



IGS ASIA PACIFIC
WATER SOLUTIONS

IGS Water Conditioners



No Moving Parts | No Power Needed | Maintenance Free
| Eco-Friendly | Chemical, Salt & Additive Free |
Easy Installation | Cost Effective | Never Needs Replacing

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WHAT IS WATER CONDITIONING

Unlike a conventional water-softener that only removes calcium from the water with sodium, the IGS Water Conditioner does not add chemicals or remove any minerals from the water flow. However, it does turn 'hard water' into 'soft water' as it changes the characteristics of the calcium, magnesium and iron molecules so that they do not cling to other surfaces. The IGS Water Conditioning device prevents scale from forming by neutralizing the scale producing properties of the minerals in hard water. This means the neutralized mineral particles will flow freely through the system without sticking to the surfaces. The IGS Water Conditioner is very effective, affordable, and safe to use as it has no harsh chemicals, no pollution, and requires no electricity.

SAVE TIME & MONEY & AVOID EQUIPMENT FAILURE

Preventing your equipment from failing not only saves you time and money but avoids scale build-up in your equipment and treats the problem immediately. By simply changing the chemical structure of the hard water before it touches your equipment, the minerals will not harden and crust on the surfaces. The process is stress-free because you will no longer need to treat the water with added chemicals or manually have to chip off the scales or replace any equipment when it fails.

BENEFITS

- Eco-friendly (no chemicals & no salts)Prevents calcium carbonate scaling.
- Over time existing scaling is dissolved.
- Inhibits the growth of bio-film.
- Reduces iron staining problems.
- Reduces operating costs.
- Reduces down time.
- Reduces maintenance costs.
- Reduces your carbon footprint.
- Improves health & safety issues by reducing chemical usage.

WHAT IS THE PROCESS?

The IGS Water Conditioner has a non-sacrificial, catalytic converter that is non-ferrous, resists rusting and corrosion, and is non-toxic and ecologically safe. The unit is installed directly in your water line and does not require salt, resins, electricity, magnets, backwashing, or maintenance. Using a unique combination of metals within the alloy core plus, with the principle of turbulence (the venturi effect) - the water flow is forced through the IGS Water Conditioner unit where an electro-chemical catalytic reaction occurs. During this reaction, electrons are transferred between molecules, completing missing electrons so new mineral compounds are formed. The electro-physical changes in the minerals neutralize their scale producing properties. The result is that previously 'hard' minerals are transformed from being large molecules into inactive, microscopic mineral particles. The mineral content before treatment remains the same as after treatment, just in a different molecular arrangement. Thus, the IGS Water Conditioner will 'soften' your water although it is not technically a water softener. It is the characteristics of the chemicals in the water that matter, not the chemical content.

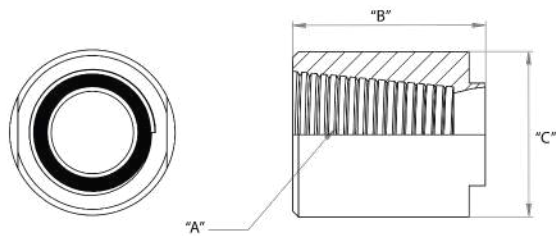
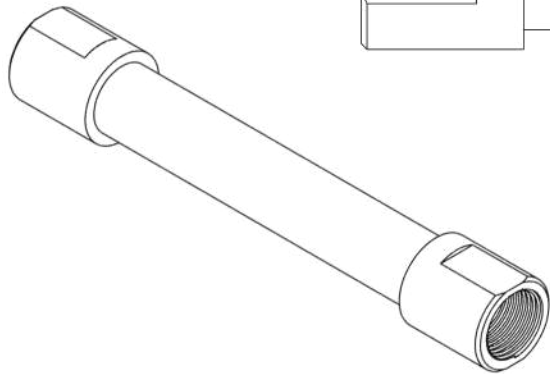
WHY CHOOSE IGS WATER CONDITIONER?

The IGS Water Conditioner works for you 24 hrs a day, 7 days a week. It is affordable, effective and safe to use and will save you time and money. It prevents calcium carbonate scaling, reduces iron staining problems, reduces operating costs, down time, maintenance costs, and your carbon footprint which results in improved health & safety by reducing chemical usage.



SPECIFICATIONS

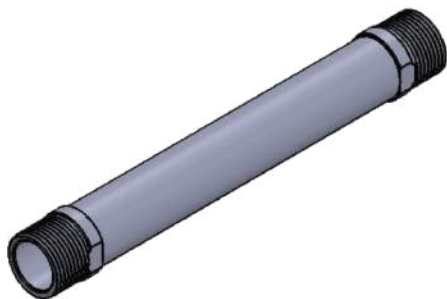
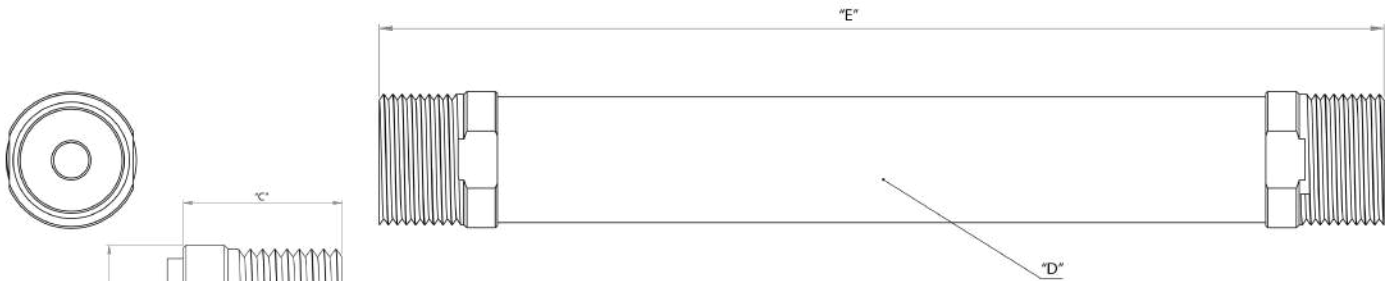
HEADER MODEL SPECIFICATIONS • MATERIAL: 316SS



Model	Header				Housing				Approx. Weight Kg's
	A	B (mm)	C (mm)	Material	D (mm)	E (mm)	Tolerance + or - (mm)	Material	
IGSSHOWER	1/2" / 15 BSPP Female	16	28.9	316SS	25.4	102	3	316SS	0.21
IGSAPP	1/2" / 20 BSPP Male	19.1	32.7	316SS	25.4	104	3	316SS	0.268
	3/4" / 20 BSPP Female								
IGSFRIDGE	3/4" / 20 BSPP Male	16	28.9	316SS	19.05	120	3	316SS	0.21
IGSOVEN	1/2" BSPP Female								
IGS300*	1/2" / 15 BSPP	16	28.9	316SS	20	112	3	316SS	0.214
	3/4" / 20 BSPP	19.1	32.7			118			0.236
IGS420*	1/2" / 15 BSPP	16	28.9	316SS	25.4	95	3	316SS	0.214
	3/4" / 20 BSPP	19.1	32.7			101			0.236
IGS540*	1/2" / 15 BSPP	16	28.9	316SS	25.4	95	3	316SS	0.214
	3/4" / 20 BSPP	19.1	32.7			101			0.236
IGS540MF	3/4" / 20 BSPP Female	19.1	32.7	316SS	25.4	104	3	316SS	0.268
	3/4" / 20 BSPP Male								
IGS720*	1/2" / 15 BSPP	16	28.9	316SS	25.4	159	3	316SS	0.343
	3/4" / 20 BSPP	19.1	32.7			164			0.365
IGS720MF	3/4" / 20 BSPP Female	19.1	32.7	316SS	25.4	168	3	316SS	0.389
	3/4" / 20 BSPP Male								
IGS1080	3/4" / 20 BSPT	30	34.6	316SS	32	186	3	316SS	0.518
IGS2040	3/4" / 20 BSPT	30	34.6	316SS	32	248	3	316SS	0.654
IGS3360	1" / 25 BSPT	34.4	40.1	316SS	32	296	3	316SS	0.994
IGS6000	2" / 50 BSPT	48.3	68.3	316SS	50.9	444	3	316SS	2.849
IGS13200	2" / 50 BSPT	48.3	68.3	316SS	63.5	491	3	316SS	3.85

* Can be manufactured with either thread. Specify when ordering

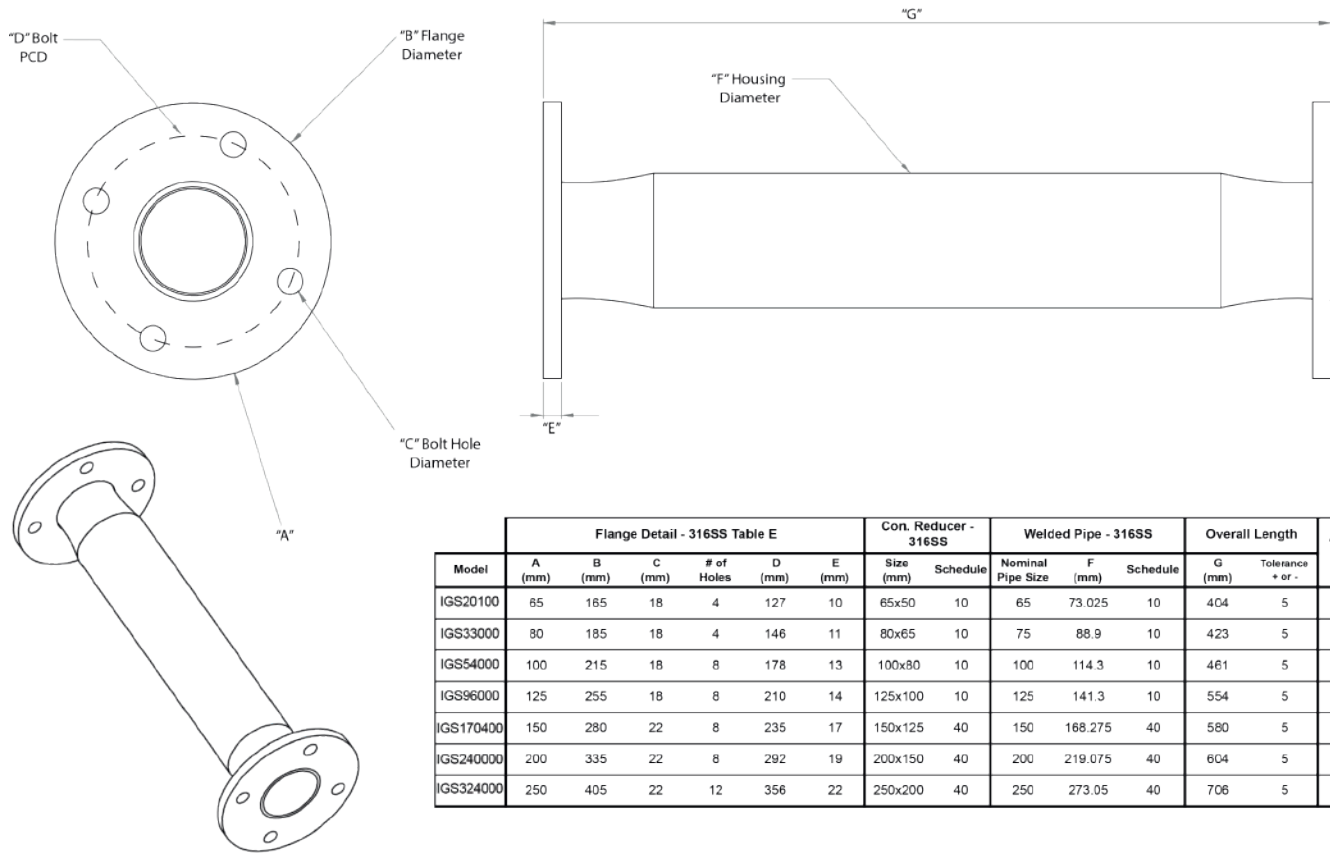
MALE HEADER MODEL SPECIFICATIONS • MATERIAL: 316SS



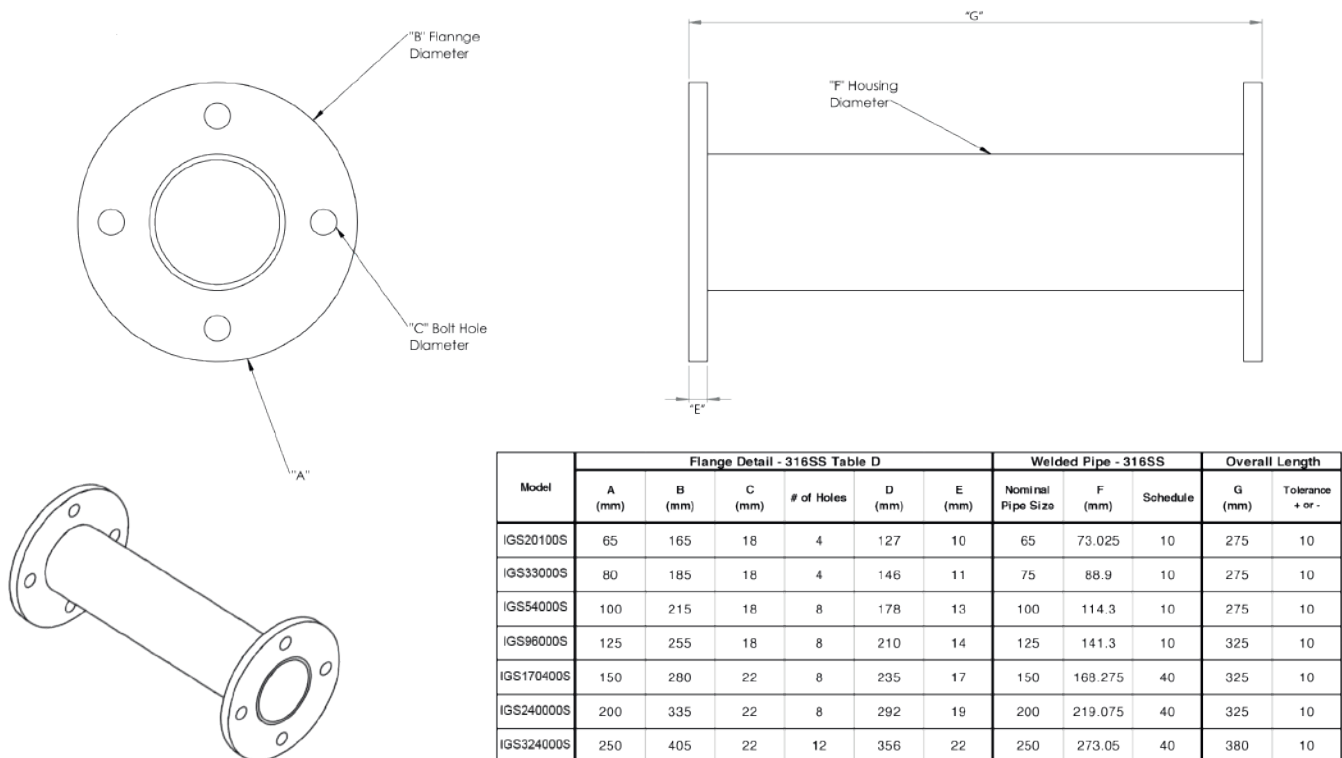
Model	Header				Housing				Approx. Weight Kg's
	A	B (mm)	C (mm)	Material	D (mm)	E (mm)	Tolerance + or - (mm)	Material	
IGS540M	3/4" BSPP Male	28.5	24	304SS	25.4	117	3	304SS	0.226
IGS720M	3/4" BSPP Male	28.5	24	304SS	25.4	182	3	304SS	0.357
IGS1080M	1" BSPP Male	34.6	30	304SS	31.8	193	3	304SS	0.471
IGS2040M	1" BSPP Male	34.6	30	304SS	31.8	254	3	304SS	0.602
IGS3360M	1" BSPP Male	34.6	30	304SS	31.8	301	3	304SS	0.9
IGS6000M	2" BSPP Male	68	42	304SS	50.9	443	3	304SS	2.75
IGS3200M	2" BSPP Male	68	42	304SS	63.5	493	3	304SS	3.75

SPECIFICATIONS

FLANGED MODEL SPECIFICATIONS • MATERIAL: 316SS



SHORT FLANGED MODEL SPECIFICATIONS • MATERIAL: 316SS

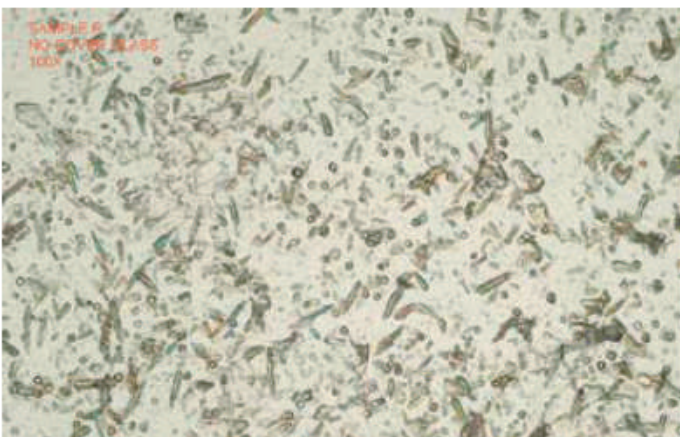


TECHNICAL INFORMATION

THE CHEMISTRY

1. Blended in a specialised foundry process, each alloy core is made up of several dissimilar metals scientifically selected from the anode and cathode galvanic scale. The alloy is not a sacrificial anode (i.e. does not need replacement).
2. On contact with water thousands of intense galvanic electrochemical reactions occur along the length of the alloy core.
3. Minerals are attracted to these galvanic sites as they flow through the system.
4. The electrical charge & zeta potential of the minerals in the water is reduced allowing the minerals to aggregate and form nano-sized colloids which remain in suspension, rather than precipitate on pipes and associated equipment.

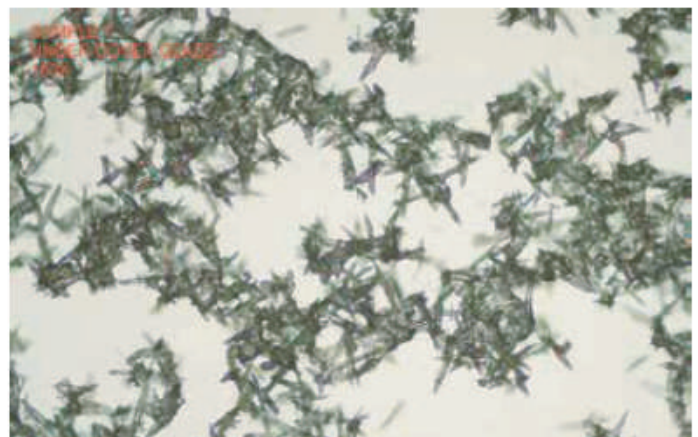
RAW WATER



THE PHYSICS

1. Each alloy core has been designed and engineered for a specific flow range.
2. Each core has offset discs so that there is no direct route for the water to travel. There is a definite water alloy contact.
3. Water velocity is increased as water is squeezed through the disc apertures and throughout the chambers along the length of the core.
4. High and low pressure areas are developed on either side of each disc.
5. Extreme turbulence is generated in each chamber along the length of the core.
6. The increase in water velocity and turbulence combine and create a mechanical washing action that prevents minerals from building up on the core.

SOFTERWATER



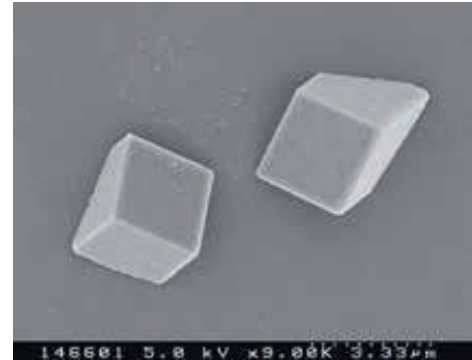
ZETA POTENTIAL IS CONSIDERED TO BE THE ELECTRIC POTENTIAL OF THE MINERALS IN WATER.

SOFTERWATER LOWERS THE ZETA POTENTIAL OF WATER BY A FACTOR OF ALMOST 2.

THE RESULTS AND ADVANTAGES

Nuclei are introduced into the system providing an attractive site for minerals to combine as nano sized colloids, which remain in suspension and flow through the system rather than precipitate on pipes and equipment. These subtle changes to the electrical charge of the minerals in water have significant effects on reducing downstream costly hard water problems!

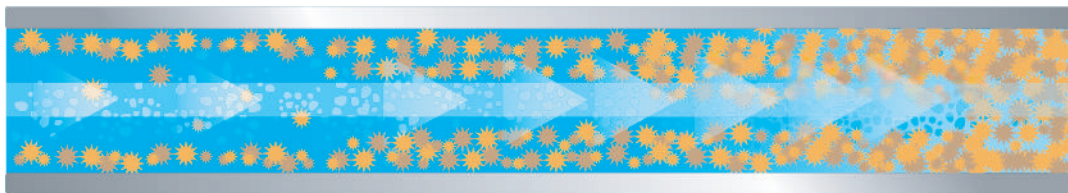
- Softer, 'wetter' water!
- Reduced hard water problems!
- Investment in capital equipment is protected!
- Reduced scaling and corrosion issues!
- Soaps, detergents and shampoo mix and lather better with softer water!
- Laundry items feel softer!
- Swimming pool water is clearer, the backwashing is reduced, scum lines are easier to clean away, the salt water chlorinators work more effectively, there is no scale build up, black spot disappears and chemical usage is reduced!
- Water with lower surface tension is more easily absorbed into the ground, reducing surface crust and runoff improving plant and crop health.
- Able to irrigate with brackish water



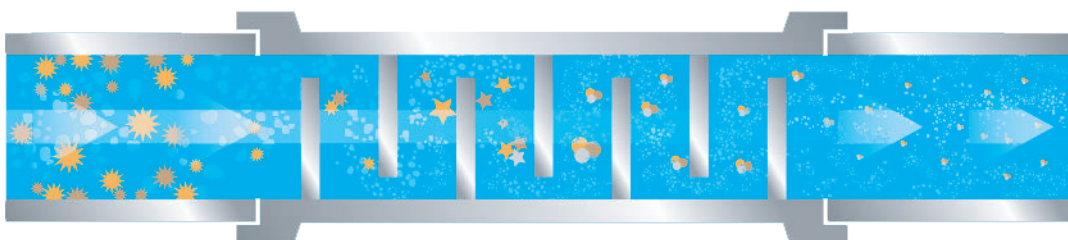
MINERALS WITH HIGH ZETA POTENTIAL (NEGATIVE OR POSITIVE ELECTRICAL CHARGE) ARE ELECTRICALLY STABILISED, REPEL EACH OTHER AND PRECIPITATE ON PIPES AND EQUIPMENT.



COLLOIDS WITH A LOW ZETA POTENTIAL TEND TO AGGREGATE AND REMAIN IN SUSPENSION RATHER THAN PRECIPITATE ON PIPE AND ASSOCIATED EQUIPMENT.



STANDARD WATER SYSTEMS



WITH IGS WATER CONDITIONER

STANDARD WATER SYSTEM: SCALE-CAUSING MINERALS HAVE A HIGH ELECTRICAL CHARGE, REPEL EACH OTHER AND 'STICK' TO PIPES AND EQUIPMENT CAUSING COSTLY HARD WATER PROBLEMS.

IGS WATER CONDITIONER: THE IGS WATER ALLOY PRODUCES A TURBULENT MINERAL-ATTRACTING GALVANIC ACTION REDUCING THE ELECTRICAL CHARGE OF MINERALS. NON-STICKING NANO SIZED COLLOIDS ARE FORMED AND FLOW THROUGH THE SYSTEM IN SUSPENSION SIGNIFICANTLY REDUCING HARD WATER PROBLEMS.

FLOW INFORMATION

APPROXIMATE PRESSURE DROP FOR MINIMUM, AVERAGE & MAXIMUM FLOW RATES

MODEL	MIN FLOW L/MIN	APPROX. PRESSURE DROP (PSI)	AVERAGE FLOW L/MIN	APPROX. PRESSURE DROP (PSI)	MAX FLOW L/MIN	APPROX. PRESSURE DROP (PSI)	HEADER/FLANGE
IGS300	0.5		4		6		1/2" (15mm) BSPP
IGS540	4	0.31	9	2.08	12	3.14	1/2" (15mm) BSPP
IGS720	8	0.88	12	2.20	16	3.51	1/2" (15mm) BSPP
IGS1080	10	0.42	18	1.69	28	3.27	3/4" (20mm) BSPT
IGS2040	24	1.77	34	3.87	45	6.19	3/4" (20mm) BSPT
IGS3360	41	2.67	56	5.50	78	9.64	1" (25mm) BSPT
IGS13200	186	4.71	220	6.86	280	10.66	2" (50mm) BSPT
IGS20100	281	1.74	335	3.55	450	7.4	2.5" (65mm) Table E
IGS30000	451	1.83	500	2.37	800	5.71	3" (80mm) Table E
IGS54000	801	1.91	900	2.55	1400	5.81	4" (100mm) Table E
IGS96000	1401	2.64	1600	3.68	2500	8.38	5" (125mm) Table E
IGS170000	2501	3.06	2840	4.73	3500	7.98	6" (150mm) Table E
IGS240000	3501	3.78	4000	5.13	4900	7.57	8" (200mm) Table E
IGS324000	4901	3.27	5400	4.62	6500	7.58	10" (250mm) Table E

NOTE: PRESSURE DROPS ARE SOFTWARE GENERATED AND DO NOT TAKE INTO CONSIDERATION THE AGE AND STATE OF THE WATER PUMPING AND CARRYING SYSTEM. VALUES SHOULD BE USED AS A GUIDE ONLY.



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