic - Metres (M ³) / HR	= 16.67 LPM	1 Metre	= 3.28 Feet
1 Cumec	= 60000 Litres / Minutes	1 H.P. (Metric)	= 735.5 Watts
1 LPM	= 60 LPS	1 kW	= 1000 W
		1 Kg	= 1000 Gms

HEAD CALCULATION

- H-1 = Pumping water level (in mtrs)
- H-2 = 1% friction loss (horizontal distance from bend to terminal points of pipes in mtrs)
- H-3 = 1 mtr x number of sprinklers (nozzles) to be operated
- H = Total head in mtrs (H-1 + H-2 + H-3)

DISCHARGE CALCULATION

- Q = total discharge of sprinklers (nozzles) 30 LPM x number of sprinklers (nozzles)

HYPOTHETICAL ILLUSTRATION

- H-1 = 61 mtrs (200 ft)
- H-2 = 1% x 610 mtrs (200 ft) (horizontal distance) = 6.1 mtrs
- H-3 = 1 mtr x 17 sprinklers (nozzles) = 17 mtrs
- H = Total Head in mtrs (61 + 6.1 + 17) = (84.1 mtrs)
- Q = 30 LPM x 17 sprinklers (nozzles) = (510 LPM)

Pumps has to be selected at duty point of 84 mtrs with discharge of 510 LPM.

“Unnati” performance chart shows that UL-6 15 HP SB-12/12 stage is suitable for given application.

Note: This is only guideline. Actual selection will be based upon field conditions.



- It is recommended to use correct size cable of reliable brand/make to ensure performance capability and durability of the pumpset.

CABLE SELECTION CHART FOR SINGLE PHASE MOTOR

Sr. No.	HP	TOTAL LENGTH IN MTRS																				
		10	20	30	40	50	60	70	80	90	100	120	140	160	180	200	250	300	350	400	450	500
		CABLES SIZE IN SQ. MM																				
1	0.50	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	6.0	10.0	10.0
2	0.75	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	6.0	10.0	10.0
3	1.00	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0
4	1.25	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0
5	1.50	1.5	1.5	1.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	10.0	16.0	16.0	16.0	25.0	25.0	25.0
6	2.00	1.5	1.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0	16.0	25.0	25.0	25.0	35.0	35.0
7	3.00	1.5	1.5	2.5	2.5	4.0	4.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0	16.0	16.0	16.0	25.0	25.0	25.0	35.0	35.0
8	4.00	1.5	2.5	2.5	4.0	4.0	6.0	6.0	10.0	10.0	16.0	16.0	16.0	16.0	16.0	16.0	25.0	25.0	25.0	35.0	35.0	35.0
9	5.00	2.5	2.5	4.0	4.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0	16.0	25.0	25.0	25.0	25.0	35.0	35.0	50.0	50.0	50.0

CABLE SELECTION CHART FOR THREE PHASE MOTOR

Sr. No.	HP	TOTAL LENGTH IN MTRS																				
		10	20	30	40	50	60	70	80	90	100	120	140	160	180	200	250	300	350	400	450	500
		CABLES SIZE IN SQ. MM																				
1	1.00	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5
2	1.50	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	4.0	4.0
3	2.00	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	4.0
4	3.00	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	4.0	6.0	4.0	4.0	6.0	6.0	6.0
5	4.00	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	4.0	4.0	6.0	6.0	6.0	6.0	10.0	10.0
6	5.00	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	10.0
7	6.00	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	10.0	16.0
8	7.50 SD	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	16.0	16.0	16.0
9	7.50DOL	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	10.0
10	10.00	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	4.0	4.0	4.0	6.0	6.0	10.0	10.0	10.0	10.0	16.0

**U
77**

Borewell Size	77 mm
Pump O.D.	75 mm
Motor O.D.	75 mm

U-77 (V3) OIL/WATER FILLED PREMIUM/ KLASSIC LP54 SINGLE PHASE



Outlet Size 25mm (1")					
Sr. No.	H.P.	Kw.	Pump Type/ Stage	ISI Mark	Star Rating
1	0.50	0.37	R3-5/10		
2	0.50	0.37	R3-5/12		
3	0.75	0.55	R3-5/15		
4	1.00	0.75	R3-5/16		

5	1.00	0.75	R3-5/20		
6	1.25	0.93	R3-5/25		
7	1.50	1.10	R3-5/28		
8	1.50	1.10	R3-5/30		

Outlet Size 25mm (1")					
Sr. No.	H.P.	Kw.	Pump Type/ Stage	ISI Mark	Star Rating
9	0.50	0.37	R3-7/07		
10	0.50	0.37	R3-7/08		
11	0.75	0.55	R3-7/10		
12	1.00	0.75	R3-7/12		



Discharge								Recom'ded Cable in Sq. mm
M ³ /H	1.20	1.32	1.56	1.74	2.10	2.40	2.64	
LPM	20	22	26	29	35	40	44	
TOTAL HEAD IN METERS	38	36	33	30	23	15	8	1.5
	45	43	40	36	28	18	9	1.5
	57	54	50	45	34	23	12	1.5
	61	58	53	48	37	24	12	1.5
	76	72	66	60	45	30	16	2.5
	95	90	83	75	56	38	20	2.5
	106	101	92	84	63	42	22	2.5
	114	108	99	90	69	45	23	2.5

Discharge								Recom'ded Cable in Sq. mm
M ³ /H	1.98	2.22	2.40	2.58	3.00	3.36	3.66	
LPM	33	37	40	43	50	56	61	
TOTAL HEAD IN METERS	27	25	23	21	16	11	6	1.5
	30	29	26	24	18	12	6	1.5
	38	36	33	30	23	15	8	1.5
	46	43	40	36	28	18	10	1.5

*Single Phase Motor of Starting Water filled - CSCR, Oil Filled - CSR

■ Best Working Zone

**U
77**

Borewell Size	77 mm
Pump O.D.	75 mm
Motor O.D.	75 mm

U-77 (V3) OIL/WATER FILLED PREMIUM/ KLASSIC LP54 SINGLE PHASE



Outlet Size 25mm (1")					
Sr. No.	H.P.	Kw.	Pump Type/ Stage	ISI Mark	Star Rating
13	1.00	0.75	R3-7/15		
14	1.25	0.93	R3-7/16		
15	1.25	0.93	R3-7/18		
16	1.50	1.10	R3-7/20		

Discharge								Recom'ded Cable in Sq. mm
M ³ /H	1.98	2.22	2.40	2.58	3.00	3.36	3.66	
LPM	33	37	40	43	50	56	61	
TOTAL HEAD IN METERS	57	54	50	45	34	23	12	1.5
	61	58	53	48	36	24	13	1.5
	69	65	60	54	41	27	15	1.5
	76	72	66	60	45	30	16	2.5

Outlet Size 32mm (1.25")					
Sr. No.	H.P.	Kw.	Pump Type/ Stage	ISI Mark	Star Rating
17	0.50	0.37	R3-10/05		
18	0.75	0.55	R3-10/07		
19	1.00	0.75	R3-10/08		

Discharge								Recom'ded Cable in Sq. mm
M ³ /H	2.46	2.82	3.18	3.60	4.38	4.98	5.34	
LPM	41	47	53	60	73	83	89	
TOTAL HEAD IN METERS	22	21	19	18	13	9	5	1.5
	31	29	27	25	18	12	6	1.5
	35	33	31	28	21	14	7	1.5
	40	38	35	32	24	16	8	1.5
	44	42	39	35	26	18	9	1.5
	53	50	46	42	32	21	11	1.5
66	63	58	53	39	26	14	1.5	

20	1.00	0.75	R3-10/09		
21	1.00	0.75	R3-10/10		
22	1.25	0.93	R3-10/12		
23	1.50	1.10	R3-10/15		

*Single Phase Motor of Starting Water filled - CSCR, Oil Filled - CSR

■ Best Working Zone

- Prices of model not mentioned here in will be furnished on request if found technically viable.
- Order will be accepted on receipt of advance payment.
- GST will be charge extra as applicable at the time of dispatch.
- Freight and insurance to be borne by the Buyer.
- Company has right to revise the pricelist and include /withdraw any model without prior information.
- It is recommended to select the pumpset within a highlighted working zone.
- Images, Design, MOC and Discharge Data indicated in this booklet are for general information and may differ with supplied models due to site condition and continuous upgradation.
- V3, V4 Performance Characteristic cum Price List No.54 is effective from 1st Feb., 2022 and supersedes previous pricelist & circulars.
- Customers are advised to use quality accessories, panels and cable etc. of appropriate values.
- All disputes subject to Ahmedabad jurisdiction.

CONVERSION FACTORS

1 Imperial Gallon	= 4.546 Litres	1 Kg / Cm ²	= 10 MWC
1 Cubic foot (CFT)	= 28.32 Litres	1 Atmosphere	= 1.033 Kg / Cm ²
1 Cusec / 28.32 lps	= 1699 Litres / Minutes	1 Foot	= 0.3048 Metre
1 Cubic - Metres (M ³) / HR	= 16.67 LPM	1 Metre	= 3.28 Feet
1 Cumec	= 60000 Litres / Minutes	1 H.P. (Metric)	= 735.5 Watts
1 LPM	= 60 LPS	1 KW	= 1000 W
		1 Kg	= 1000 Gms

V3 (U-77) WATER FILLED - USE CAPACITOR FOR H.P. WISE PANEL LIST

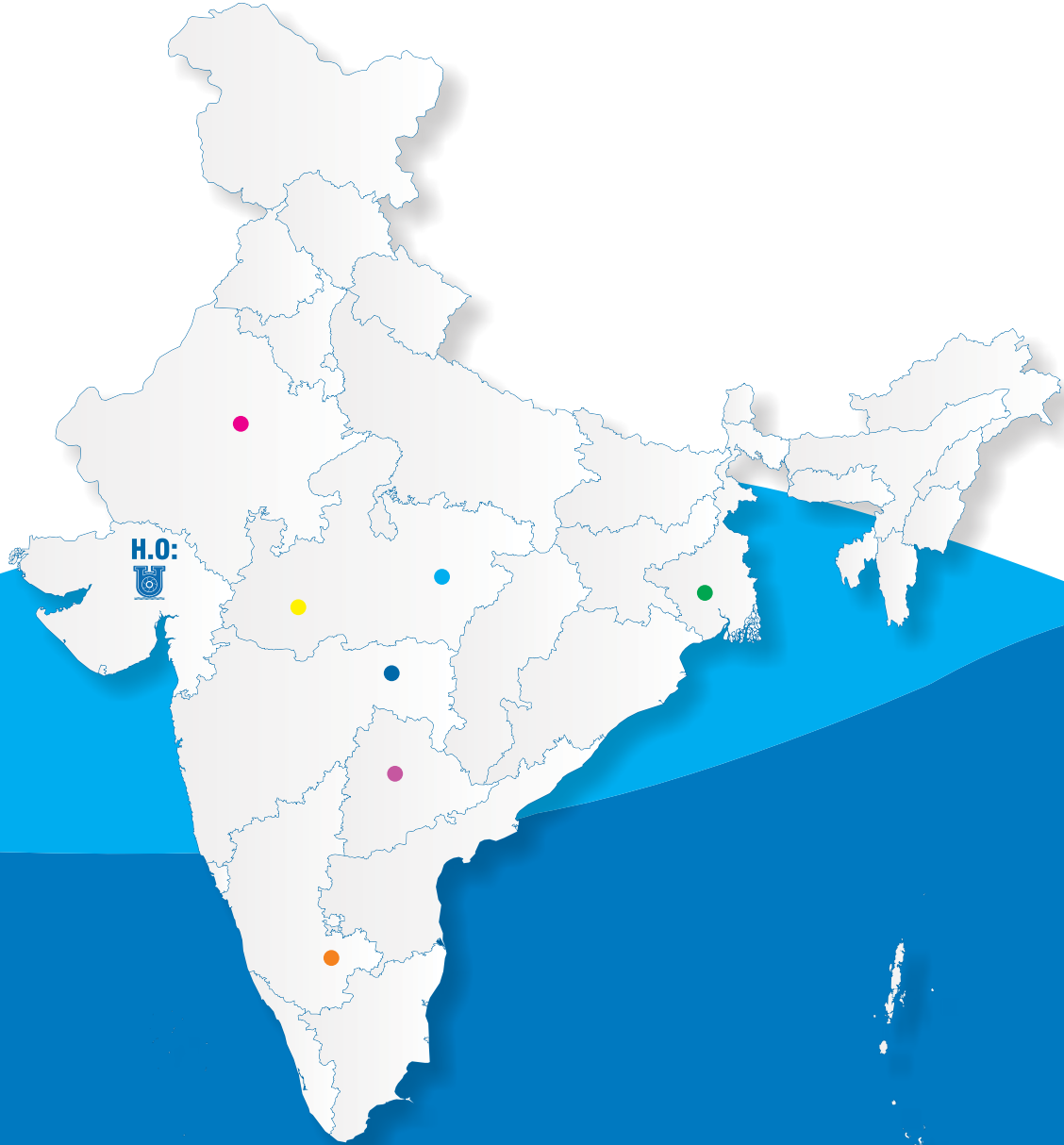
SR. NO	H.P	STARTING CAP.	RUNNING CAP.	M.C.B.	Max Current Limit At Standard Voltage Condition
1	0.50	100-120 μ fd	36 μ fd	10 Amp.	5.00 Amp.
2	0.75	100-120 μ fd	50 μ fd	10 Amp.	6.00 Amp.
3	1.00	120-150 μ fd	36+36 μ fd	10 Amp.	7.00 Amp.
4	1.25	120-150 μ fd	36+36 μ fd	16 Amp.	10.50 Amp.
5	1.50	120-150 μ fd	36+36 μ fd	16 Amp.	10.50 Amp.

V3(U-77) OIL FILLED - USE CAPACITOR FOR H.P. WISE PANEL LIST

SR. NO	H.P	START & RUNNING CAP.	M.C.B.	Max Current Limit At Standard Voltage Condition
1	0.50	36 μ fd	10 Amp.	5.00 Amp.
2	0.75	36 μ fd	10 Amp.	6.00 Amp.
3	1.00	36 μ fd	10 Amp.	7.00 Amp.
4	1.25	36 μ fd	16 Amp.	10.00 Amp.
5	1.50	36 μ fd	16 Amp.	10.50 Amp.

PANEL BOARD'S RATE, TERMS & CONDITIONS:

- Discount: Nil - Not Applicable.
- Taxes & Duties : Extra as applicable to Buyer A/c.
- It is advisable to use STD. STR. CON. ACC. provided by the company for the better performance and durability.



Head Office:

 Ahmedabad

Sales Office:

- Jaipur
- Indore
- Jabalpur
- Bangaluru
- Secunderabad
- Nagpur
- Kolkata

The key to our growth and success is simple

*“Together we can do it
Together we have always done it”*

Since 1969

Unnati[®]

SUBMERSIBLE PUMP



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