



VIV International



Value in Valve

VIV International

We solve your control valve concerns instantly.

High Performance Control Valve

Product Usage

Precisely controls fluids subject to high temperature and high differential pressure in power plants and industrial plant facilities
(Pressure and flow control for water, steam, gas, etc.)

Core Values

- World-class source technology (excellent performance certification from the Ministry of SMEs and Startups, excellent invention from the Korean Intellectual Property Office, innovative product from the Ministry of Trade, Industry and Energy in Korea)
- Domestically developed and validated products to reduce chronic reliance on foreign products
- Competitive in quality, performance, and price compared to foreign products

Key Customers

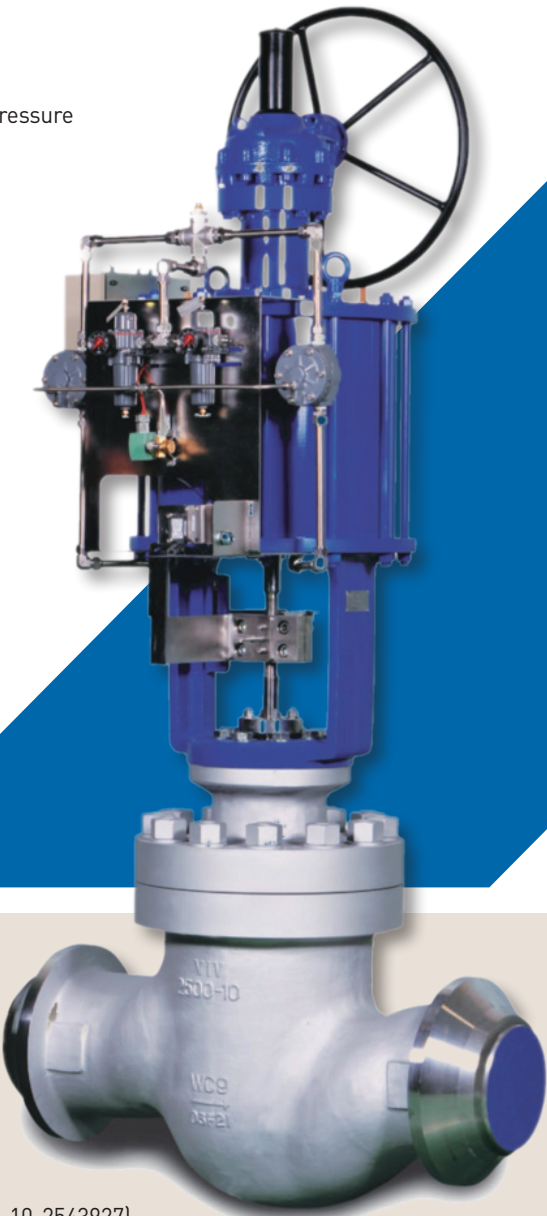
- Nuclear power plant: Korea Hydro & Nuclear Power Co. in Korea
- 5 KEPCO thermal power generation companies (Central/Southern/Southeast/East-West/Western Power Plant Co.)
- Korea District Heating Corporation
- Nawah Energy Company in UAE

Unique Selling Points

- Prevention of internal leakage (passing), anti-cavitation, Low noise and vibration, corrosion resistance
- Three-dimensional flow path trim effective for precise high differential pressure control (Korean Patent No. 10-2482270, No. 10-2493448)
- Fluid-induced vibration stress distribution plug with improved durability (Korean Patent No. 10-2535879)
- Seat ring with gap flow reduction to prevent erosion (Korean Patent No. 10-2543927)
- “Excellent Performance Certification (No. 23-AAN0273)” from the Ministry of SMEs and Startups of Korea
- “Excellent Invention(No. 2023-3967)” from the Korean Intellectual Property Office/Korea Invention Promotion Association
- “Innovative Product” from the Ministry of Trade, Industry and Energy of Korea

Key Specifications

Pressure Drop	2~50 Stage	Body Type	Globe or Angle
Size	¼”~48”	Leakage	ANSI Class IV, V, VI
Pressure	ANSI Class #150~#4500	Connection	RF, BW, SW
Temperature	-196~650℃	Material	Carbon Steel, Stainless Steel



Control Valve

Model Number

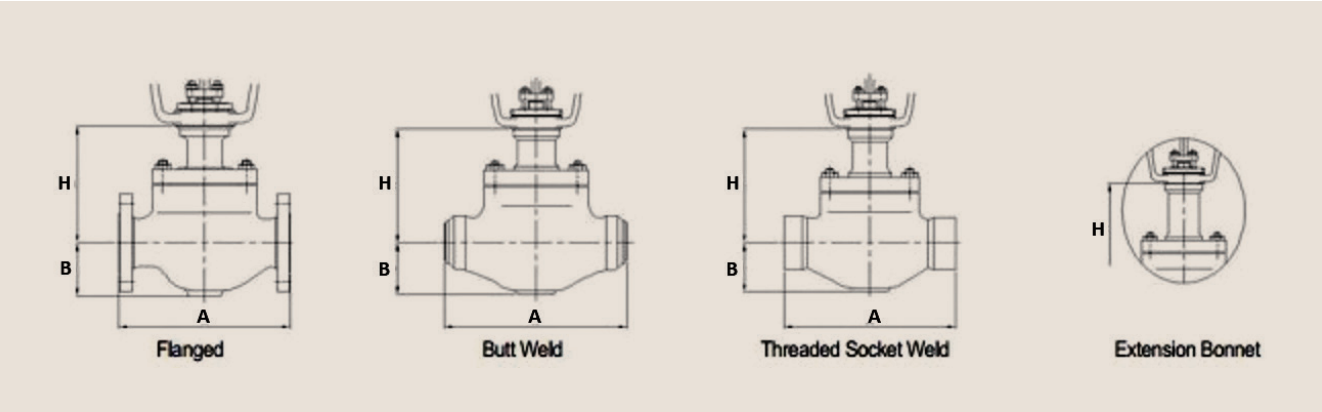
ex) VIV-CV-150-1
Valve Size (inch)
ANSI Pressure Rating

No.	Model Number	Pressure Rating [MPa]	Valve Size		No.	Model Number	Pressure Rating [MPa]	Valve Size	
			mm	inch				mm	inch
1	VIV-CV-150-1	1	25	1	40	VIV-CV-900-1	6	25	1
2	VIV-CV-150-1.5		40	1.5	41	VIV-CV-900-1.5		40	1.5
3	VIV-CV-150-2		50	2	42	VIV-CV-900-2		50	2
4	VIV-CV-150-3		80	3	43	VIV-CV-900-3		80	3
5	VIV-CV-150-4		100	4	44	VIV-CV-900-4		100	4
6	VIV-CV-150-6		150	6	45	VIV-CV-900-6		150	6
7	VIV-CV-150-8		200	8	46	VIV-CV-900-8		200	8
8	VIV-CV-150-10		250	10	47	VIV-CV-900-10		250	10
9	VIV-CV-150-12		300	12	48	VIV-CV-900-12		300	12
10	VIV-CV-150-14		350	14	49	VIV-CV-900-14		350	14
11	VIV-CV-150-16		400	16	50	VIV-CV-900-16		400	16
12	VIV-CV-150-18		450	18	51	VIV-CV-900-18		450	18
13	VIV-CV-150-20		500	20	52	VIV-CV-900-20		500	20
14	VIV-CV-300-1	2	25	1	53	VIV-CV-1500-1	10	25	1
15	VIV-CV-300-1.5		40	1.5	54	VIV-CV-1500-1.5		40	1.5
16	VIV-CV-300-2		50	2	55	VIV-CV-1500-2		50	2
17	VIV-CV-300-3		80	3	56	VIV-CV-1500-3		80	3
18	VIV-CV-300-4		100	4	57	VIV-CV-1500-4		100	4
19	VIV-CV-300-6		150	6	58	VIV-CV-1500-6		150	6
20	VIV-CV-300-8		200	8	59	VIV-CV-1500-8		200	8
21	VIV-CV-300-10		250	10	60	VIV-CV-1500-10		250	10
22	VIV-CV-300-12		300	12	61	VIV-CV-1500-12		300	12
23	VIV-CV-300-14		350	14	62	VIV-CV-1500-14		350	14
24	VIV-CV-300-16		400	16	63	VIV-CV-1500-16		400	16
25	VIV-CV-300-18		450	18	64	VIV-CV-1500-18		450	18
26	VIV-CV-300-20		500	20	65	VIV-CV-1500-20		500	20
27	VIV-CV-600-1	4	25	1	66	VIV-CV-2500-1	17	25	1
28	VIV-CV-600-1.5		40	1.5	67	VIV-CV-2500-1.5		40	1.5
29	VIV-CV-600-2		50	2	68	VIV-CV-2500-2		50	2
30	VIV-CV-600-3		80	3	69	VIV-CV-2500-3		80	3
31	VIV-CV-600-4		100	4	70	VIV-CV-2500-4		100	4
32	VIV-CV-600-6		150	6	71	VIV-CV-2500-6		150	6
33	VIV-CV-600-8		200	8	72	VIV-CV-2500-8		200	8
34	VIV-CV-600-10		250	10	73	VIV-CV-2500-10		250	10
35	VIV-CV-600-12		300	12	74	VIV-CV-2500-12		300	12
36	VIV-CV-600-14		350	14	75	VIV-CV-2500-14		350	14
37	VIV-CV-600-16		400	16	76	VIV-CV-2500-16		400	16
38	VIV-CV-600-18		450	18	77	VIV-CV-2500-18		450	18
39	VIV-CV-600-20		500	20	78	VIV-CV-2500-20		500	20

Globe Control Valve

with Anti-cavitation & Low Noise Trim

Dimensions



(unit: kg)

Valve Size (inch)	A							
	RF Flange				Weding			
	ANSI Class				ANSI Class			
	150	300	600	900	1500	150~160	900, 1500	2500
1-1/2	222	235	251	-	-	251	-	-
2	254	267	286	375	375	286	375	400
3	298	318	337	441	460	337	460	498
4	352	368	394	511	530	394	530	575
6	451	473	508	714	768	508	768	762
8	243	268	610	914	972	610	972	1029
10	673	708	752	991	1067	752	1168	-
12	737	775	819	1130	1219	819	1219	-
14	889	927	972	-	-	972	-	-
16	1016	1057	1108	-	-	1180	-	-
18	1140	1190	-	-	-	1235	-	-
20	1703	1745	-	-	-	-	-	-

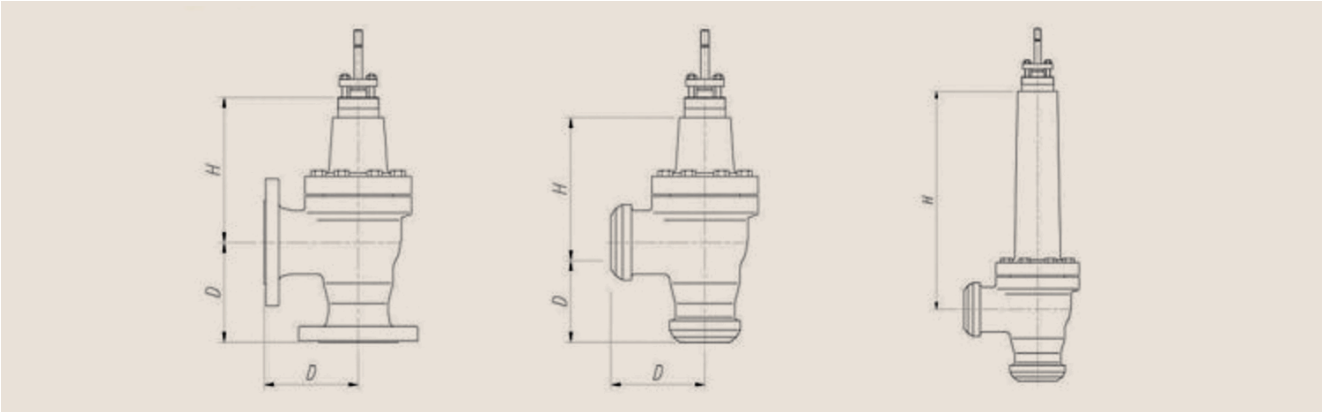
(unit: kg)

Valve Size (inch)	B		H			
	ANSI Class		Standard		Extension	
	ANSI Class		ANSI Class		ANSI Class	
	~600	900, 1500	~600	900, 1500	~600	900, 1500
1-1/2	59	-	225	-	315	-
2	95	73	260	-	367	-
3	117	122	310	350	460	502
4	130	163	340	350	460	550
6	201	198	405	393	536	622
8	225	240	505	523	645	709
10	275	283	575	-	746	-
12	365	380	625	-	869	-
14	418	-	670	-	869	-
16	485	-	710	-	910	-
18	520	-	810	-	1020	-
20	550	-	900	-	1100	-

Angle Control Valve

with Anti-cavitation & Low Noise Trim

Dimensions



ANSI Class 150~600

(unit: mm)

Valve Size (inch)	A							D			H			
	ANSI Class 150~600		ANSI Class 150	ANSI Class 300		ANSI Class 600		ANSI Class 150	ANSI Class 300	ANSI Class 600	ANSI Class 150~300		ANSI Class 600	
	Thr'd SW,BW	RF	RTJ	RF	RTJ	RF	RTJ				Standard Bonnet	Extension Bonnet	Standard Bonnet	Extension Bonnet
1/2	210	184	-	190	203	203	203	92	95	102	160	295	160	295
3/4	210	184	-	194	206	206	206	92	97	103	160	295	160	295
1	210	184	197	197	210	210	210	92	99	105	160	295	160	295
1-1/2	251	222	235	235	248	251	251	111	118	126	160	295	160	295
2	296	254	267	267	283	286	289	127	134	143	160	295	160	295
3	337	298	311	317	333	337	340	149	159	169	210	330	240	340
4	394	352	365	368	384	394	397	176	184	197	210	330	275	375
6	208	451	464	473	489	508	511	226	237	254	290	430	325	450
8	610	543	556	568	584	610	613	272	284	305	430	585	430	585
10	752	673	686	708	724	752	755	337	354	376	470	635	480	645

ANSI Class 900~2500

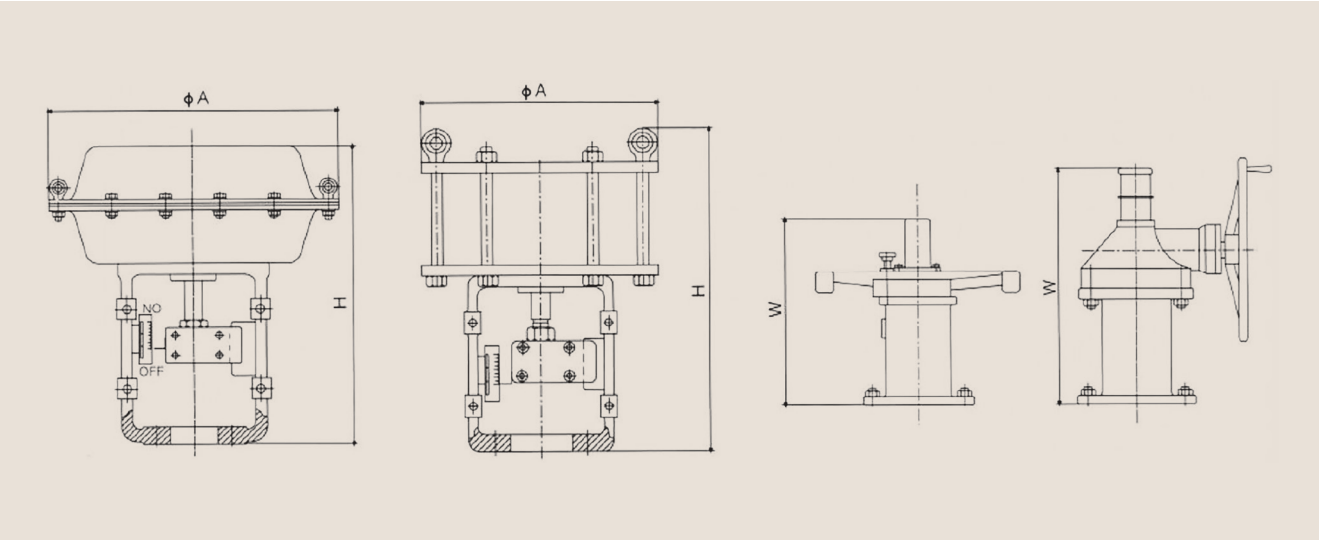
(unit: mm)

Valve Size (inch)	A								D		H			
	ANSI Class 900, 1500 SW,BW	ANSI Class 2500 SW,BW	ANSI Class 900		ANSI Class 1500		ANSI Class 2500		ANSI Class 900~1500	ANSI Class 2500	ANSI Class 900~1500		ANSI Class 2500	
			RF	RTJ	RF	RTJ	RF	RTJ			Standard Bonnet	Extension Bonnet	Standard Bonnet	Extension Bonnet
3/4	248	292	242	242	242	242	286	286	124	146	200	305	240	340
1	292	318	292	292	292	292	318	318	146	159	185	300	185	300
1-1/2	333	359	333	333	333	333	359	362	197	180	185	300	185	300
2	311	393	311	314	311	314	393	397	156	197	235	335	295	400
3	406	527	387	390	406	409	527	533	203	264	295	400	365	469
4	483	625	464	467	483	486	635	645	242	318	355	465	445	560
6	610	762	556	559	610	616	762	775	305	381	435	580	525	675

Globe & Angle Control Valve

with Anti-cavitation & Low Noise Trim

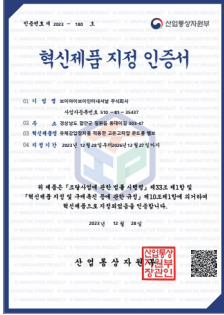
Actuators and Handwheels




Type	Actuator Size	Without Handwheel		With Handwheel			
		ΦA	H	Handwheel Type	ΦA	H	W
Diaphragm	#22	285	266	Top	285	266	170
Diaphragm	#23	285	295	Top	285	295	170
Diaphragm	#34	360	375	Top	360	375	210
Diaphragm	#45	470	453	Top	470	453	250
Diaphragm	#56	580	660	Top	580	660	270
Cylinder	L852	420	210	Side	420	210	300
Cylinder	L853	460	265	Side	460	265	300
Cylinder	L854	460	315	Side	460	315	300
Cylinder	L855	550	370	Side	550	370	300
Cylinder	L856	760	430	Side	760	430	370
Cylinder	L857	760	480	Side	760	480	370
Cylinder	L858	760	580	Side	760	580	370

(unit: mm)


Certification




Innovative Product
[Ministry of Trade, Industry and Energy of Korea]



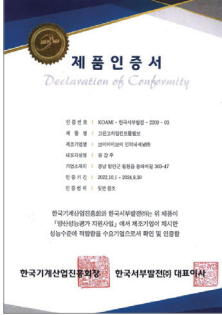
Excellent Performance certificate
[Ministry of SMEs and Startups]



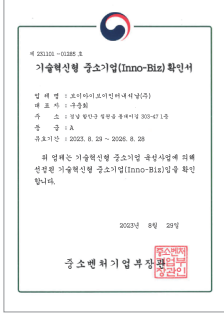
Excellent invention
[Korea Invention Promotion Association]



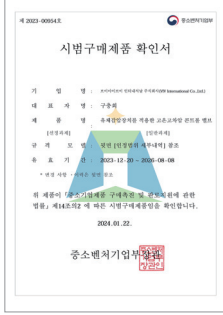
Equipment supply qualification certificate
[KEPCO 5 power generation companies]




Product quality certificate
[Korea Machinery Industry Promotion Association, and Korea Western Power Co., Ltd.]




Confirmation of technologically innovative small and medium-sized business (Inno-Biz)
[Small and Medium Venture Business Corporation]



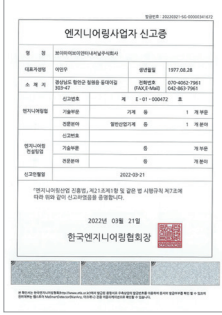
Designation of Purchase Product
[Ministry of SMEs and Startups]



ISO 9001
[Korea Productivity Center]



Company-affiliated research institute
[Korea Industrial Technology Association]





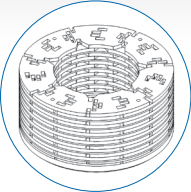
Engineering Contractor Registration Certificate
[Korea Engineering Association]

Patent List

No	The name of the invention	Registration number	Registration date	Note
1	Intelligent control valve management system with self-diagnosis and safety functions	10-1884665	2018.08.16	Korean Patent
2	Device to prevent damage to sealing member of sealing valve for melting furnace	10-1545720	2015.08.12	Korean Patent
3	Hopper lower seal valve device	10-1301099	2013.08.14	Korean Patent
4	Hopper lower seal valve device	10-1286582	2013.07.10	Korean Patent
5	Portable negative pressure safety valve test device	10-1446029	2014.09.24	Korean Patent
6	Valve gap adjustment device and valve including the same	10-1417313	2014.07.01	Korean Patent
7	fluid pressure reduction device	10-24882270	2022.12.23	Korean Patent
8	fluid pressure reduction device	10-2493448	2023.01.25	Korean Patent
9	Combined structure of plug and stem with improved durability	10-2535879	2023.05.18	Korean Patent
10	A valve device equipped with a cage and seat ring structure that slows down the gap flow	10-2543927	2023.06.12	Korean Patent
11	fluid pressure reduction device	PCT/KR2022/15509	2022.10.13	International Patent
12	fluid pressure reduction device	PCT/KR2022/16389	2022.10.25	International Patent
13	Abnormal pressure relief device for off-product gas transfer piping	10-1382167	2014.04.01	Exclusive Right of Use
14	fluid control valve	10-1431034	2014.08.11	Exclusive Right of Use
15	solenoid valve	10-1515792	2015.04.22	Exclusive Right of Use
16	Automatic valve shaft sealing device and automatic valve device including the same	10-1304676	2013.08.30	Exclusive Right of Use
17	Low pressure gas safety valve system	10-1363994	2014.02.11	Exclusive Right of Use

Technological Competitiveness

HIGH TECH CONTROL VALVE



World-class manufacturing expertise in high-temperature and high-pressure valves

Possessing leak-free (no passing) control valve technology

Reputable technology (possible to replace expensive foreign valves)

Intelligent control valve with self-diagnosis and safety functions(patented)

1

- 17 domestic and foreign patents
- Top-grade valve manufacturing capabilities through 30 years of R&D (ANSI Class 4500 / World-class)

2

- Overcoming the operating temperature limit of 550°C and operating differential pressure of 300kg/cm²
- Supplying power plant control valves that reduce energy loss and noise (performance record of valve improvement services for Korea District Heating Corporation)

3


- Advanced technology for three-dimensional flow path trim
- Excellent Performance Certification", "Excellent Invention Product", "Innovative Product" from the Korean Gov.
- Product certification from Korea Machinery Industry Promotion Association/Korea Western Power Co.
- Exporting to UAE's nuclear power plants

4

- Intelligent control valve applying AI and IoT technology (future new industrial technology)
- Korean Patent No. 10-1884665


Technology Development Performance

1




Multi-Stage Trim
Multi-stage trim control valve for high-high temperature and high-high pressure

2




Development of methanol reforming hydrogen production plant for submarines

3




Research on improving reliability of valves in combined heat and power plants

4



Local production and mass production performance evaluation of high temperature and high differential pressure control valves

5



Development of a large-capacity water supply control valve for nuclear power plant steam generators

Supervising organization : POSCO
Development period : 2019.08~2020.07
Technological achievements :
- Installation and operation of POSCO Gwangyang Thermal Power Plant
- Commercialization for high-high temperature and high pressure applications
- Development of key components for high-high pressure applications

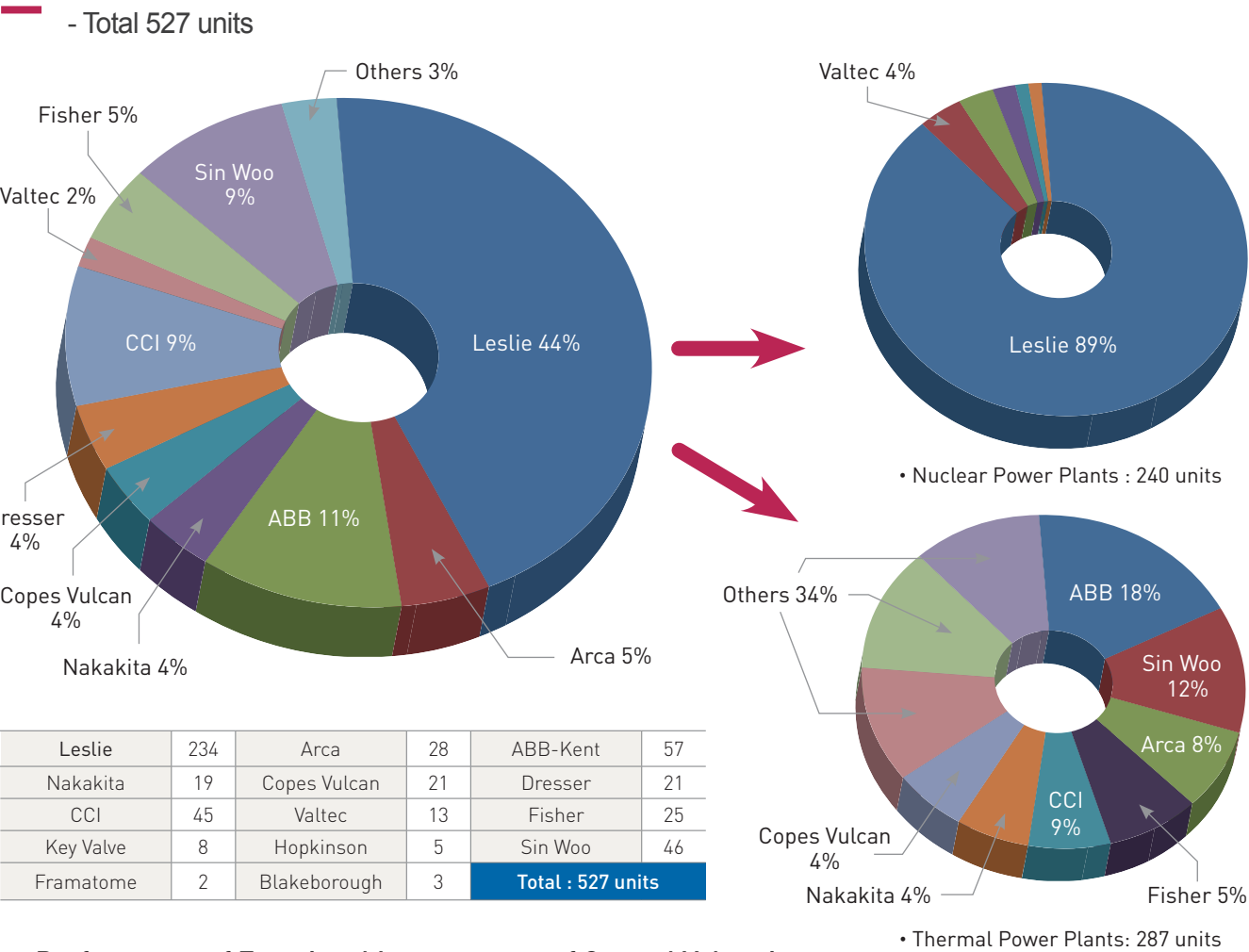
Supervising organization : Korea Agency for Defense Development/Daewoo Shipbuilding & Marine Engineering
Development period : 2019.06~2021.05
Technological achievements :
- Project to advance into the 4th industrial revolution hydrogen field
- Securing hydrogen production technology from methanol
- Miniaturization of hydrogen production plants

Supervising organization : Korea District Heating Corporation
Development period : 2020.10~2022.09
Technological achievements :
- Identifying the cause of valve damage
- Development of damage reduction technology under high differential pressure conditions
- Installation and evaluation of two new valves (successful)

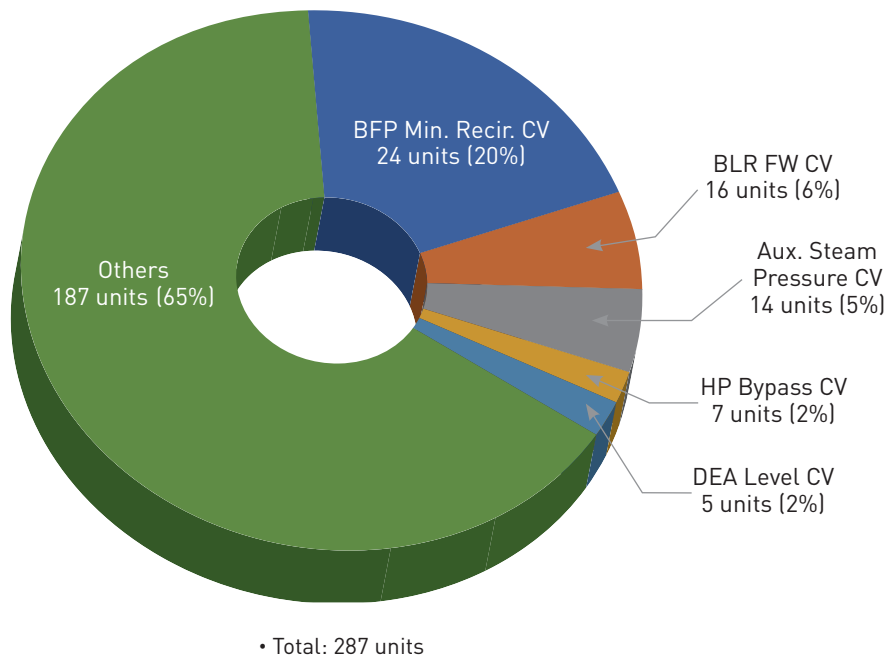
Supervising organization : Ministry of Commerce, Industry and Energy/Korea Western Power
Development period : 2021.10~2022.09
Technological achievements :
- Development of large, high value-added control valves
- Pyeongtaek thermal power plant installation and operation evaluation (Expert member of the Ministry of Commerce, Industry and Energy)
- Selected as an excellent performance project by the Ministry of Commerce, Industry and Energy
- Acquired performance certification from the Ministry of SMEs and Startups
- Selected as an excellent invention by the Korean Intellectual Property Office
- Selected as an innovative product by the Ministry of Trade, Industry and Energy

Supervising organization : Ministry of SMEs and Startups
Development period : 2022.11~2024.10
Significance of technology development :
- Development of advanced trim technology for high-performance reactors
- Enhancement of design and manufacturing technology for large-scale control valves

Performance of Replacement and Improvement of Foreign Control Valves



Performance of Functional Improvement of Control Valves in Thermal Power Plants

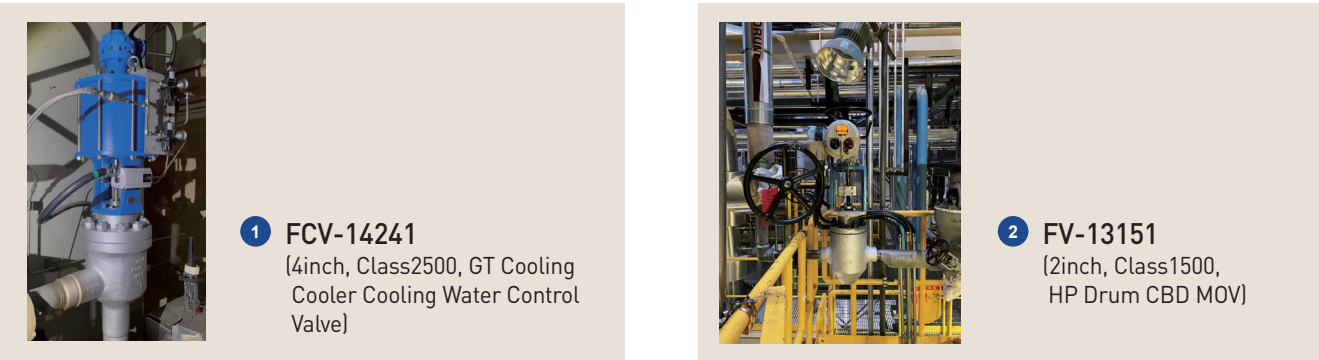


Function	Q'ty
Boiler Feed Pump Min. Recirculation CV	58
Boiler High Pressure Feed Water Control Valve	16
Steam Pressure Control Valve	14
High Pressure Turbine Bypass Control Valve	7
Deareaetor Level Control Valve	5
Others	187
Total	287

Dongtan combined heat and power plant of Korea District Heating Corporation

- Research on improving valve operation reliability of combined heat and power generation facilities

The Dongsan Branch of Korea District Heating Corporation has selected two valves currently operating under the most severe operating conditions. The purpose is to investigate the causes of internal leaks and apply valves that incorporate new technologies to promote efficient and stable facility operation.



Comparison of condition of internal parts before and after improvement

Other company's products	
<p>Fluid pressure reducing device (Trim)</p> <ul style="list-style-type: none">Period of use: 1 year and 6 months ('21.10 ~ '22.4)Severe damage due to erosion, poor flow control performance	<p>Plug / Seat</p> <ul style="list-style-type: none">Period of use: 1 year and 6 months ('21.10 ~ '22.4)Severe erosion damage, energy loss due to excessive passing

VIV International products	
<p>Fluid pressure reducing device (Trim)</p> <ul style="list-style-type: none">Period of use: 1 year and 6 months ('22.4 ~ '23.10)Good condition (no damage)	<p>Plug / Seat</p> <ul style="list-style-type: none">Period of use: 1 year and 6 months ('22.4 ~ '23.10)Good condition (no damage)