



HYLIC PUMP

Reliable Pumping Solutions
for a Sustainable Future



Model HWS
Submersible Sewage Pumps

Hylic HWS Model

Standard-Capacity Models (Up to 7.7 kW)

The Hylic HWS model is a compact submersible sewage pump rated up to 7.7 kW, designed and manufactured in an ISO 9001-certified facility. Engineered for high efficiency, reliability, and ease of operation, the HWS model incorporates a single or double runner impeller that provides strong flow capacity and clog-free performance—ideal for light to medium-duty wastewater applications.

Its coaxial, direct-drive motor and compact structure allow for low-noise operation and simple installation, making it suitable for a wide range of pump station configurations. The unit is compatible with dedicated electric control cabinets, enabling automatic operation and comprehensive motor protection through integrated oil and water detection probes.

Hylic HWS pumps offer long-term performance, reduced maintenance requirements, and reliable functionality, providing a practical and efficient solution for modern wastewater systems.



HWS

Applications

The Hylic HWS model is ideal for a wide range of applications including municipal infrastructure, industrial facilities, hotels, hospitals, and mining operations. It is designed to pump sewage, wastewater, rainwater, and domestic water containing solid particles and long fibrous materials with high efficiency and reliability.

These pumps operate efficiently under the following conditions :

- **Liquid Temperature** : Must not exceed 40°C
- **Liquid Density** : $\leq 1200 \text{ kg/m}^3$
- **pH Range** : Between 5 and 9
- **Minimum Liquid Level** : The liquid level must remain above the minimum threshold indicated in the installation manual during operation
- **Power Supply** : 380V, 50Hz (Allowable deviation: $\pm 5\%$ for both voltage and frequency)
- **Solid Particle Size** : The diameter of solid particles must not exceed 50% of the pump outlet diameter

Impeller Rotation

The impeller rotates counterclockwise (CCW) when viewed from the suction side.

Key Features

- **Efficient Hydraulic Design**
Single or double runner impeller ensures stable flow, strong solids-handling capability, and minimized risk of clogging.
- **Compact & Quiet Operation**
Coaxial motor-pump alignment with direct drive reduces footprint and noise while enhancing system stability.
- **Reliable Shaft Seal System**
Single end-face mechanical seal ensures dependable sealing and prolonged service life.
- **Advanced Motor Protection**
Built-in oil and water detection probes and multi-level protective features enhance safety and reliability during long-term operation.

Scope of Supply and Optional Components

Category	Item	Automatic Coupling	Mobile	Remarks
Standard Supply	Main unit (Pump + Motor)	√	√	
	Automatic coupling system	√		
	Guide rail	√		Not included in GAK(II)
	Base (Part installed on structure)	√	√	Material : Cast iron/plastic (DN50-100)
	90° Rigid elbow	√	√	Material : Cast iron/plastic (DN50-100)
	90° Flexible elbow		√	Material : Cast iron/plastic (DN50-100)
Optional Items	Ground anchor bolts	√		
	Flange adapter	√	√	Not provided when using flexible elbow
	Flange connection bolts and gaskets	√	√	
	Lifting chain	√		
	Shock absorber	√		
Spare Parts	Impeller	√		
	Bearing	√		
	Mechanical seal	√		
	O-ring	√		

Note : For mobile-type installations, if not otherwise specified in the contract, a rigid elbow is assumed by default.

Ground Anchor Bolt Specifications (for Pump Base Installation)

Discharge Diameter of Pump	Specifications	Quantity	Reference Dimension of Reserved Hole (L × W × D)
32	M16×300	4	80×80×350
50	M16×300	4	80×80×350
65	M16×300	4	80×80×350
80	M16×300	4	80×80×350
100	M16×300	4	80×80×350
150	M16×300	4	80×80×350

Guide Rod Specifications and Dimensions

Discharge Diameter of Pump	Carbon Steel Welded Pipe	Galvanized Pipe	304 Welded Pipe	Guide Rod Reference Length (mm)	Rod Tolerance (mm)
32	DN25×3	DN25×3	Ø32×3	210	±0.03
50				210	
65				230	
80	DN50×3	DN50×3	Ø60×3.5	270	±0.03
100				280	
150				480	

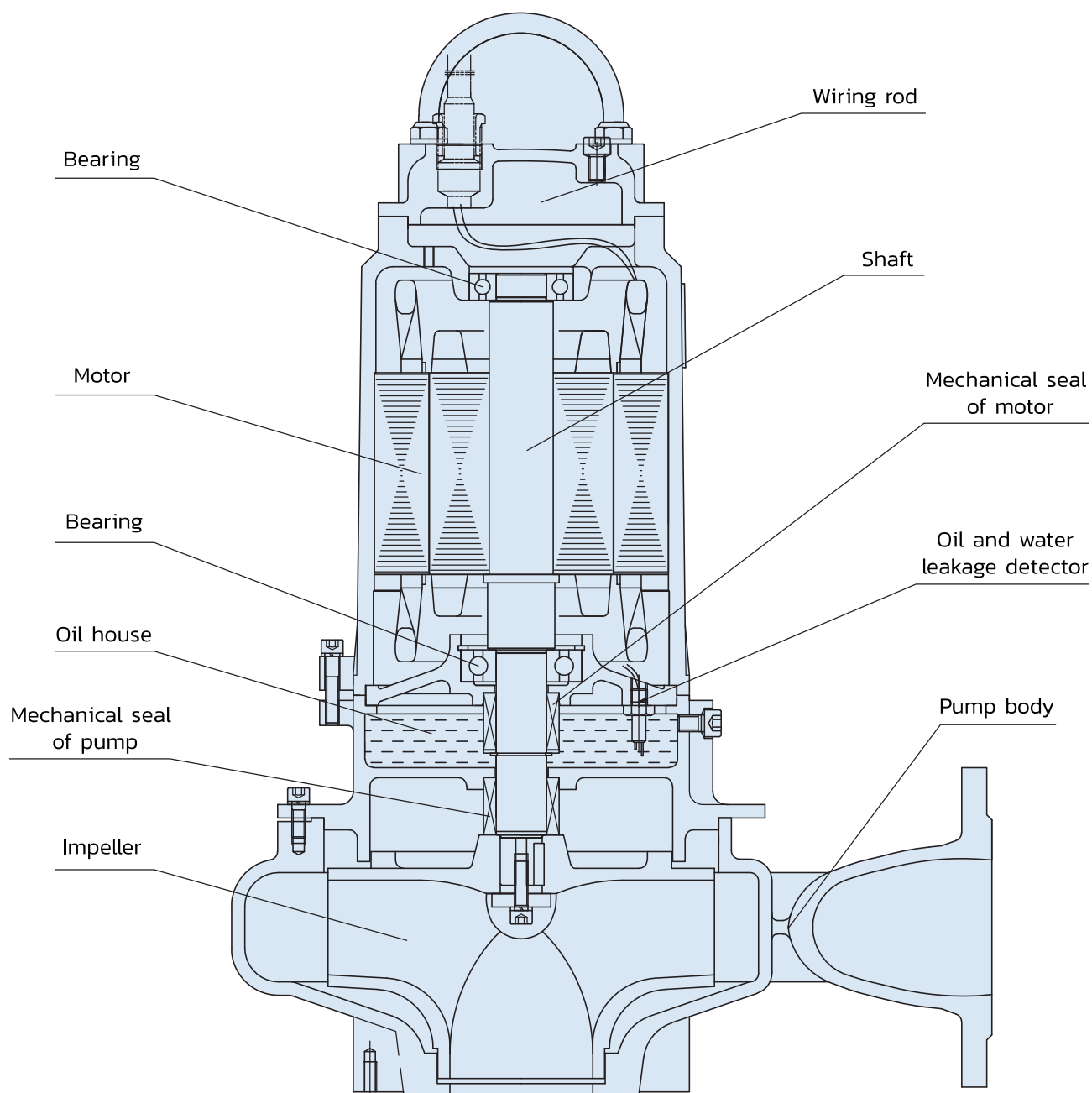
Note :

- Guide Rod Reference Length = (pool depth) + 15mm below size
- Carbon steel & galvanized pipe standards : GB/T 3091-2015
- 304 pipe standard : GB/T 12771-2008

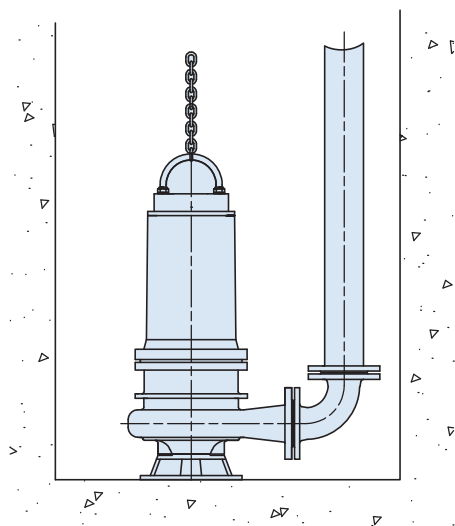


Pump Structure (Part List) Model : HWS

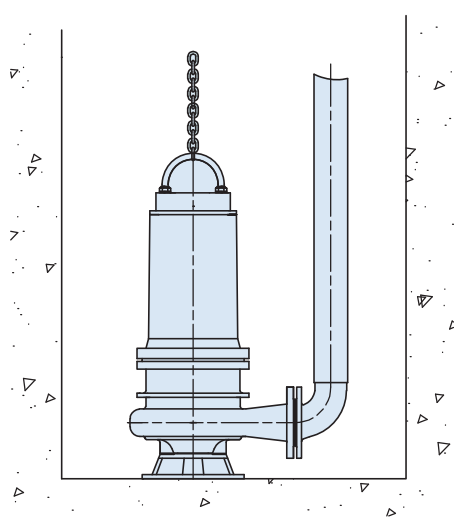
HWS Model Structure drawing



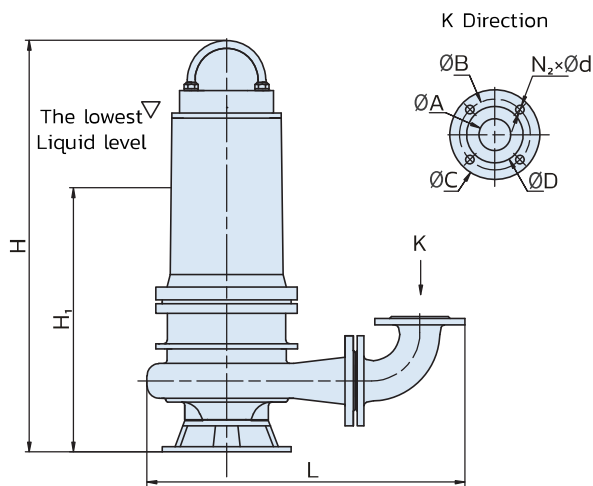
HWS Model Installation



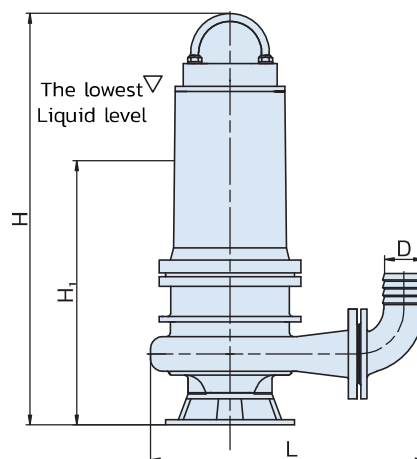
Movable Hard Pipe Installation



Movable Soft Pipe Installation



Hard pipe connection dimension



Soft pipe connection dimension

HWS Model Installation method

1. Auto-Coupled Installation

The pump is lowered along a guide rail and automatically connects to the drainage pipeline. This method reduces both installation and maintenance costs.

2. Movable Hard Pipe Installation

The pump is installed on a fixed base with a hard pipe connection to the pipeline system.

3. Movable Soft Pipe Installation

The pump is installed on a base and connected to a flexible rubber outlet hose. This setup allows for easy relocation and is suitable for multipurpose applications.

Installation Dimension Tables

Model : HWS

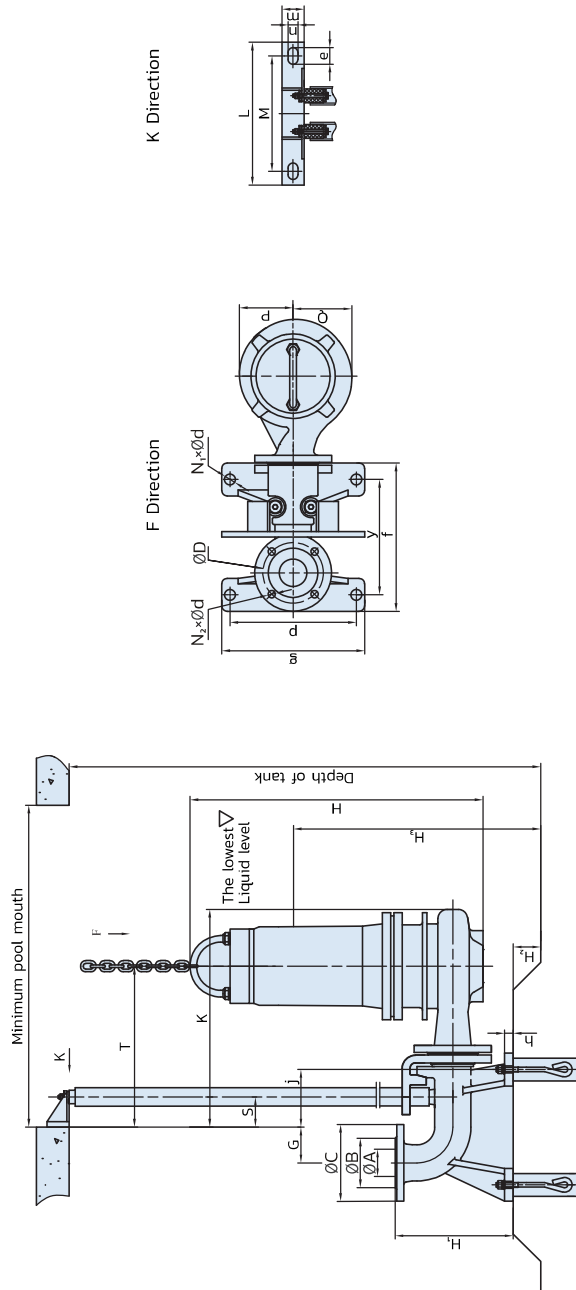
HWS Model Installation dimension table

NO.	Type	Hard pipe connection dimension							Soft pipe connection dimension				
		ØA	ØB	ØC	ØD	N ₂ ×Ød	H	H _i	L	ØD	L	H	H _i
1	32HWS8-10-0.75	32	69	120	90	4×Ø13.5	551	340	395	32	353	551	340
2	32HWS8-15-1.1	32	69	120	90	4×Ø13.5	551	360	395	32	353	551	360
3	50HWS15-8-0.75	50	90	140	110	4×Ø13.5	549	340	433	60	366	549	340
4	50HWS15-12-1.1	50	90	140	110	4×Ø13.5	549	360	433	60	366	549	360
5	50HWS15-16-1.5	50	90	140	110	4×Ø13.5	583	370	433	60	366	583	370
6	50HWS15-22-2.2	50	90	140	110	4×Ø13.5	583	400	433	60	366	583	400
7	50HWS15-30-3	50	90	140	110	4×Ø13.5	634	400	494	60	427	634	400
8	50HWS25-25-4	50	90	140	110	4×Ø13.5	639	410	494	60	427	639	410
9	50HWS25-32-5.5	50	90	140	110	4×Ø13.5	692	410	535	60	468	692	410
10	50HWS25-36-7.5	50	90	140	110	4×Ø13.5	692	420	535	60	468	692	420
11	65HWS30-10-2.2	65	110	160	130	4×Ø13.5	659	420	610	74	524	659	420
12	65HWS30-15-3	65	110	160	130	4×Ø13.5	659	450	610	74	524	659	450
13	65HWS30-22-4	65	110	160	130	4×Ø13.5	642	420	527	74	440	642	420
14	65HWS30-30-5.5	65	110	160	130	4×Ø13.5	691	410	565	74	470	691	410
15	65HWS30-35-7.5	65	110	160	130	4×Ø13.5	691	420	565	74	470	691	420
16	80HWS50-8-2.2	80	128	190	150	4×Ø17.5	699	470	697	86	583	699	470
17	80HWS50-10-3	80	128	190	150	4×Ø17.5	699	490	697	86	583	699	490
18	80HWS50-15-4	80	128	190	150	4×Ø17.5	704	500	697	86	583	704	500
19	80HWS50-20-5.5	80	128	190	150	4×Ø17.5	720	440	610	86	496	720	440
20	80HWS50-25-7.5	80	128	190	150	4×Ø17.5	720	450	610	86	496	720	450
21	100HWS80-7-3	100	148	210	170	4×Ø17.5	699	490	718	100	605	699	490
22	100HWS80-10-4	100	148	210	170	4×Ø17.5	704	500	718	100	605	704	500
23	100HWS80-13-5.5	100	148	210	170	4×Ø17.5	720	440	620	100	507	720	440
24	100HWS80-18-7.5	100	148	210	170	4×Ø17.5	720	450	620	100	507	720	450
25	150HWS150-7-5.5	150	202	265	225	8×Ø17.5	831	560	907	150	855	831	560
26	150HWS150-10-7.5	150	202	265	225	8×Ø17.5	831	600	907	150	855	831	600

Auto-coupled Installation Dimension Table

Model : HWS

HWS Model Auto-coupled installation dimensions table



NO.	Type	ØA	ØB	ØC	ØD	N ₁ ×Ød	H	H ₁	H ₂	H ₃	h	G	J	S	T	g	f	p	y	N ₁ ×Ød	P	Q	K	L	M	e	n	m	E
1	32HWS8-10-0.75	32	69	120	90	4×Ø13.5	471	200	50	390	20	65	105	55	265	260	310	230	210	4×Ø20	91	91	362	260	210	30	18	40	700×570
2	32HWS8-15-1.1	32	69	120	90	4×Ø13.5	471	200	50	400	20	65	105	55	265	260	310	230	210	4×Ø20	91	91	362	260	210	30	18	40	700×570
3	50HWS15-8-0.75	50	90	140	110	4×Ø13.5	499	215	50	400	20	65	105	55	293	260	310	230	210	4×Ø20	98	107	396	260	210	30	18	40	700×570
4	50HWS15-12-1.1	50	90	140	110	4×Ø13.5	499	215	50	410	20	65	105	55	293	260	310	230	210	4×Ø20	98	107	396	260	210	30	18	40	700×570
5	50HWS15-16-1.5	50	90	140	110	4×Ø13.5	533	215	50	430	20	65	105	55	293	260	310	230	210	4×Ø20	98	107	396	260	210	30	18	40	700×570
6	50HWS15-22-2.2	50	90	140	110	4×Ø13.5	533	215	50	450	20	65	105	55	333	260	310	230	210	4×Ø20	98	107	396	260	210	30	18	40	700×570
7	50HWS15-30-3	50	90	140	110	4×Ø13.5	584	215	50	450	20	65	105	55	333	260	310	230	210	4×Ø20	117	126	457	260	210	30	18	40	850×700
8	50HWS25-25-4	50	90	140	110	4×Ø13.5	589	215	50	460	20	65	105	55	333	260	310	230	210	4×Ø20	117	126	457	260	210	30	18	40	850×700
9	50HWS25-32-5.5	50	90	140	110	4×Ø13.5	641	215	50	470	20	65	105	55	353	260	310	230	210	4×Ø20	130	144	498	260	210	30	18	40	850×700
10	50HWS25-36-7.5	50	90	140	110	4×Ø13.5	641	215	50	480	20	65	105	55	353	260	310	230	210	4×Ø20	130	144	498	260	210	30	18	40	850×700
11	65HWS30-10-2.2	65	110	160	130	4×Ø13.5	609	240	65	480	20	80	120	55	383	285	310	250	225	4×Ø20	152	173	543	260	210	30	18	40	850×700
12	65HWS30-15-3	65	110	160	130	4×Ø13.5	609	240	65	510	20	80	120	55	383	285	310	250	225	4×Ø20	152	173	543	260	210	30	18	40	850×700
13	65HWS30-22-4	65	110	160	130	4×Ø13.5	592	240	65	490	20	80	120	55	333	285	310	250	225	4×Ø20	120	135	460	260	210	30	18	40	850×700
14	65HWS30-30-5.5	65	110	160	130	4×Ø13.5	641	240	65	490	20	80	120	55	353	285	310	250	225	4×Ø20	129	145	498	260	210	30	18	40	850×700
15	65HWS30-35-7.5	65	110	160	130	4×Ø13.5	641	240	65	500	20	80	120	55	353	285	310	250	225	4×Ø20	129	145	498	260	210	30	18	40	850×700
16	80HWS50-8-2.2	80	128	190	150	4×Ø17.5	639	275	80	530	25	70	175	90	475	290	340	255	260	4×Ø20	163	190	647	380	320	30	18	40	950×750
17	80HWS50-10-3	80	128	190	150	4×Ø17.5	639	275	80	560	25	70	175	90	475	290	340	255	260	4×Ø20	163	190	647	380	320	30	18	40	950×750
18	80HWS50-15-4	80	128	190	150	4×Ø17.5	644	275	80	570	25	70	175	90	475	290	340	255	260	4×Ø20	163	190	647	380	320	30	18	40	950×750
19	80HWS50-20-5.5	80	128	190	150	4×Ø17.5	659	275	80	540	25	70	175	90	415	290	340	255	260	4×Ø20	132	158	560	380	320	30	18	40	950×750
20	80HWS50-25-7.5	80	128	190	150	4×Ø17.5	659	275	80	550	25	70	175	90	415	290	340	255	260	4×Ø20	132	158	560	380	320	30	18	40	950×750
21	100HWS80-7-3	100	148	210	170	4×Ø17.5	639	330	100	590	25	90	215	90	485	340	410	305	310	4×Ø20	169	202	668	380	320	30	18	40	1000×800
22	100HWS80-10-4	100	148	210	170	4×Ø17.5	644	330	100	600	25	90	215	90	485	340	410	305	310	4×Ø20	169	202	668	380	320	30	18	40	1000×800
23	100HWS80-13-5.5	100	148	210	170	4×Ø17.5	660	330	100	580	25	90	215	90	425	340	410	305	310	4×Ø20	125	147	570	380	320	30	18	40	1000×800
24	100HWS80-18-7.5	100	148	210	170	4×Ø17.5	660	330	100	590	25	90	215	90	425	340	410	305	310	4×Ø20	125	147	570	380	320	30	18	40	1000×800
25	150HWS150-7-5.5	150	202	265	225	8×Ø17.5	751	485	150	740	35	125	260	90	568	480	500	440	400	4×Ø20	201	249	793	380	320	30	18	40	1100×850
26	150HWS150-10-7.5	150	202	265	225	8×Ø17.5	751	485	150	780	35	125	260	90	568	480	500	440	400	4×Ø20	201	249	793	380	320	30	18	40	1100×850

Pump Performance Model : HWS

HWS Model Performance

NO.	Type	Outlet diameter (mm)	Capacity		Head (m)	Speed (r/min)	Power (kW)	Efficiency (%)	Weight (Kg)
			(m³/h)	(L/s)					
1	32HWS8-10-0.75	32	6	1.7	12	2825	0.75	40	32
			8	2.2	10			42	
			10	2.8	8			40	
2	32HWS8-15-1.1	32	6	1.7	17	2825	1.1	40	34
			8	2.2	15			42	
			10	2.8	12			40	
3	50HWS15-8-0.75	50	10	2.8	10	2825	0.75	48	34
			15	4.2	8			52	
			20	5.6	7			56	
4	50HWS15-12-1.1	50	10	2.8	14	2825	1.1	48	35
			15	4.2	12			52	
			20	5.6	10			56	
5	50HWS15-16-1.5	50	10	2.8	18	2840	1.5	48	38
			15	4.2	16			52	
			20	6.9	10			56	
6	50HWS15-22-2.2	50	10	2.8	25	2840	2.2	48	40
			15	4.2	22			52	
			20	6.9	16			56	
7	50HWS15-30-3	50	10	2.8	33	2880	3	45	55
			15	4.2	30			50	
			20	6.9	20			54	
8	50HWS25-25-4	50	20	5.6	28	2880	4	43	62
			25	6.9	25			48	
			40	11.1	18			53	
9	50HWS25-32-5.5	50	20	5.6	35	2880	5.5	43	83
			25	6.9	32			48	
			40	11.1	25			55	
10	50HWS25-36-7.5	50	20	5.6	38	2880	7.5	43	85
			25	6.9	36			48	
			40	11.1	33			55	
11	65HWS30-10-2.2	65	20	5.6	12	1410	2.2	50	70
			30	8.3	10			62	
			45	12.5	8			64	
12	65HWS30-15-3	65	20	5.6	17	1410	3	50	75
			30	8.3	15			62	
			45	12.5	12			64	
13	65HWS30-22-4	65	20	5.6	24	2880	4	44	63
			30	8.3	22			52	
			45	12.5	16			57	
14	65HWS30-30-5.5	65	20	5.6	32	2880	5.5	44	84
			30	8.3	30			52	
			45	12.5	22			57	
15	65HWS30-35-7.5	65	20	5.6	37	2880	7.5	44	86
			30	8.3	35			50	
			45	12.5	30			57	
16	80HWS50-8-2.2	80	40	11.1	10	1410	2.2	56	77
			50	13.9	8			60	
			75	20.8	6			63	
17	80HWS50-10-3	80	40	11.1	13	1410	3	56	78
			50	13.9	10			60	
			75	20.8	8			62	
18	80HWS50-15-4	80	40	11.1	18	1435	4	55	92
			50	13.9	15			58	
			75	20.8	10			60	
19	80HWS50-20-5.5	80	40	11.1	23	2880	5.5	48	90
			50	13.9	20			55	
			75	20.8	16			66	
20	80HWS50-25-7.5	80	40	11.1	28	2880	7.5	48	92
			50	13.9	25			55	
			75	20.8	21			63	
21	100HWS80-7-3	100	65	18.1	8	1440	3	62	86
			80	22.2	7			64	
			120	33.3	5			60	
22	100HWS80-10-4	100	65	18.1	12	1435	4	62	94
			80	22.2	10			64	
			120	33.3	7			62	
23	100HWS80-13-5.5	100	65	18.1	15	2880	5.5	58	105
			80	22.2	13			64	
			120	33.3	10			67	
24	100HWS80-18-7.5	100	65	18.1	21	2880	7.5	58	115
			80	22.2	18			64	
			120	33.3	13			67	
25	150HWS150-7-5.5	150	100	27.8	9	1440	5.5	63	135
			150	41.7	7			72	
			220	61.1	5			70	
26	150HWS150-10-7.5	150	100	27.8	12	1440	7.5	63	145
			150	41.7	10			72	
			220	61.1	7			70	

Reference Table for Pipeline Loss

Pipe diameter (mm)	Capacity (L/s)																							
	1	2	4	6	8	10																		
25	32.7	13.0																						
38	3.5	14	55				15	20																
50	0.8	3.1	13	29					25	30														
65		1.6	3.2	7.1	13	20					40	50												
75		0.4	0.8	3.3	5.9	9.6	21.6						60	70										
100			0.23	0.8	1.3	2.1	6.8	8.6	13	19.4					80	90								
125				0.23	0.4	0.63	1.3	2.7	4.1	5.9	10.7					100	110							
150					0.16	0.26	0.58	1.1	1.6	2.3	4.2	6.4	9.4					120	130					
175						0.11	0.27	0.5	0.74	1.05	1.9	2.9	4.3	5.8	7.7	9.6					140	160		
200							0.13	0.26	0.37	0.53	0.93	1.5	2.1	2.9	3.7	4.7	6.1	7.2	8.5				180	200
250								0.07	0.12	0.18	0.30	0.48	0.68	0.93	1.2	1.5	1.9	2.3	2.8	3.3	3.7	4.9	5.2	
300										0.07	0.12	0.19	0.27	0.37	0.49	0.61	0.76	0.9	1.1	1.3	1.5	2.0	2.4	3.0

Brief table for the frictional loss of a straight pipe (for evaluation), the lost meters of a 100m straight pipe takes the newly iron pipe as the standard and multiple for the old one.

The length of a straight pipe converted into from both valva and elbow (each)

NO.	Convert into the times of the diameter of a straight pipe	Remark
Standard elbow	12	Multiple in case of unopen
Fully opened gate valve	25	
Back valve	100	
Foot valve	100	Partial block-up multiplied

Note : For instance, a 100mm diameter pipe, the foot valve has a 100×100=10000mm=10m diameter when which is converted into 100 times that of the pipe's diameter. Suppose the flow is 8L/s. Looked into that above table, the loss of the straight pipe is 1.3m each 100m, then the one for 100mm is 0.13m, that is, for a 100mm foot valve with a flow 8L/s, its head low is 0.13m.

Limit of the maximum flow for a pipe with a certain diameter

Pipeline diameter (mm)	Maximum flow (L/s)	Maximum flow rate (m/s)
25	1	2.04
38	2.5	1.69
50	4.17	2.12
65	6.67	2.01
75	10.0	2.26
100	18.4	2.33
125	30.0	2.44
150	43.0	2.45
175	60.0	2.49
200	83.3	2.69
250	133.0	2.72
300	192.0	2.71

Note : The pipeline loss would be made greatly increased once the limit is over.



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CERTIFIED
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