

SURGE ANTICIPATING CONTROL VALVE

CATALOG



 **tayfur**
su sistemleri

TYPHOON®



TYPHOON[®]



ABOUT US

Tayfur Water Systems, which was established by Tayfun Yazaroğlu in 2004 in Izmir. We continue our activities as "Tayfur Water Systems Machinery Engineering Industry and Trade Inc." since 2017.

Our company offers its products and experiences to the local market and international market. Tayfur Water Systems, while strengthening its recognition abroad, continues to expand its production, sales and marketing activities every day.

Our engineers and technical staff, technological infrastructure, manufacturing, sales, project-consulting, contracting and service planning meets the requirements of the sector.

Our company manufactures "TYPHOON" brand, hydraulic control valves, plastic hydraulic control valves, backwash valves, plastic backwash valves, impact-free dynamic suction cups, plastic suction cups, bottom clamps, filter reverse flushing control devices. It is progressing towards becoming a strong brand in both domestic and foreign markets by meeting the special demands of its domestic and foreign customers.

Our Quality Policy

In order to be a leader in quality in the sales, marketing and service sector by complying with legal conditions and to comply with the requirements of Quality Management System in order to meet the needs and expectations of our customers, to continuously improve the efficiency and to not compromise the quality under any circumstances.

Our Mission

To be a company aiming to present its synergy in the national and international market which has always taken its responsibilities, desires and expectations of our customers in a correct, reliable and timely manner, within the framework of high quality standards, transforming efficiency and competition into an advantage...

Our Vision

To be a leading, innovative, powerful and reputable enterprise in its sector.

Surge Anticipating Control Valve

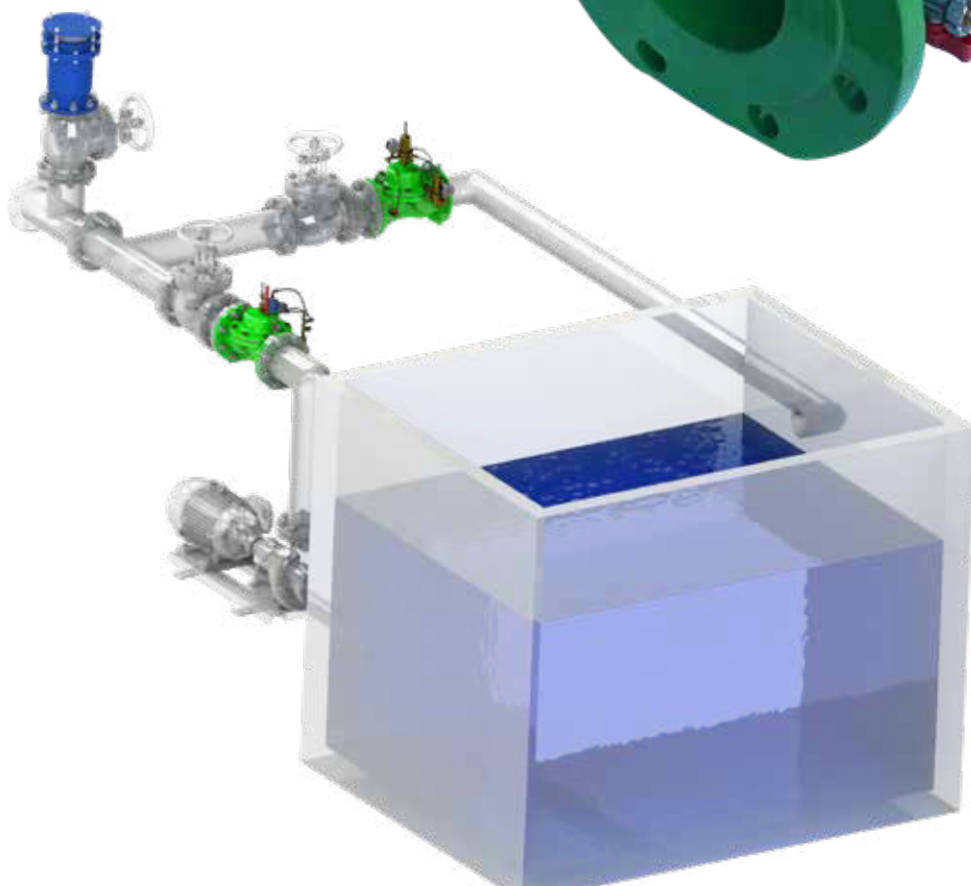
Hydraulic Control Valves

The Surge Anticipating Control Valve is the safety control valve designed to protect system in relatively longer water supply network elevating line by damping energy waves formed by energy interruptions in pumping systems and by releasing waterhammers which are caused from sudden changes in water flow rate to atmosphere automatically and quickly. Valve is opened quickly by sensing diminished pressure wave previously by means of pressure signal tube it owned. When line pressure reached normal level, it is closed slowly and automatically as wholly sealed

Order Information

Please provide the following information in order

- Maximum flow rate m³/h
- Maximum mains / operating pressure bar
- Main pipeline diameter mm
- Valve connection type



Installation

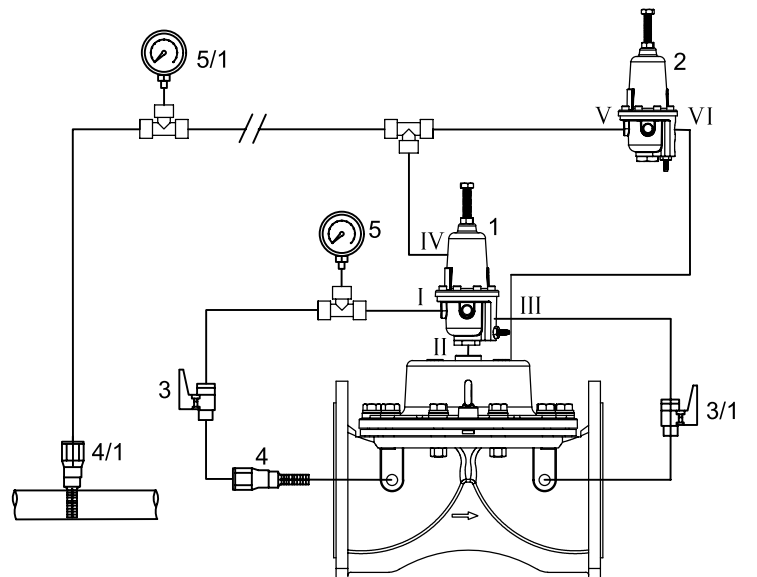
- After the veyra 4 "finger filter and the bakır 3 boru mini ball valve are connected to the valve inlet, connection to the "I" outlet of the pressure stabilizer pilot is provided by means of copper or plastic pipe.
- Valve cap of the pressure stabilizer pilot vana II eleman is connected to the valve cap.
- Connect the mini ball valve 3/1 to the valve outlet. From here, the connection to the "III" output of the pressure stabilizer pilot is provided.
- The IV "output of the pressure stabilizer pilot is connected to the düşür V un output of the pressure reducing pilot.
- The ilya VI eleman output of the pressure reducing pilot is connected to the valve cover by the necessary fasteners.
- Install the valve on the line "TE".
- Mount the pressure signal pipe of the valve on the main line.
- Mount the valve in the direction of the arrow indicated on it.
- When connecting the valve to the line, put a gasket between the valve flange and the pipe flange to ensure sealing. tighten the bolts in the cap.
- It is recommended to use isolating valves (butterfly or gate valve etc.), air relief valve, quick pressure relief control valve (QR) and strainer valves in the line of the valve.
- Risk of cavitation during pressure drop is dangerous for the valve body. Adjust the output pressure value that you want to adjust by looking at the cavitation chart or contact our company.

Adjust

- * Loosen the adjustment bolt of the low pressure pilot valve indicated by "1" (1/1) and gently tighten the adjustment bolt of the high pressure pilot valve indicated by "2" (2/1).
- Turn off the ball valves shown with "3/2" and "3/3" and start the pump.
- When the system pressure reaches the operating pressure, open the valve indicated with "3/3" and loosen the "2/1" adjustment Bolt until the water drops from the "3/3" global valve. After starting to drip water, turn the adjustment screw in the opposite direction until 1 round and tighten the Contra nut under it. The setting point of the high pressure pilot valve is usually set to 1 bar higher than the system pressure.
- Turn on the "3/2" ball valve and adjust the low pressure pilot valve indicated by "1".

Low Pressure Pilot Setting

- Close the spherical valve indicated by "3/4".
- Slowly open the needle valve indicated by "6".
- Check the pressure from the "5" manometer. The pressure will drop.
- When the pressure drops, the "3/2" will start to drip water from the global valve.
- After the water starts dripping, close the needle valve indicated by "6" and open the "3/4" ball valve.
- Set the low pressure pilot valve "1" opening pressure to the desired value with the adjustment Bolt "1/1" if it is not in the desired value. If the low pressure wave (valve opening pressure) is too high, loosen the "1/1" adjustment Bolt 1/2 laps. If the low pressure wave is too low, tighten the "1/1" adjustment screw 1/2 lap. Adjust each low pressure pilot valve setting according to the instructions above.



- 1 Pressure Stabilizer Pilot
- 2 Pressure Lowering Pilot
- 3 MiniBall Valve
- 4 Finger Filter
- 5 Manometer

HYDRAULIC CONTROL VALVES

Flanged - Threaded - Angled - Victaulic

Typhoon hydraulic control valves are automatic valves with direct diaphragm shut-off working with line pressure. It is a comfortable, smooth flow in the minimum pressure loss of the body and diaphragm, which is kept in the foreground in its design.

In hydraulic control valves, worn parts such as shafts, bearings and bushings are longevity. The single moving part of valves is the diaphragm.

TYPHOON hydraulic control valves, in-line drinking water pump, agricultural irrigation, fire systems, filtration, industrial, etc. designed for use in areas.

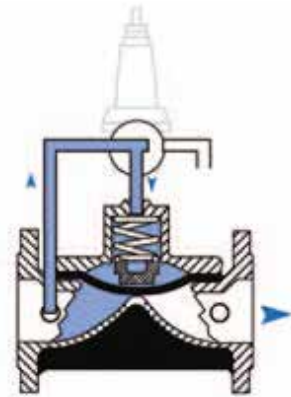
M	Manually Controlled Valve
PR	Pressure Reducing Control Valve
PRPS	Pressure Reducing + Pressure Sustaining Control Valve
PS	Pressure Sustaining Control Valve
PREL	Pressure Reducing + Solenoid Controlled Valve
EL	Solenoid Controlled Valve
QR	Quick Relief Control Valve
FL	Float Level Control Valve
FLEL	Electric Float Level Control Valve
DIFL	Differential Float Level Control Valve
PC	Pump (Booster) Control Valve
DPC	Deep Well (Submersible) Pump Control Valve
SA	Surge Anticipating Control Valve
HD	Hydraulic Check Valve



They are automatic control valves which are used hydraulically to perform the desired operations with line pressure without the need of energy sources in the mains line.

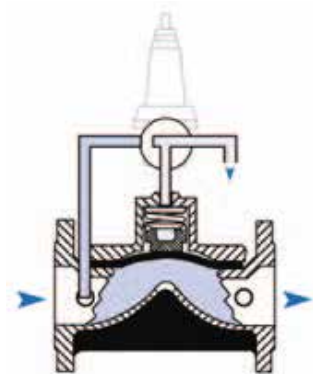
Valve Closing Mode

When the pilot discharge position on the main control valve in the closed position is reached, the pressurized water on the diaphragm of the main control valve is drained. When the line pressure reaches the position of spring force, hydraulic force is applied to the diaphragm of the control valve under water, so that the valve is in full open position.



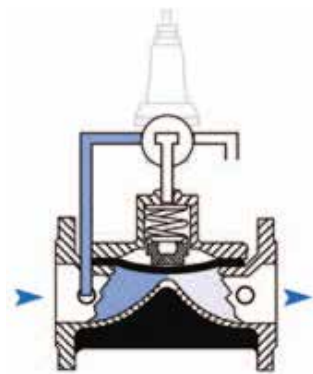
Valve Opening Mode

When the pilots on the main control valve reach the water pressure diaphragm, the water creates a hydraulic force. The resulting hydraulic force combines the diaphragm with the force applied by the spring to create a complete seal and close.



Modulation Mode

These are the pilot valves which are connected to the control valve which allows the main valve to operate in this position. According to the amount of flow and pressure to be adjusted, the water pressure on the diaphragm is controlled constantly, allowing it to operate in a modulated position.



HYDRAULIC CONTROL VALVES

Models

Flanged

Connection		Material		Body		Transmission Pressure			
Flanged		GGG40		Globe		PN10 - PN16 - PN25			
Available Diameters									
mm	50	65	80	100	125	150	200	250	300
inch	2	2½	3	4	5	6	8	10	12



Threaded

Connection		Material		Body		Transmission Pressure		
Threaded		GGG40		Globe		PN10 - PN16 - PN25		
Available Diameters								
mm	20	25	32	40	50	65	80	
inch	¾	1	1¼	1½	2	2½	3	



Victaulic

Connection		Material		Body		Transmission Pressure	
Victaulic		GGG40		Globe		PN10 - PN16 - PN25	
Available Diameters							
mm	50	65	80	100	150	200	
inch	2	2½	3	4	6	8	



Angled

Connection		Material		Body		Transmission Pressure	
Flanged Threaded		GGG40		Globe		PN10 - PN16 - PN25	
Available Diameters							
mm	50	80	100	150			
inch	2	3	4	6			



Hydraulic Performance

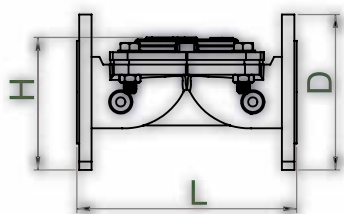
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
Valve Diameter	2	50	2½	65	3	80	4	100	5	125	6	150	8	200	10	250	12	300
Kv m³/h @ 1bar	88		88		174		187		187		419		1139		1698		2276	
Cv gmp @ 1psi	102		102		201		216		216		484		1316		1961		2629	

$$Kv(Cv) = Q \cdot \sqrt{G/\Delta P}$$

Kv : Valve flow coefficient (flow rate at 1 bar pressure loss m³/h @ 1 bar)
Cv : Valve flow coefficient (flow in pressure loss of 1 psi GPM @ 1 psi)
Q : Flow (m³/h, gpm)

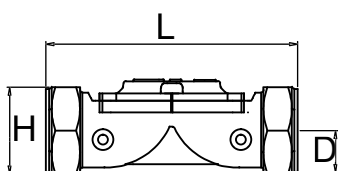
Cv = 1,155Kv
ΔP : Pressure Loss (bar, psi)
G : The specific gravity of water(Water=1.0)

Flanged



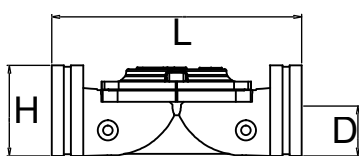
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	6,50	165	8,66	220	5,87	149	17,60	8,00
2½	65	7,28	185	8,66	220	6,06	154	21,60	9,80
3	80	7,87	200	11,26	286	6,81	173	38,80	17,46
4	100	8,66	220	12,99	330	6,81	173	46,47	29,08
5	125	9,84	250	14,49	368	8,35	212	62,30	28,25
6	150	11,22	285	15,51	394	12,80	325	114,40	51,90
8	200	13,38	340	18,19	462	14,96	380	200,80	91,10
10	250	15,94	405	21,46	545	19,09	458	332,90	151,00
12	300	18,11	460	22,19	582	19,69	500	392,90	178,20

Threaded

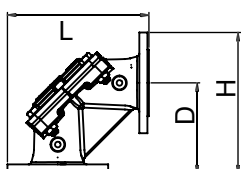
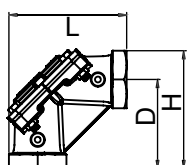


DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
3/4	20	0,9	23	5,2	132	2	50	2,2	1
1	25	0,9	23	5,2	132	2	50	2,2	1
1¼	32	1,35	34	6,8	173	3,6	92,3	6,3	2,85
1½	40	1,35	34	6,8	173	3,6	92,3	5,8	2,65
2	50	1,65	41,5	7,3	186	4,4	112	9	4,1
2½	65	1,8	46	8,9	226	4,6	118	11,7	5,3
3	80	2,05	52,5	12,5	318	5	127	26,4	12

Victaulic



DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	1,18	30	7,24	184	3,11	79	8,6	3,9
2½	65	1,46	37	8,9	226	3,74	95	9,92	4,5
3	80	1,77	45	11,42	290	3,7	94	13	5,9
4	100	2,26	57,5	12,48	317	4,19	106,5	13,6	6,2
6	150	3,3	84	17,87	454	5,24	133	66	30
8	200	4,53	115	21,40	544	13,10	332	143,3	



Angled

Flanged Threaded

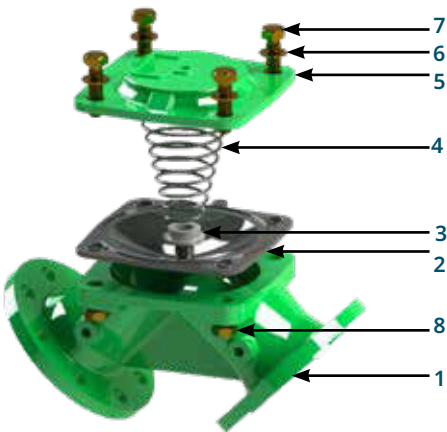
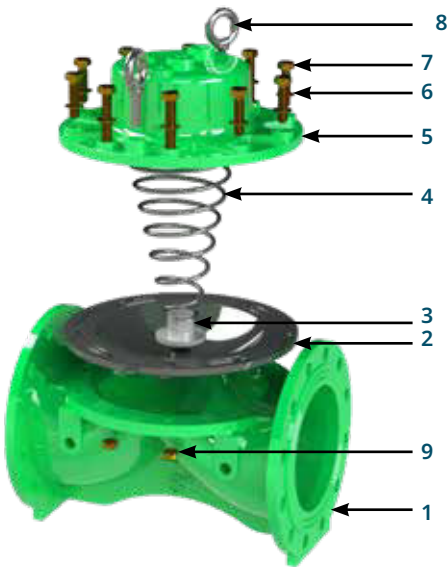
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	4,4	112	6,05	154	6,05	154	9,47	4,3
3	80	7,1	180	9,45	240	9,45	240	29,3	13,3
2	50	4,4	112	7,44	189	7,44	189	19,07	8,65
3	80	7,1	180	10,95	278	10,95	278	39,02	17,7
4	100	7,48	190	12	305	12	305	60,19	27,3
6	150	9,05	230	14,92	379	14,92	379	106,26	48,2

HYDRAULIC CONTROL VALVES

Main Parts

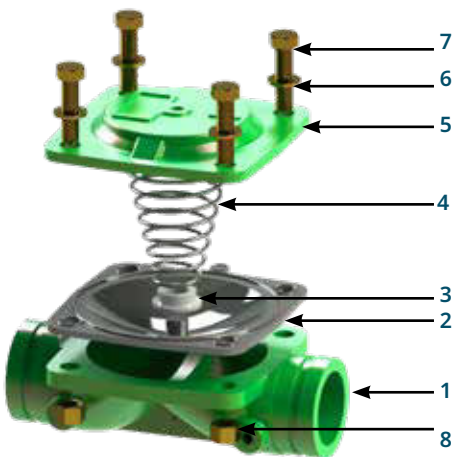
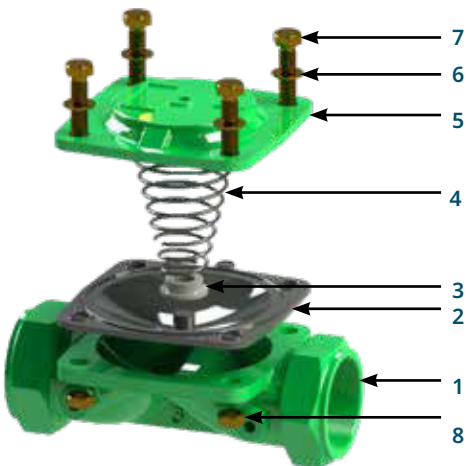
Flanged

Nr.	Material Name	Type Of Material
1	Body	GGG40
2	Diaphragm	Natural Rubber
3	Spring Seat	Polyamide
4	Spring	SST 302
5	Cover	GGG40
6	Washer	8.8 Coated Steel
7	Bolt	8.8 Coated Steel
8	Lifting Eyebolts	8.8 Coated Steel
9	Nut	8.8 Coated Steel



Threaded - Victaulic - Angled

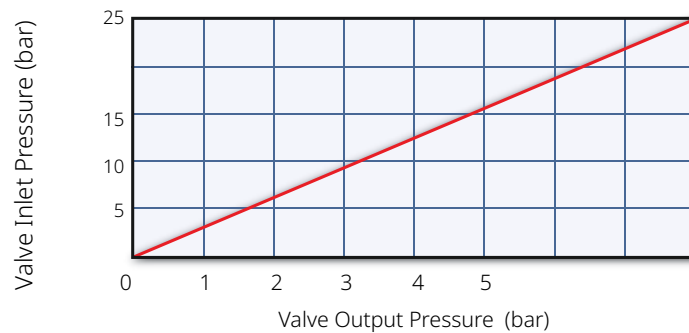
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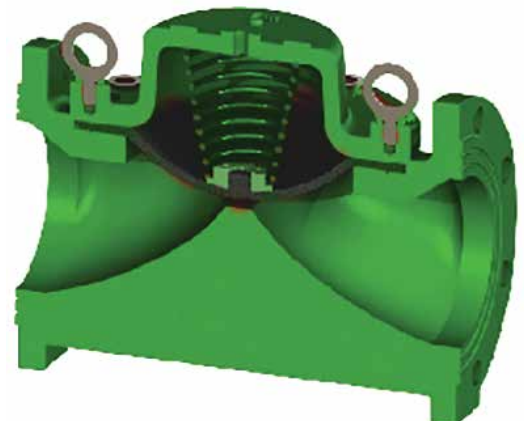
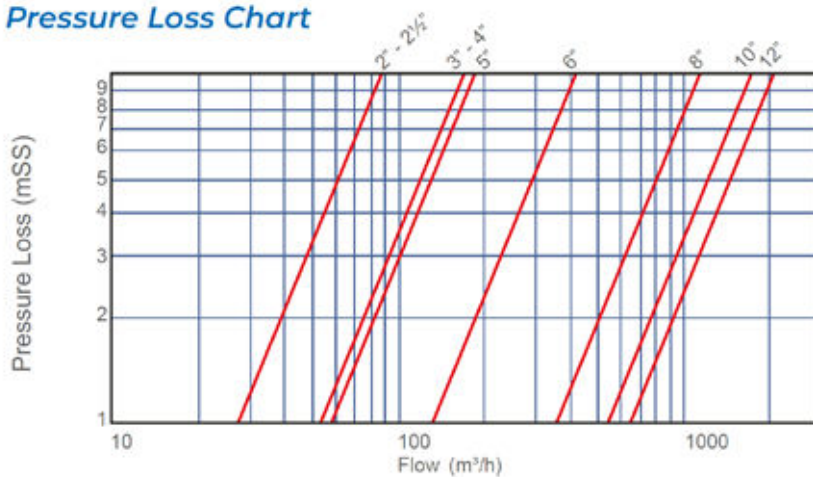
Technical Specifications

Operating Pressure	Standard	0,7 - 16 bar (10 - 240 psi)
	Low Pressure Range	0,5 - 10 bar (7,5 - 160 psi)
	High Pressure Range	0,7 - 25 bar (10 - 360 psi)
Temperature	Minimum Operating Temp.	- 10 °C (14 °F) DIN 2401/2
	Maximum Operating Temp.	80 °C (176 °F) DIN 2401/2
Connection	Flanged	DIN 2501, ISO 7005 - 2
	Threaded	ISO (BSP) , ANSI (NPT)
Covering	Standard	Epoxy
	Optional	Polyester
Hydraulic Connections	Standard	Reinforced Nylon (Air Brake) Hydraulic Tube SAE J 844
	Optional	Copper DIN1057
Actuator Type	With Single Control Chamber Aperture With Diaphragm	

Cavitation Chart



Pressure Loss Chart







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*Every factory is a fortress

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