

Diaphragm Seals

Series: GDS

Srl.	Products	Model
1	Diaphragm Seal - Sandwich type (Threaded connection)	GDS-S
2	Diaphragm Seal - Sandwich-Blocks Screwed type (Threaded connection)	GDS-SBS
3	Diaphragm Seal - Sandwich-Blocks Welded type (Threaded connection)	GDS-SBW
4	Diaphragm Seal - Pan-Cake/Wafer Flush type	GDS-PC
5	Diaphragm Seal - Direct Flush type (Flanged connection)	GDS-DF
6	Diaphragm Seal - 'I' Section type (Flanged connection)	GDS-IS
7	Diaphragm Seal - Extended type (Flanged connection)	GDS-E
8	Diaphragm Seal - In-Line Flow Through type	GDS-IL
9	Diaphragm Seal - In-Line Flow Through Isolating Annular type	GDS-ILI
10	Diaphragm Seal - Plug-in Adaptor type (Threaded connection)	GDS-PA
11	Diaphragm Seal - Sanitary/Hygiene Tri-Clamp Ferrule type	GDS-TCF
12	Diaphragm Seal - Sanitary/Hygiene SMS Union type	GDS-SMS
13	Diaphragm Seal - Sanitary/Hygiene IDF Union type	GDS-IDF
14	Flushing Ring	GDS-FR
15	Capillary Extension	GA-CE
16	Optional Items	GA-OI
17	Accessories (Refer Accessories Catalogue)	GA

Note: Part of our development programs, product specifications, photos, drawings, dimensions and other information provided in catalogue/website may change without any notice.

General Specifications:

1) Diaphragm Seal - Sandwich type (Threaded connection) specifications:

- Model** : GDS-S
- Instrument Connection : Select from below table (TC)
- Process Connection : Select from below table (TC)
- Flange (Size, Rating, Type) : Select from below table (FC)
- Top Flange Material : Select from below table (FM)
- Bottom Flange Material : Select from below table (FM)
- Diaphragm Material : Select from below table (DM)
- Construction : Diaphragm sandwiched between flanges.
- Optional : Select from below table (OI), if required.

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200

Flange Material (FM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		

M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Flange Connection (FC)					
Code	Size	Code	Rating	Code	Type
15	1/2"	A	150#	RF	RF
20	3/4"	B	300#	FF	FF
25	1"	C	600#	SR	SORF
40	1 1/2"	D	900#	SF	SOFF
50	2"	E	1500#	RT	RTJ
X	Specify	X	Specify	X	Specify



Model: GDS-S - Diaphragm Seals - Sandwiched
 (Both flanges welded together type construction available)
 (Both flanges Screwed together type construction available)
 (Weld-in process connection instead of threaded available)

2) Diaphragm Seal - Sandwich-Blocks Screwed type (Threaded connection) specifications:

- Model** : **GDS-SBS**
- Instrument Connection : Select from below table (TC)
- Process Connection : Select from below table (TC)
- Block Material (Top) : Select from below table (BM)
- Block Material (Bottom) : Select from below table (BM)
- Diaphragm Material : Select from below table (DM)
- Construction : Diaphragm sandwiched between blocks and blocks bolted/screwed together
- Optional : Select from below table (OI), if required

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

Block Material (BM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		



Model: GDS-SBS - Diaphragm Seal – Sandwich-Blocks Screwed
 (Weld-in process connection instead of threaded available)

3) Diaphragm Seal - Sandwich-Blocks Welded type (Threaded connection) specifications:

- Model** : GDS-SBW
 Instrument Connection : Select from below table (TC)
 Process Connection : Select from below table (TC)
 Block Material (Top) : Select from below table (BM)
 Block Material (Bottom) : Select from below table (BM)
 Diaphragm Material : Select from below table (DM)
 Construction : Diaphragm sandwiched between blocks and blocks welded together
 Optional : Select from below table (OI), if required

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L

Block Material (BM)	
Code	Material
S36	SS316
S36L	SS316L

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female

Diaphragm Material (DM)	
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

Block Material (BM)	
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Threaded Connection (TC)				Metric threads available on request
Code	Size	Code	Type	
12	1/2"	BS	BSP	
34	3/4"	BP	BSPP	
1	1"	BT	BSPT	
X	Specify	X	Specify	



Model: DSSBW - Diaphragm Seal - Sandwich-Blocks Welded
 (Weld-in process connection instead of threaded available)

4) Diaphragm Seal - Pan-Cake/Wafer Flush type specifications:

- Model** : GDS-PC
 Instrument Connection : Select from below table (TC)
 Block Material : Select from below table (BM)
 Diaphragm Material : Select from below table (DM)
 Construction : Diaphragm welded within block bore
 Optional : Select from below table (OI), if required.

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

Block Material (BM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		



Model: GDS-PC - Diaphragm Seal - Pan-Cake/Wafer Flush

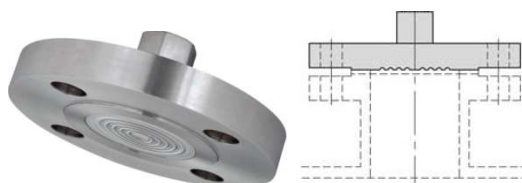
5) Diaphragm Seal - Direct Flush type (Flanged connection) specifications:

- Model** : GDS-DF
- Instrument Connection : Select from below table (TC)
 - Process Connection : Select from below table (FC)
 - Flange Material : Select from below table (FM)
 - Diaphragm Material : Select from below table (DM)
 - Construction : Diaphragm welded with flange bottom
 - Optional : Select from below table (OI), if required

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

Flange Material (FM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		
Flange Connection (FC)					
Code	Size	Code	Rating	Code	Type
15	1/2"	A	150#	RF	RF
20	3/4"	B	300#	FF	FF
25	1"	C	600#	SR	SORF
40	1 1/2"	D	900#	SF	SOFF
50	2"	E	1500#	RT	RTJ
X	Specify	X	Specify	X	Specify



Model: GDS-DF - Diaphragm Seal - Direct Flush

6) Diaphragm Seal - 'I' Section type (Flanged connection) specifications:

- Model** : GDS-IS
- Instrument Connection : Select from below table (TC)
- Flange (Top & Bottom) : Select from below table (FC) (Size, Rating, Type)*
- Top Flange Material : Select from below table (FM)**
- Bottom Flange Material : Select from below table (FM)**
- Diaphragm Material : Select from below table (DM)
- Construction : Diaphragm welded with top flange bottom.
- "I" Section Material : Select from below table (FM)
- "I" Section Flange : Select from below table (FC) (Size, Rating, Type)
- "I" Section Flange Material : Select from below table (FM)
- Total Assembly Length : 300mm, Specify
- Optional : Select from below table (OI), if required.

Diaphragm Material (DM)		Flange Material (FM)		Threaded Connection (TC)					
Code	Material	Code	Material	Code	Size	Code	Type	Code	Shape
S36	SS316	S36	SS316	14	1/4"	NT	NPT	M	Male
S36L	SS316L	S36L	SS316L	38	3/8"	NM	NPSM	F	Female
S36T	SS316Ti	S34	SS304	12	1/2"	BS	BSP	Metric threads available on request	
S31	SS321	S31	SS321	34	3/4"	BP	BSPP		
I60	Inconel-625	I65	Inconel-625	1	1"	BT	BSPT		
NI	Nickel-200	NI	Nickel-200	X	Specify	X	Specify		
M4	Monel-400	M4	Monel-400	Flange Connection (FC)					
HC	Hastelloy-C	HC	Hastelloy-C	Code	Size	Code	Rating	Code	Type
HB	Hastelloy-B	HB	Hastelloy-B	15	1/2"	A	150#	RF	RF
TI	Titanium	TI	Titanium	20	3/4"	B	300#	FF	FF
TA	Tantalum	I60	Inconel-600	25	1"	C	600#	SR	SORF
PT	PTFE	I80	Inconel-800	40	1 1/2"	D	900#	SF	SOFF
SI	Silver	CS	CS (A105)	50	2"	E	1500#	RT	RTJ
X	Specify	X	Specify	X	Specify	X	Specify	X	Specify

Bolted & Welded flange or block construction available.

*Manufacturer standard dimensions may consider for machined Block instead of Flange.

**Select material from FM for blocks, if machined Block construction required instead of Flange.



Model: GDS-IS - Diaphragm/Chemical Seal - 'I' Section

7) Diaphragm Seal - Extended type (Flanged connection) specifications:

- Model** : GDS-E
 Instrument Connection : Select from below table (TC)
 Process Connection : Select from below table (FC)
 Flange Material : Select from below table (FM)
 Extension Piece Material : Select from below table (FM)
 Extension Piece Dia : Specify process Nozzle/Flange ID
 Length below Flange : 150mm, 300mm, Specify
 Diaphragm Material : Select from below table (DM)
 Construction : Diaphragm welded with extension piece bottom
 Optional : Select from below table (OI), if required

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

Flange Material (FM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		
Flange Connection (FC)					
Code	Size	Code	Rating	Code	Type
15	1/2"	A	150#	RF	RF
20	3/4"	B	300#	FF	FF
25	1"	C	600#	SR	SORF
40	1 1/2"	D	900#	SF	SOFF
50	2"	E	1500#	RT	RTJ
X	Specify	X	Specify	X	Specify



Model: GDS-E - Diaphragm Seal – Extended

8) Diaphragm Seal - In-Line Flow Through type specifications:

- Model** : GDS-IL
 Instrument Connection : Select from below table (TC)
 Block Material : Select from below table (BM)
 Diaphragm Material : Select from below table (DM)
 Construction : Diaphragm welded with bottom of instrument connection
 Optional : Select from below table (OI), if required.

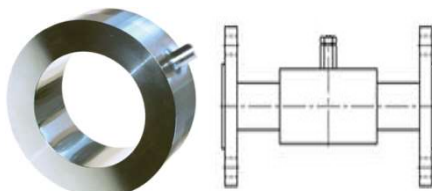
Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321
I60	Inconel-625
NI	Nickel-200

Block Material (BM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321
I65	Inconel-625
NI	Nickel-200

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Metric threads available on request	
34	3/4"	BP	BSPP		
1	1"	BT	BSPT		
X	Specify	X	Specify		

M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify



Model: GDS-IL - Diaphragm Seal - In-line Flow Through

9) Diaphragm Seal – In-Line Flow Through Isolating Annular type specifications:

- Model** : **GDS-ILI**
- Instrument Connection : 1/4", 3/8", 1/2", 3/4" / NPTF, BSPF
- Isolation/Valve Connection : 1/4", 3/8", 1/2", 3/4" / NPTF, BSPF
- Rings Material : SS304, SS304L, SS316, SS316L
- Diaphragm Material : Non-metallic seal for wastewater & chemical feed (A full range of additional diaphragm seal materials and constructions available)
- Construction : Diaphragm sandwiched between two rings and rings bolted together (Replaceable Diaphragm)
- Service : Recommended for Clog-resistant seal for slurries and heavy sludge's.
- Optional : Select from below table (OI), if required



Model: GDS-ILI - Diaphragm Seal – In-Line Flow Through Isolating

10) Diaphragm Seal - Plug-in Adaptor type (Threaded connection) specifications:

- Model** : **GDS-PA**
- Instrument Connection : Select from below table (TC)
- Process Connection : Select from below table (TC)
- Body Material : Select from below table (BM)
- Diaphragm Material : Select from below table (DM)
- Construction : Diaphragm welded at bottom of adaptor
- Optional : Select from below table (OI), if required.

Diaphragm Material (DM)	
Code	Material
S36	SS316
S36L	SS316L
S36T	SS316Ti
S31	SS321

Body Material (BM)	
Code	Material
S36	SS316
S36L	SS316L
S34	SS304
S31	SS321

Threaded Connection (TC)					
Code	Size	Code	Type	Code	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Met ric thre ads avail able on requ est	
34	3/4"	BP	BSPP		

I60	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
TA	Tantalum
PT	PTFE
SI	Silver
X	Specify

I65	Inconel-625
NI	Nickel-200
M4	Monel-400
HC	Hastelloy-C
HB	Hastelloy-B
TI	Titanium
I60	Inconel-600
I80	Inconel-800
CS	CS (A105)
X	Specify

1	1"	BT	BSPT	
X	Specify	X	Specify	



Model: GDS-PA - Diaphragm Seal - Plug-in Adaptor

11) Diaphragm Seal - Sanitary/Hygiene Tri-Clamp Ferrule type specifications:

- Model** : GDS-TCF
- Instrument Connection : 1/4", 3/8", 1/2", 3/4", 1" / NPTF, BSPF
- Ferrule Material : SS304, SS304L, SS316, SS316L
- Diaphragm Material : SS316, SS316L
- Ferrule Size : 1/2", 3/4", 1", 1 1/2", 2", 2 1/2", 3", 4" 6" 8" 10" 12"
- Construction : Diaphragm welded within ferrule ID
- Optional : Select from below table (OI), if required.



Model: GDS-TCF - Diaphragm Seal - Sanitary/Hygiene Tri-Clamp Ferrule

12) Diaphragm Seal - Sanitary/Hygiene SMS Union type specifications:

- Model** : GDS-SMS
- Instrument Connection : 1/4", 3/8", 1/2", 3/4", 1" / NPTF, BSPF
- Union Material : SS304, SS304L, SS316, SS316L
- Diaphragm Material : SS316, SS316L
- Union Size : 1", 1 1/2", 2", 2 1/2", 3", 4"
- Construction : Diaphragm welded within union ID
- Optional : Select from below table (OI), if required.



Model: GDS-SMS - Diaphragm Seal - Sanitary/Hygiene SMS Union

13) Diaphragm Seal - Sanitary/Hygiene IDF Union type specifications:

- Model** : GDS-IDF
- Instrument Connection : 1/4", 3/8", 1/2", 3/4", 1" / NPTF, BSPF
- Union Material : SS304, SS304L, SS316, SS316L
- Diaphragm Material : SS316, SS316L
- Union Size : 1", 1½", 2", 2½", 3", 4"
- Construction : Diaphragm welded within union ID
- Optional : Select from below table (OI), if required.



Model: GDS-IDF - Diaphragm Seal - Sanitary/Hygiene IDF Union

14) Flushing Ring specifications:

- Model** : GDS-FR
- Material : SS304, SS304L, SS316, SS316L, SS316Ti, SS321, SS310, Nickel-200, Monel-400, Hastalloy-B, Hastalloy-C, Titanium, CS
- Connections : 1/4" NPTF, 1/2"NPTF, 1/4" BSPF, 1/2"BSPF
- Inner/Outer Dia : Manufacturer standard or suitable to flange/Pipe (Specify flange/Pipe or Ring dimensions)
- Thickness : Manufacturer standard, Specify
- Optional : Select from below table (OI), if required.



Model: GDS-FR - Flushing Ring

15) Capillary Extension specifications:

- Model** : GA-CE
- Length : 1 Mtr, 2 Mtrs, 3 Mtrs, Specify
- Material : Specify from below table (CM)
- Instrument Connection : Select from below table (TC)
- Process Connection : Select from below table (TC)
- Optional : Select from below table (OI), if required.

Capillary Material (CM)	
Code	Material
M1	SS304M capillary
M2	SS316M capillary
M3	SS304M capillary SS304 armoured
M4	SS316M capillary SS304 armoured
M5	SS304M capillary SS316 armoured
M6	SS316M capillary SS316 armoured
M7	SS304M capillary SS304 armour +

Threaded Connection (TC)					
Cod e	Size	Cod e	Type	Cod e	Shape
14	1/4"	NT	NPT	M	Male
38	3/8"	NM	NPSM	F	Female
12	1/2"	BS	BSP	Note : Connection material same as capillary tube material (others please specify)	
34	3/4"	BP	BSPP		
01	1"	BT	BSPT		
M8	M18x1.	GT	G Thread		
M0	M20x1.	RT	R Thread		

	PVC covered
M8	SS316M capillary SS304 armour + PVC covered
M9	SS304M capillary SS316 armour + PVC covered
M10	SS316M capillary SS316 armour + PVC covered
X	Specify

	5		
X	Specify	Rp	Rp Thread
		JF	JIS-PF
		JT	JIS-PT
		X	Specify



Model: GA-CE - Capillary Extension for Instrument remote mounting

Note:- Specifications other than above offered on request. Refer “optional items list” or “accessories catalogue” for more details, if required

16) Optional Items for Diaphragm Seal

Model : GA-OI

Optional Items

Srl.	Products	Code
1	Not applicable	N
2	Glycerine filled	FGL
2	Silicon Oil filled	FSI
3	Food grade Silicon Oil filled	FFS
4	Halocarbon filled	FHA
5	Fluorolube filled	FFL
6	Syltherm-800 filled	FSY
7	Mineral Oil filled	FMI
8	PTFE coated/lined diaphragm	PCD
9	PTFE coated/lined flange bottom	PCF
10	Exotic cladding over RF (specify material)	ECR
11	Integral flushing connection 1/4"NPTF	IF1
12	Integral flushing connection 1/2"NPTF	IF2
13	Male Plug (specify thread & material)	MP
14	Gasket (specify size/material)	GA
15	Washer (specify size/material)	WA
16	3A certificate	3A
17	Specify others if any	X

Note :- Refer attached "Accessories" catalogue page, if you want more items suitable to use with Diaphragm Seal / Pressure / Vacuum Gauges.

17) Accessories (Refer Accessories Catalogue)

Model : GA