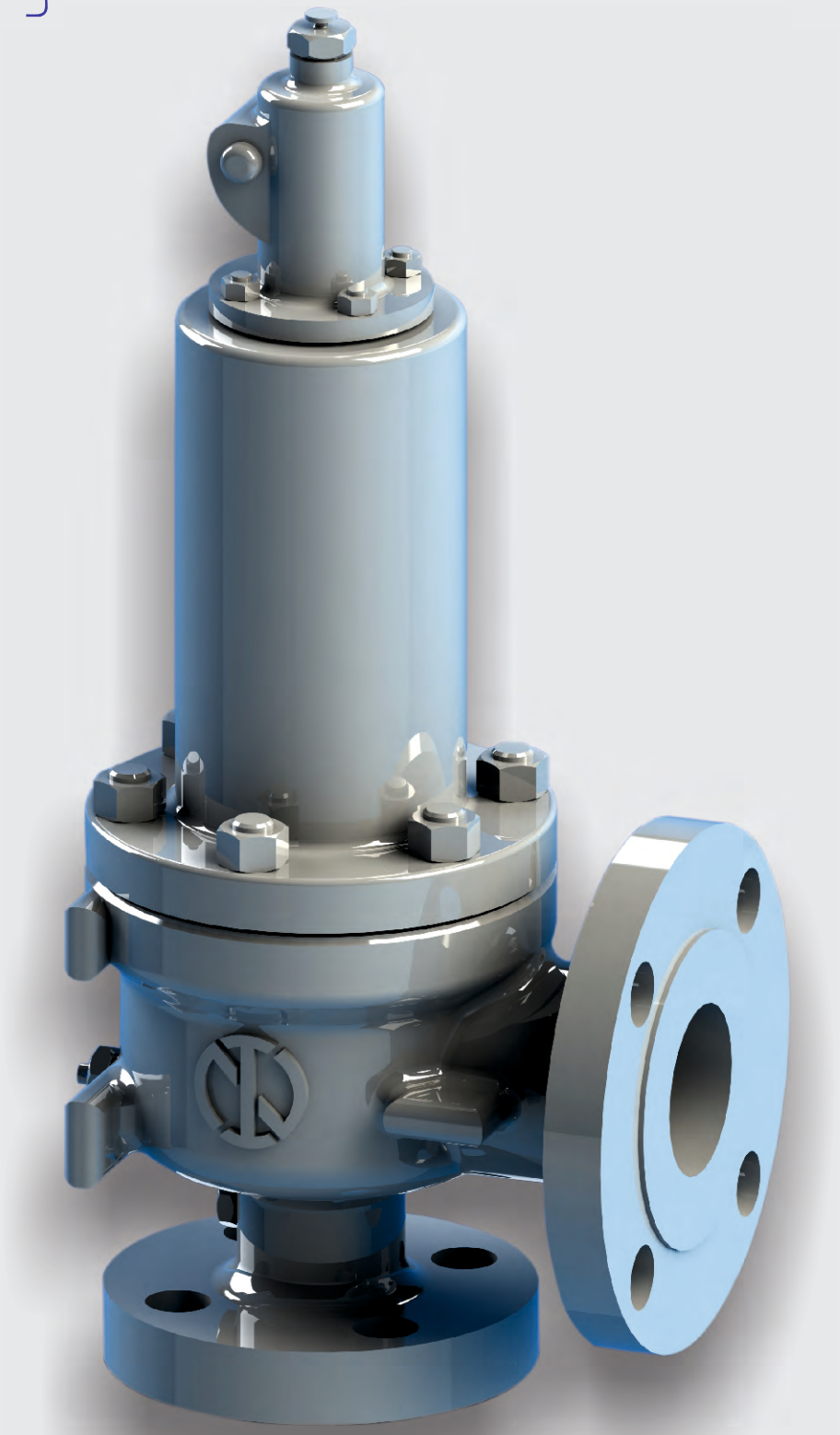
SR-07 API 526
Safety Relief Valve

ASME UV NB IBR CCoE

SecuraMax®

Nirmal Safety Valve Division



Nirmal CI™
INDUSTRIAL CONTROLS PVT. LTD.
Expertise that delivers

PRODUCT DESCRIPTION

SR-07 SAFETY RELIEF VALVE

The SR-07 are spring loaded safety relief valves, specially designed and manufactured to API 526. These valves have been optimized in close cooperation with plant engineers and service specialists, simplifying design with fewer components for less down time, fewer spare parts and lower maintenance costs.

SR-07 has been engineered and designed to provide high quality performance standards for over pressure protection for air, gas, steam, and vapor as well as liquid phase applications. This valve provides highly effective solution for various applications as in refineries, chemical industry, fertilizer plant, petrochemical industry, Oil & Gas Industry, Storage tank systems etc.

TECHNICAL SPECIFICATION

- Valve size: 1" (DN25) - 8" (DN200)
- Inlet Rating : 150#, 300#,600#,900#, 1500# and 2500#
- Outlet Rating : 150# and 300#
- End connection : Flanged (As per ASME B16.5)
- Orifice & Mounting dimensions : As per API 526
- Maximum set pressure : Refer Valve Selection chart
- Temperature capabilities : Refer Material Option Table

CODES AND STANDARDS

Series SR-07 complies with the following codes and standards;

- ASME Section II- Materials
- ASME Section VIII DIV 1
- ASME B16.5
- API 520
- API 521
- API 526
- API 527
- NACE MR 0175 *
- PED 97/23/EC (CE Marking) *
- IBR 1950*

(*- Client to specify requirement in Enquiry)

DESIGN HIGHLIGHTS

- Seven valve sizes from 1" through 8" and 14 orifices sizes from D through T.
- Materials like WCB, WC6, CF8M and a wide range of material variations for critical applications.
- Open or closed bonnet, packed or plain lifting lever or gas tight cap.
- Full lift, full nozzle type.
- Balanced bellow design for back pressure.
- Many other options to adjust to various operating conditions.
- Adjusting & Reaction Rings

High capacity and performance :

- Full compliance with ASME SEC VIII Div.-1 Standard 526, 520 & 527.
- Designed on concepts of safety, high performance, interchangeability and simplicity.
- Suitable for air, gas, steam, cryogenic and liquid service.

Simplified design for Built-in-safety:

- Fool-proof design with few parts for build-in safety.
- Two point guided nozzle for improved alignment.
- Arrangement for draining.

Trouble free operation:

- Designed to API 526 Std. , the nozzle, self-aligning top guided disc and Piston are made from stainless steel from different grades providing sufficient difference of hardness to prevent seizing or galling .
- Self aligned disc is designed to withstand high and low temperature without leakage due to non-uniform thermal expansion.
- Series SR-07 are metal to metal seated valves, these valves are carefully lapped and mirror polished. This lapping together with the disc design assures excellent tightness and easy maintenance.
- Series SR-07 are provided with a soft seat (such as Nitrile, fluorocarbon for applications where premium tightness is required) designed so that it cannot blow out under pressure.

Designed for interchangeability:

- Valve configuration can be changed from metal to metal soft seat type by simply changing the trim sub-assembly.

SR-07 VALVE SELECTION GUIDE

MODEL	
SERIES 07	❑

INLET SIZE	
1″	❑
1.5″	❑
2″	❑
3″	❑
4″	❑
6″	❑
8″	❑

OUTLET SIZE	
2”	❑
3”	❑
4”	❑
6”	❑
8”	❑
10”	❑

INLET END RATING	
150#	❑
300#	❑
600#	❑
900#	❑
1500#	❑
2500#	❑
BS TABLE–F	❑
EN 1092	❑
300# (150 LBS)	❑

OUTLET END RATING	
150#	❑
300#	❑
600#	❑
900#	❑
1500#	❑
2500#	❑
BS TABLE–F	❑
EN 1092	❑
300# (150 LBS)	❑

CERTIFICATION	
IBR	❑
UV Stamp	❑
NB Stamp	❑
CCoE	❑
None	❑

ORIFICE	
D	❑
E	❑
F	❑
G	❑
H	❑
J	❑
K	❑
L	❑
M	❑
N	❑
P	❑
Q	❑
R	❑
S	❑
T	❑

SPECIAL REQUIREMENT 4	
CONVENTIONAL	❑
BALLANCED BELLOWS	❑
OPEN BONNET	❑
OTHERS	❑

SPECIAL REQUIREMENT-II	
LEVER	❑
TEST GAG	❑
STELLITING	❑
LEVER + TEST GAG	❑
LEVER + STELLING	❑
LEVER + TEST GAG + STELLING	❑
TEST GAG + STELLING	❑
ANY SPECIAL	❑
WITHOUT ACCESSORIES	❑
WEATHER HOOD	❑
JACKET (STEAM)	❑

BODY MATERIAL	
A216 Gr. WCB	❑
A352 Gr. LCB	❑
A351 Gr. CF8	❑
A351 Gr. CF8M	❑
A351 Gr. CF3	❑
A351 Gr. CF3M	❑
A217 Gr. WC6	❑
A351 Gr. CN7M	❑
OTHERS	❑

NOZZLE MATERIAL	
A351 Gr. CF8	❑
A351 Gr. CF8M	❑
A351 Gr. CF3	❑
A351 Gr. CF3M	❑
A479 Gr. 304	❑
A479 Gr. 316	❑
A479 Gr. 304L	❑
A479 Gr. 316L	❑
MONEL	❑
HASTELLOY	❑
OTHERS	❑

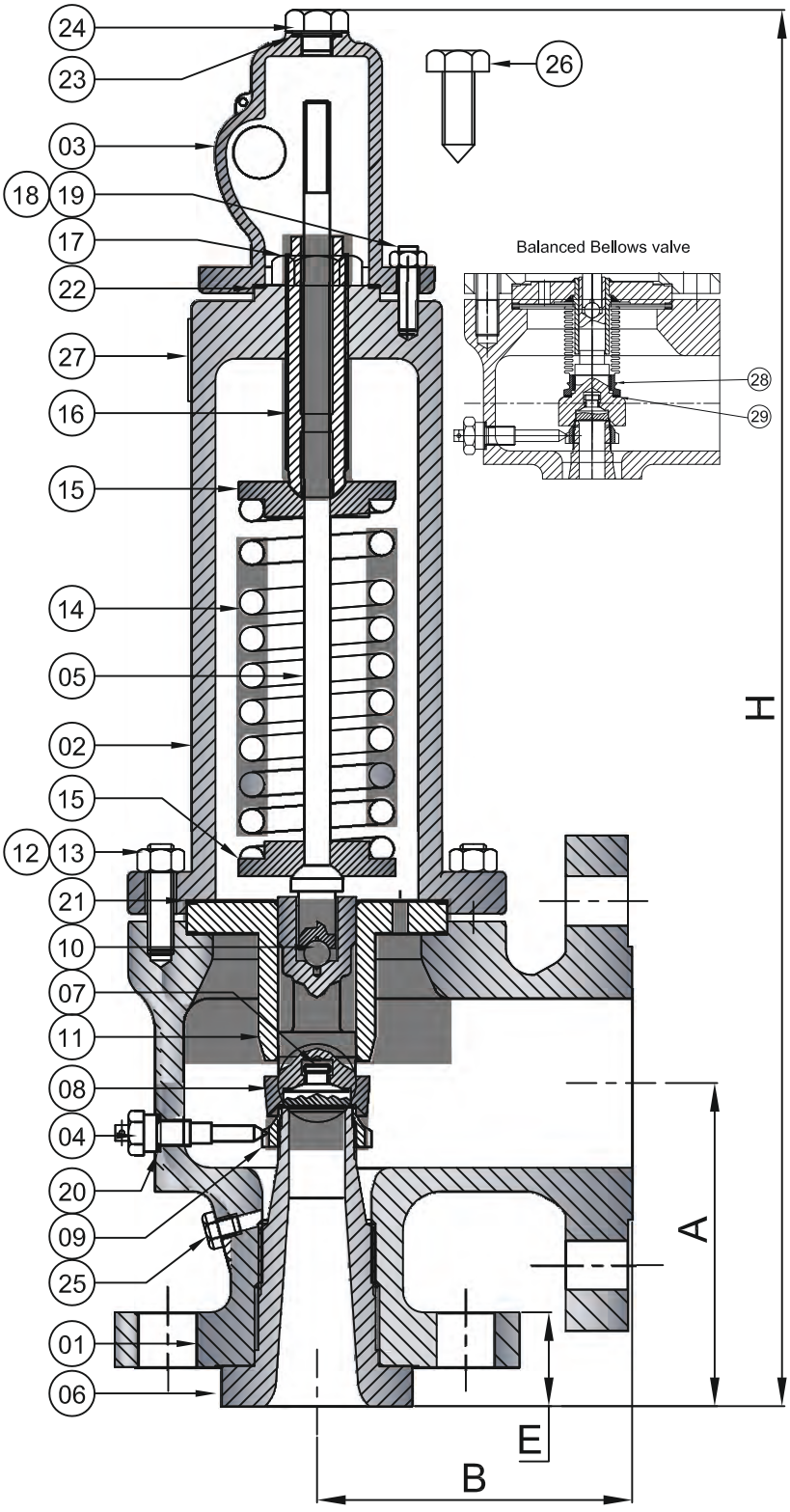
SPRING MATERIAL	
SPRING STEEL	❑
SS304	❑
SS316	❑
STAINLESS STEEL	❑
CRV STEEL	❑
INCONEL	❑
TUNGUSTON	❑
OTHERS	❑

O-RING MATERIAL	
NOT APPLICABLE	❑

DISC MATERIAL	
A479 Gr. 304	❑
A479 Gr. 316	❑
A479 Gr. 304L	❑
A479 Gr. 316L	❑
A479 Gr. 410	❑
HASTELLOY-C	❑
MONEL	❑
NITRILE	❑
NEOPRENE	❑
EPDM	❑
VITON	❑
PTFE	❑
OTHER	❑

CONVENTIONAL SR-07 SAFETY RELIEF VALVE

ITEM NO.	DESCRIPTION
01	BODY
02	BONNET
03	CAP
04	NOZZLE RING SET SCREW
05	SPINDLE
06	NOZZLE
07	DISC
08	PISTON
09	NOZZLE RING
10	BALL
11	GUIDE
12	BONNET STUD
13	BONNET STUD NUT
14	SPRING
15	SPRING WASHER
16	ADJUSTING BOLT
17	ADJUSTING BOLT NUT
18	CAP STUD
19	CAP STUD NUT
20	SET SCREW - GASKET
21	GUIDE - GASKET
22	CAP - GASKET
23	CAP PLUG - GASKET
24	CAP PLUG
25	DRAIN PLUG
26	TEST GAG
27	NAME PLATE
28	BELLOW
29	BELLOW GASKET



CONVENTIONAL SR-07 SAFETY RELIEF VALVE

Item No.	Description	Materials			
		Carbon Steel	Stainless Steel	Cr.Mo. Steel	Low temperature Stee
		-29°C to +425°C	-29°C to +538°C	-29°C to +538°C	-29°C to +340°C
1	Body	SA216 Gr.WCB	SA351 Gr.CF8M	A217 Gr.WC6	A352 Gr.LCB
2	Bonnet	SA216 Gr.WCB	SA351 Gr.CF8M	A217 Gr.WC6	A352 Gr.LCB
3	CAP	SA216 Gr.WCB	SA351 Gr.CF8M	A217 Gr.WC6	A352 Gr.LCB
4	Nozzle Ring Set Screw	SA 479 Gr.304	SA 479 Gr.304	S.S304	S.S304
5	Spindle	SA 479 Gr.304	SA 479 Gr.304	S.S304	S.S304
6	Nozzle	SA 479 Gr.316/ SA 351 Gr.CF8M	S.S 316/CF8M	S.S 316/CF8M	S.S 316/CF8M
7	Disc***	SA 479 Gr.316	SA 479 Gr.316	SA 479 Gr.316	SA 479 Gr.316
8	Piston	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304
9	Nozzle Ring	SA 351 Gr.CF8M	SA 351 Gr.CF8M	SA 351 Gr.CF8M	SA 351 Gr.CF8M
10	Ball	S.S.304	S.S.304	S.S.304	S.S.304
11	Guide	SA 479 Gr.316/ SA 351 Gr.CF8M	SA 479 Gr.316/ SA 351 Gr.CF8M	SA 479 Gr.316/ SA 351 Gr.CF8M	SA 479 Gr.316/ SA 351 Gr.CF8M
12	Bonnet Stud	SA193 Gr.B7	SA193. Gr.B8	SA193 Gr.B7	SA193 Gr.B7
13	Bonnet Stud Nut	SA194 Gr.2H	SA194 Gr. 8	SA194 Gr.2H	SA194 Gr.2H
14	Spring	Chrome Alloy Rust Proofed	Chrome Alloy Nickel Plated	Chrome Alloy Nickel Plated	Chrome Alloy Rust Proofed
15	Spring Washer	SA 105	SA 479 Gr.304	SA 479 Gr.304	SA 105
16	Adjusting Bolt	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304
17	Adj.Bolt Lock Nut	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304
18	Cap Stud	SA193 Gr.B7	SA193. Gr.B8	SA193 Gr.B7	SA193 Gr.B7
19	Cap Stud Nut	SA194 Gr.2H	SA194 Gr. 8	SA194 Gr.2H	SA194 Gr.2H
20	Gasket - Nozzle Ring Pin	According to Medium and Temperature			
21	Gasket - Guide				
22	Gasket - Cap				
23	Gasket - Set screw				
24	Cap Plug	SA 105	SA 479 Gr.304	SA 105	SA 105
25	Drain Plug	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304
26	Test Gag	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304	SA 479 Gr.304
27	Name Plate	S.S.304	S.S.304	S.S.304	S.S.304
28	Bellow	S.S.316/S.S.316L	S.S.316/S.S.316L	S.S.316/S.S.316L	S.S.316/S.S.316L
29	Bellow Gasket	According to Medium and Temperature			

Note :- ***, Disc Material available on Ploymers such us Nitrile/ Neoprene/ EPDM/ Viton on request.

VALVE SELECTION CHART

Orifice Designation On	Eff. Area	Act. Area	Flanges ANSI RF*			Max. Set pressure	Dimensions				Weight
			DN	Rating			A	B	E	H	
	cm²	cm²	inch²	Inch			mm	mm	mm	mm	kg
	inch²	inch²	Inlet x outlet	Inlet	Outlet	Bar @38°C					
D	0.710 0.11	0.801 0.124	1" x 2″	150	150	19.6	105	114	32.5	420	18
				300	150	19.6	105	114	32.5	420	18
				300	150	51.1	105	114	32.5	420	18
				600	150	102	105	114	32.5	420	18
			1 ½" x 2"	900	300	153	105	140	40.5	512	30
				1500	300	255	105	140	40.5	512	30
			1 ½" x 3"	2500	300	414	140	178	60	640	42
E	1.265 0.196	1.431 0.222	1" x 2″	150	150	19.6	105	114	32.5	420	18
				300	150	19.6	105	114	32.5	420	18
				300	150	51.1	105	114	32.5	420	18
				600	150	102	105	114	32.5	420	18
			1 ½" x 2"	900	300	153	105	140	40.5	512	30
				1500	300	255	105	140	40.5	512	30
			1 ½" x 3"	2500	300	42	140	178	60	640	42
F	1.981 0.307	2.270 0.352	1 ½" x 2"	150	150	19.6	124	121	34	530	30
				300	150	19.6	124	121	34	530	30
				300	150	51.1	124	152	38	530	36
				600	150	102	124	152	38	530	36
			1 ½" x 3"	900	300	153	124	165	47	554	48
				1500	300	255	124	165	47	554	48
				2500	300	414	140	178	60	640	60
G	3.245 0.503	3.664 0.568	1 ½" x 3"	150	150	19.6	124	121	34	540	30
				300	150	19.6	124	121	34	540	30
				300	150	51.1	124	152	38	540	36
				600	150	102	124	152	38	540	36
				900	300	153	124	165	47	650	42
			2" x 3″	1500	300	255	156	171	64	740	78
				2500	300	255	156	171	64	740	84
H	5.065 0.785	5.726 0.887	1 ½" x 3"	150	150	19.6	130	124	36	540	35
				300	150	19.6	130	124	36	540	35
			2" x 3″	300	150	51.1	130	124	36	540	35
				600	150	102	155	162	42	700	48
				900	150	153	155	162	63	730	78
				1500	300	190	155	162	63	730	82

Orifice Designation On	Eff. Area	Act. Area	Flanges ANSI RF*			Max. Set pressure	Dimensions				Weight
			DN	Rating			A	B	E	H	
	cm²	cm²	inch²	Inch		Bar @38°C	mm	mm	mm	mm	kg
	inch²	inch²	Inlet x outlet	Inlet	Outlet						
J	8.303 1.287	9.402 1.457	2" x 3″	150	150	19.6	137	124	36	553	35
				300	150	19.6	137	124	36	553	35
			3" x 4″	300	150	51.1	184	181	47	740	58
				600	150	102	184	181	49	775	98
				900	150	153	184	181	53	970	132
				1500	300	186	184	181	67	1130	145
K	11.858 1.838	13.527 2.097	3" x 4″	150	150	19.6	156	162	43.5	700	78
				300	150	19.6	156	162	43.5	700	78
				300	150	51.1	156	162	43.5	700	78
				600	150	102	184	181	53	970	130
			3" x 6″	900	150	153	198.5	216	54	1160	156
				1500	300	153	197	216	67	1160	210
L	18.406 2.853	20.831 3.229	3" x 4″	150	150	19.6	156	165	43.5	700	78
				300	150	19.6	156	165	43.5	700	78
			4" x 6″	300	150	51.1	179	181	44	990	130
				600	150	69	179	203	52.5	1000	180
				900	150	103	197	222	61	1160	210
				1500	150	103	197	222	71	1160	222
M	23.226 3.6	24.718 3.831	4" x 6″	150	150	19.6	178	184	44	1000	108
				300	150	19.6	178	184	44	1000	130
				300	150	51.1	178	184	44	1000	130
				600	150	76	178	203	52.5	1000	180
				900	150	76	197	222	61	1160	210
N	28.000 4.34	33.347 5.169	4" x 6″	150	150	19.6	197	210	48	1010	90
				300	150	19.6	197	210	48	1010	130
				300	150	51.1	197	210	46	1010	130
				600	150	69	197	222	61	1010	205
				900	150	69	197	222	61	1039	210
P	41.161 6.38	46.566 7.218	4" x 6″	150	150	19.6	181	229	46	1000	136
				300	150	19.6	181	229	46	1000	132
				300	150	36	225	254	46.5	1060	180
				600	150	69	225	254	60	1150	264
				900	150	69	225	254	60	1200	270
Q	71.290 11.05	83.728 12.978	6" x 8″	150	150	11.5	240	241	54	1120	192
				300	150	11.5	240	241	45	1190	264
				300	150	21	240	241	54	1190	264
				600	150	42	240	241	67.5	1188	288
R	103.226 16	117.379 18.194	6" x 8″	150	150	7	240	241	45	1100	198
				300	150	7	240	241	54	1120	270
			6" x 10″	300	150	16	240	267	54	1217	282
				600	150	21	240	267	63	1217	306
T	167.742 26	191.748 29.721	8" x 10″	150	150	4.5	276	279	47	1370	408
				300	150	8	276	279	60	1370	436
				300	150	21	276	279	60	1370	428

Ordering Information

For proper and timely processing of your order, the following information should be given:

1) Quantity
2) Inlet and outlet size
3) Nirmal Make series Number
4) Inlet and outlet flange rating and facing (if different from standard)
5) Material of construction if different from standard
6) Soft seat material requirement
7) Set pressure
8) Maximum inlet pressure
9) Maximum allowable working pressure
10) Temperature
11) Service
12) Back pressure (constant or variable) and value
13) Required capacity
14) Code requirements
15) Accessories : if any
16) Special Requirements : IBR / PESO / NACE / OTHER

Please send all your communications to prv@securamax.in

Represented by

SECURAMAX®
Nirmal Safety Valve Division

First Floor, Samriddhi, L.B.S. Road, Mulund (W),
Mumbai - 400080, INDIA
Phone: +91-22-6774 6200 ; Fax: +91-22-2568-2771
Email: prv@securamax.in ; srv@securamax.in
Website: www.securamax.in