

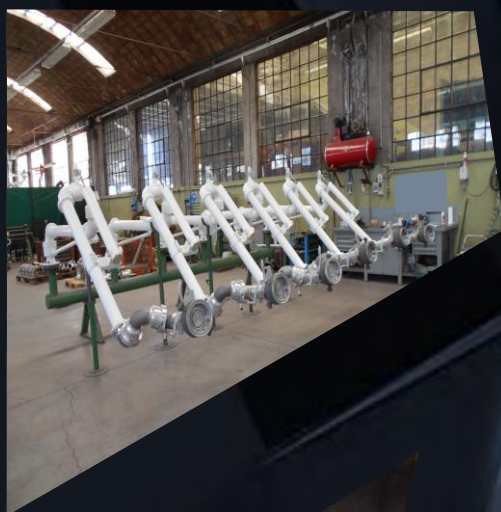
Officine Meccaniche Cavourresi S.p.A.



We empower loading

Liquid Transfer Systems

Land Loading Arms



2018 Catalogue

Certificate of Approval

This is to certify that the Management System of:

Officine Meccaniche Cavourresi S.p.A.

Via Saluzzo, 78, 10061 Cavour - TO, Italy

has been approved by LRQA to the following standards:

ISO 9001:2015



Gilles Bessiere - Area Technical Manager

Issued By: Lloyd's Register Quality Assurance Italy Srl

for and on behalf of: Lloyd's Register Quality Assurance Limited

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Approval Number(s): ISO 9001 – 0042852

The scope of this approval is applicable to:
Design and manufacturing of fluid transfer systems intended for petrochemical industry.



001

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Our Quality Control System according to EN ISO 9001 has been widely tested throughout the years with continuous updates to the production cycle, the final checks and tests and, consequently, to the quality manual and procedures. For this reason, on September 2001, we have obtained the approval from **LLOYD'S REGISTER QUALITY ASSURANCE**

We are pleased to introduce our wide range of liquid transfer systems, currently installed and operating all over the world supported by 50 years of experience.

Our land loading arms offer the best solutions for all loading necessities, covered by various types of arms according to the loading typologies, products and operating conditions.



Summary

Loading arms for hydrocarbons

Top loaders 622-BC/722-BC Model

Top loaders 621-BC/721-BC Model

Top loaders 621-LR/B Model

Top loaders 2239-UB Model

Top loaders 2633 Model

Top loaders 2620 Model

Bottom loaders 740/750 Model

Bottom loaders 750-LR Model

Bottom loaders 750-SPC Model

Bottom unloaders 2454-BC Model

Bottom loaders 2475 Model

Loading arms for chemicals

Top loaders 2374 Model

Top loaders 2385 Model

Top loaders 2385-LR Model

Top loaders 2903 Model

Top loaders 2902 Model

Top loaders/unloaders 2503-BC Model

Bottom loaders 2504-BC Model

Bottom unloaders 2455-BC Model

Bottom loaders 2475 Model

Loading arms for LPG

Bottom loaders 2503-BC Model

Bottom loading station 2503-BC Model

Closed system bottom loading station 2874 Model

Loading arms for hot products

Top loaders 2570-TRC Model with electrical tracing

Top loaders 2879-TRC Model with electrical tracing

Top unloaders 2879-TRC Mod. with electrical tracing

Top loaders 2902-TRC Model with electrical tracing

Bottom unloader 2454-BC-TRC Mod. with electrical tracing

Bottom unloader 2454-TRC Mod. with electrical tracing

Top loaders 2570-JACK Model with jacket

Top loaders 2879-JACK Model with jacket

Top loaders 2902-JACK Model with jacket

Bottom unloader 2454-BC-JACK Mod. with jacket

Loading arms for food service

Top loaders 2385 Model

Top loaders 2385-LR Model

Pg 2	Various loading arms	Pg 42
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Loading arms for hydrocarbons

Top loading arms



622-BC
Pg 3



621-BC
Pg 4



621-LR/B
Pg 5



2239-UB
Pg 6



2633
Pg 7



**2620 with vapour
recovery line**
Pg 8

Bottom loading arms



750
Pg 9



750-LR
Pg 10



750-SPC
Pg 11



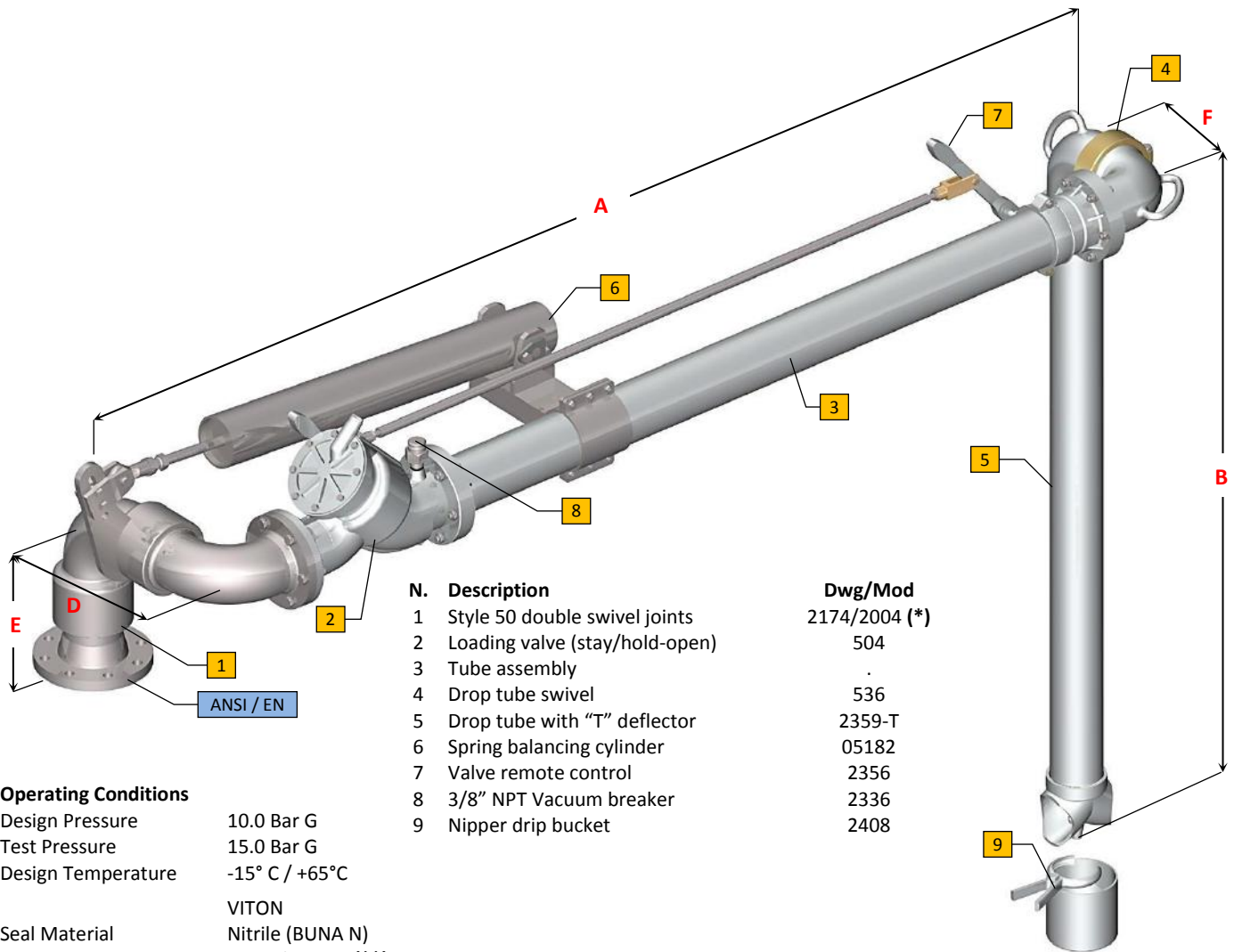
2454-BC
Pg 12



2475
Pg 13

Fixed range top loading arm

622-BC



Operating Conditions

Design Pressure 10.0 Bar G
 Test Pressure 15.0 Bar G
 Design Temperature -15° C / +65°C

Seal Material VITON
 Nitrile (BUNA N)
 Special VITON (**)

Flow Rate 3"- 75 mc/h Max
 4"- 125 mc/h Max
 6"- 280 mc/h Max

Standard Dimensions

Dn.	3"	4"	6"
A	2000/3000	2000/3000	2000/3000
B	1200/2000	1200/2000	1200/2000
C	/	/	/
D	296	353	525
E	289	328	462
F	174	201	278
Weight	85	105	200

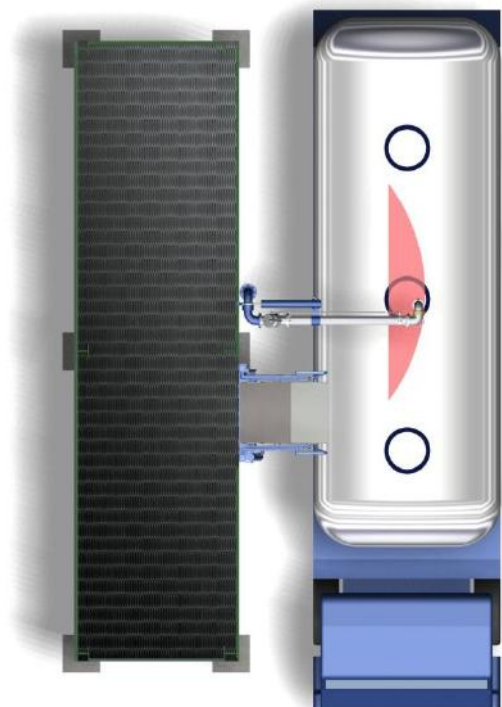
Notes

- Earthing continuity along the arm, according to ATEX directive
- (*) Swivels 2174 Mod. installed on 622-BC Mod. loading arms
 Swivels 2004 Mod. installed on 722-BC Mod. loading arms

Options

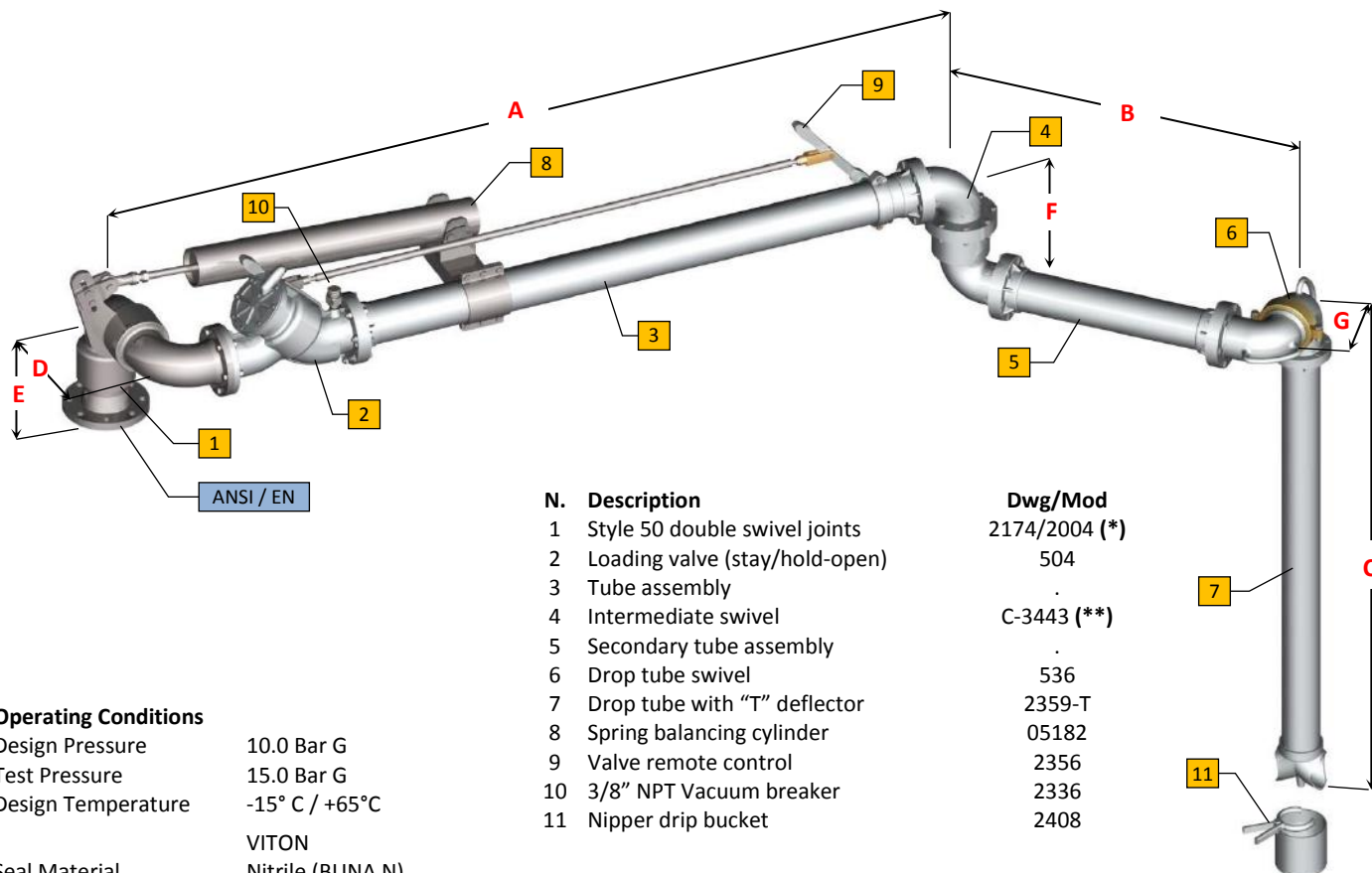
- Pos.5 with flute beak end (2359-BF)
- Pos.5 with flow deflector (2359-D)
- Microswitch to signal valve opened/closed
- (**) Suitable for BIO-Products
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Variable range top loading arm 621-BC / 721-BC



N. Description

- 1 Style 50 double swivel joints
- 2 Loading valve (stay/hold-open)
- 3 Tube assembly
- 4 Intermediate swivel
- 5 Secondary tube assembly
- 6 Drop tube swivel
- 7 Drop tube with "T" deflector
- 8 Spring balancing cylinder
- 9 Valve remote control
- 10 3/8" NPT Vacuum breaker
- 11 Nipper drip bucket

Dwg/Mod

- 2174/2004 (*)
504
C-3443 (**)
536
2359-T
05182
2356
2336
2408

Operating Conditions

Design Pressure 10.0 Bar G
Test Pressure 15.0 Bar G
Design Temperature -15° C / +65°C

Seal Material VITON
Nitrile (BUNA N)
Special VITON (***)

Flow Rate 3"- 75 mc/h Max
4"- 125 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	2100/2800	2100/2800
B	600/1000	600/1000
C	1200/2000	1200/2000
D	296	353
E	289	328
F	238	305
G	174	201
Weight	90	115

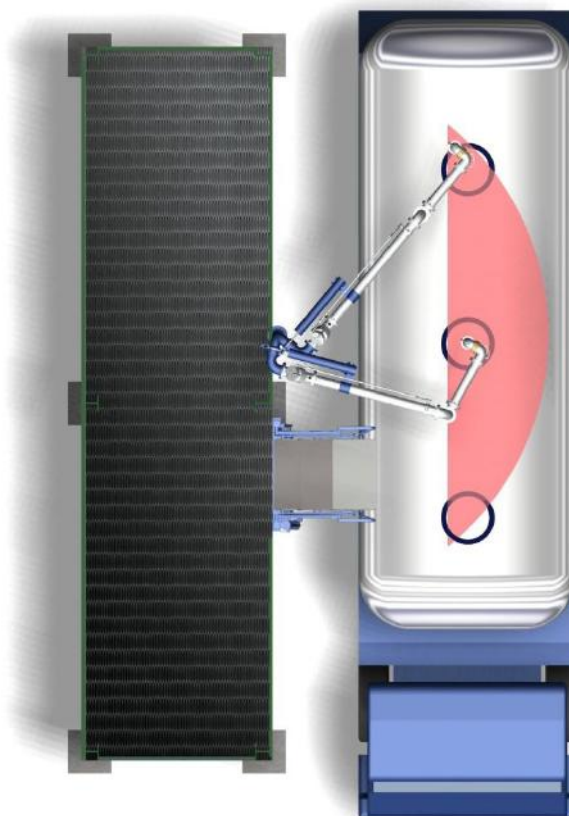
Notes

- Earthing continuity along the arm, according to ATEX directive
- (**) Horizontal or 10° sloped construction, for improve the drainage of the product from the tube.
- (*) Swivels 2174 Mod. installed on 622-BC Mod. loading arms
Swivels 2004 Mod. installed on 722-BC Mod. loading arms

Options

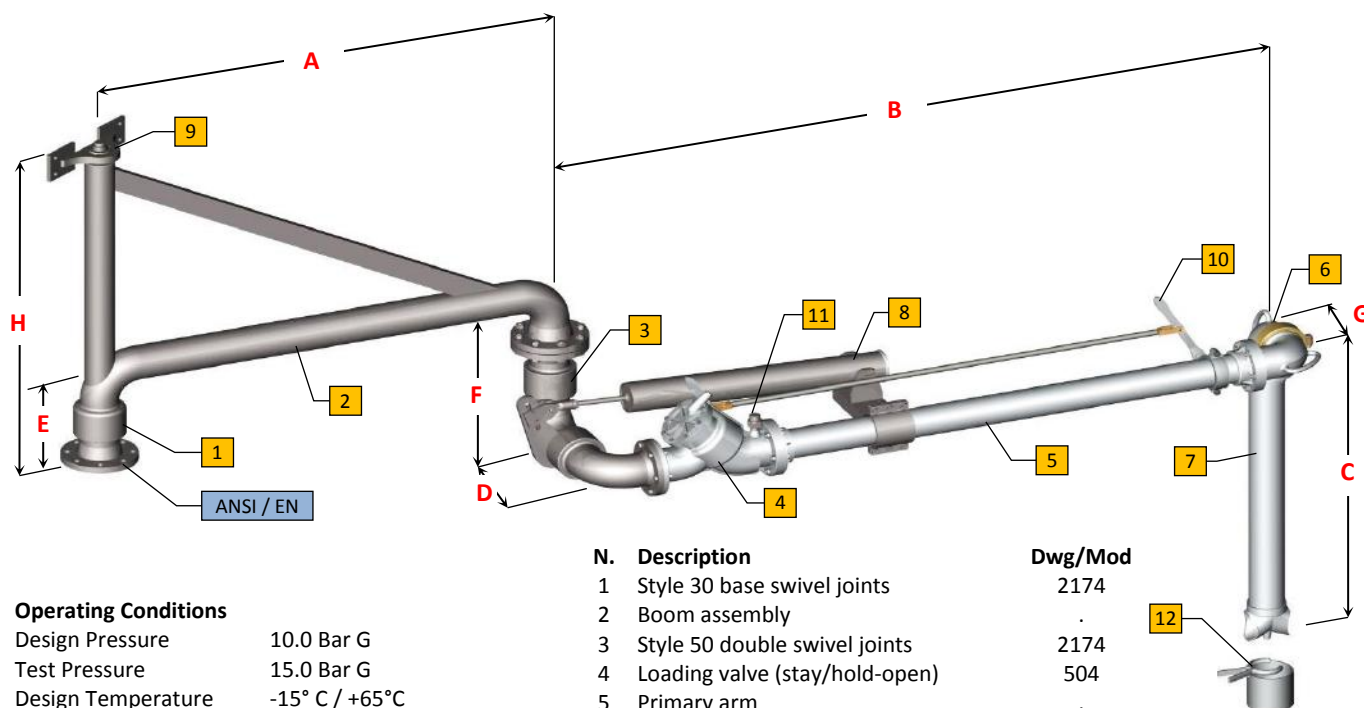
- Pos.7 with flute beak end (2359-BF)
- Pos.7 with flow deflector (2359-D)
- Microswitch to signal valve opened/closed
- Rotational microswitches to signal arm side in use
- (***) Suitable for BIO-Products
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Long range top loading arm

621-LR/B



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C
	VITON
Seal Material	Nitrile (BUNA N) Special VITON (*)
Flow Rate	3"– 75 mc/h Max 4"– 125 mc/h Max 6"– 280 mc/h Max

N. Description

1	Style 30 base swivel joints
2	Boom assembly
3	Style 50 double swivel joints
4	Loading valve (stay/hold-open)
5	Primary arm
6	Drop tube swivel
7	Drop tube with "T" deflector
8	Spring balancing cylinder
9	Pillow block
10	Valve remote control
11	3/8" NPT Vacuum breaker
12	Nipper drip bucket

Dwg/Mod

2174
.
2174
504
.
536
2359-T
05182
C-4354
2356
2336
2408

Standard Dimensions

Dn.	3"	4"	6"
A	2500	2500	2500
B	2100	2100	2100
C	1200/2000	1200/2000	1200/2000
D	296	353	525
E	289	328	462
F	439	510	707
G	174	201	278
H	1000/2000	1000/2000	1000/2000
Weight	160	215	300

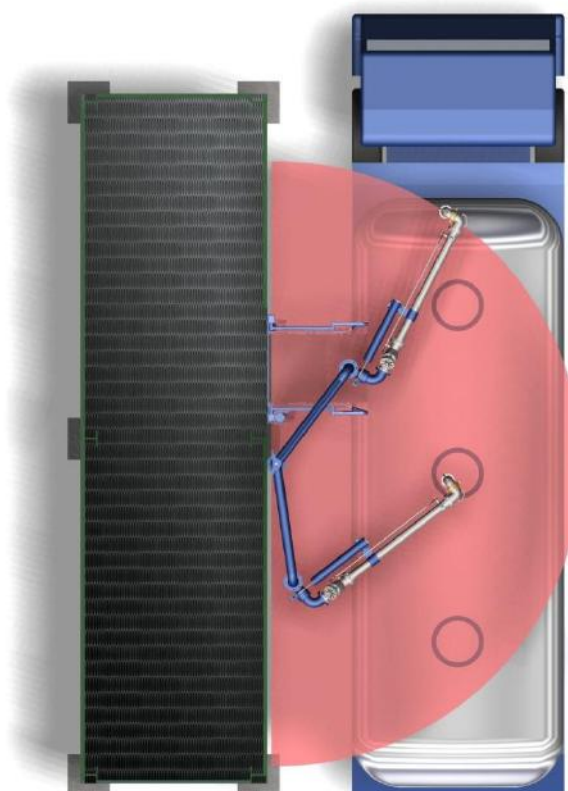
Notes

- 621-LR/A Model is also available, with intermediate swivel Pos. 3 turned toward the top
- Earthing continuity along the arm, according to ATEX directive

Options

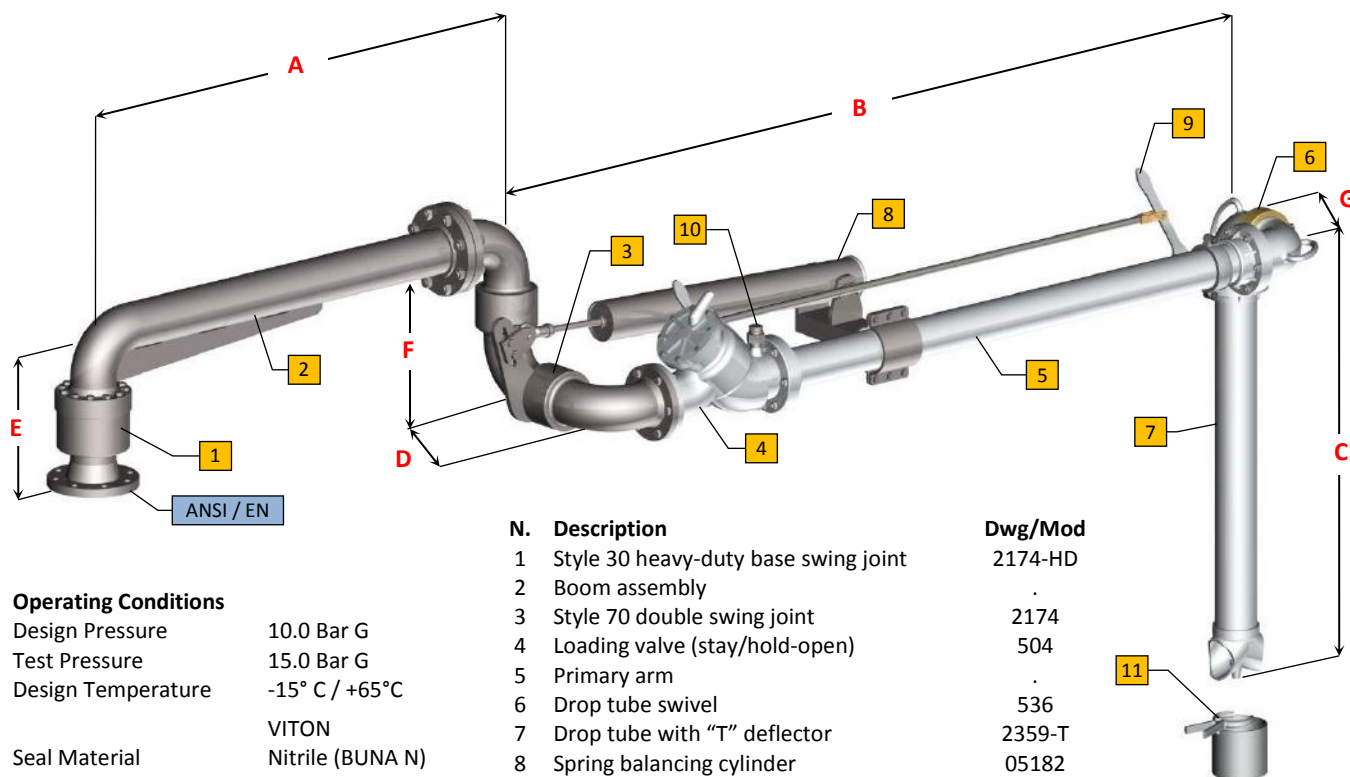
- Pos.7 with flute beak end (2359-BF)
- Pos.7 with flow deflector (2359-D)
- Microswitch to signal valve opened/closed
- Locking device for arm in parking position
- (*) Suitable for BIO-Products
- Overfill level sensor
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Long range top loading arm with unsupported boom 2239-UB



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C
	VITON
Seal Material	Nitrile (BUNA N) Special VITON (*)
	3"– 75 mc/h Max
Flow Rate	4"– 125 mc/h Max 6"– 280 mc/h Max

N. Description

- 1 Style 30 heavy-duty base swing joint
- 2 Boom assembly
- 3 Style 70 double swing joint
- 4 Loading valve (stay/hold-open)
- 5 Primary arm
- 6 Drop tube swivel
- 7 Drop tube with "T" deflector
- 8 Spring balancing cylinder
- 9 Valve remote control
- 10 3/8" NPT Vacuum breaker
- 11 Nipper drip bucket

Dwg/Mod

2174-HD
2174
504
.
536
2359-T
05182
2356
2336
2408

Standard Dimensions

Dn.	3"	4"	6"
A	800/2000	850/2000	1000/2000
B	2100	2100	2100
C	1200/2000	1200/2000	1200/2000
D	296	353	525
E	318	375	491
F	296	353	525
G	174	201	278
Weight	125	165	335

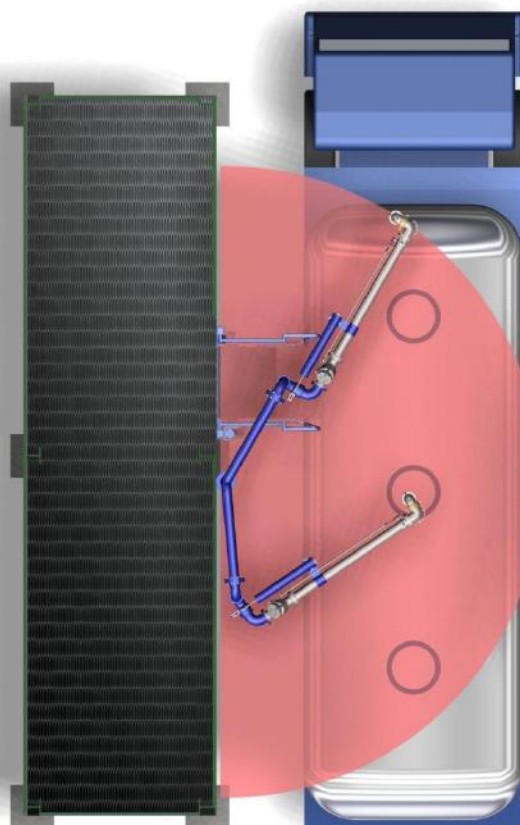
Notes

- 2239-UA Model is also available, with intermediate swivel Pos. 3 turned toward the top
- Earthing continuity along the arm, according to ATEX directive

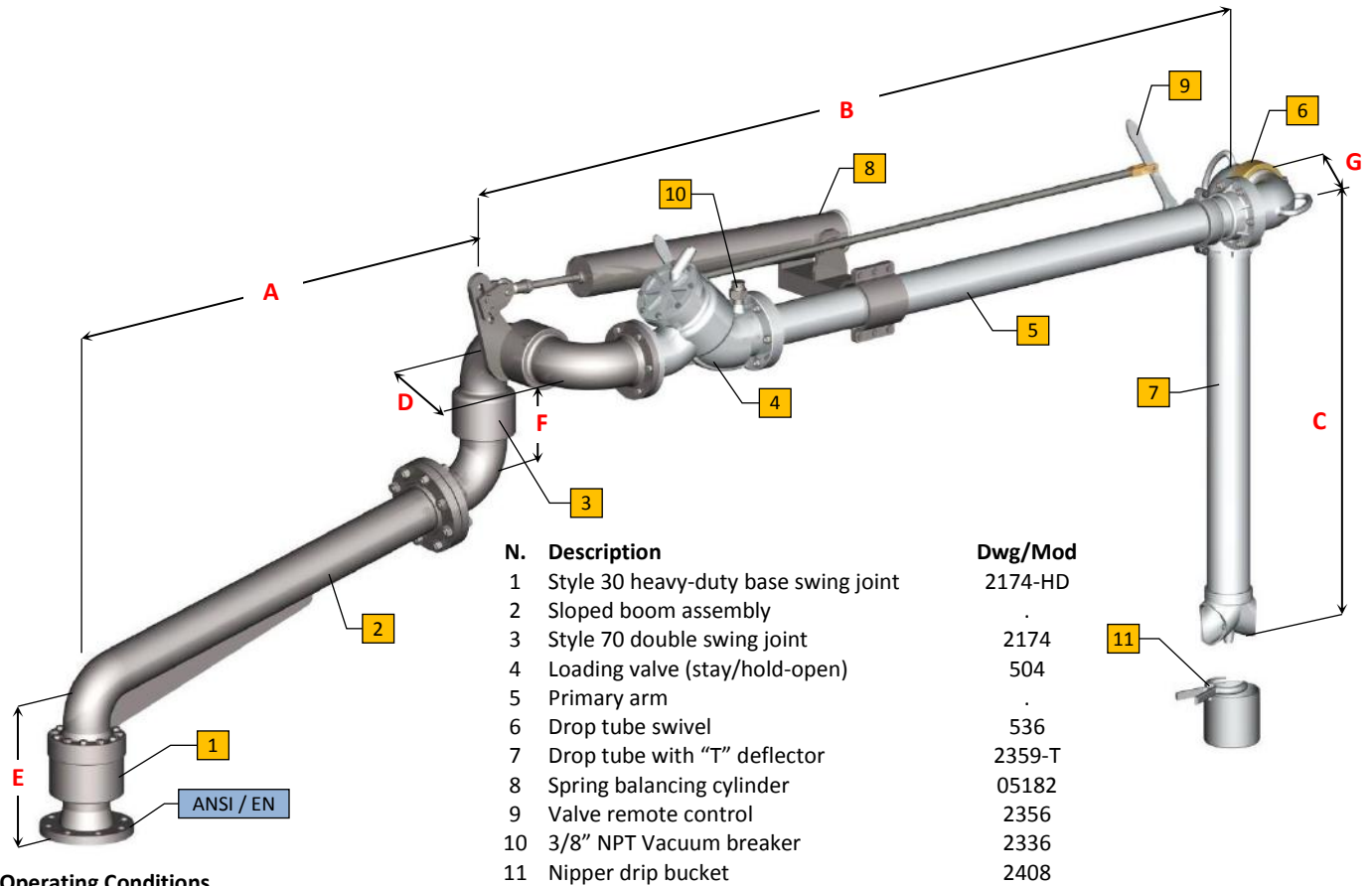
Options

- Pos.7 with flute beak end (2359-BF)
- Pos.7 with flow deflector (2359-D)
- Microswitch to signal valve opened/closed
- Locking device for arm in parking position
- (*) Suitable for BIO-Products
- Overfill level sensor
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Long range top loading arm with sloped unsupported boom 2633



Operating Conditions

Design Pressure 10.0 Bar G
Test Pressure 15.0 Bar G
Design Temperature -15° C / +65°C

Seal Material VITON
Nitrile (BUNA N)
Special VITON (*)

Flow Rate 3"- 75 mc/h Max
4"- 125 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	1500/2500	1500/2500
B	2000/3000	2000/3000
C	1600	1600
D	296	353
E	318	375
F	296	353
G	174	201
Weight	125	165

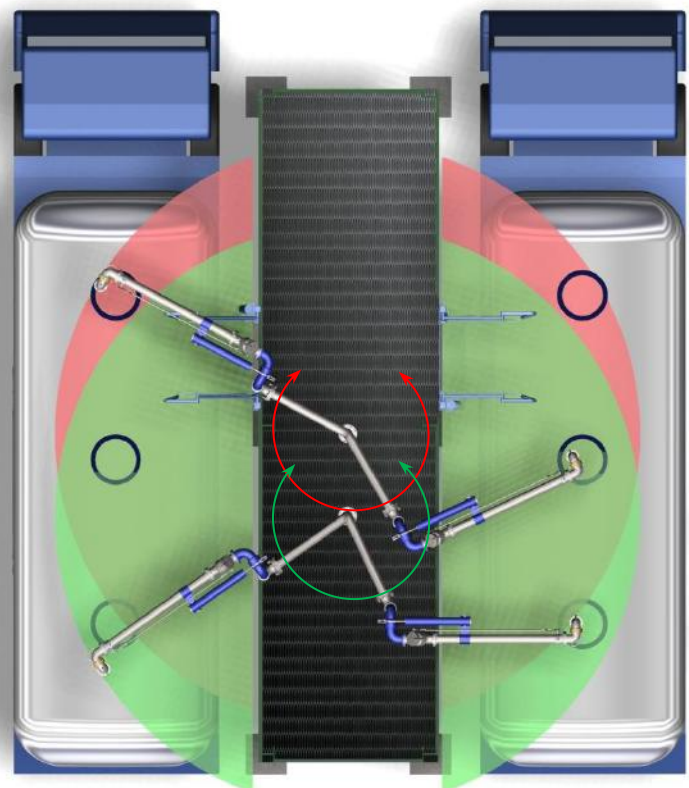
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

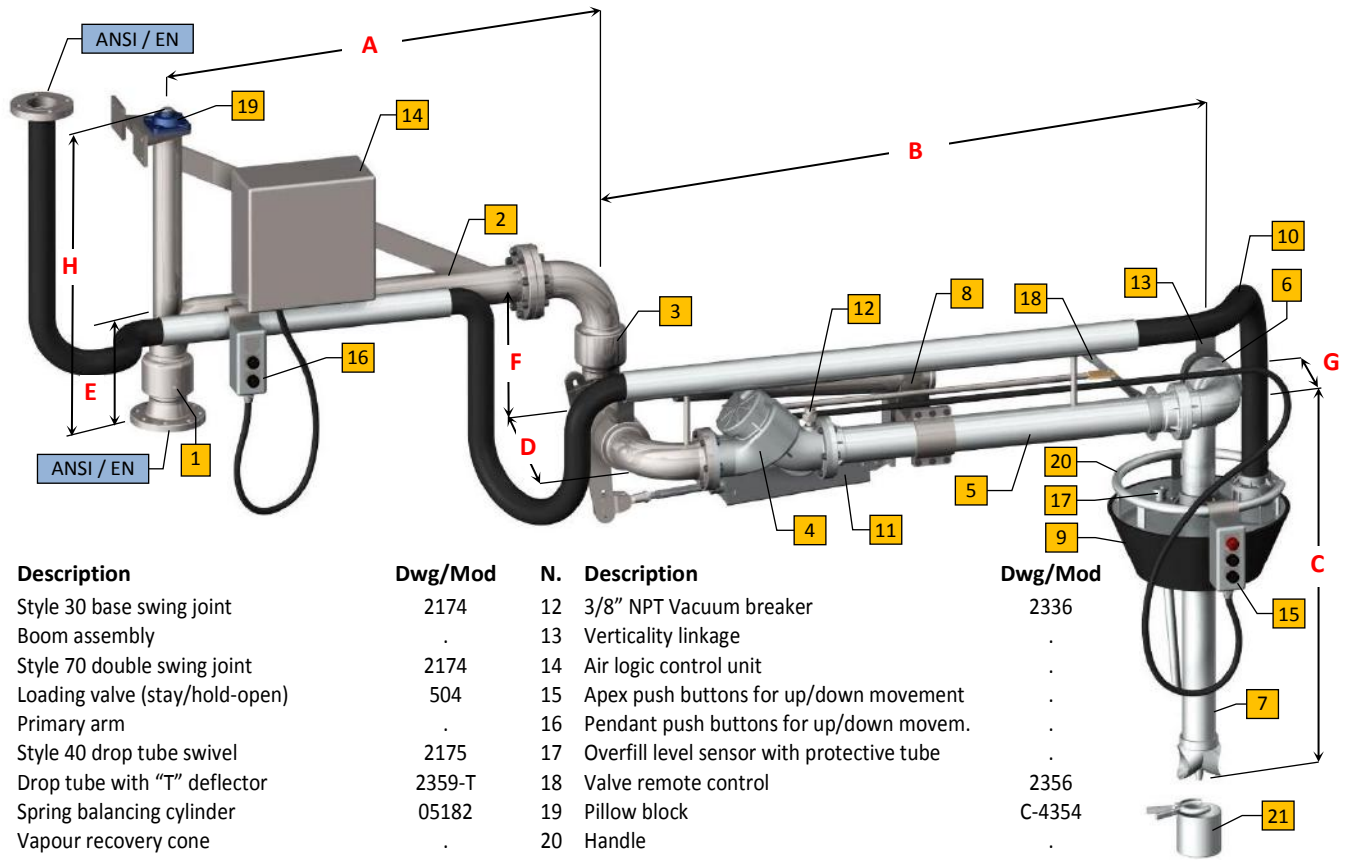
- Pos.7 with flute beak end (2359-BF)
- Pos.7 with flow deflector (2359-D)
- Microswitch to signal valve opened/closed
- Rotational microswitches to signal arm side in use
- Locking device for arm in parking position
- (*) Suitable for BIO-Products
- Overfill level sensor
- NDT test (RT-PT-MT) available on request

Demonstration of operating area (both side of loading gantry)





Long range top loading arm with vapour recovery system 2620



N. Description

1	Style 30 base swing joint
2	Boom assembly
3	Style 70 double swing joint
4	Loading valve (stay/hold-open)
5	Primary arm
6	Style 40 drop tube swivel
7	Drop tube with "T" deflector
8	Spring balancing cylinder
9	Vapour recovery cone
10	Vapour-return hose with loose flange
11	Pneumatic cylinder for vertical movem.

Dwg/Mod

2174
.
2174
504
.
2175
2359-T
05182
.
.
.

N. Description

12	3/8" NPT Vacuum breaker
13	Verticality linkage
14	Air logic control unit
15	Apex push buttons for up/down movement
16	Pendant push buttons for up/down movem.
17	Overfill level sensor with protective tube
18	Valve remote control
19	Pillow block
20	Handle
21	Nipper drip bucket

Dwg/Mod

2336
.
.
.
.
.
2356
C-4354
.
2408

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C

	VITON
Seal Material	Nitrile (BUNA N)
	Special VITON (*)

Flow Rate	3" – 75 mc/h Max
	4" – 125 mc/h Max

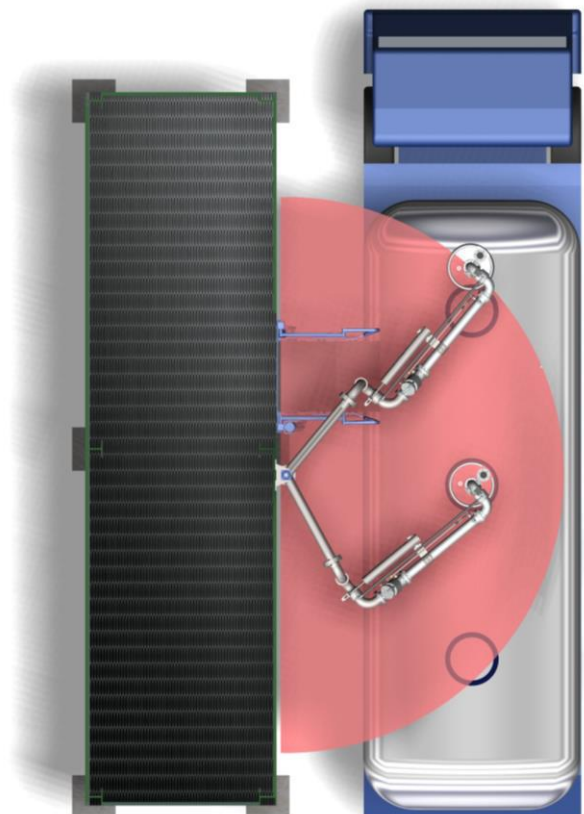
Standard Dimensions

Dn.	3"	4"
A	1000/1500	1000/1500
B	1500/2200	1500/2200
C	1600	1600
D	372	455
E	289	328
F	372	455
G	203	343
H	1000	1000
Weight	190	220

Options

- Pos.7 with flute beak end (2359-BF)
- Pos.7 with flow deflector (2359-D)
- Check valve for liquid (2141 Mod.) and vapour (2904 Mod.) phases
- 2424 Model sight glass
- Microswitch to signal valve opened/closed
- Sliding counterweight press-down instead pneumatic control
- Locking device for arm in parking position
- Telescopic drop tube (manual or pneumatic)
- (*) Suitable for BIO-Products
- NDT test (RT-PT-MT) available on request

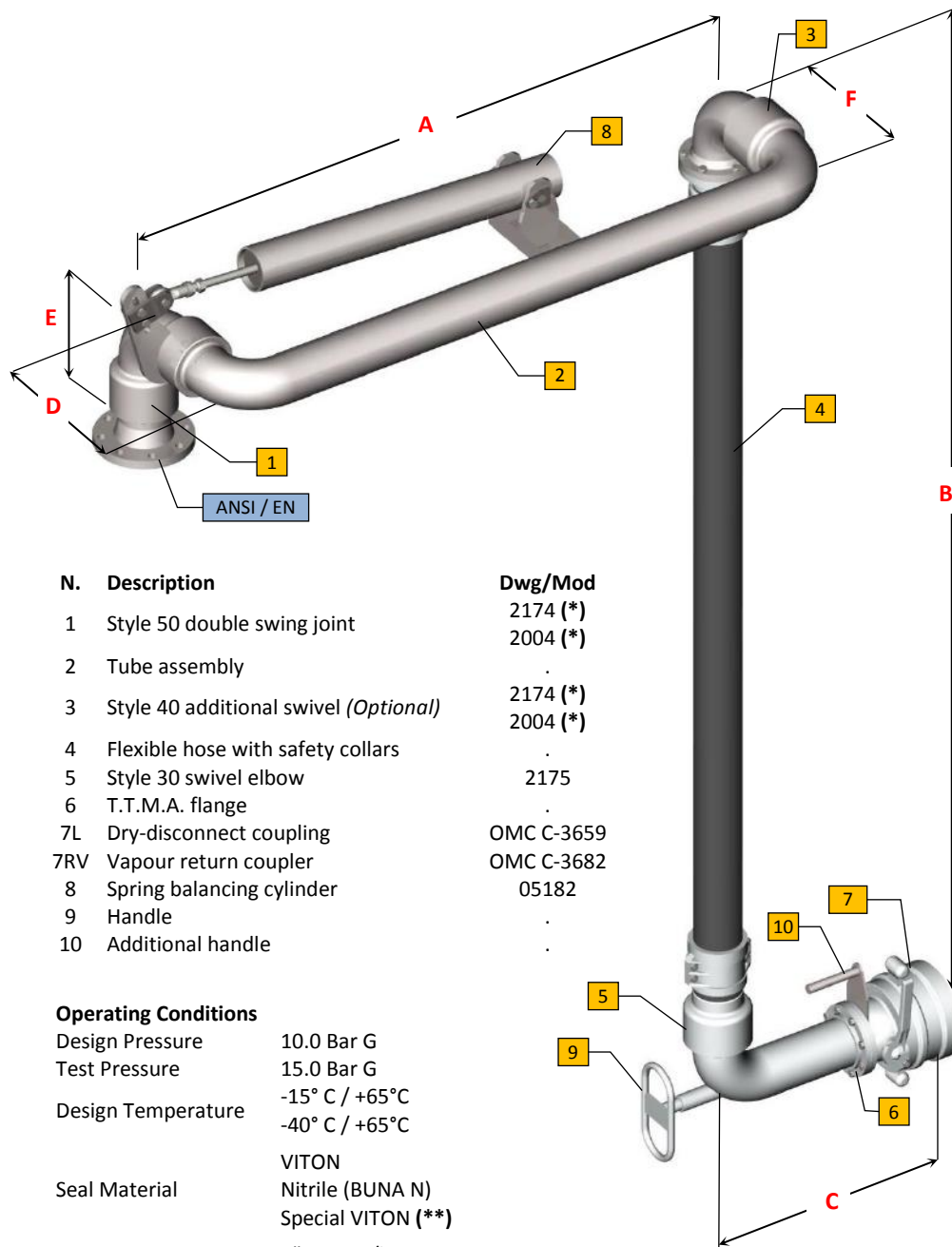
Demonstration of operating area



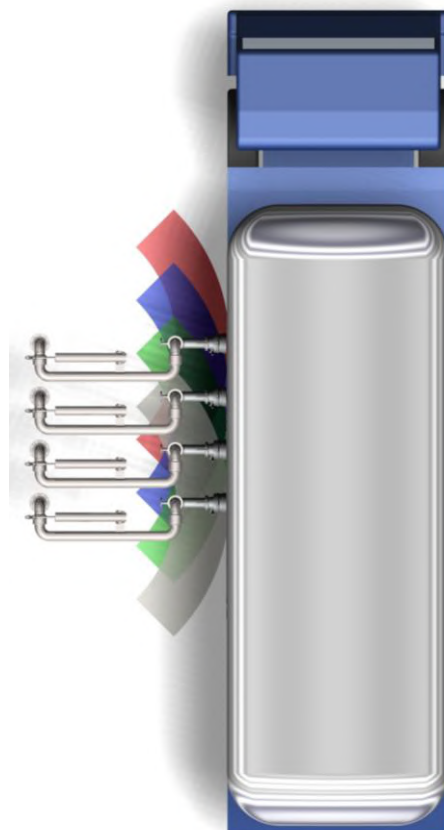
Notes

- Earthing continuity along the arm, according to ATEX directive

Single range bottom loading/vapour recovery arm with vertical flexible hose 750 / 740



Demonstration of operating area



N. Description

1	Style 50 double swing joint
2	Tube assembly
3	Style 40 additional swivel (Optional)
4	Flexible hose with safety collars
5	Style 30 swivel elbow
6	T.T.M.A. flange
7L	Dry-disconnect coupling
7RV	Vapour return coupler
8	Spring balancing cylinder
9	Handle
10	Additional handle

Dwg/Mod

2174 (*)
2004 (*)
2174 (*)
2004 (*)
2175
OMC C-3659
OMC C-3682
05182
.
.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C
	-40° C / +65° C
Seal Material	VITON
	Nitrile (BUNA N)
	Special VITON (**)
Flow Rate	3" - 75 mc/h Max
	4" - 150 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	900/1800	900/1800
B	2500/4000	2500/4000
C	650	650
D	296	353
E	289	328
F	296	353
Weight	90	120

Notes

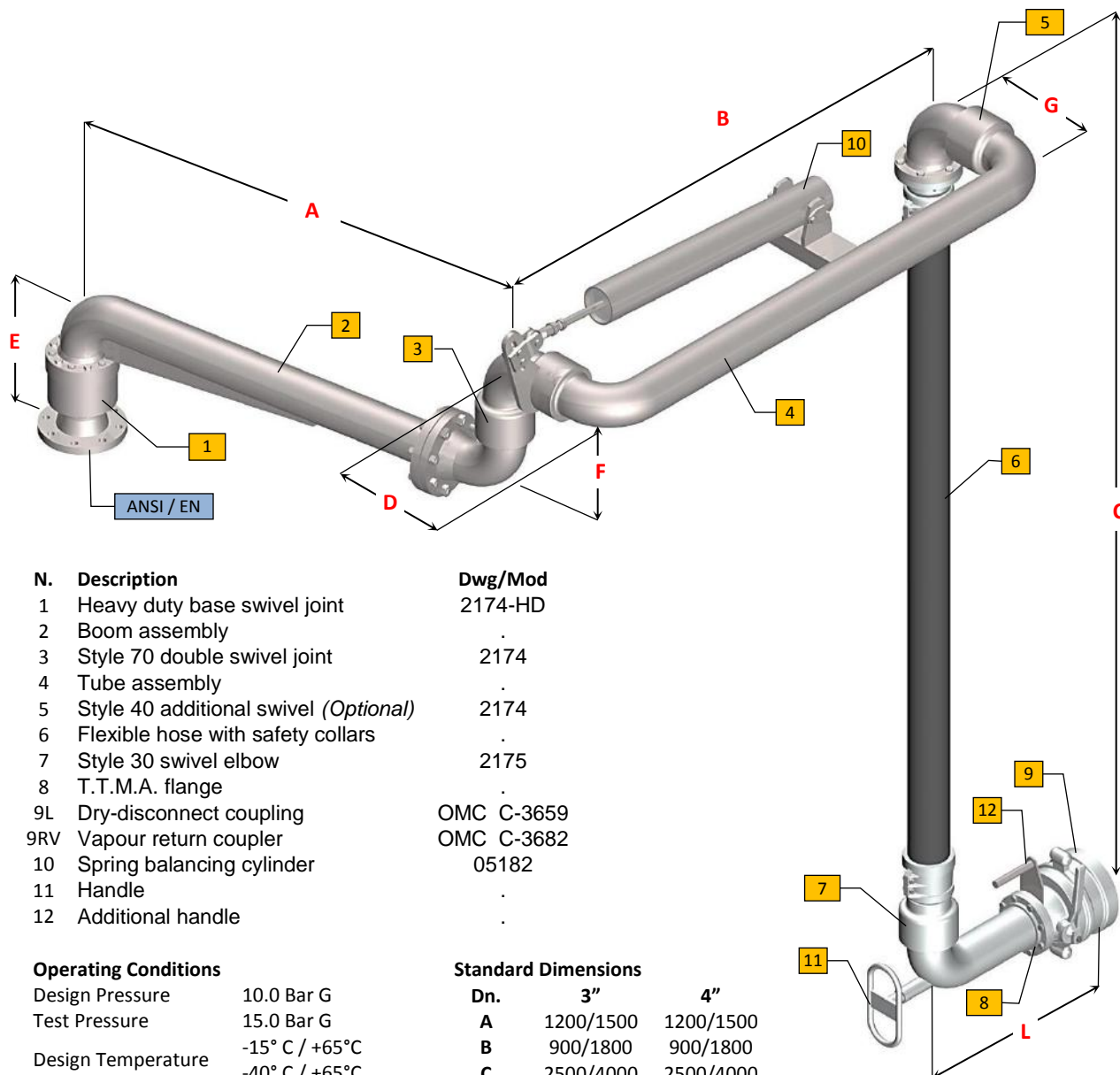
- (*) Swivels 2174 Mod. installed on 750 Mod. loading arms
Swivels 2004 Mod. installed on 740 Mod. loading arms
- Earthing continuity along the arm, according to ATEX directive

Options

- Additional swivel pos. 3
- Safety breakaway coupling OMC 4222 Model
- Dry-disconnect coupling C-3659-CV Model with integrated check valve instead C-3659 API coupler
- Proximity switch to signal coupler connected
- Locking device arm in parking position C-3784
- Sight glass 2424 Model
- Standpost C-4929 Model
- (**) Suitable for BIO-Products or low temperature
- NDT test (RT-PT-MT) available on request



Long range bottom loading/vapour recovery arm with vertical flexible hose 750-LR



N.	Description	Dwg/Mod
1	Heavy duty base swivel joint	2174-HD
2	Boom assembly	.
3	Style 70 double swivel joint	2174
4	Tube assembly	.
5	Style 40 additional swivel (Optional)	2174
6	Flexible hose with safety collars	.
7	Style 30 swivel elbow	2175
8	T.T.M.A. flange	.
9L	Dry-disconnect coupling	OMC C-3659
9RV	Vapour return coupler	OMC C-3682
10	Spring balancing cylinder	05182
11	Handle	.
12	Additional handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C
	-40° C / +65° C
Seal Material	VITON
	Nitrile (BUNA N)
	Special VITON (*)
Flow Rate	3"- 75 mc/h Max
	4"- 150 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	1200/1500	1200/1500
B	900/1800	900/1800
C	2500/4000	2500/4000
D	296	353
E	318	375
F	296	353
G	296	353
L	650	650
Weight	120	150

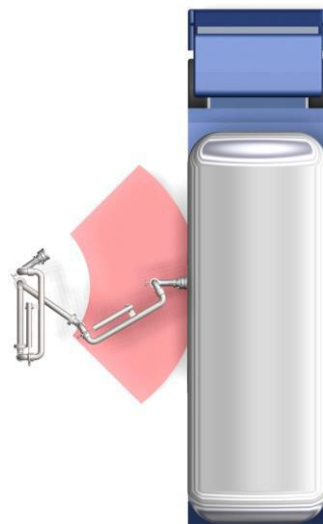
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

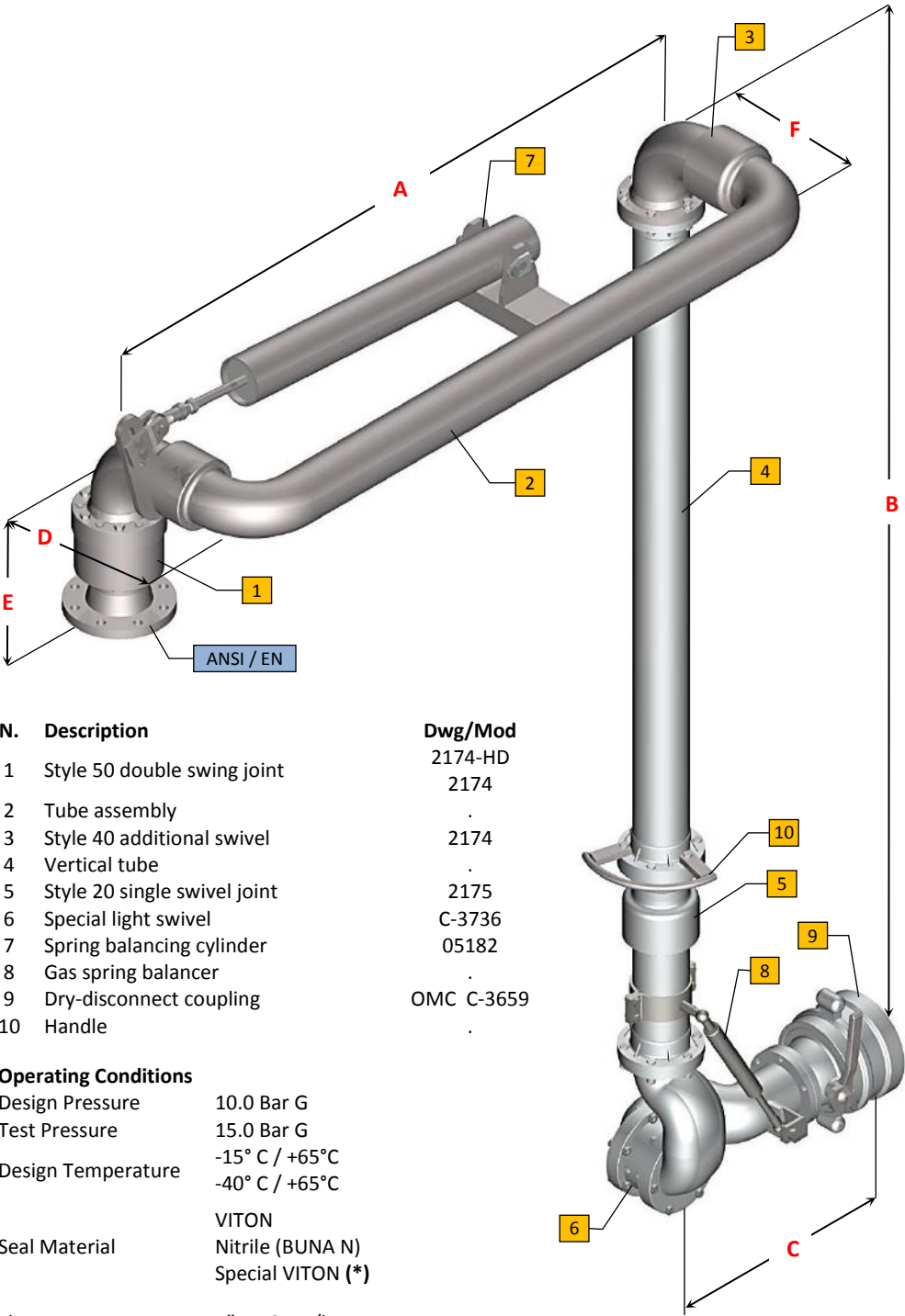
- Additional swivel pos. 5
- Safety breakaway coupling OMC 4222 Model
- Dry-disconnect coupling C-3659-CV Model with integrated check valve instead C-3659 API coupler
- Proximity switch to signal coupler connected
- Locking device arm in parking position C-3784
- Sight glass 2424 Model
- Standpost C-4929 Model
- (*) Suitable for BIO-Products or low temperature
- NDT test (RT-PT-MT) available on request

Demonstration of operating area

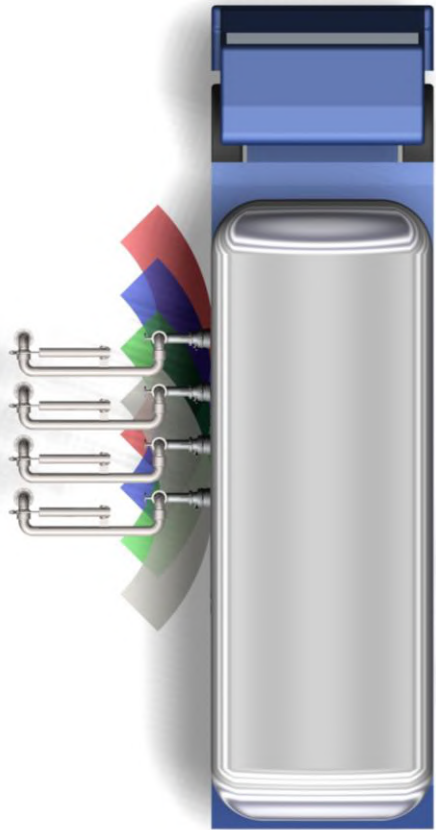


Single range bottom loading/vapour recovery arm with vertical rigid tube

750-SPC



Demonstration of operating area



N.	Description	Dwg/Mod
1	Style 50 double swing joint	2174-HD 2174
2	Tube assembly	.
3	Style 40 additional swivel	2174
4	Vertical tube	.
5	Style 20 single swivel joint	2175
6	Special light swivel	C-3736
7	Spring balancing cylinder	05182
8	Gas spring balancer	.
9	Dry-disconnect coupling	OMC C-3659
10	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C -40° C / +65° C
Seal Material	VITON Nitrile (BUNA N) Special VITON (*)
Flow Rate	4" - 150 mc/h Max

Notes

- Earthing continuity along the arm, according to ATEX directive

Standard Dimensions

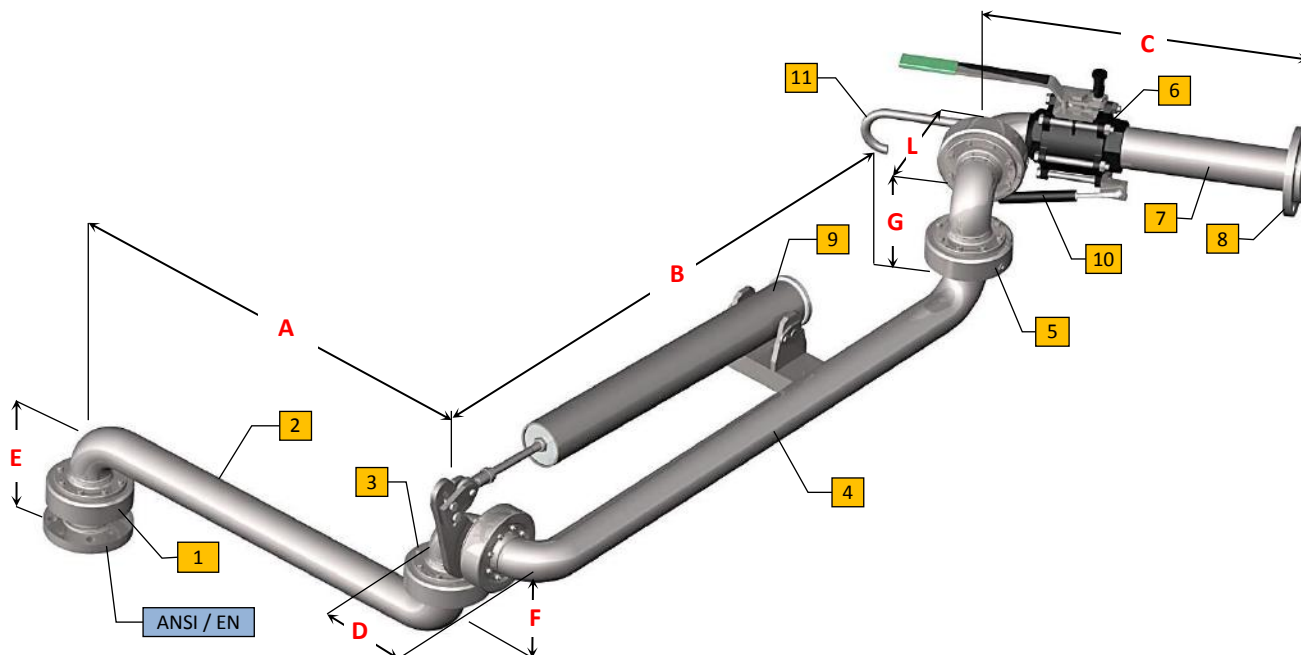
Dn.	4"
A	900/1800
B	2500/4000
C	650
D	353
E	375
F	353
Weight	130

Options

- Safety breakaway coupling OMC 4222 Mod.
- Dry-disconnect coupling C-3659-CV Model with integrated check valve instead C-3659 API coupler
- Proximity switch to signal coupler connected
- Locking device arm in parking position C-3784
- Sight glass 2424 Mod.
- Standpost C-4929
- (*) Suitable for BIO-Products and low temperature
- NDT test (RT-PT-MT) available on request



Triple range bottom loading/unloading arm 2454-BC



N. Description

1	Style 30 base swing joint	3996-WN
2	Boom assembly	.
3	Style 70 double swing joint	3996-WN
4	Primary arm	.
5	Style 70 double swing joint	3996-WN
6	Ball valve with locking device in closed position	.
7	Final arm	.
8	Loose flange	.
9	Spring balancing cylinder	05182
10	Gas spring balancer	.
11	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C

Seal Material	VITON
	Special VITON (*)

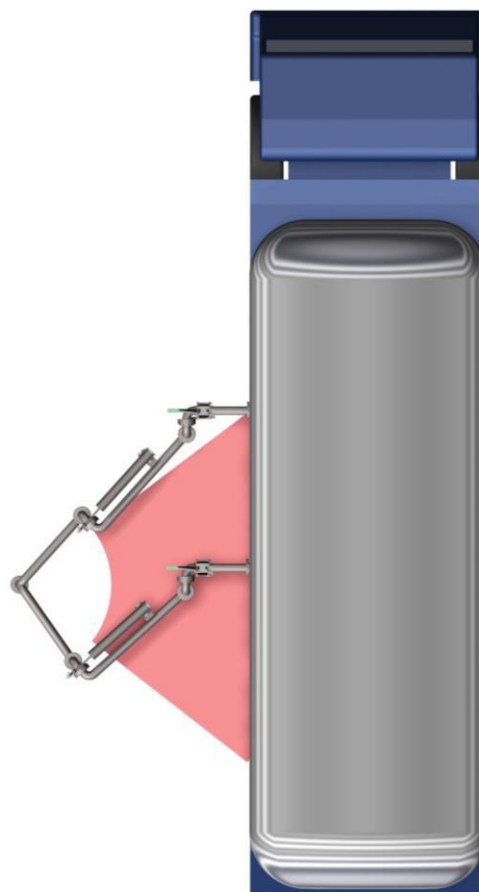
Standard Dimensions

Dn.	3"	4"	6"
A	1500	1500	1500
B	1800	1800	1800
C	600	650	700
D	250	312	469
E	243	288	405
F	250	312	469
G	250	312	469

Options

- Safety breakaway coupling OMC 4222 Mod.
- Locking device arm in parking position
- Dry-disconnect coupling instead flange (pos.8)
- Standpost and pillow block for arm supporting
- Support foot (only with style 40 base swivel)
- Sight glass installed on pos.7
- (*) Suitable for BIO-Products
- NDT test (RT-PT-MT) available on request

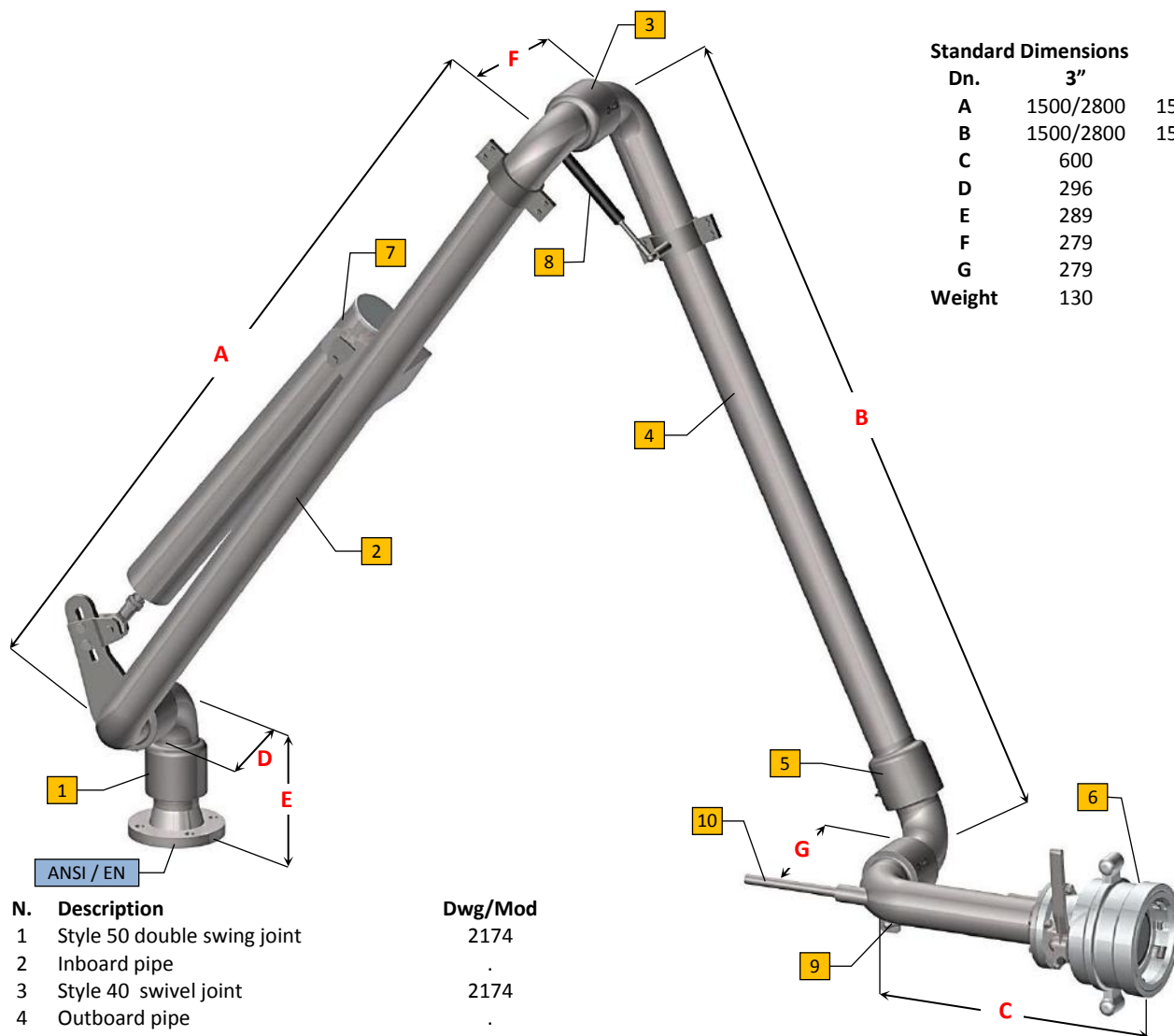
Demonstration of operating area



Notes

- Earthing continuity along the arm, according to ATEX directive

“A frame” triple range bottom loading arm 2475



Standard Dimensions

Dn.	3"	4"
A	1500/2800	1500/2800
B	1500/2800	1500/2800
C	600	600
D	296	353
E	289	328
F	279	343
G	279	343
Weight	130	160

N.	Description
1	Style 50 double swing joint
2	Inboard pipe
3	Style 40 swivel joint
4	Outboard pipe
5	Style 50 double swing joint
6	Dry-disconnect coupler
7	Spring balancing cylinder
8	Gas spring balancer
9	Gas spring balancer
10	Handle

Dwg/Mod
2174
.
2174
.
2175
OMC C-3659
05182
.
.
.

Operating Conditions

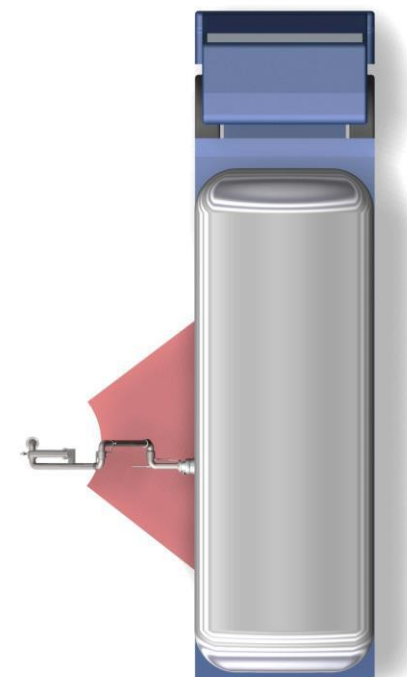
Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
	VITON
Seal Material	PTFE
	Special VITON (*)
Flow Rate	3"—75 mc/h Max
	4"—150 mc/h Max

Notes

- Earthing continuity along the arm, according to ATEX directive

Options

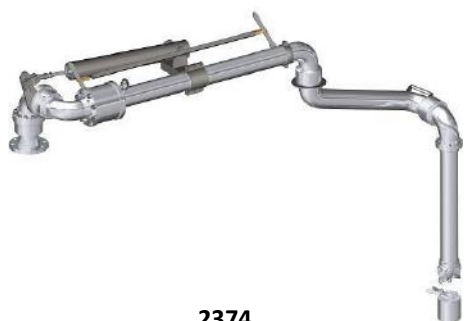
- Safety breakaway coupling OMC 4222 Mod.
- Dry-disconnect coupling C-3659-CV Model with integrated check valve instead C-3659 API coupler
- Proximity switch to signal coupler connected
- Locking device arm in parking position
- (*) Suitable for BIO-Products
- NDT test (RT-PT-MT) available on request





Loading arms for chemicals

Top loading arms



2374
Pg 15



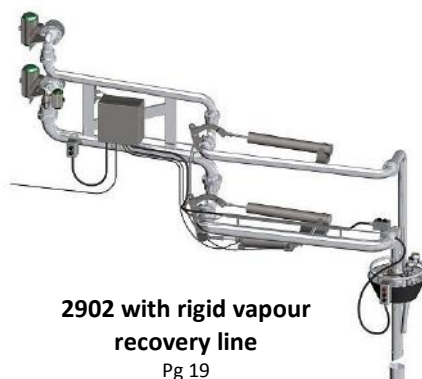
2385
Pg 16



2385-LR
Pg 17



**2903 with flexible
vapour recovery line**
Pg 18



**2902 with rigid vapour
recovery line**
Pg 19



2503-BC
Pg 20

Bottom loading arms



2504-BC
Pg 21



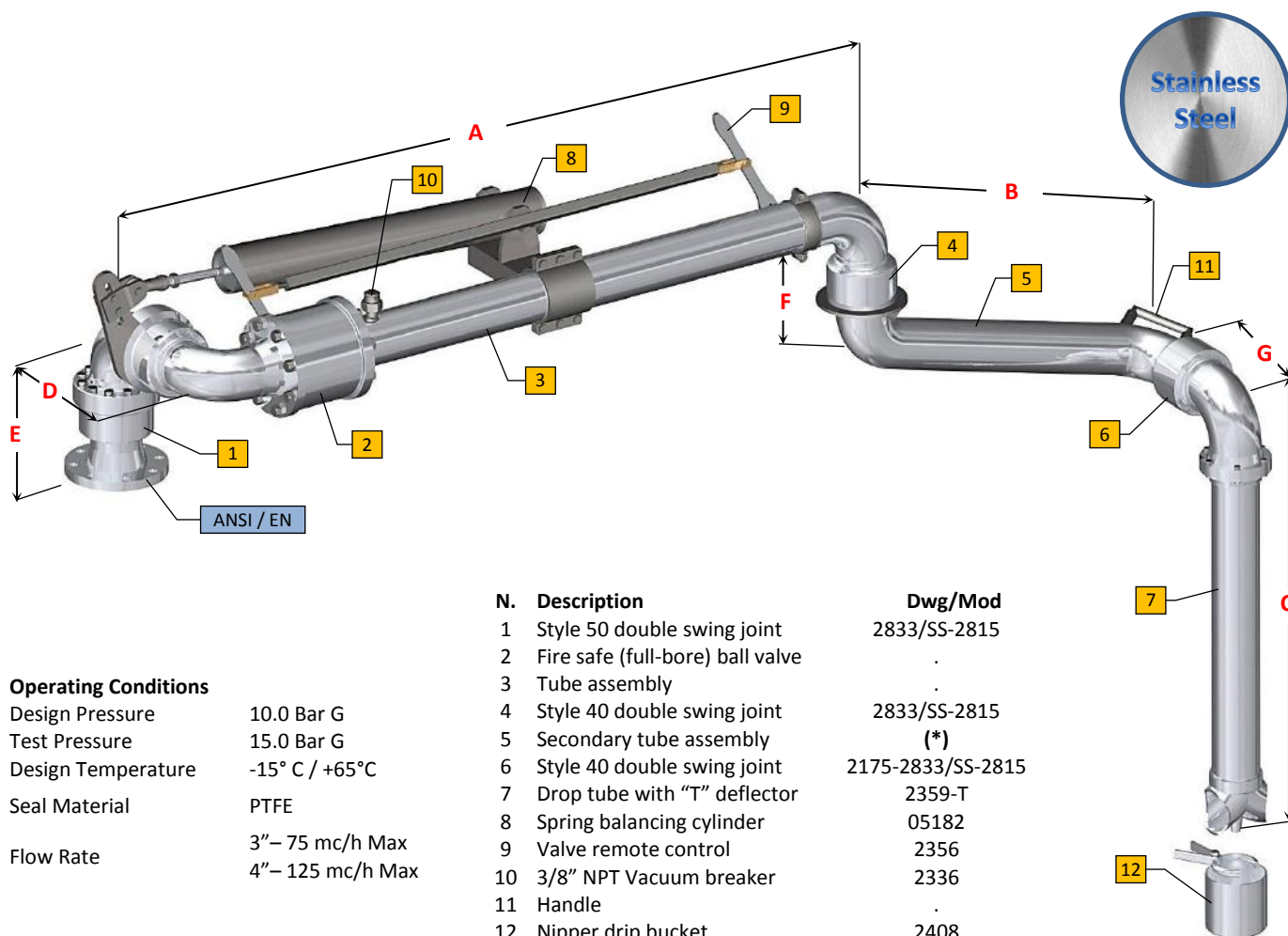
2455-BC
Pg 22



2475
Pg 23

Variable range top loading arm

2374



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
Flow Rate	3"– 75 mc/h Max 4"– 125 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	2100	2100
B	600	600
C	1600	1600
D	347	424
E	302	348
F	279	343
G	279	343
Weight	100	125

Notes

- Earthing continuity along the arm, according to ATEX directive
- (*) Horizontal or 10° sloped construction, for improve the drainage of the product from the tube.
- 2833/SS swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Options

- Pos.7 with flute beak end (2359-BF)
- Microswitch to signal valve opened/closed
- Overfill level sensor installed on positional spider
- Locking device arm turned in parking position
- NDT test (RT-PT-MT) available on request

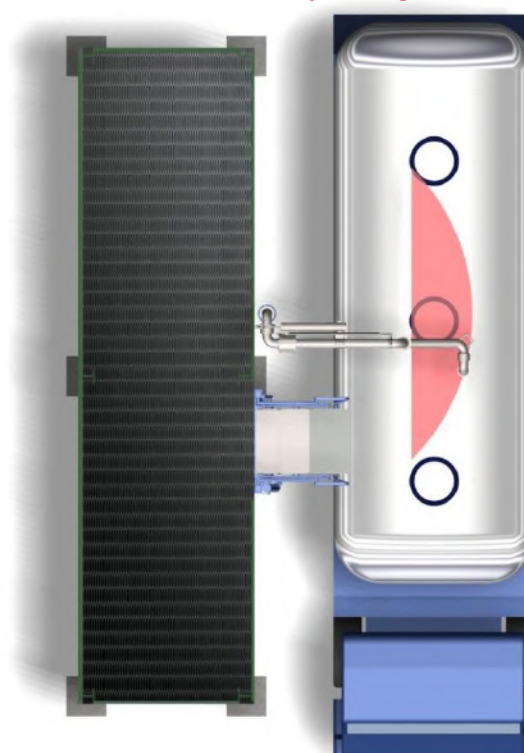
N. Description

- 1 Style 50 double swing joint
- 2 Fire safe (full-bore) ball valve
- 3 Tube assembly
- 4 Style 40 double swing joint
- 5 Secondary tube assembly
- 6 Style 40 double swing joint
- 7 Drop tube with "T" deflector
- 8 Spring balancing cylinder
- 9 Valve remote control
- 10 3/8" NPT Vacuum breaker
- 11 Handle
- 12 Nipper drip bucket

Dwg/Mod

2833/SS-2815
.
.
2833/SS-2815
(*)
2175-2833/SS-2815
2359-T
05182
2356
2336
.
2408

Demonstration of operating area

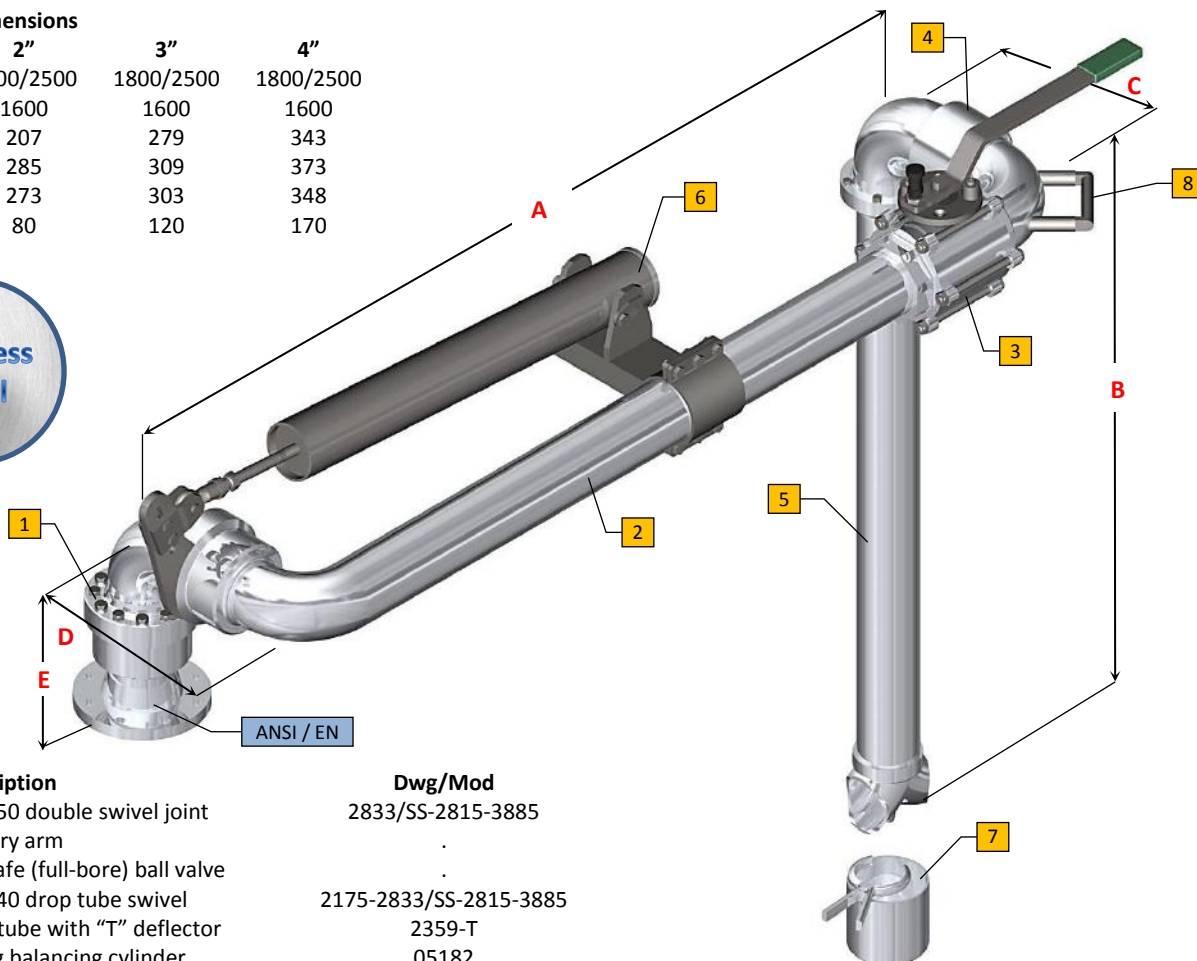




Fixed range top loading arm 2385

Standard Dimensions

Dn.	2"	3"	4"
A	1800/2500	1800/2500	1800/2500
B	1600	1600	1600
C	207	279	343
D	285	309	373
E	273	303	348
Weight	80	120	170



N.	Description	Dwg/Mod
1	Style 50 double swivel joint	2833/SS-2815-3885
2	Primary arm	.
3	Fire safe (full-bore) ball valve	.
4	Style 40 drop tube swivel	2175-2833/SS-2815-3885
5	Drop tube with "T" deflector	2359-T
6	Spring balancing cylinder	05182
7	Nipper drip bucket	2408
8	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
Flow Rate	2"– 35 mc/h Max 3"– 75 mc/h Max 4"– 125 mc/h Max

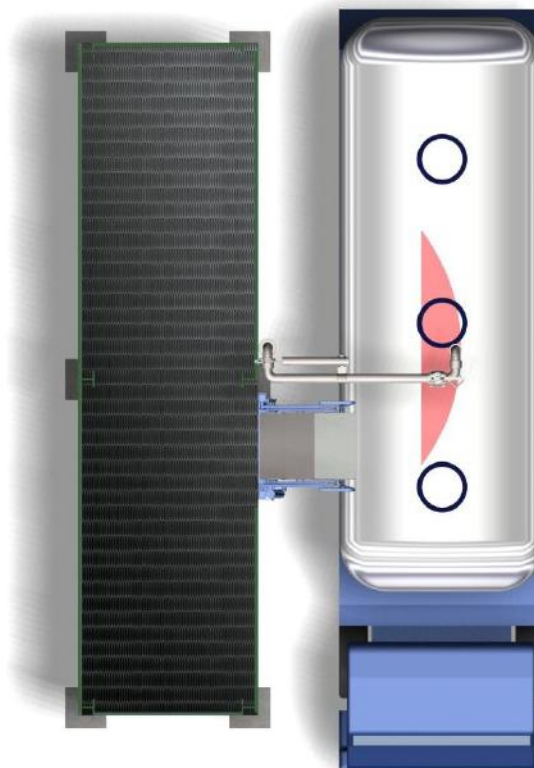
Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Options

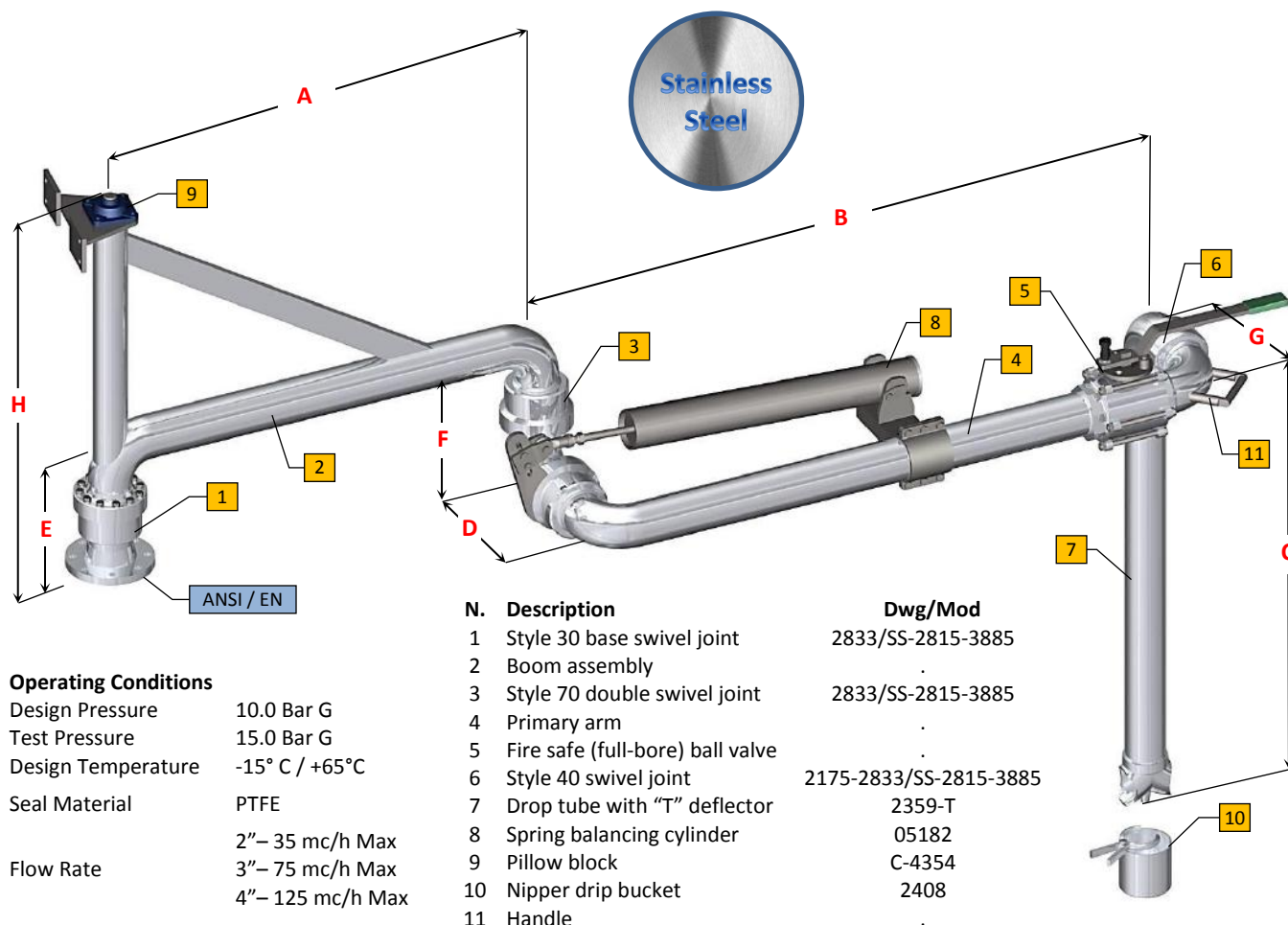
- Pos.5 with flute beak end (2359-BF)
- Microswitch to signal valve opened/closed
- Ball valve installed at the beginning of the primary arm, with remote control and vacuum breaker
- Overfill level sensor installed on positional spider
- Locking device arm turned in parking position
- NDT test (RT-PT-MT) available on request

Demonstration of operating area

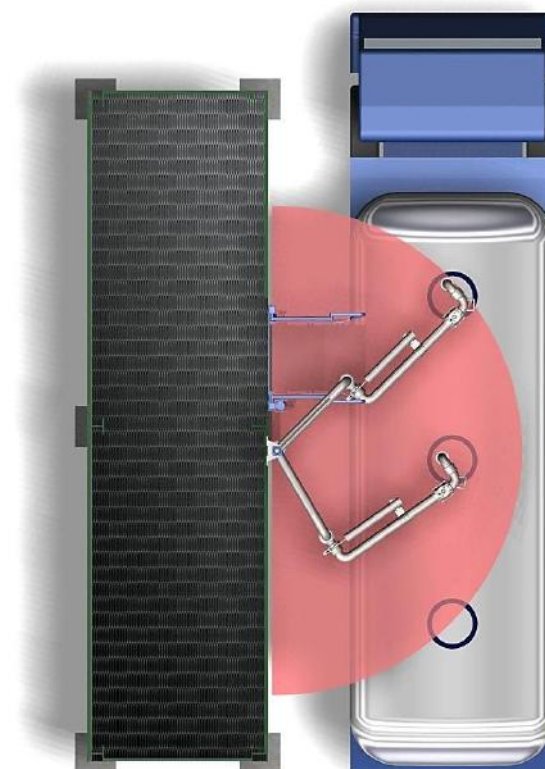


Long range top loading arm

2385-LR

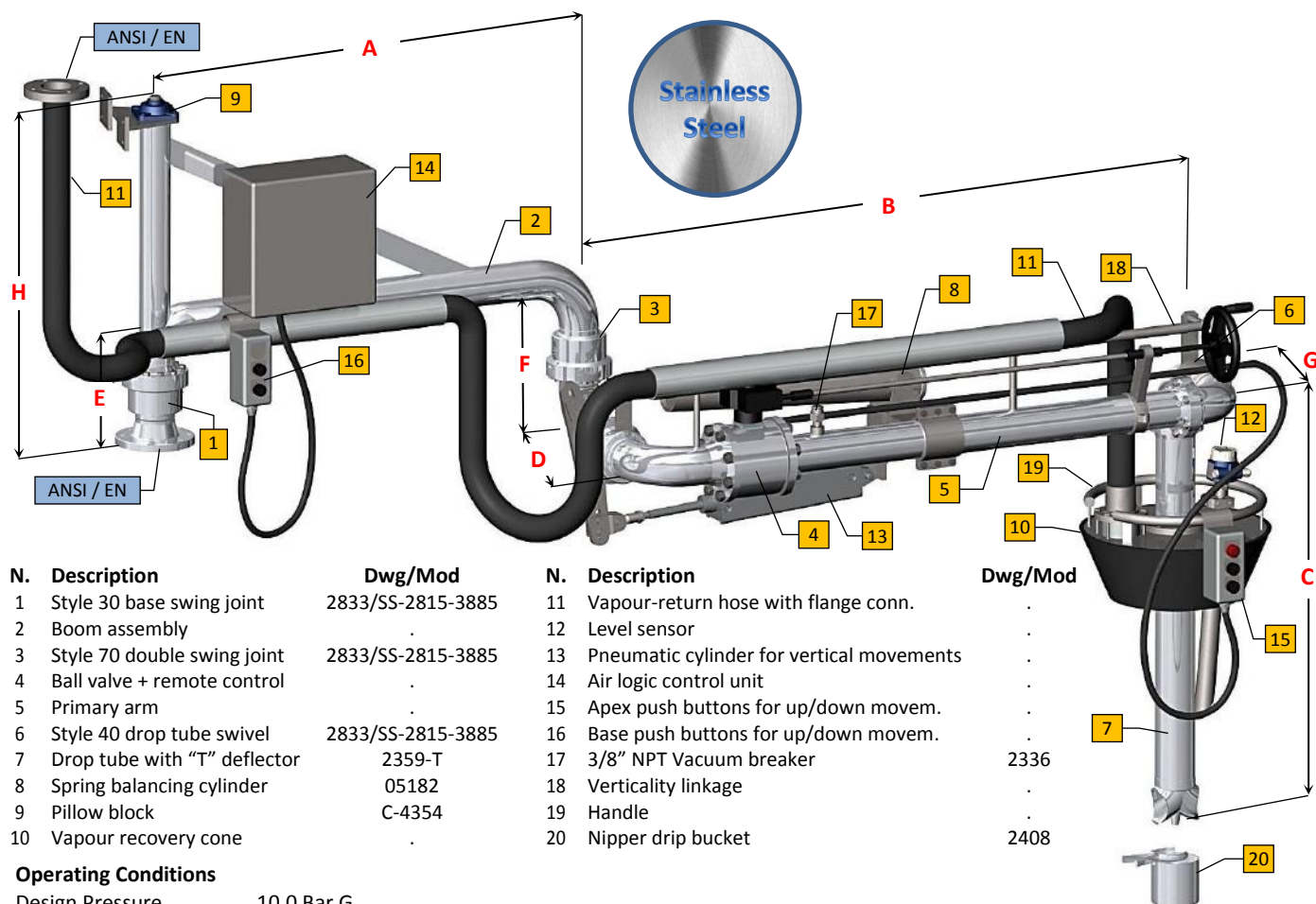


Demonstration of operating area





Long range top loading arm with vapour recovery system 2903



N.	Description	Dwg/Mod
1	Style 30 base swing joint	2833/SS-2815-3885
2	Boom assembly	.
3	Style 70 double swing joint	2833/SS-2815-3885
4	Ball valve + remote control	.
5	Primary arm	.
6	Style 40 drop tube swivel	2833/SS-2815-3885
7	Drop tube with "T" deflector	2359-T
8	Spring balancing cylinder	05182
9	Pillow block	C-4354
10	Vapour recovery cone	.

N.	Description	Dwg/Mod
11	Vapour-return hose with flange conn.	.
12	Level sensor	.
13	Pneumatic cylinder for vertical movements	.
14	Air logic control unit	.
15	Apex push buttons for up/down movem.	.
16	Base push buttons for up/down movem.	.
17	3/8" NPT Vacuum breaker	2336
18	Verticality linkage	.
19	Handle	.
20	Nipper drip bucket	2408

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
Flow Rate	3"-75 mc/h Max
	4"-125 mc/h Max

Standard Dimensions

Dn.	3"	4"
A	1200/1600	1200/1600
B	1600/2000	1600/2000
C	1600	1600
D	385	475
E	302	348
F	372	424
G	360	373
H	1000	1000
Weight	230	300

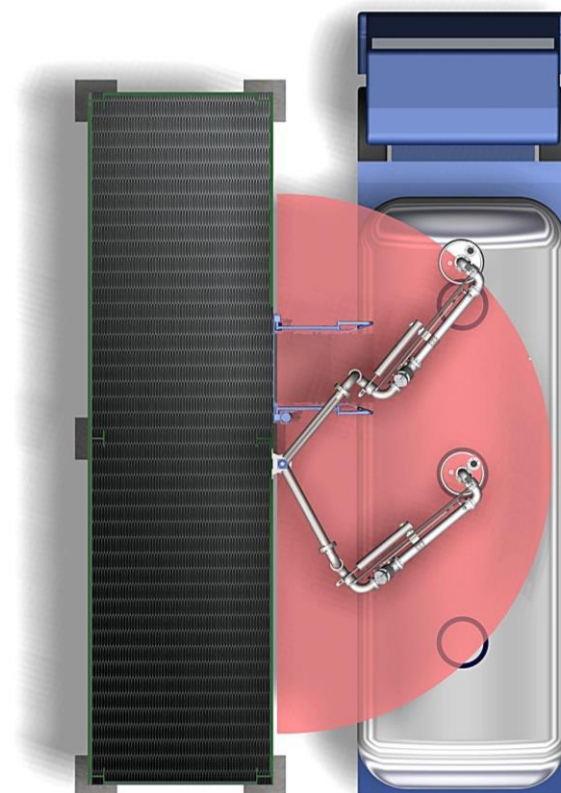
Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total execution
- 3885 swivels AISI 316-L total execution
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

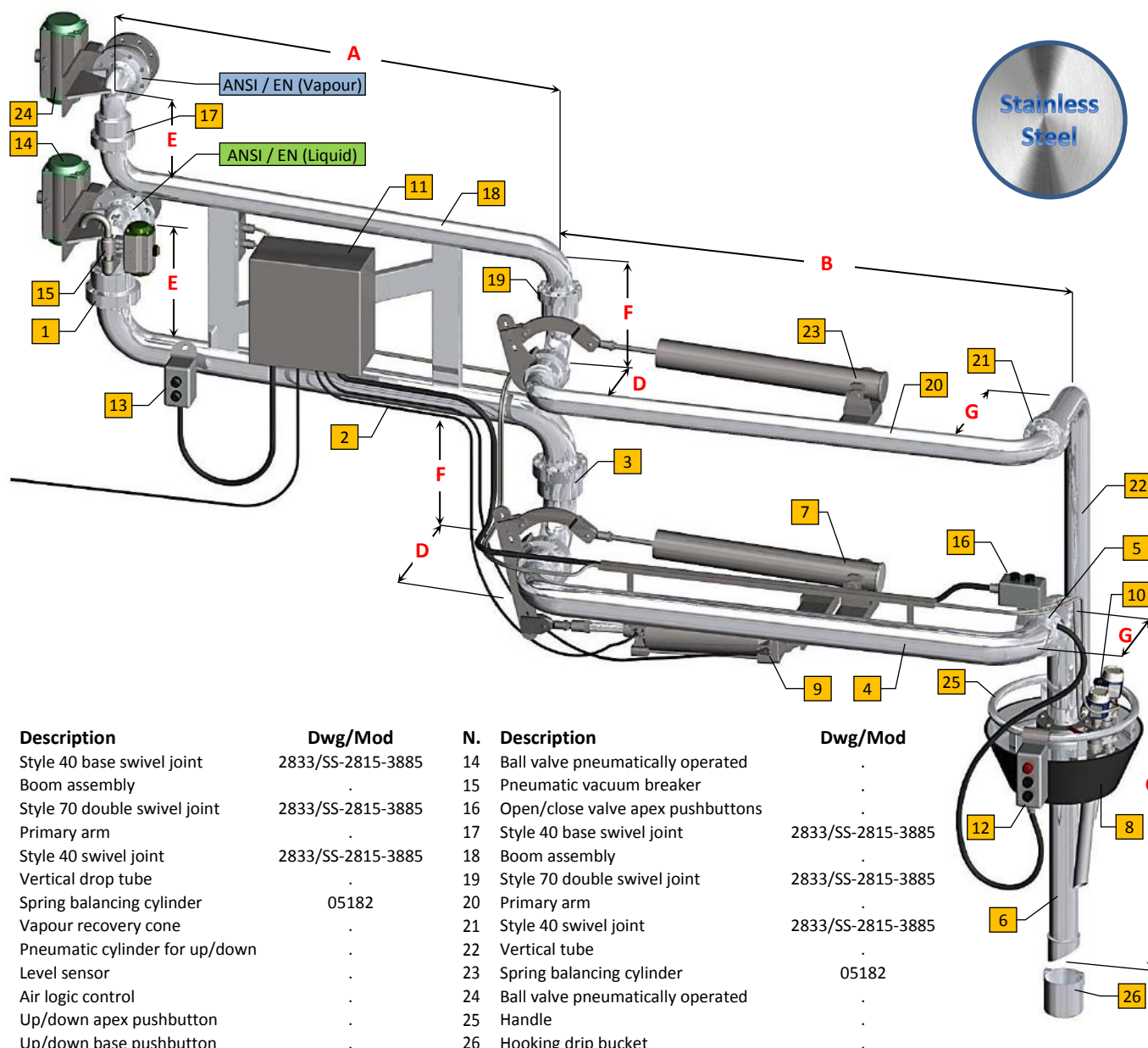
Options

- Pos.7 with flute beak end (2359-BF)
- Microswitch to signal valve opened/closed
- Locking device arm in parking position
- Liquid/Vapour/vacuum breaker valves pneumatically controlled
- Electronic level sensor instead pneumatic type
- Double level sensor (pneumatic or electronic)
- Flange bracket
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Long range top loading arm with rigid vapour return line 2902



N.	Description	Dwg/Mod
1	Style 40 base swivel joint	2833/SS-2815-3885
2	Boom assembly	.
3	Style 70 double swivel joint	2833/SS-2815-3885
4	Primary arm	.
5	Style 40 swivel joint	2833/SS-2815-3885
6	Vertical drop tube	.
7	Spring balancing cylinder	05182
8	Vapour recovery cone	.
9	Pneumatic cylinder for up/down	.
10	Level sensor	.
11	Air logic control	.
12	Up/down apex pushbutton	.
13	Up/down base pushbutton	.

N.	Description	Dwg/Mod
14	Ball valve pneumatically operated	.
15	Pneumatic vacuum breaker	.
16	Open/close valve apex pushbuttons	.
17	Style 40 base swivel joint	2833/SS-2815-3885
18	Boom assembly	.
19	Style 70 double swivel joint	2833/SS-2815-3885
20	Primary arm	.
21	Style 40 swivel joint	2833/SS-2815-3885
22	Vertical tube	.
23	Spring balancing cylinder	05182
24	Ball valve pneumatically operated	.
25	Handle	.
26	Hooking drip bucket	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temp.	-15° C / +65° C
Seal Material	PTFE
Flow Rate	3"- 75 mc/h Max 4"- 125 mc/h Max

Options

- Locking device arm in parking position
- Standpost C-4928-A Model
- Double level sensors
- Electronic level sensor instead pneumatic type
- NDT test (RT-PT-MT) available on request

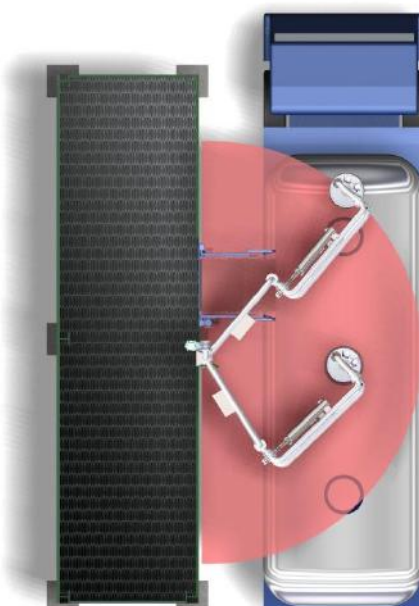
Standard Dimensions

Dn.	3"x2"		4"x3"	
Phase	L	V	L	V
A	1400	1400	1400	1400
B	1600	1600	1600	1600
C	1600	.	1600	.
D	309	285	373	309
E	303	273	348	303
F	309	285	373	309
G	309	460	373	309
Weight	270		350	

Notes

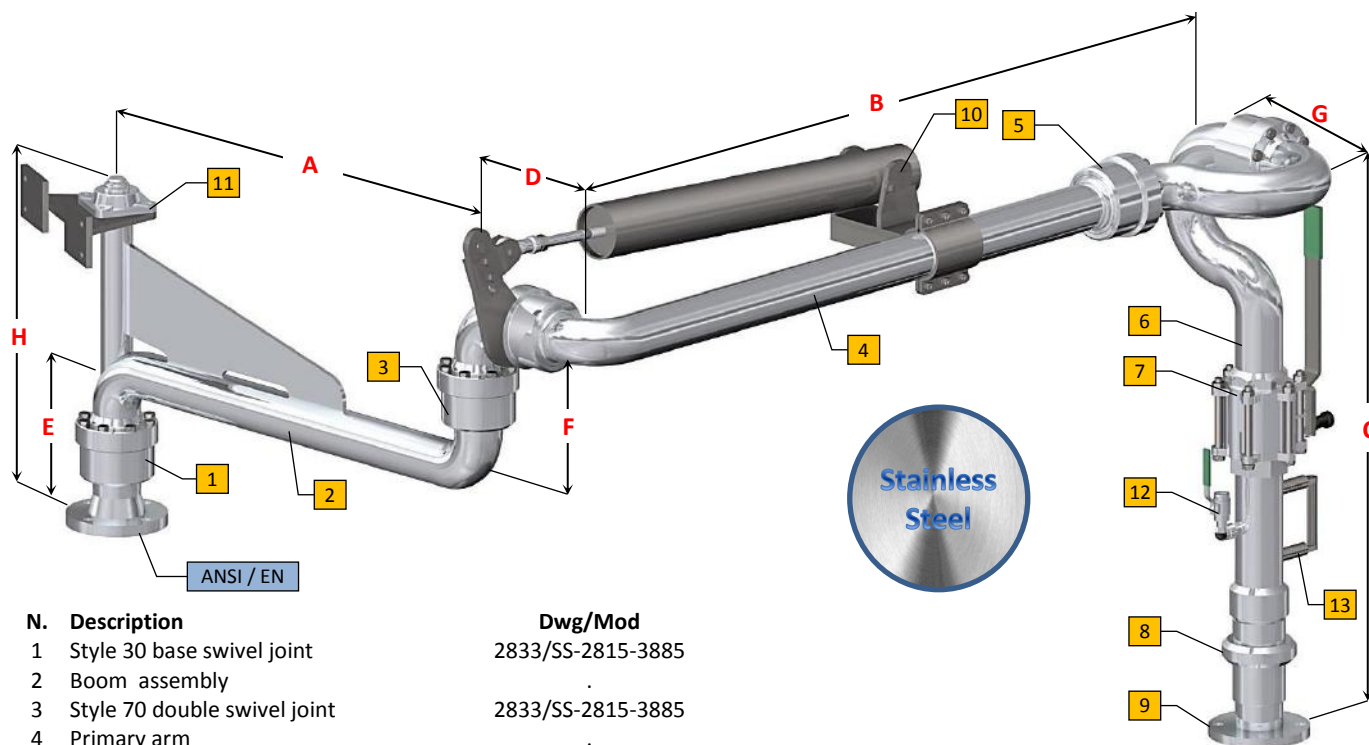
- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Demonstration of operating area





Double range top loading/unloading arm 2503-BC



N. Description

	Dwg/Mod
1 Style 30 base swivel joint	2833/SS-2815-3885
2 Boom assembly	.
3 Style 70 double swivel joint	2833/SS-2815-3885
4 Primary arm	.
5 Style 70 double swivel joint	2833/SS-2815-3885
6 Vertical tube	.
7 Manual ball valve with locking device	.
8 Safety breakaway coupling	.
9 ANSI/DIN loose flange	.
10 Spring balancing cylinder	05182
11 Pillow block	C-4354
12 Nitrogen purge valve	.
13 Handle	.

Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Operating Conditions

Design Pressure	10.0 Bar G
	-1.0 Bar G (unl. by suction)
Test Pressure	15.0 Bar G
	-1.0 Bar G (unl. by suction)
Design Temperature	-15° C / +65° C
Seal Material	PTFE

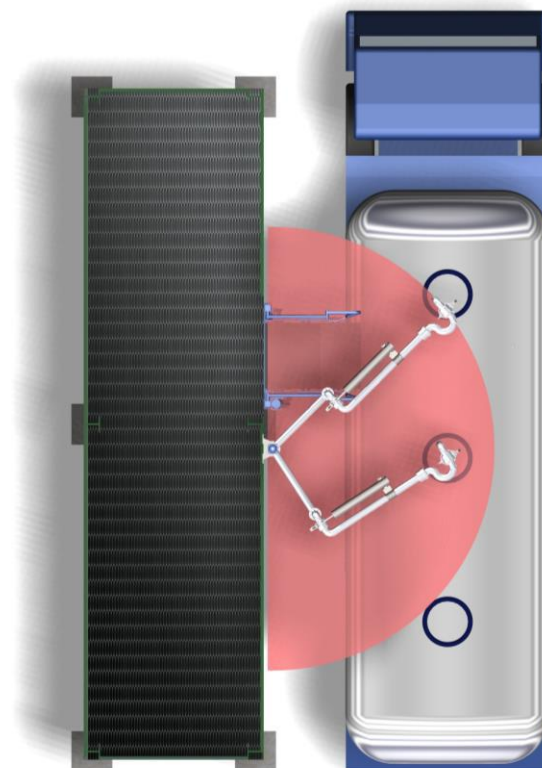
Standard Dimensions

Dn.	2"x2"	3"x3"	4"x4"
A	1500	1500	1500
B	1800	1800	1800
C	1200	1200	1200
D	285	309	373
E	273	303	348
F	310	347	424
G	336	385	475
H	600	650	700
Weight	110	150	220

Options

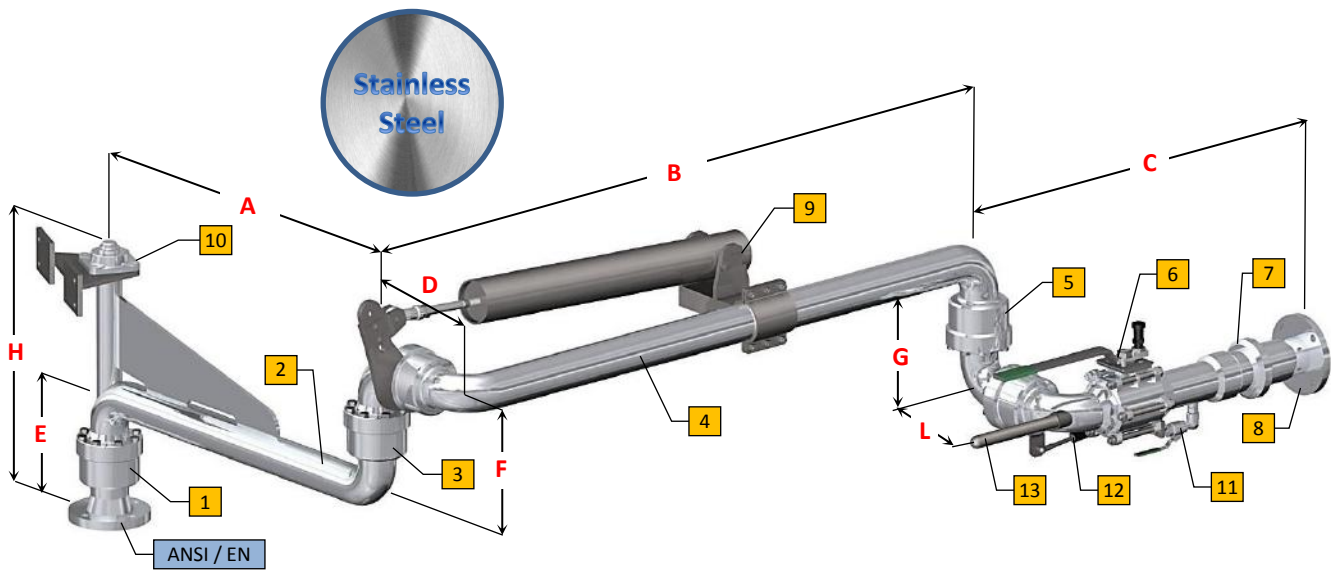
- Drain valve + flanged flexible hose
- Locking device arm in parking position + proximity
- Dry-disconnect coupling or quick coupling
- Flange bracket
- Standpost C-4928-B Model
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Triple range bottom loading arm

2504-BC



N. Description

- | | |
|----|--|
| 1 | Style 30 base swivel joint |
| 2 | Boom assembly |
| 3 | Style 70 double swivel joint |
| 4 | Primary arm |
| 5 | Style 70 double swivel joint |
| 6 | Manual ball valve with locking device |
| 7 | Safety breakaway coupling |
| 8 | ANSI/EN loose flange |
| 9 | Spring balancing cylinder |
| 10 | Pillow block |
| 11 | ½" drain valve + hose + ANSI/EN flange |
| 12 | Gas spring balancer |
| 13 | Handle |

Dwg/Mod

- | |
|-------------------|
| 2833/SS-2815-3885 |
| . |
| 2833/SS-2815-3885 |
| . |
| 2833/SS-2815-3885 |
| . |
| . |
| 05182 |
| C-4354 |
| . |
| . |
| . |

Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
	2"– 35 mc/h Max
Flow Rate	3"– 75 mc/h Max
	4"– 125 mc/h Max

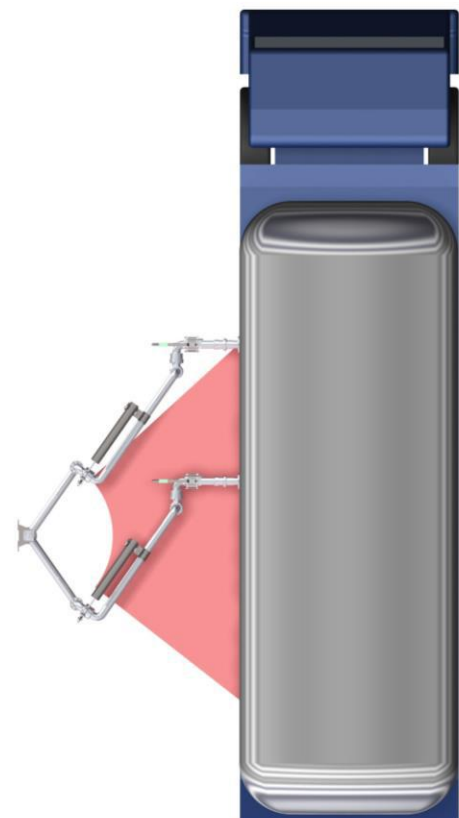
Standard Dimensions

Dn.	2"x2"	3"x3"	4"x4"
A	1500	1500	1500
B	1800	1800	1800
C	600	750	800
D	285	309	373
E	273	303	348
F	285	309	373
G	285	309	373
H	600	650	700
L	285	309	373
Weight	120	160	230

Options

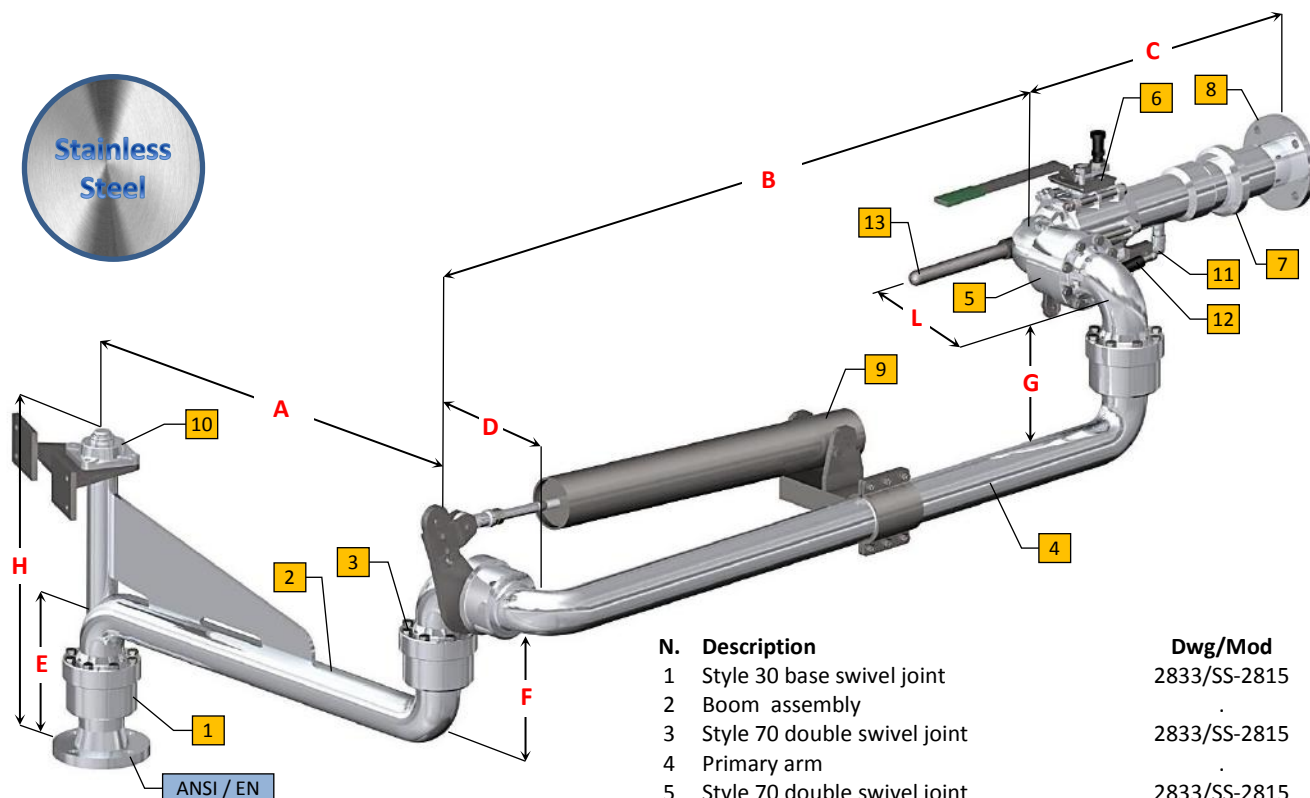
- Locking device arm in parking position
- Dry-disconnect coupling or quick coupling
- Flange bracket
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Triple range bottom unloading arm 2455-BC



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE

Standard Dimensions

Dn.	2"x2"	3"x3"	4"x4"
A	1500	1500	1500
B	1800	1800	1800
C	600	750	800
D	285	309	373
E	273	303	348
F	285	309	373
G	285	309	373
H	600	650	700
L	285	309	373
Weight	120	160	230

Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Options

- Final arm nitrogen purge valve
- Locking device arm in parking position
- Dry-disconnect coupling or quick coupling
- Flange bracket
- NDT test (RT-PT-MT) available on request

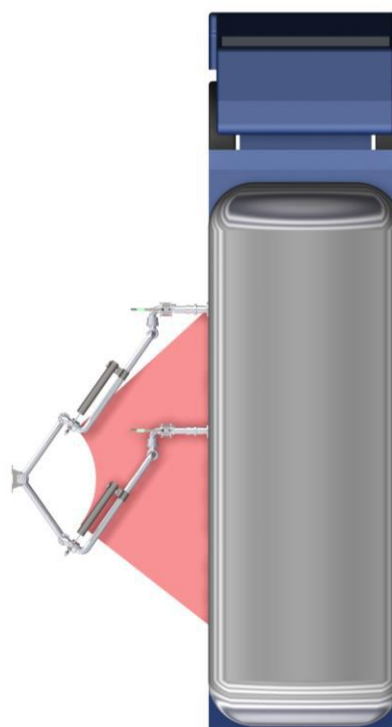
N. Description

- 1 Style 30 base swivel joint
- 2 Boom assembly
- 3 Style 70 double swivel joint
- 4 Primary arm
- 5 Style 70 double swivel joint
- 6 Manual ball valve with locking device
- 7 Safety breakaway coupling
- 8 ANSI/EN loose flange
- 9 Spring balancing cylinder
- 10 Pillow block
- 11 ½" drain valve + hose + ANSI/EN flange
- 12 Gas spring balancer
- 13 Handle

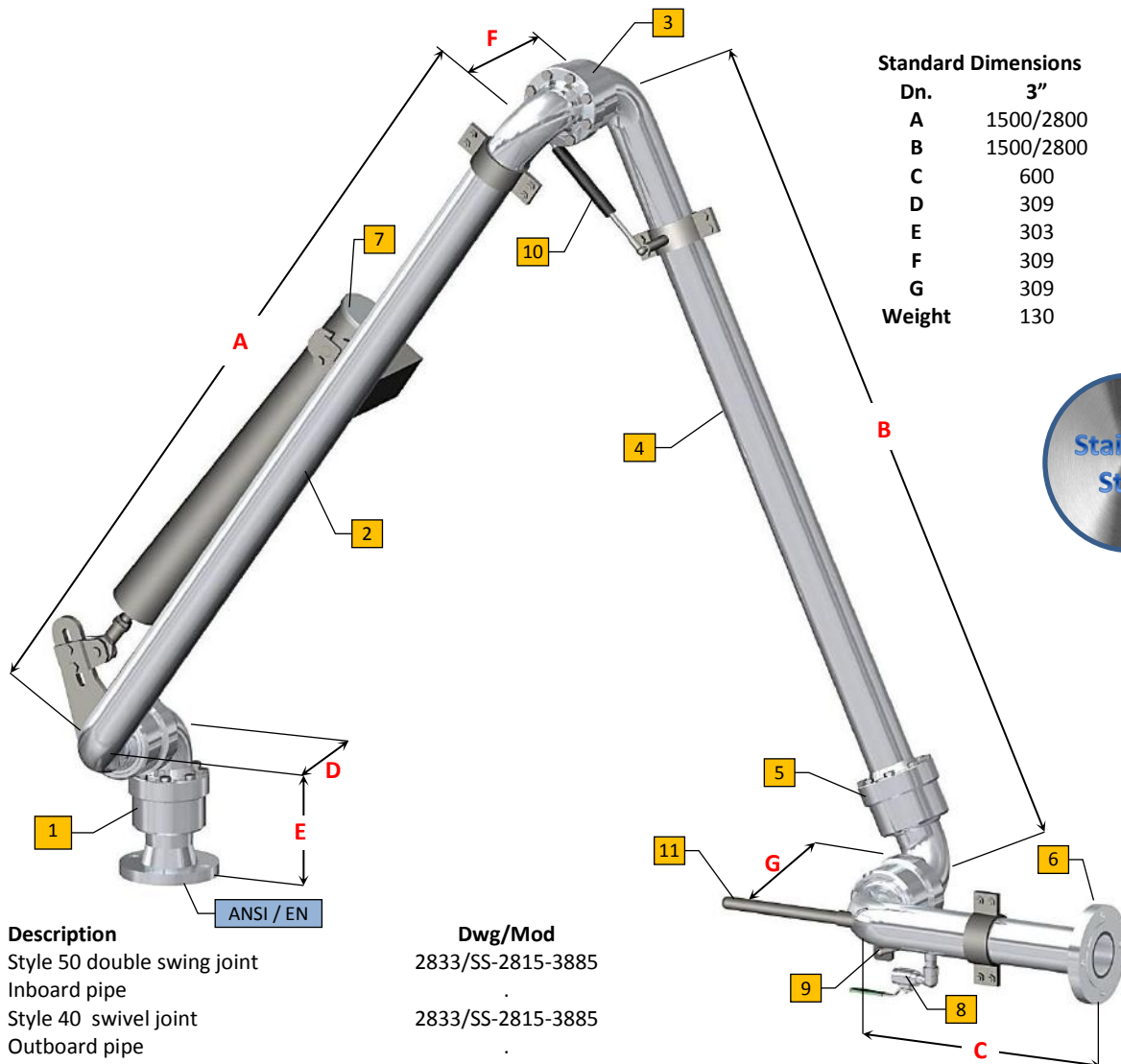
Dwg/Mod

- | |
|--------------|
| 2833/SS-2815 |
| . |
| 2833/SS-2815 |
| . |
| 2833/SS-2815 |
| . |
| . |
| 05182 |
| C-4354 |
| . |
| . |
| . |

Demonstration of operating area



“A frame” triple range bottom loading arm 2475



Standard Dimensions

Dn.	3"	4"
A	1500/2800	1500/2800
B	1500/2800	1500/2800
C	600	600
D	309	373
E	303	348
F	309	373
G	309	373
Weight	130	160

Stainless
Steel

N. Description

- 1 Style 50 double swing joint
- 2 Inboard pipe
- 3 Style 40 swivel joint
- 4 Outboard pipe
- 5 Style 50 double swing joint
- 6 Loose flange
- 7 Spring balancing cylinder
- 8 ½" drain valve + hose + ANSI/EN flange
- 9 Gas spring balancer
- 10 Gas spring balancer
- 11 Handle

Dwg/Mod

- 2833/SS-2815-3885
- .
- 2833/SS-2815-3885
- .
- 2833/SS-2815-3885
- .
- 05182
- .
- .
- .
- .

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
Flow Rate	3" – 75 mc/h Max 4" – 125 mc/h Max

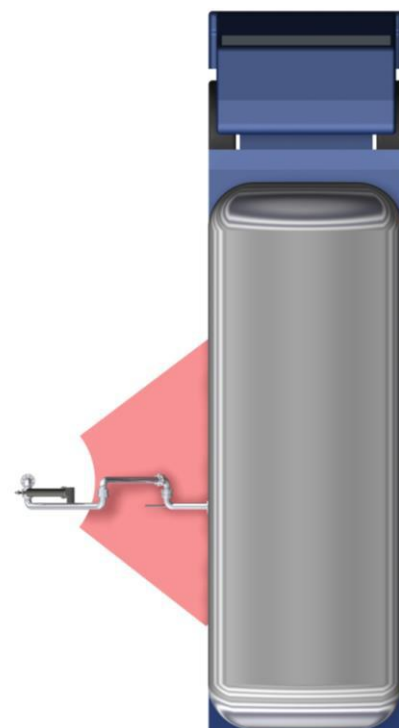
Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Options

- Locking device arm in parking position
- Dry-disconnect coupling or quick coupling
- Flange bracket
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Loading arms for LPG

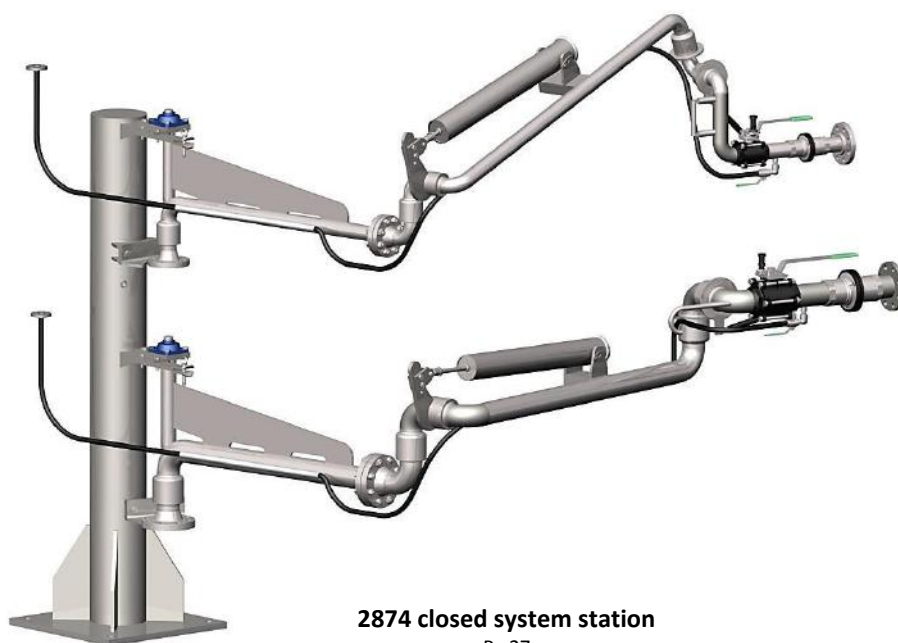
Bottom loading arms



2503-BC
Pg 25



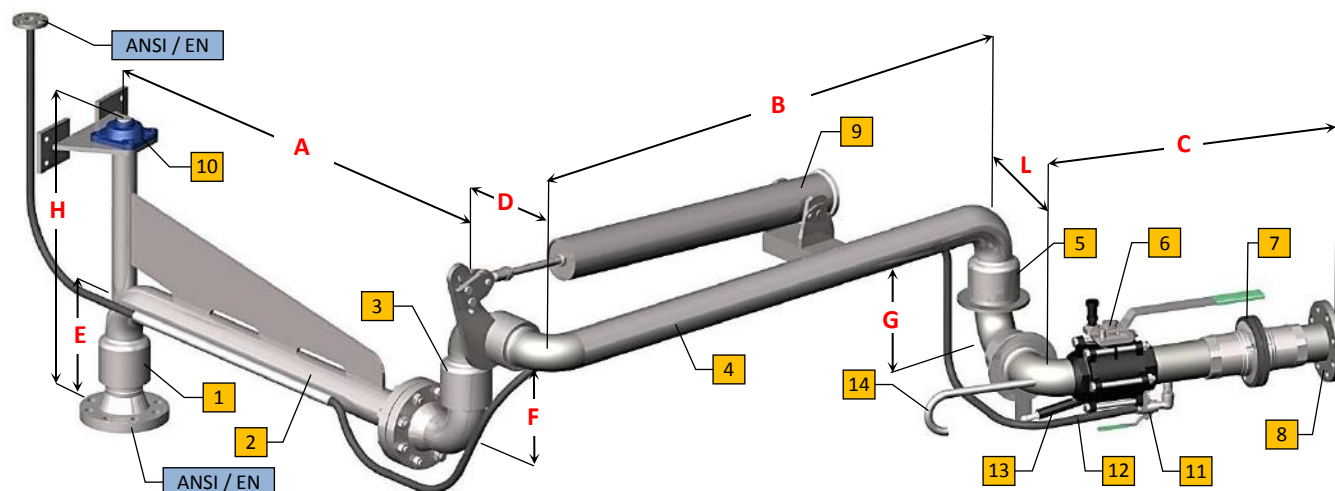
2503-BC loading station
Pg 26



2874 closed system station
Pg 27

Triple range LPG bottom loading arm

2503-BC



N. Description

1	Style 30 base swivel joint	2174
2	Boom assembly	.
3	Style 70 double swivel joint	2174
4	Primary arm	.
5	Style 70 double swivel joint	2174
6	Manual ball valve with locking device	.
7	Safety breakaway coupling	.
8	ANSI/EN loose flange	.
9	Spring balancing cylinder	05182
10	Pillow block	C-4354
11	½" drain valve	.
12	Drain hose + ANSI/EN connecting flange	(*)
13	Gas spring balancer	.
14	Handle	.

Operating Conditions

Design Pressure	40.0 Bar G (till ball valve)
Test Pressure	60.0 Bar G (till ball valve)
Design Temperature	-40°C / +65°C
Seal Material	Swivels: BUNA N Valve: PTFE
Flow Rate	4.5 m/s

Standard Dimensions

Dn.	2"x1.1/2"	2"x2"	3"x2"	3"x3"
A	1500	1500	1500	1500
B	1800	1800	1800	1800
C	600	650	650	750
D	221	221	221	296
E	218	218	278	278
F	221	221	221	296
G	233	221	221	296
H	600	600	650	650
L	233	221	221	296
Weight	100	110	120	150

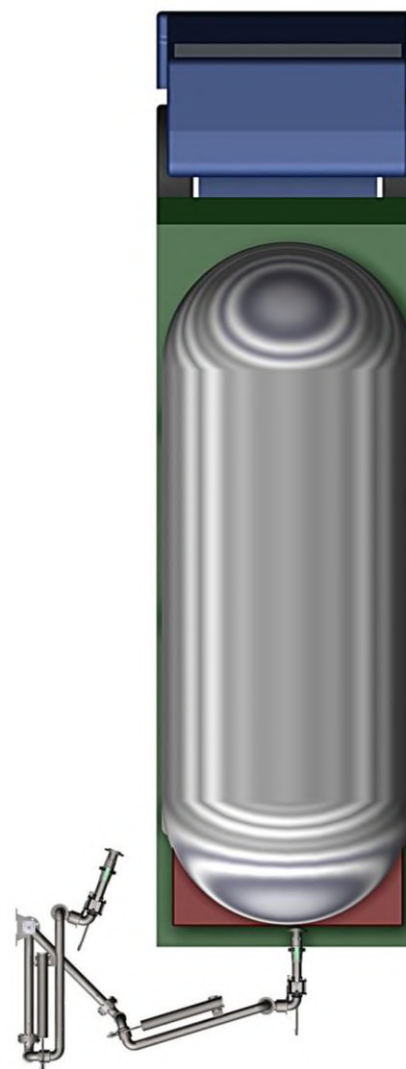
Options

- Flange bracket
- Locking device in parking position
- WECO or CUNA connector (pos.8)
- Dry-disconnect coupling (pos.8)
- Drain valve (pos.11) with "dead-man" function
- NDT test (RT-PT-MT) available on request

Notes

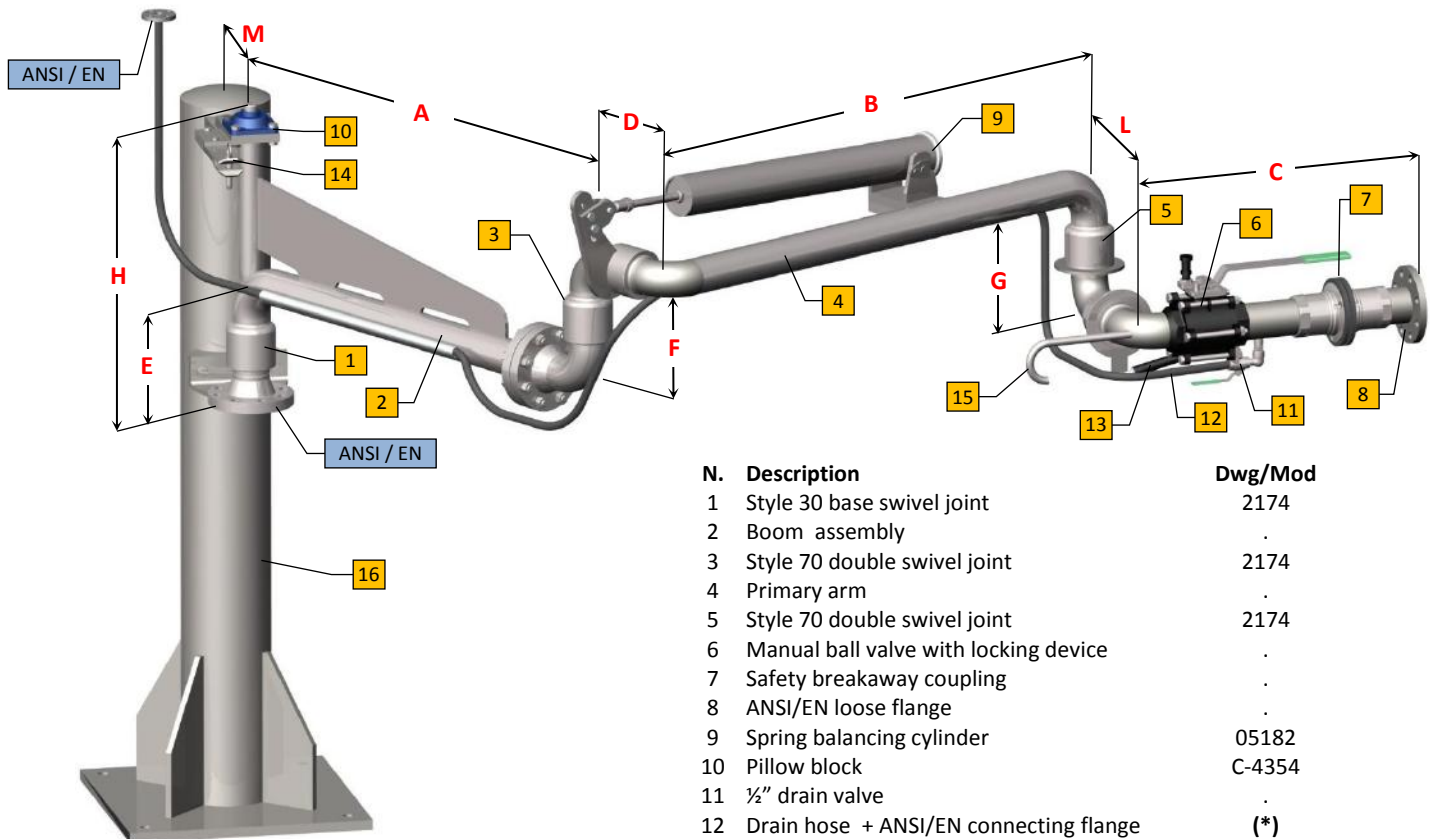
- Earthing continuity along the arm, according to ATEX directive
- (*)Flexible hose equipped with protective tube along all the straight parts of the arm

Demonstration of operating area





Triple range LPG bottom loading station 2503-BC



N.	Description	Dwg/Mod
1	Style 30 base swivel joint	2174
2	Boom assembly	.
3	Style 70 double swivel joint	2174
4	Primary arm	.
5	Style 70 double swivel joint	2174
6	Manual ball valve with locking device	.
7	Safety breakaway coupling	.
8	ANSI/EN loose flange	.
9	Spring balancing cylinder	05182
10	Pillow block	C-4354
11	½" drain valve	.
12	Drain hose + ANSI/EN connecting flange	(*)
13	Gas spring balancer	.
14	Locking device arm in parking position	.
15	Handle	.
16	Standpost	C-4928-B

Operating Conditions

Design Pressure	40.0 Bar G (till ball valve)
Test Pressure	60.0 Bar G (till ball valve)
Design Temperature	-40°C / +65°C
Seal Material	Swivels: BUNA N Valve: PTFE
Flow Rate	4.5 m/s

Standard Dimensions

Dn.	2"x1.1/2"	2"x2"	3"x2"	3"x3"
A	1500	1500	1500	1500
B	1800	1800	1800	1800
C	600	650	650	750
D	221	221	221	296
E	218	218	278	278
F	221	221	221	296
G	233	221	221	296
H	600	600	650	650
L	233	221	221	296
M	300	300	300	300
Weight	100	110	120	150

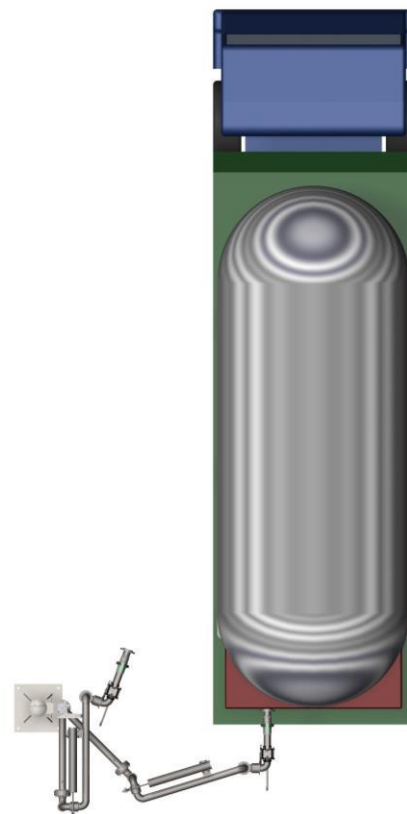
Notes

- Earthing continuity along the arm, according to ATEX directive
- (*)Flexible hose equipped with protective tube along all the straight parts of the arm

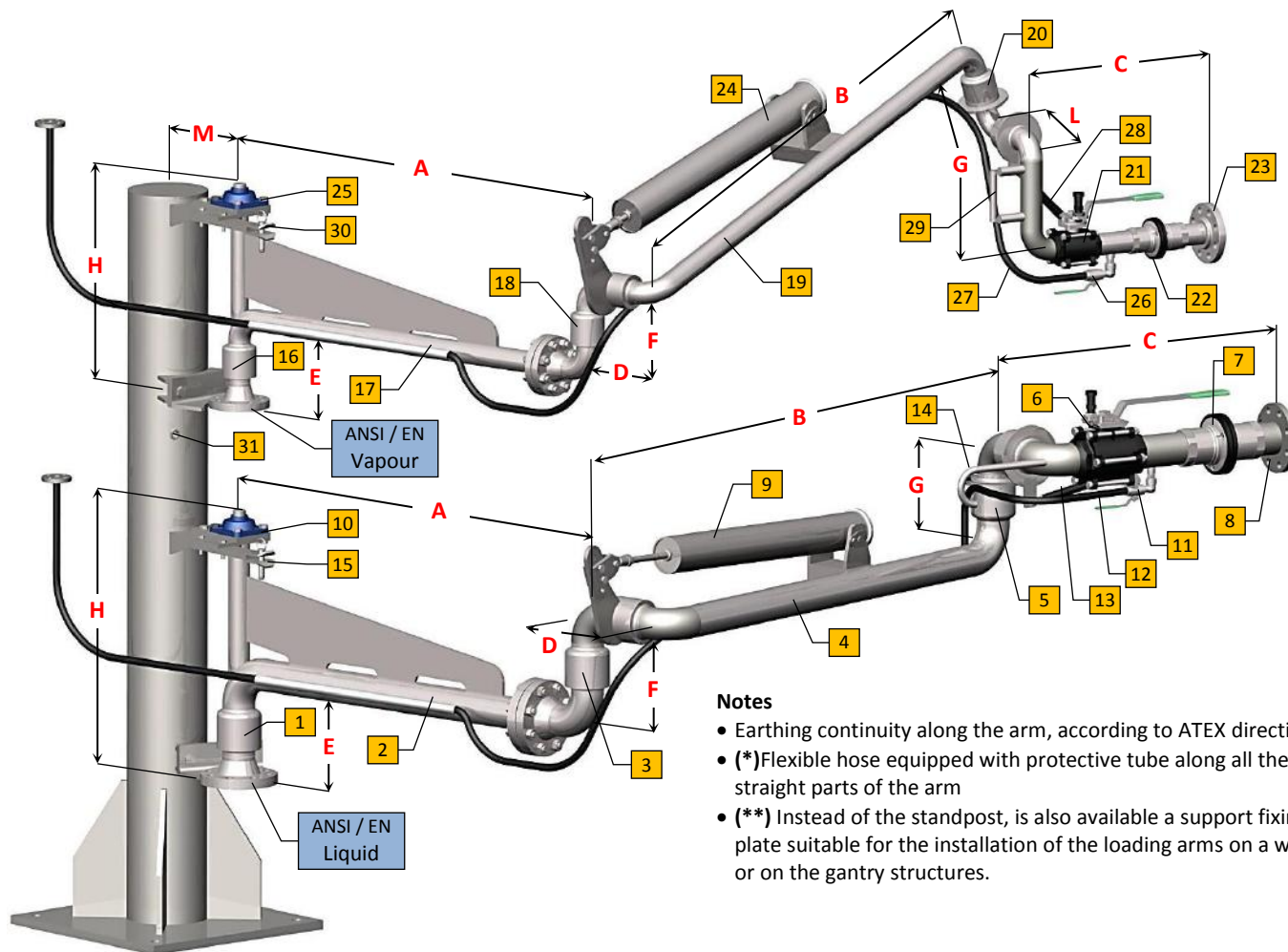
Options

- WECO or CUNA connector (pos.8)
- Dry-disconnect coupling (pos.8)
- Drain valve (pos.11) with "dead-man" function
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Triple range LPG closed system bottom loading station 2874



Notes

- Earthing continuity along the arm, according to ATEX directive
- (*) Flexible hose equipped with protective tube along all the straight parts of the arm
- (**) Instead of the standpost, is also available a support fixing plate suitable for the installation of the loading arms on a wall or on the gantry structures.

N	Description	Dwg/Mod
1	Style 30 base swivel joint	2174
2	Boom assembly	.
3	Style 70 double swivel joint	2174
4	Primary arm	.
5	Style 70 double swivel joint	2174
6	Ball valve with locking device	.
7	Safety breakaway coupling	.
8	ANSI 300/DIN PN 40 loose flange	.
9	Spring balancing cylinder	05182
10	Pillow block	.
11	½" drain valve	.
12	Drain hose with connecting flange	(*)
13	Gas spring balancer	.
14	Handle	.
15	Locking device arm in parking position	.

Operating Conditions

Design Pressure	40.0 Bar G (till ball valve)
Test Pressure	60.0 Bar G (till ball valve)
Design Temperature	-40°C / +65°C
Seal Material	Swivels: BUNA N Valve: PTFE
Flow Rate	4.5 m/s

Dwg/Mod

Standard Dimensions

Dn.	2"x1.1/2"	3"x2"
A	1500	1500
B	1800	1800
C	480	750
D	221	221
E	218	278
F	221	221
G	460	221
H	600	650
L	233	221
M	300	300
Kg	100	120

N	Description	Dwg/Mod
16	Style 30 base swivel joint	2174
17	Boom assembly	.
18	Style 70 double swivel joint	2174
19	Primary arm	.
20	Style 70 double swivel joint	2174
21	Ball valve with locking device	.
22	Safety breakaway coupling	.
23	ANSI 300/DIN PN 40 loose flange	.
24	Spring balancing cylinder	05182
25	Pillow block	.
26	½" drain valve	.
27	Drain hose with connecting flange	(*)
28	Gas spring balancer	.
29	Handle	.
30	Locking device arm in parking position	.
31	Standpost	(**)

Options

- WECO or CUNA connector (pos.8/23)
- Dry-disconnect coupling (pos.8/23)
- Drain valve (pos.11/26) with "dead-man" function
- NDT test (RT-PT-MT) available on request



Loading arms for hot products

Electrical heating system



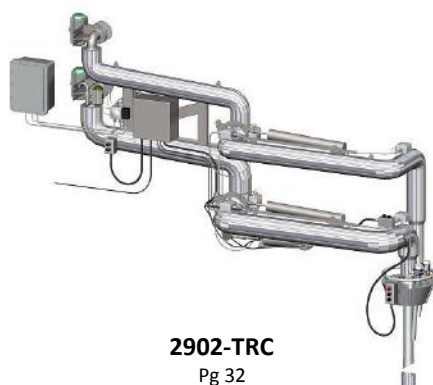
2570-TRC
Pg 29



2879-TRC
Pg 30



2879-TRC
Pg 31



2902-TRC
Pg 32



2454-BC-TRC
Pg 33

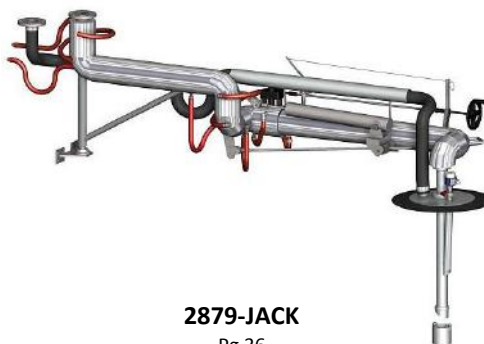


2454-TRC
Pg 34

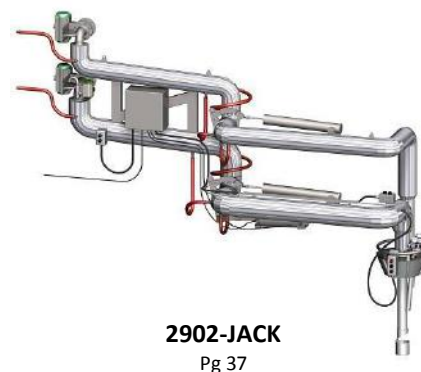
Steam heating system



2570-JACK
Pg 35



2879-JACK
Pg 36

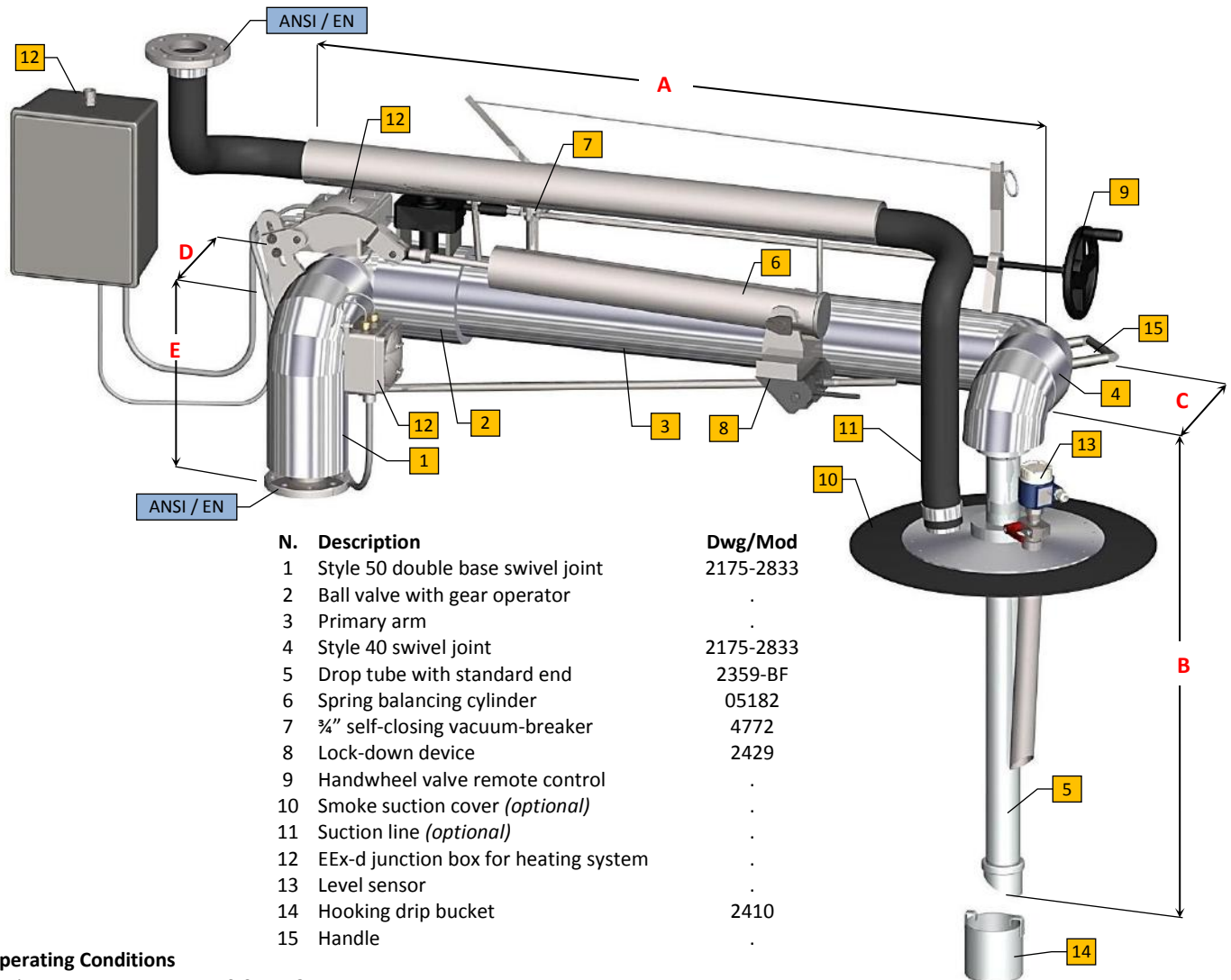


2902-JACK
Pg 37



2454-BC-JACK
Pg 38

Fixed range top loading arm electrically heated 2570-TRC



N.	Description	Dwg/Mod
1	Style 50 double base swivel joint	2175-2833
2	Ball valve with gear operator	.
3	Primary arm	.
4	Style 40 swivel joint	2175-2833
5	Drop tube with standard end	2359-BF
6	Spring balancing cylinder	05182
7	¾" self-closing vacuum-breaker	4772
8	Lock-down device	2429
9	Handwheel valve remote control	.
10	Smoke suction cover (optional)	.
11	Suction line (optional)	.
12	EEx-d junction box for heating system	.
13	Level sensor	.
14	Hooking drip bucket	2410
15	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE
Flow Rate	3"– 35 mc/h Max 4"– 60 mc/h Max 6"– 125 mc/h Max

Standard Dimensions

Dn.	3"	4"	6"
A	2000/3000	2000/3000	2000/3000
B	1200/1600	1200/1600	1200/1600
C	279	343	484
D	388	477	675
E	373	400	535
Weight	140	190	240

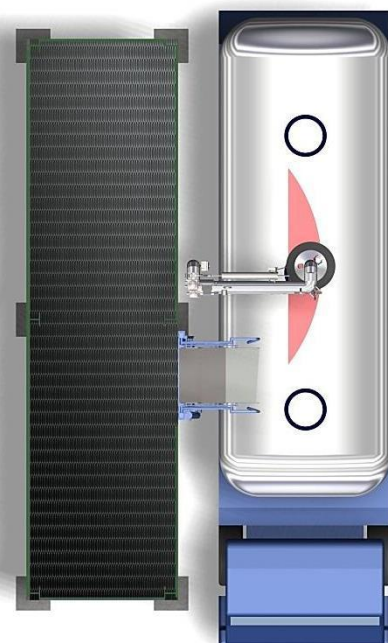
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

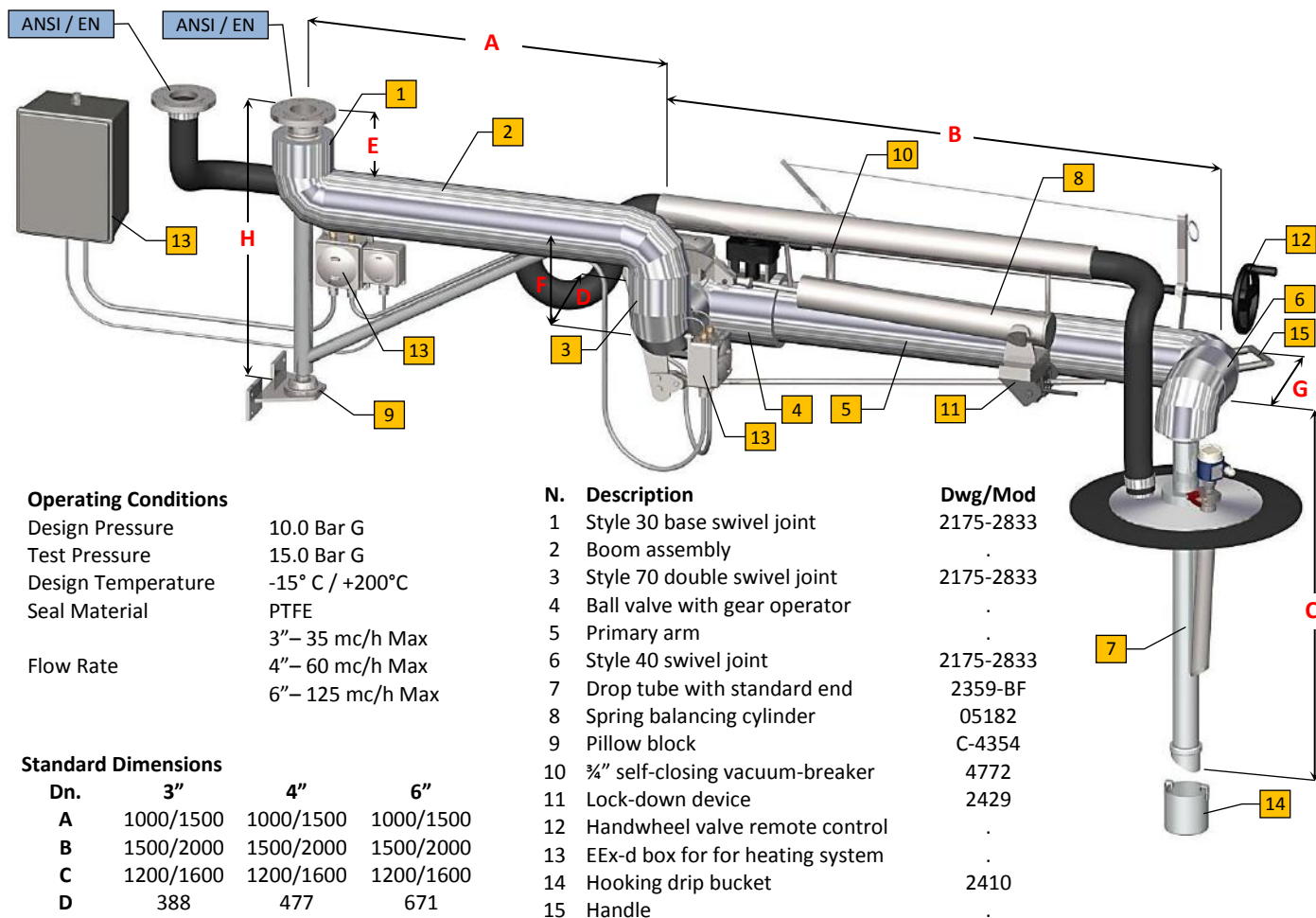
- Smoke suction system (with cover and flexible line flanged end)
- Level sensor (pneumatic or electronic) installed on cover or positional spider
- Pneumatic control for vertical movements
- Loading valve pneumatically operated
- Vacuum breaker pneumatically operated
- Insulation up to the final swivel
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Long range top loading arm electrically heated 2879-TRC



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE
Flow Rate	3\"

Standard Dimensions

Dn.	3"	4"	6"
A	1000/1500	1000/1500	1000/1500
B	1500/2000	1500/2000	1500/2000
C	1200/1600	1200/1600	1200/1600
D	388	477	671
E	300	400	550
F	350	426	595
G	279	343	484
H	700	800	1000
Weight	300	400	520

N. Description

- 1 Style 30 base swivel joint
- 2 Boom assembly
- 3 Style 70 double swivel joint
- 4 Ball valve with gear operator
- 5 Primary arm
- 6 Style 40 swivel joint
- 7 Drop tube with standard end
- 8 Spring balancing cylinder
- 9 Pillow block
- 10 ¾\"
- 11 Lock-down device
- 12 Handwheel valve remote control
- 13 EEx-d box for for heating system
- 14 Hooking drip bucket
- 15 Handle

Dwg/Mod

- 2175-2833
- .
- 2175-2833
- .
- .
- 2175-2833
- 2359-BF
- 05182
- C-4354
- 4772
- 2429
- .
- .
- 2410
- .

Demonstration of operating area



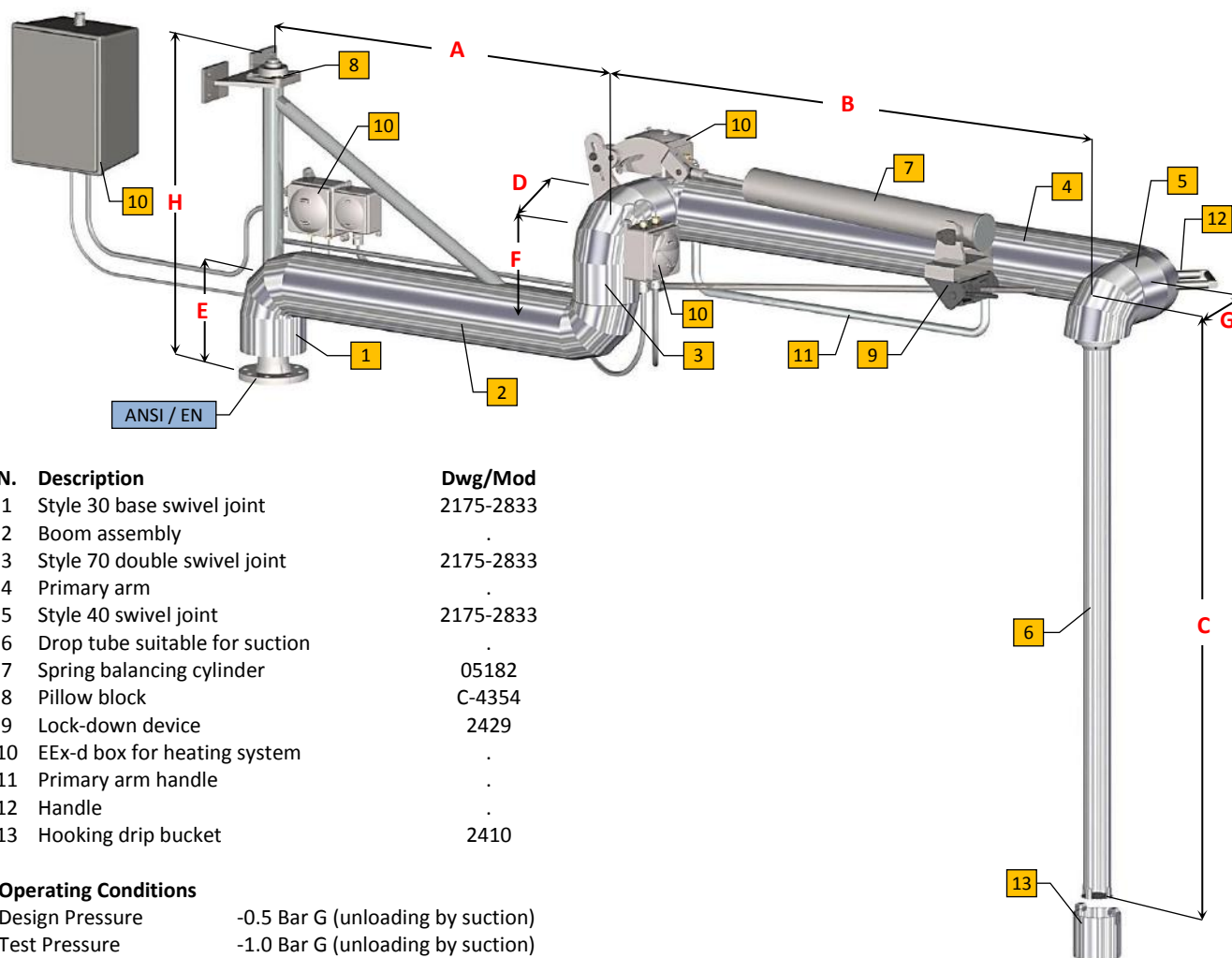
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

- Smoke suction system (with cone/cover and flexible line flanged end)
- Level sensor (pneumatic or electronic) installed on cone/cover or positional spider.
- Pneumatic control for vertical movements
- Loading valve pneumatically operated
- Vacuum breaker pneumatically operated
- Insulation up to the final swivel
- Locking device arm in parking position
- Flange bracket
- NDT test (RT-PT-MT) available on request

Long range top unloading arm electrically heated 2879-TRC



N.	Description	Dwg/Mod
1	Style 30 base swivel joint	2175-2833
2	Boom assembly	.
3	Style 70 double swivel joint	2175-2833
4	Primary arm	.
5	Style 40 swivel joint	2175-2833
6	Drop tube suitable for suction	.
7	Spring balancing cylinder	05182
8	Pillow block	C-4354
9	Lock-down device	2429
10	EEx-d box for heating system	.
11	Primary arm handle	.
12	Handle	.
13	Hooking drip bucket	2410

Operating Conditions

Design Pressure	-0.5 Bar G (unloading by suction)
Test Pressure	-1.0 Bar G (unloading by suction)
Design Temperature	-40° C / +200°C
Seal Material	PTFE

Standard Dimensions

Dn.	3"	4"
A	1000/1500	1000/1500
B	1500/2500	1500/2500
C	2000/4000	2000/4000
D	355	444
E	312	368
F	355	444
G	355	444
H	1000	1000
Weight	250	350

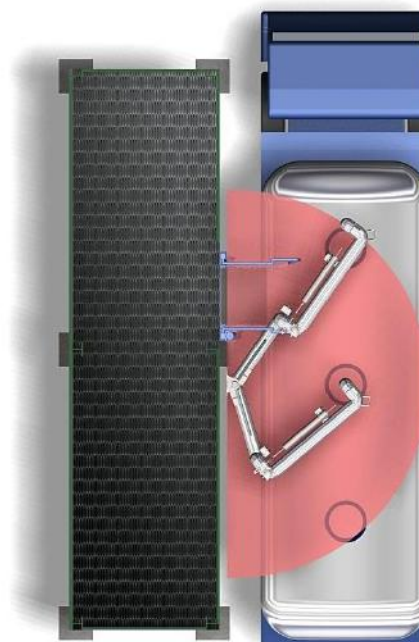
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

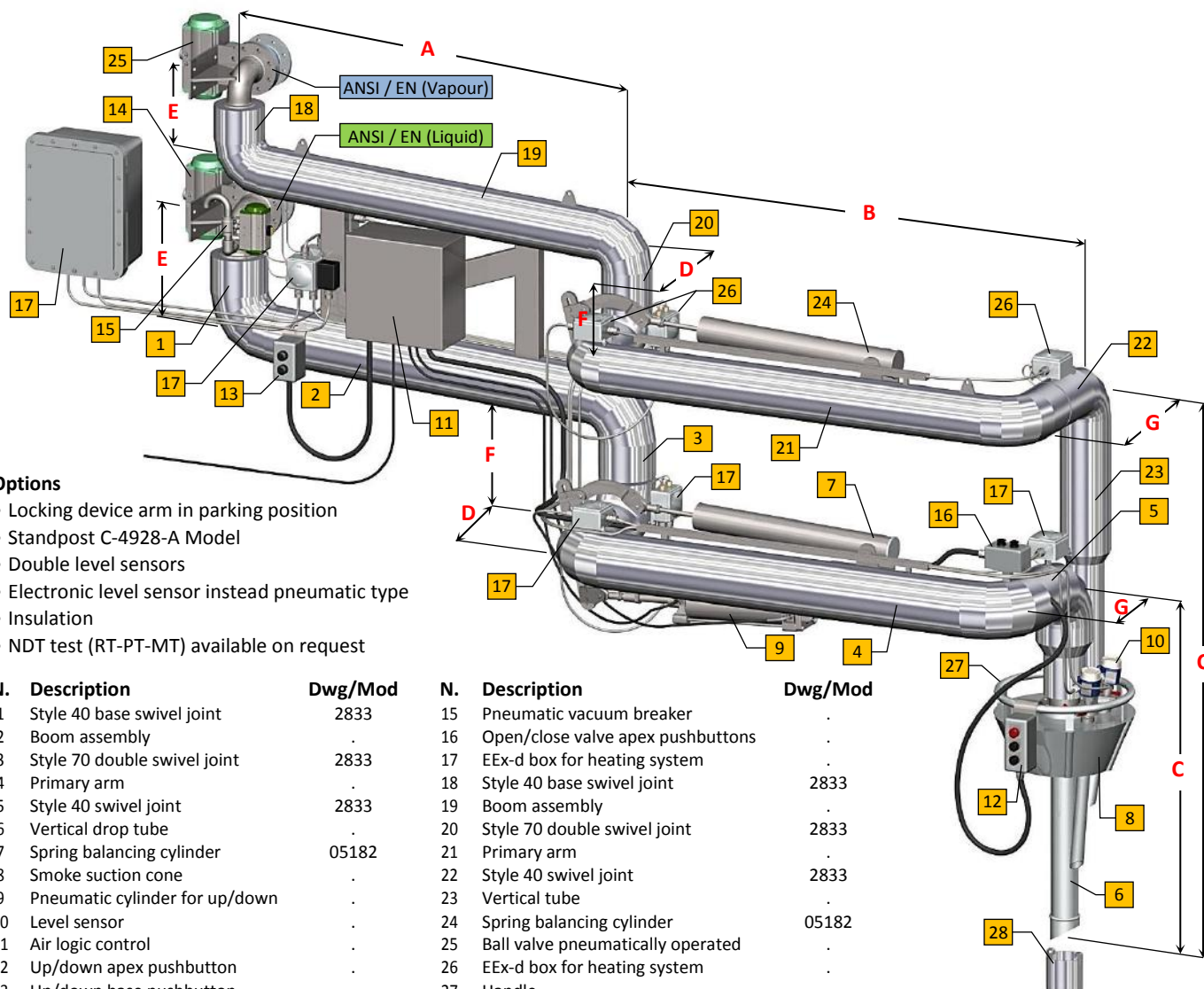
- Insulation up to the final swivel
- Locking device arm in parking position
- Flange bracket
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Long range top loading arm electrically heated, with rigid vapour return line 2902-TRC



Options

- Locking device arm in parking position
- Standpost C-4928-A Model
- Double level sensors
- Electronic level sensor instead pneumatic type
- Insulation
- NDT test (RT-PT-MT) available on request

N.	Description	Dwg/Mod
1	Style 40 base swivel joint	2833
2	Boom assembly	.
3	Style 70 double swivel joint	2833
4	Primary arm	.
5	Style 40 swivel joint	2833
6	Vertical drop tube	.
7	Spring balancing cylinder	05182
8	Smoke suction cone	.
9	Pneumatic cylinder for up/down	.
10	Level sensor	.
11	Air logic control	.
12	Up/down apex pushbutton	.
13	Up/down base pushbutton	.
14	Ball valve pneumatically operated	.

N.	Description	Dwg/Mod
15	Pneumatic vacuum breaker	.
16	Open/close valve apex pushbuttons	.
17	EEx-d box for heating system	.
18	Style 40 base swivel joint	2833
19	Boom assembly	.
20	Style 70 double swivel joint	2833
21	Primary arm	.
22	Style 40 swivel joint	2833
23	Vertical tube	.
24	Spring balancing cylinder	05182
25	Ball valve pneumatically operated	.
26	EEx-d box for heating system	.
27	Handle	.
28	Hooking drip bucket	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temp.	-15° C / +200°C
Seal Material	PTFE

Flow Rate	3" – 35 mc/h Max
	4" – 60 mc/h Max
	6" – 125 mc/h Max

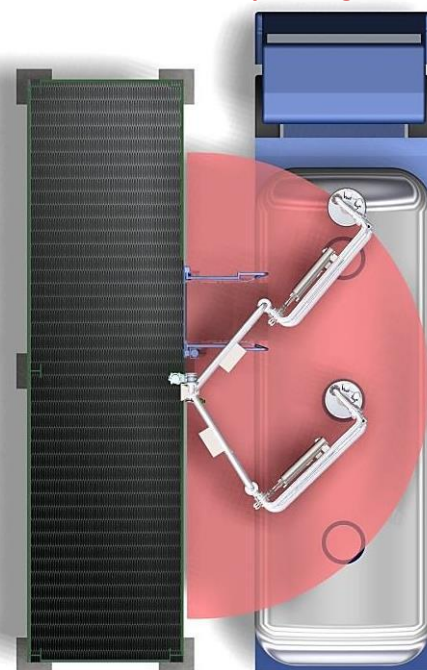
Standard Dimensions

Dn.	3"x2"		4"x3"		6"x4"	
Phase	L	V	L	V	L	V
A	1600	1600	1600	1600	1600	1600
B	1800	1800	1800	1800	1800	1800
C	1700	2500	1750	2550	1800	2600
D	350	285	426	312	600	375
E	305	273	350	305	460	350
F	350	285	426	312	600	375
G	312	427	375	441	524	520
H	550		600		650	
Weight	300		380		600	

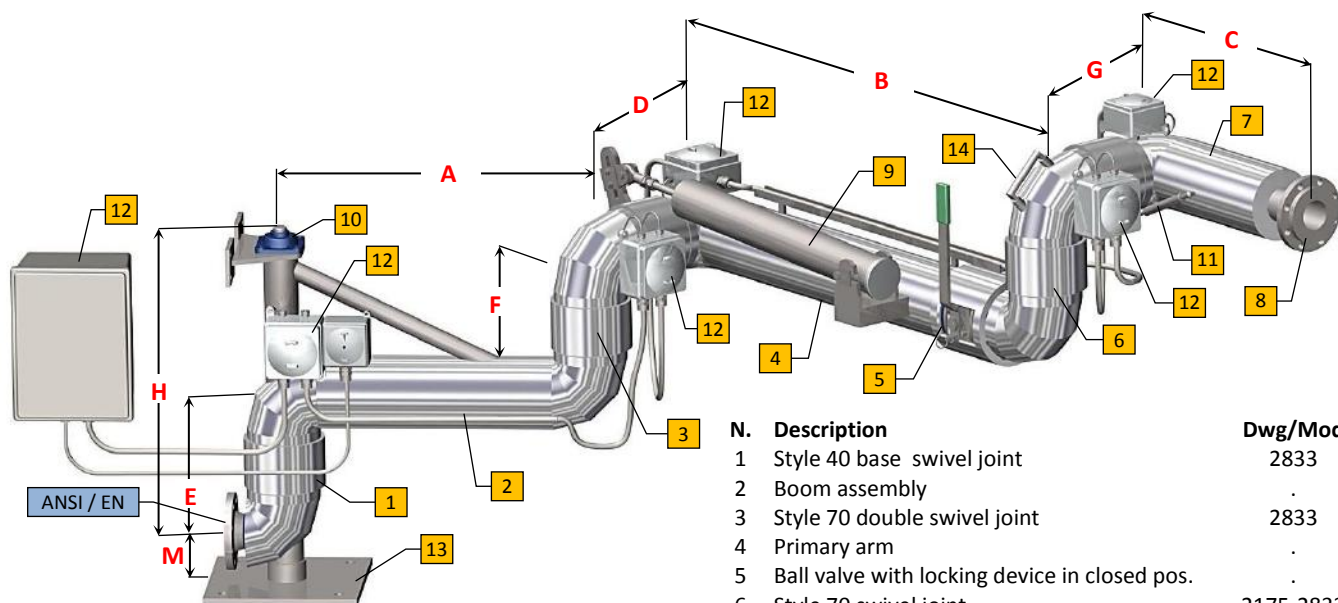
Notes

- Earthing continuity along the arm, according to ATEX directive

Demonstration of operating area



Triple range bottom unloading arm electrically heated 2454-BC-TRC



Operating Conditions

Design Pressure	5.0 Bar G
Test Pressure	7.5 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE

N. Description

1	Style 40 base swivel joint
2	Boom assembly
3	Style 70 double swivel joint
4	Primary arm
5	Ball valve with locking device in closed pos.
6	Style 70 swivel joint
7	Final arm
8	Loose flange
9	Spring balancing cylinder
10	Pillow block
11	Gas spring balancer
12	EEx-d box for heating system
13	Base support
14	Handle

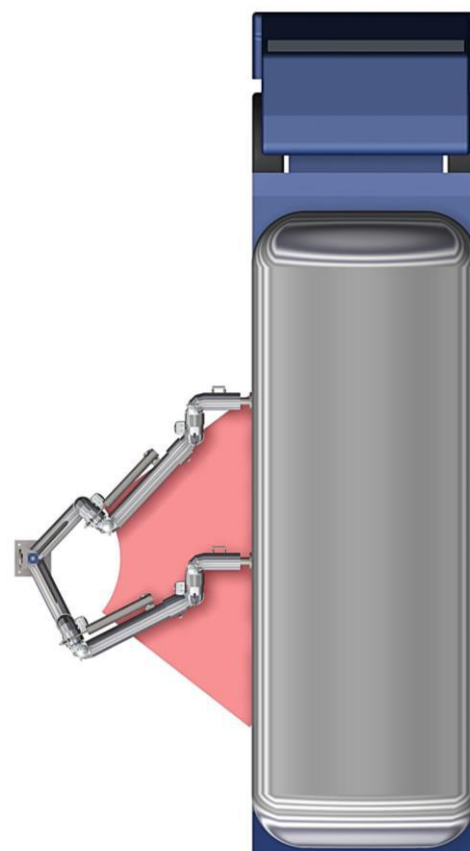
Dwg/Mod

2833
.
2833
.
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2175-2833
.
.
05182
C-4354
.
.
.
.

Standard Dimensions

Dn.	3"	4"	6"
A	1000/1500	1000/1500	1000/1500
B	1500/2000	1500/2000	1500/2000
C	650	750	800
D	312	375	524
E	312	375	524
F	312	375	524
G	312	375	524
H	700	800	1000
L	312	375	524
M	150	150	200
Weight	300	400	520

Demonstration of operating area



Notes

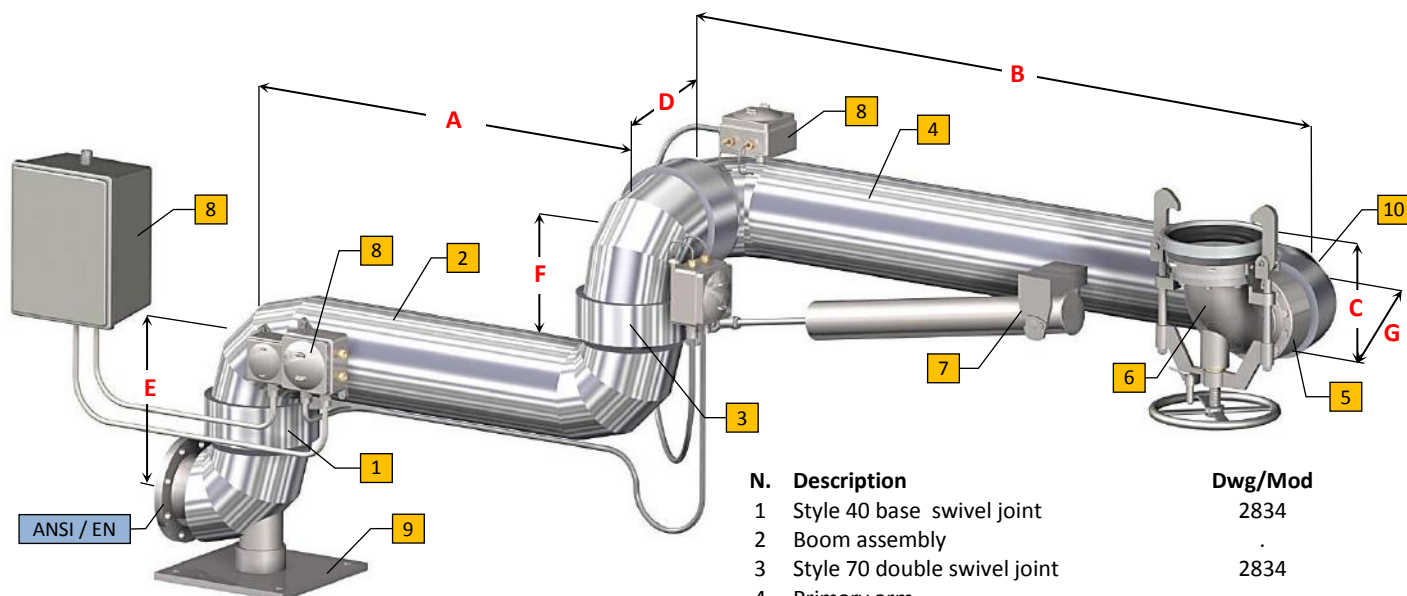
- Earthing continuity along the arm, according to ATEX directive

Options

- Insulation up to the final arm
- Locking device arm in parking position
- Standpost
- NDT test (RT-PT-MT) available on request



Double range bottom unloading arm electrically heated, for rail tank unloading 2454-TRC



Operating Conditions

Design Pressure	1.0 Bar G
Test Pressure	1.5 Bar G
Design Temperature	-40° C / +200°C
Seal Material	PTFE

N.	Description	Dwg/Mod
1	Style 40 base swivel joint	2834
2	Boom assembly	.
3	Style 70 double swivel joint	2834
4	Primary arm	.
5	Style 40 swivel joint	2834
6	Coupler for Russian tankers	C-4871
7	Spring balancing cylinder	C-4879
8	EEx-d box for heating system	.
9	Base support	.
10	Handle	.

Standard Dimensions

Dn.	6"	8"
A	1000/1500	1000/1500
B	1500/2500	1500/2500
C	264	300
D	441	548
E	441	490
F	441	490
G	441	548
Weight	300	400

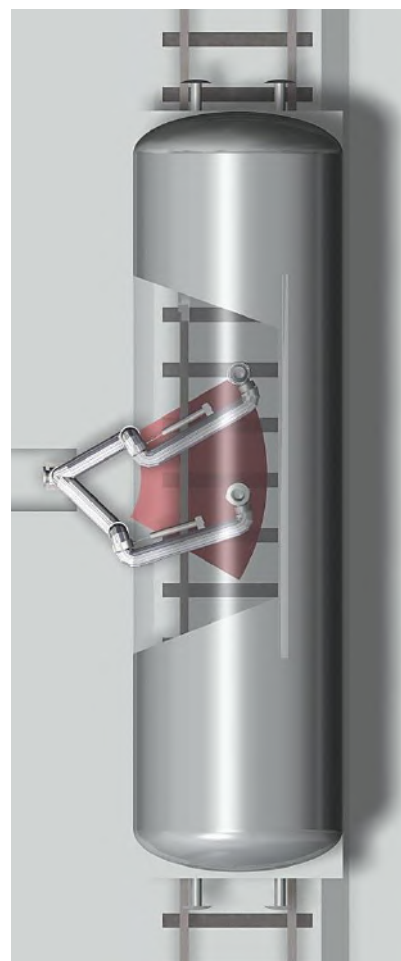
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

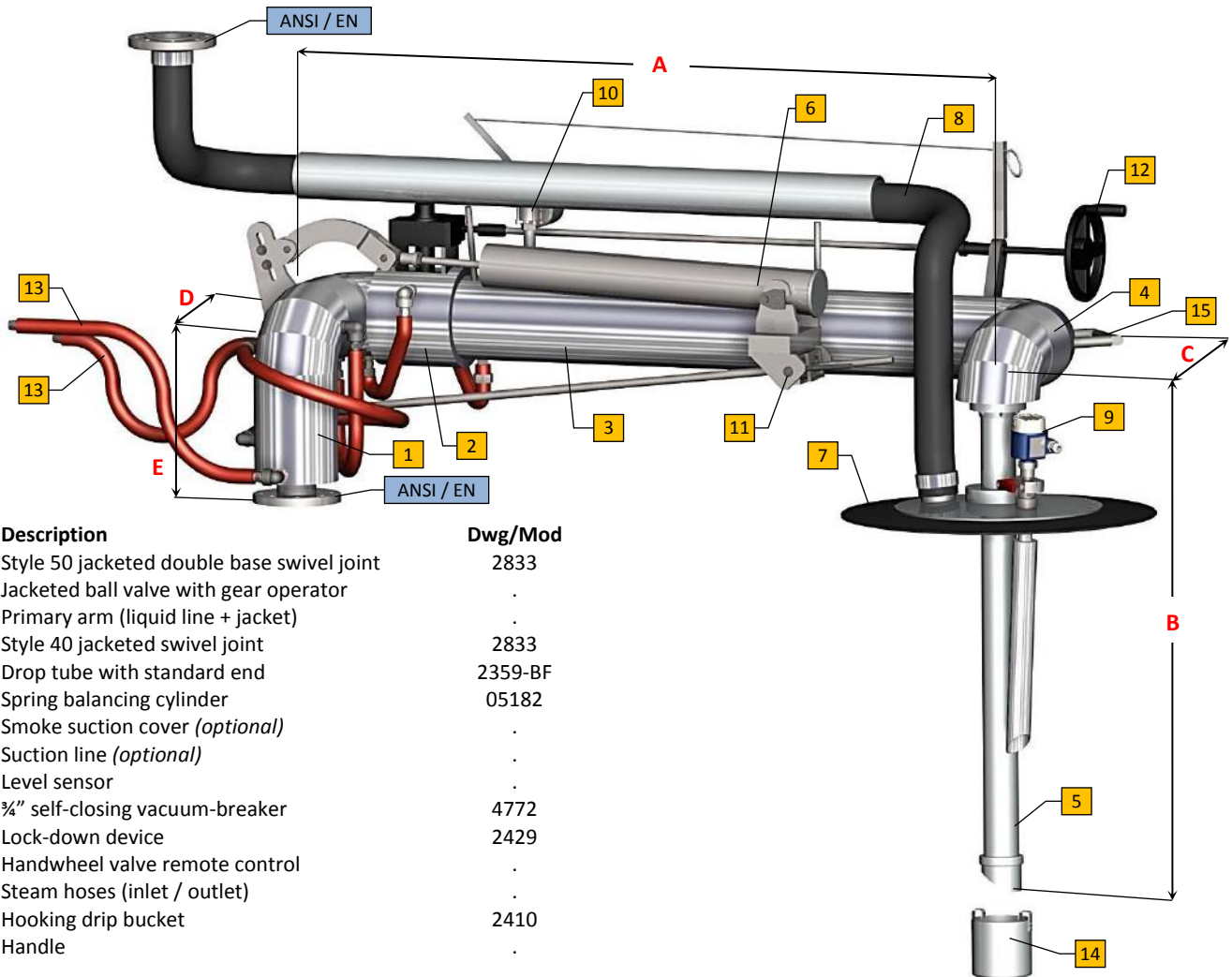
- Insulation up to the final swivel
- Locking device arm in parking position
- Standpost with pillow block
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Fixed range jacketed top loading arm

2570-jack



N.	Description	Dwg/Mod
1	Style 50 jacketed double base swivel joint	2833
2	Jacketed ball valve with gear operator	.
3	Primary arm (liquid line + jacket)	.
4	Style 40 jacketed swivel joint	2833
5	Drop tube with standard end	2359-BF
6	Spring balancing cylinder	05182
7	Smoke suction cover (optional)	.
8	Suction line (optional)	.
9	Level sensor	.
10	¾" self-closing vacuum-breaker	4772
11	Lock-down device	2429
12	Handwheel valve remote control	.
13	Steam hoses (inlet / outlet)	.
14	Hooking drip bucket	2410
15	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE
Flow Rate	2" (3" jacket) – 20 mc/h Max 3" (4" jacket) – 35 mc/h Max 4" (6" jacket) – 60 mc/h Max

Standard Dimensions

Dn.	2"x3"	3"x4"	4"x6"
A	2000/3000	2000/3000	2000/3000
B	1200/1600	1200/1600	1200/1600
C	378	454	615
D	312	375	370
E	300	400	550
Weight	140	190	240

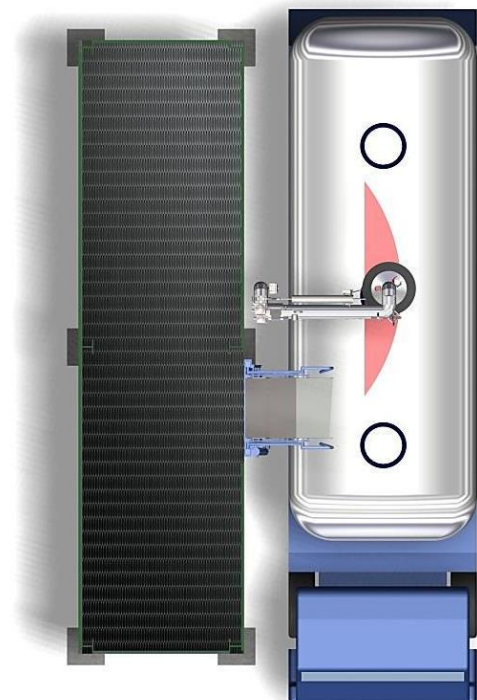
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

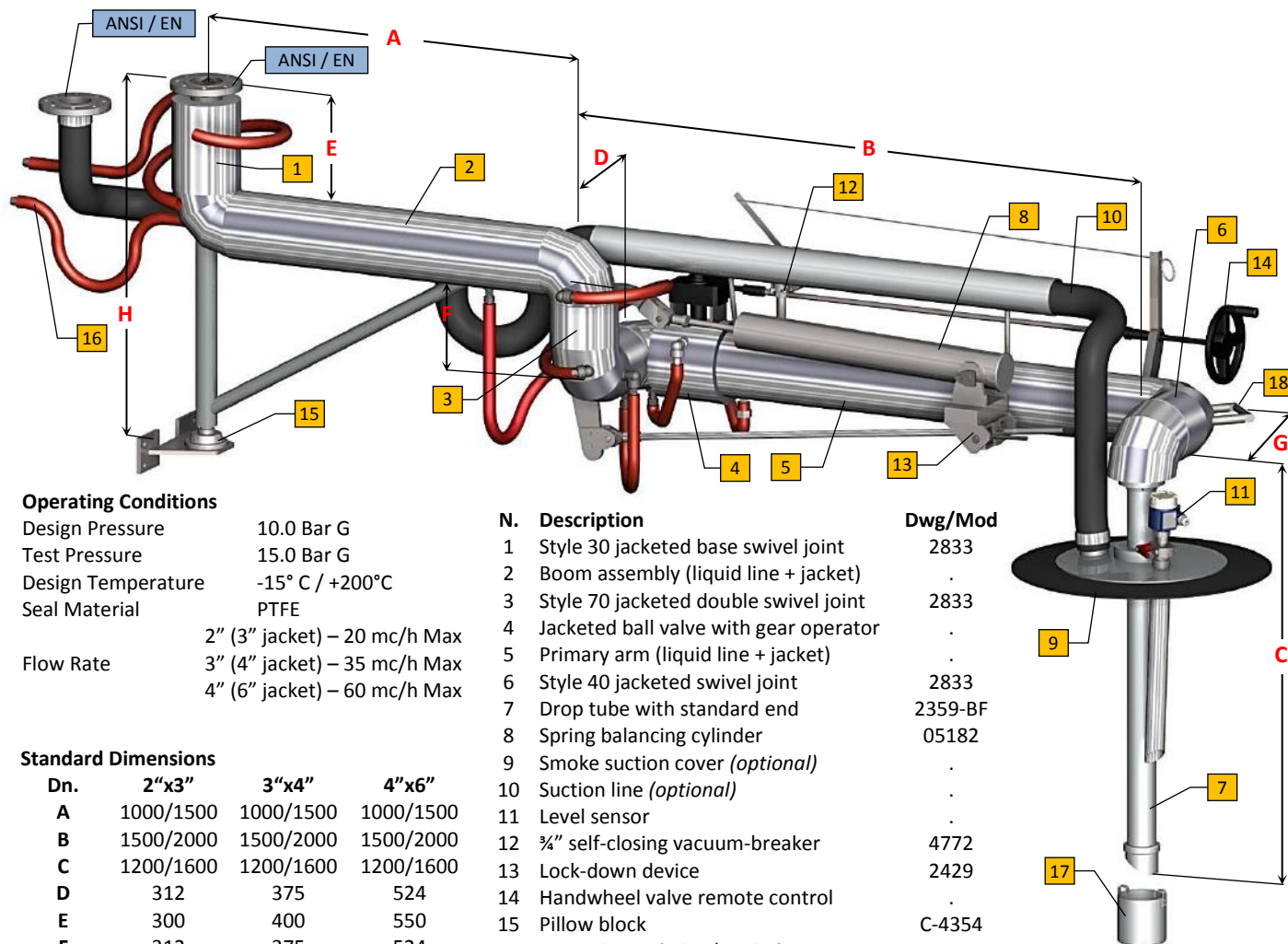
- Smoke suction system (with cover and flexible line flanged end)
- Level sensor (pneumatic or electronic) installed on cover or positional spider
- Pneumatic control for vertical movements
- Loading valve pneumatically operated
- Vacuum breaker pneumatically operated
- Insulation up to the final swivel
- NDT test (RT-PT-MT) available on request

Demonstration of operating area





Long range jacketed top loading arm 2879-JACK



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE
Flow Rate	2" (3" jacket) – 20 mc/h Max
	3" (4" jacket) – 35 mc/h Max
	4" (6" jacket) – 60 mc/h Max

Standard Dimensions

Dn.	2"x3"	3"x4"	4"x6"
A	1000/1500	1000/1500	1000/1500
B	1500/2000	1500/2000	1500/2000
C	1200/1600	1200/1600	1200/1600
D	312	375	524
E	300	400	550
F	312	375	524
G	378	454	615
H	700	800	1000
Weight	300	400	520

N. Description

1	Style 30 jacketed base swivel joint
2	Boom assembly (liquid line + jacket)
3	Style 70 jacketed double swivel joint
4	Jacketed ball valve with gear operator
5	Primary arm (liquid line + jacket)
6	Style 40 jacketed swivel joint
7	Drop tube with standard end
8	Spring balancing cylinder
9	Smoke suction cover (optional)
10	Suction line (optional)
11	Level sensor
12	¾" self-closing vacuum-breaker
13	Lock-down device
14	Handwheel valve remote control
15	Pillow block
16	Steam hoses (inlet / outlet)
17	Hooking drip bucket
18	Handle

Dwg/Mod

2833
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2833
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2833
2359-BF
05182
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.
4772
2429
C-4354
2410
.

Demonstration of operating area

Notes

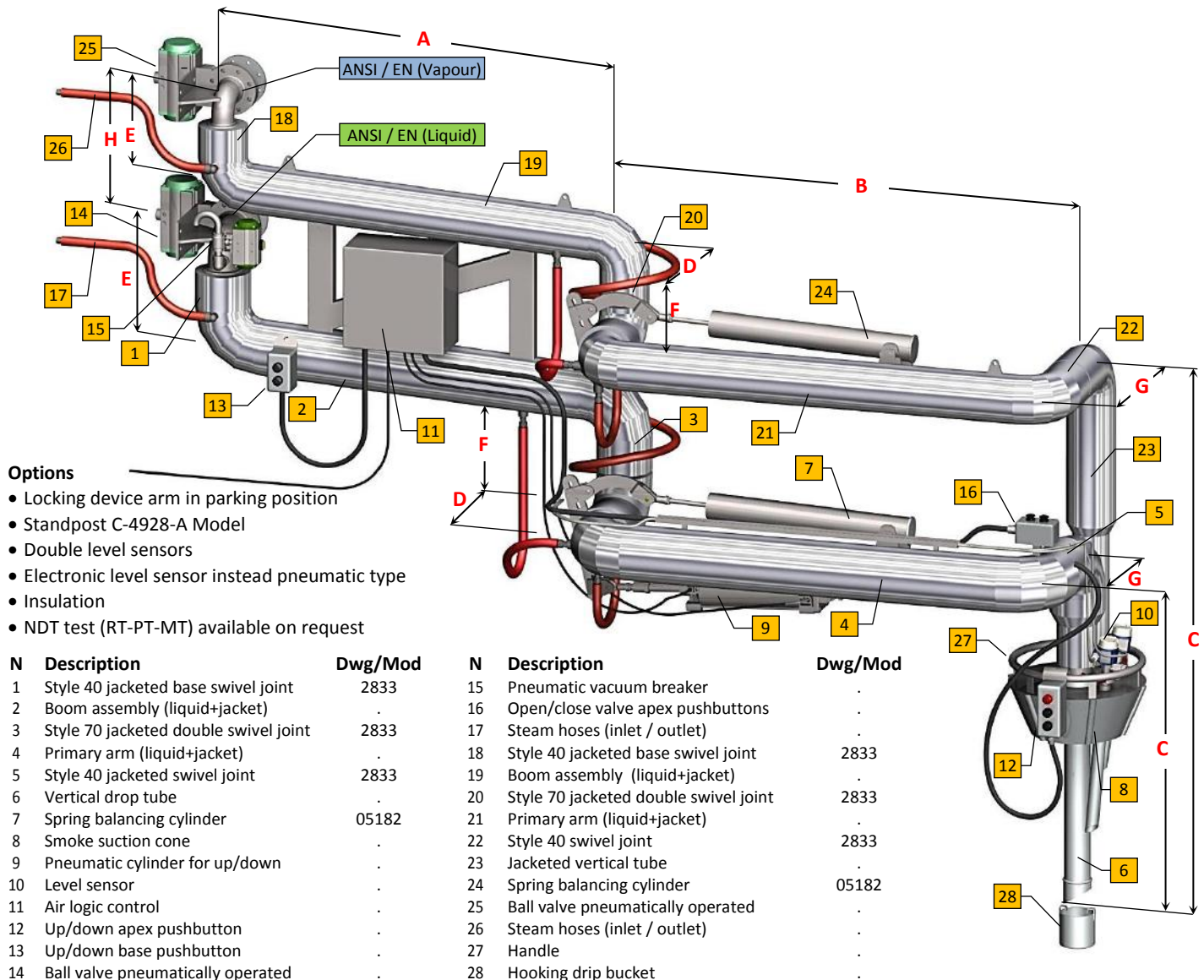
- Earthing continuity along the arm, according to ATEX directive

Options

- Smoke suction system (with cone/cover and flexible line flanged end)
- Level sensor (pneumatic or electronic) installed on cone/cover or positional spider.
- Pneumatic control for vertical movements
- Loading valve pneumatically operated
- Vacuum breaker pneumatically operated
- Insulation up to the final swivel
- Locking device arm in parking position
- Flange bracket
- NDT test (RT-PT-MT) available on request



Long range jacketed top loading arm with rigid vapour return line 2902-JACK



Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temp.	-15° C / +200°C
Seal Material	PTFE
Flow Rate	2" (3" jacket) – 20 mc/h Max 3" (4" jacket) – 35 mc/h Max 4" (6" jacket) – 60 mc/h Max

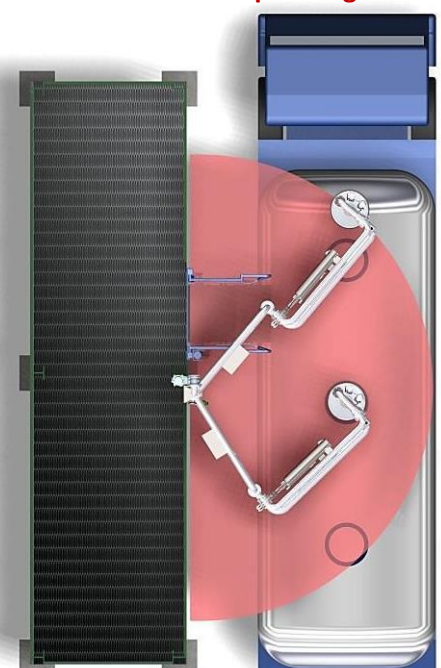
Standard Dimensions

Dn.	3"x2"		4"x3"		6"x4"	
Phase	L	V	L	V	L	V
A	1600	1600	1600	1600	1600	1600
B	1800	1800	1800	1800	1800	1800
C	1700	2500	1750	2550	1800	2600
D	312	235	375	312	524	375
E	312	235	375	312	524	375
F	312	235	375	312	524	375
G	312	235	375	312	524	375
H	550		600		650	
Weight	300		380		600	

Notes

- Earthing continuity along the arm, according to ATEX directive

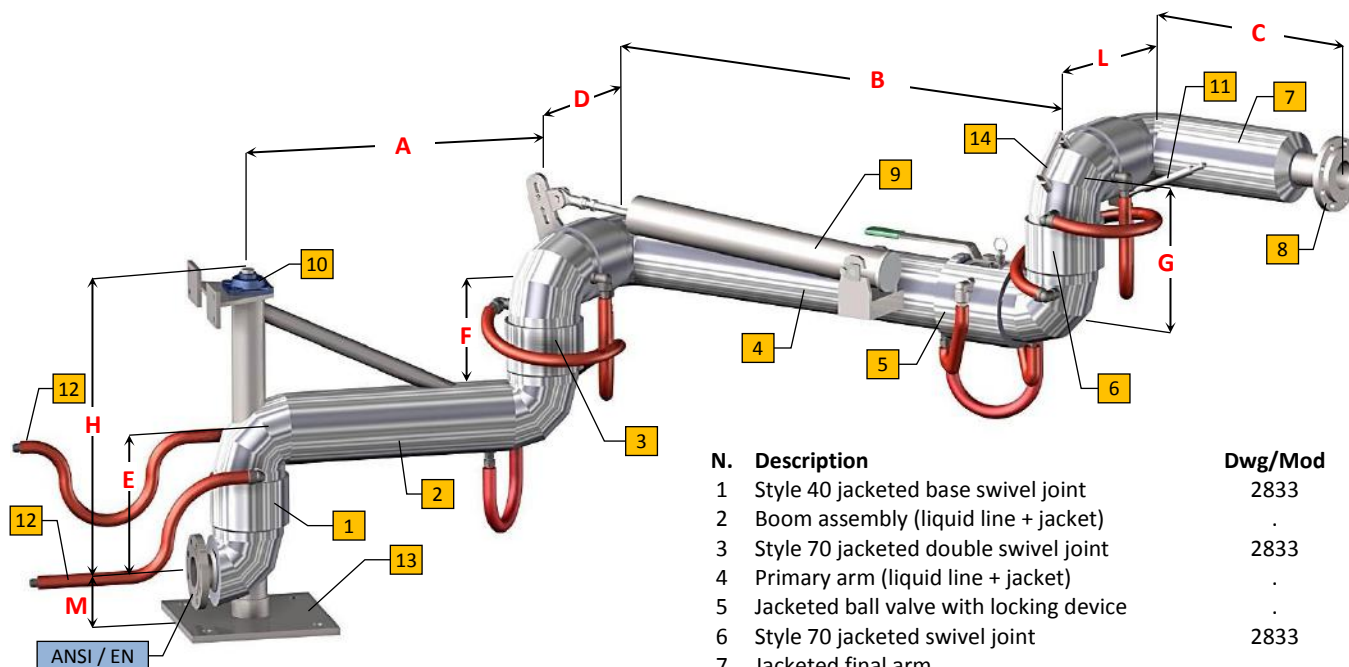
Demonstration of operating area





Triple range jacketed bottom unloading arm

2454-BC-JACK



Operating Conditions

Design Pressure	5.0 Bar G
Test Pressure	7.5 Bar G
Design Temperature	-15° C / +200°C
Seal Material	PTFE

N. Description

- 1 Style 40 jacketed base swivel joint
- 2 Boom assembly (liquid line + jacket)
- 3 Style 70 jacketed double swivel joint
- 4 Primary arm (liquid line + jacket)
- 5 Jacketed ball valve with locking device
- 6 Style 70 jacketed swivel joint
- 7 Jacketed final arm
- 8 Loose flange
- 9 Spring balancing cylinder
- 10 Pillow block
- 11 Gas spring balancer
- 12 Steam hoses (inlet / outlet)
- 13 Base support
- 14 Handle

Dwg/Mod

- | |
|--------|
| 2833 |
| . |
| 2833 |
| . |
| . |
| 2833 |
| . |
| . |
| 05182 |
| C-4354 |
| . |
| . |
| . |
| . |

Standard Dimensions

Dn.	2"x3"	3"x4"	4"x6"
A	1000/1500	1000/1500	1000/1500
B	1500/2000	1500/2000	1500/2000
C	650	750	800
D	312	375	524
E	312	375	524
F	312	375	524
G	312	375	524
H	700	800	1000
L	312	375	524
M	150	150	200
Weight	300	400	520

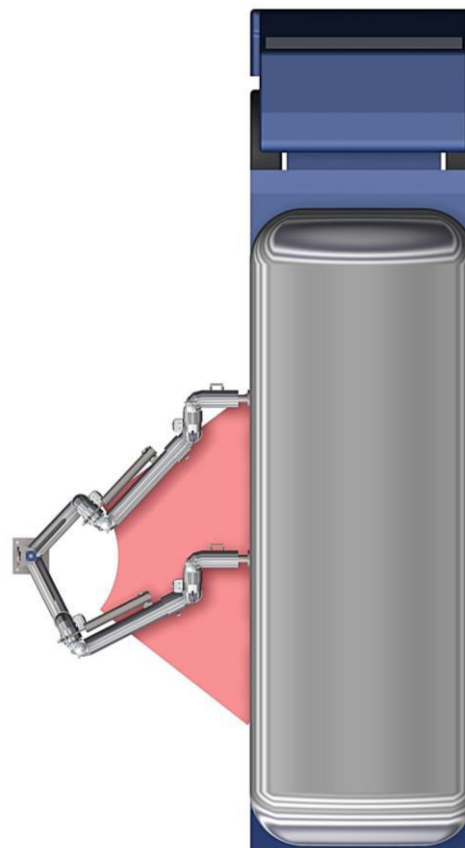
Notes

- Earthing continuity along the arm, according to ATEX directive

Options

- Insulation up to the final arm
- Locking device arm in parking position
- Standpost
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Loading arms for food service



2385
Pg 40



2385-LR
Pg 41

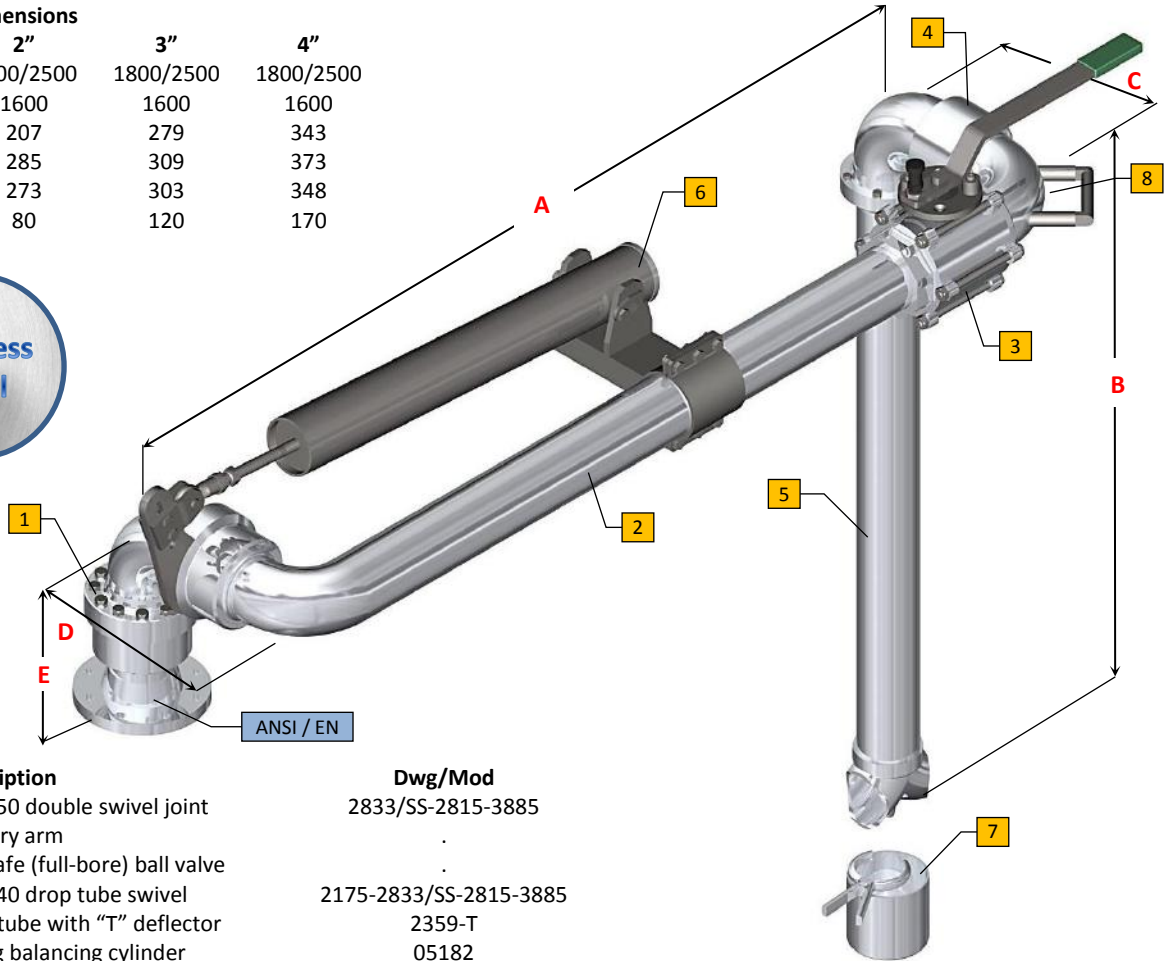


Fixed range top loading arm for food service

2385

Standard Dimensions

Dn.	2"	3"	4"
A	1800/2500	1800/2500	1800/2500
B	1600	1600	1600
C	207	279	343
D	285	309	373
E	273	303	348
Weight	80	120	170



N.	Description	Dwg/Mod
1	Style 50 double swivel joint	2833/SS-2815-3885
2	Primary arm	.
3	Fire safe (full-bore) ball valve	.
4	Style 40 drop tube swivel	2175-2833/SS-2815-3885
5	Drop tube with "T" deflector	2359-T
6	Spring balancing cylinder	05182
7	Nipper drip bucket	2408
8	Handle	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE (FDA approved)
Flow Rate	2"– 35 mc/h Max 3"– 75 mc/h Max 4"– 125 mc/h Max

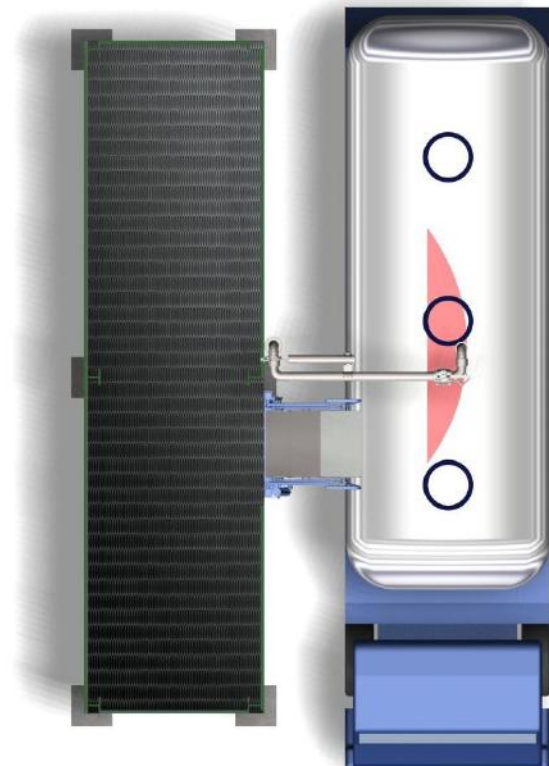
Notes

- Earthing continuity along the arm, according to ATEX directive
- 2833/SS swivels AISI 316-L total construction
- 3885 swivels AISI 316-L total construction
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts

Options

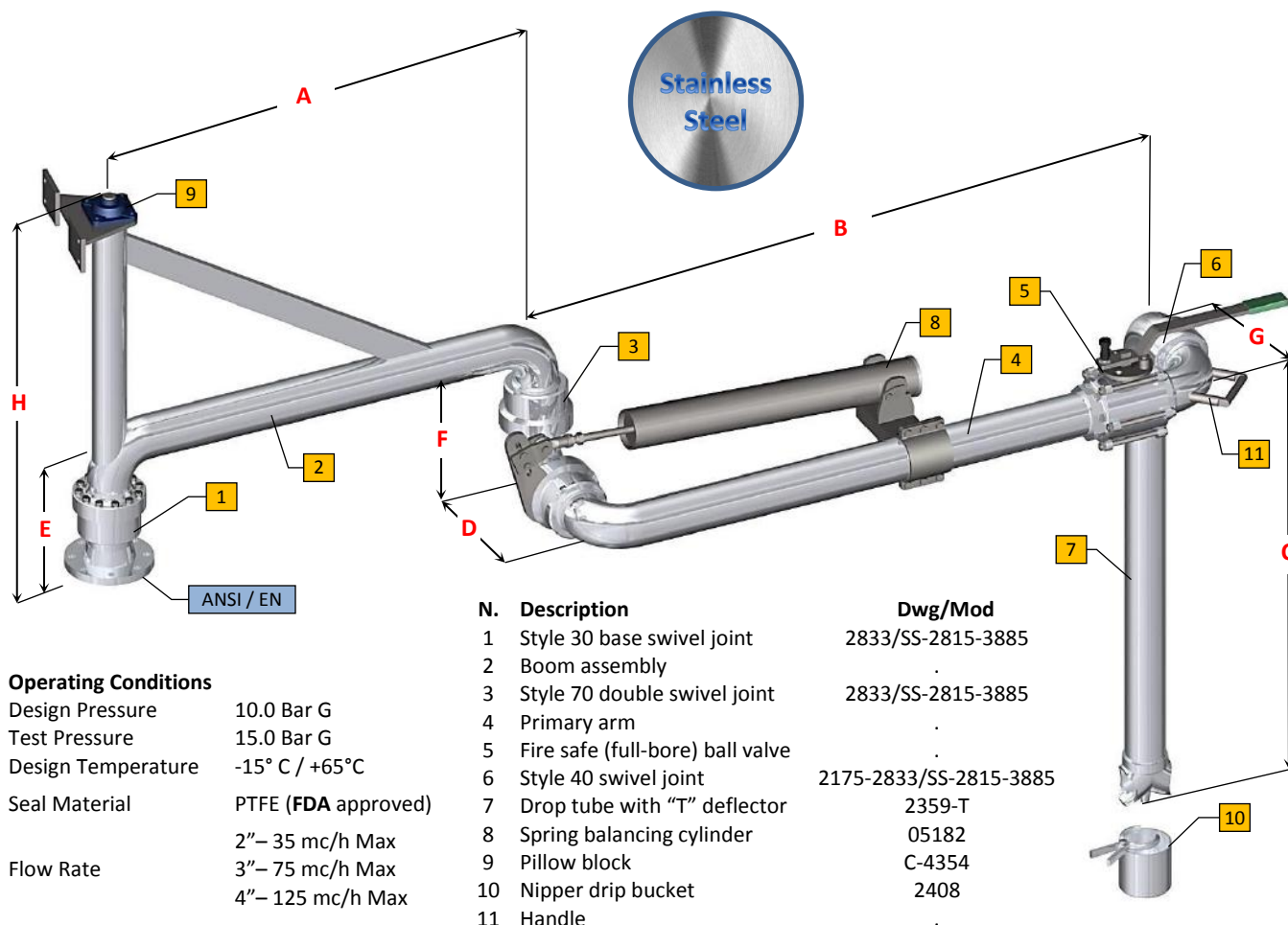
- Pos.5 with flute beak end (2359-BF)
- Microswitch to signal valve opened/closed
- Ball valve installed at the beginning of the primary arm, with remote control and vacuum breaker
- Overfill level sensor installed on positional spider
- Locking device arm turned in parking position
- Polished internal surfaces on request
- NDT test (RT-PT-MT) available on request

Demonstration of operating area

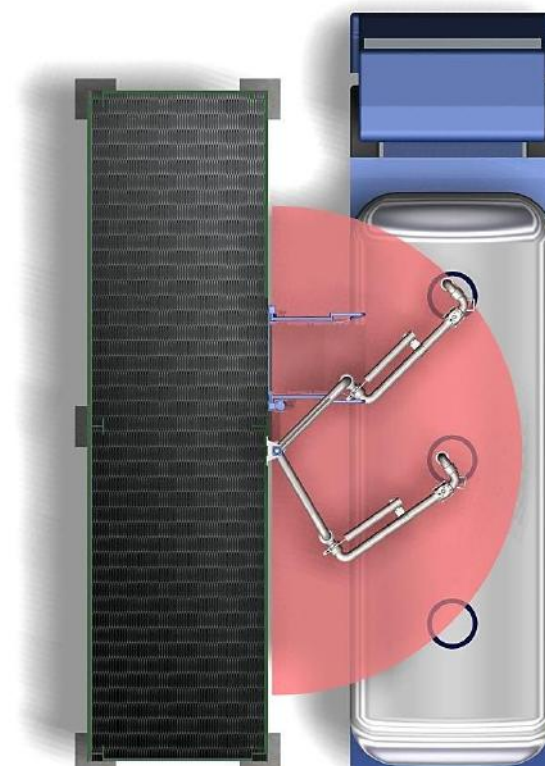


Long range top loading arm for food service

2385-LR



Demonstration of operating area





Various loading arms

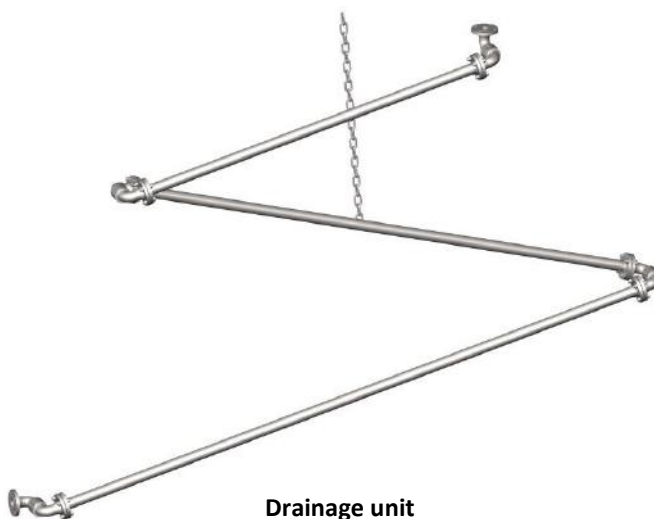
Tank equipments



2249 Model floating suction unit
Pg 43



2302 Model floating suction unit
Pg 44



Drainage unit
Pg 45

Special Arms



4903 Model hydraulically operated
Pg 46



2385-LR Model for IBC and drums loading
Pg 47

Single range floating suction unit 2249



N. Description

- 1 Swivel joint
- 2 Swing joint tube
- 3 Final elbow with baffle plate
- 4 Floats
- 5 Inspection rope
- 6 Support foot

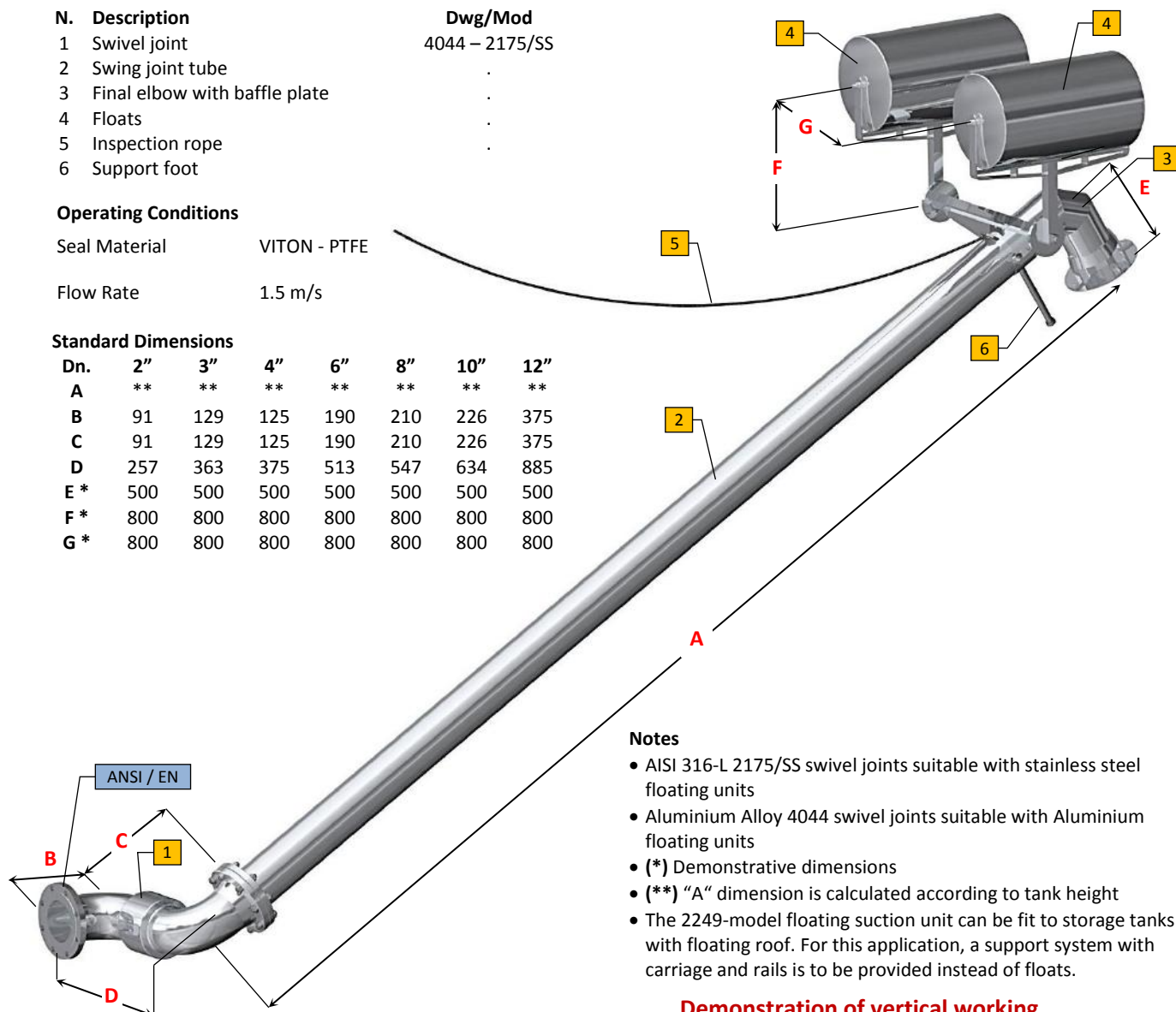
Dwg/Mod
4044 – 2175/SS

Operating Conditions

Seal Material VITON - PTFE
Flow Rate 1.5 m/s

Standard Dimensions

Dn.	2"	3"	4"	6"	8"	10"	12"
A	**	**	**	**	**	**	**
B	91	129	125	190	210	226	375
C	91	129	125	190	210	226	375
D	257	363	375	513	547	634	885
E *	500	500	500	500	500	500	500
F *	800	800	800	800	800	800	800
G *	800	800	800	800	800	800	800



Notes

- AISI 316-L 2175/SS swivel joints suitable with stainless steel floating units
- Aluminium Alloy 4044 swivel joints suitable with Aluminium floating units
- (*) Demonstrative dimensions
- (**) "A" dimension is calculated according to tank height
- The 2249-model floating suction unit can be fit to storage tanks with floating roof. For this application, a support system with carriage and rails is to be provided instead of floats.

Demonstration of vertical working

The floating suction unit 2249 Model operates into horizontal and vertical storage tanks of large diameter and is designed to suck the clean product just below the product surface. This is in order to prevent the contamination of the product with sediments which settle on the bottom of the tank. Such a position of the suction surface is guaranteed by the presence of floating units, properly sized according to the weight of the arm and of the stored product.





Double range floating suction unit 2302

N.	Description	Dwg/Mod
1	Swivel joint	4044 – 2175/SS
2	Primary swing joint tube	.
3	Swivel joint	4044 – 2175/SS
4	Secondary swing joint tube	.
5	Final elbow with baffle plate	.
6	Floats	.
7	Restraining cable	.
8	Support foot	.
9	Inspection rope	.

Operating Conditions

Seal Material VITON - PTFE

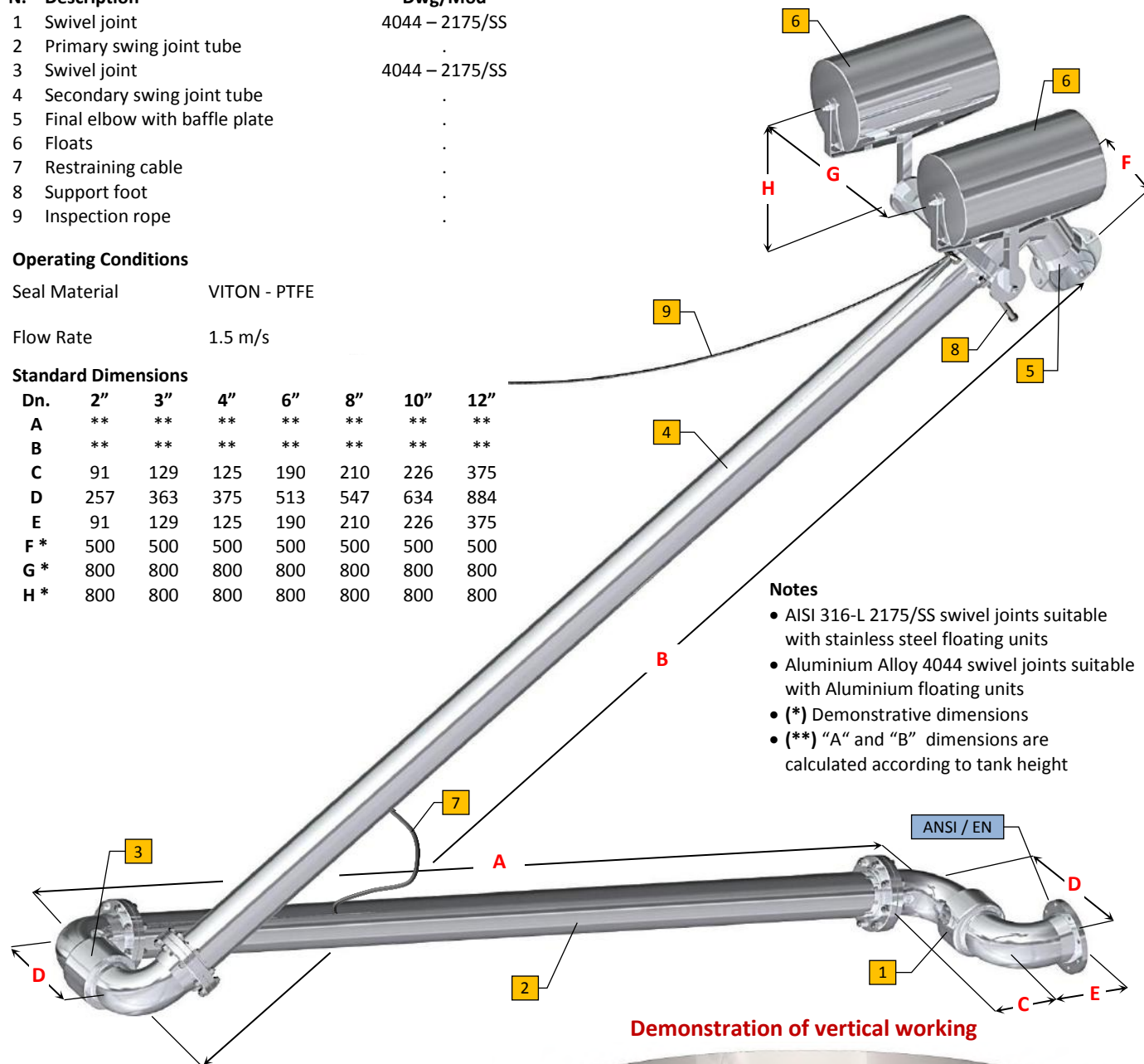
Flow Rate 1.5 m/s

Standard Dimensions

Dn.	2"	3"	4"	6"	8"	10"	12"
A	**	**	**	**	**	**	**
B	**	**	**	**	**	**	**
C	91	129	125	190	210	226	375
D	257	363	375	513	547	634	884
E	91	129	125	190	210	226	375
F *	500	500	500	500	500	500	500
G *	800	800	800	800	800	800	800
H *	800	800	800	800	800	800	800

Notes

- AISI 316-L 2175/SS swivel joints suitable with stainless steel floating units
- Aluminium Alloy 4044 swivel joints suitable with Aluminium floating units
- (*) Demonstrative dimensions
- (**) "A" and "B" dimensions are calculated according to tank height



Demonstration of vertical working

The floating suction unit 2302 Model operates into vertical storage tanks of a certain height, for which you cannot install a single section unit. As for the 2249 Model, 2302 Model is designed to suck the clean product just below the product surface. This is in order to prevent the contamination of the product with sediments which settle on the bottom of the tank. Such a position of the suction surface is guaranteed by the presence of floating units, properly sized according to the weight of the arm and of the stored product.

Notes

- The 2302 model floating suction unit can be fit to storage tanks with floating roof. For this application, a support system with carriage and rails is to be provided instead of floats.



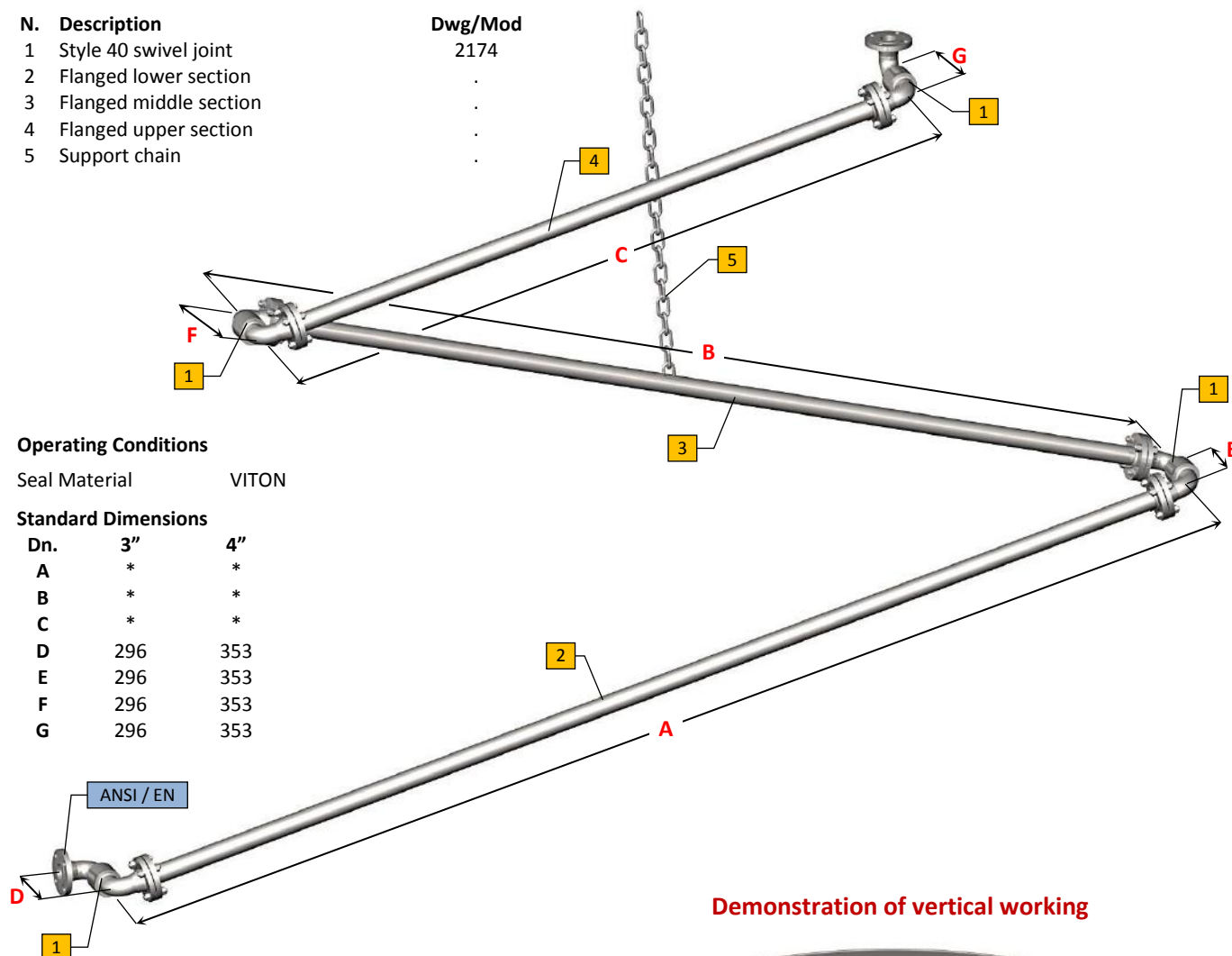
Articulated drainage unit for floating roof tanks



N. Description

- 1 Style 40 swivel joint
- 2 Flanged lower section
- 3 Flanged middle section
- 4 Flanged upper section
- 5 Support chain

Dwg/Mod
2174



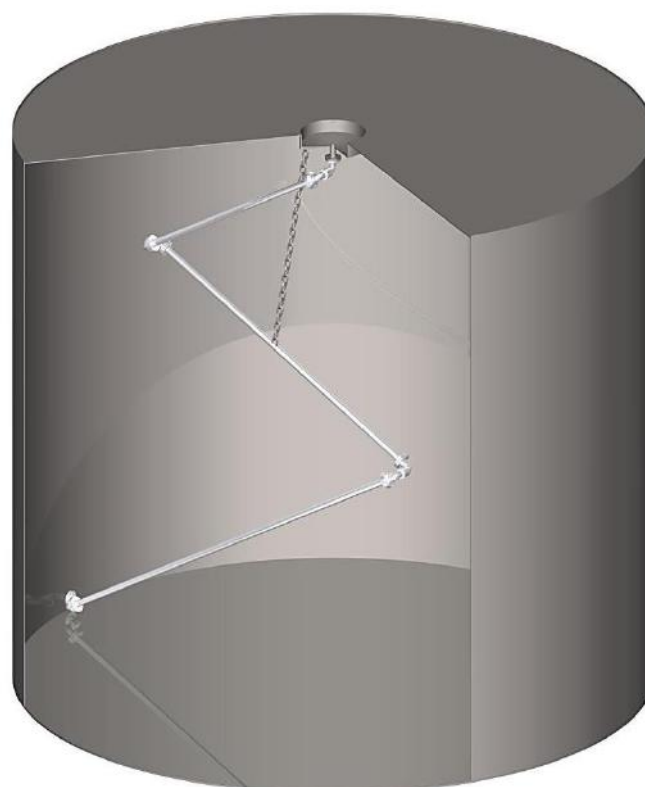
Operating Conditions

Seal Material VITON

Standard Dimensions

Dn.	3"	4"
A	*	*
B	*	*
C	*	*
D	296	353
E	296	353
F	296	353
G	296	353

Demonstration of vertical working



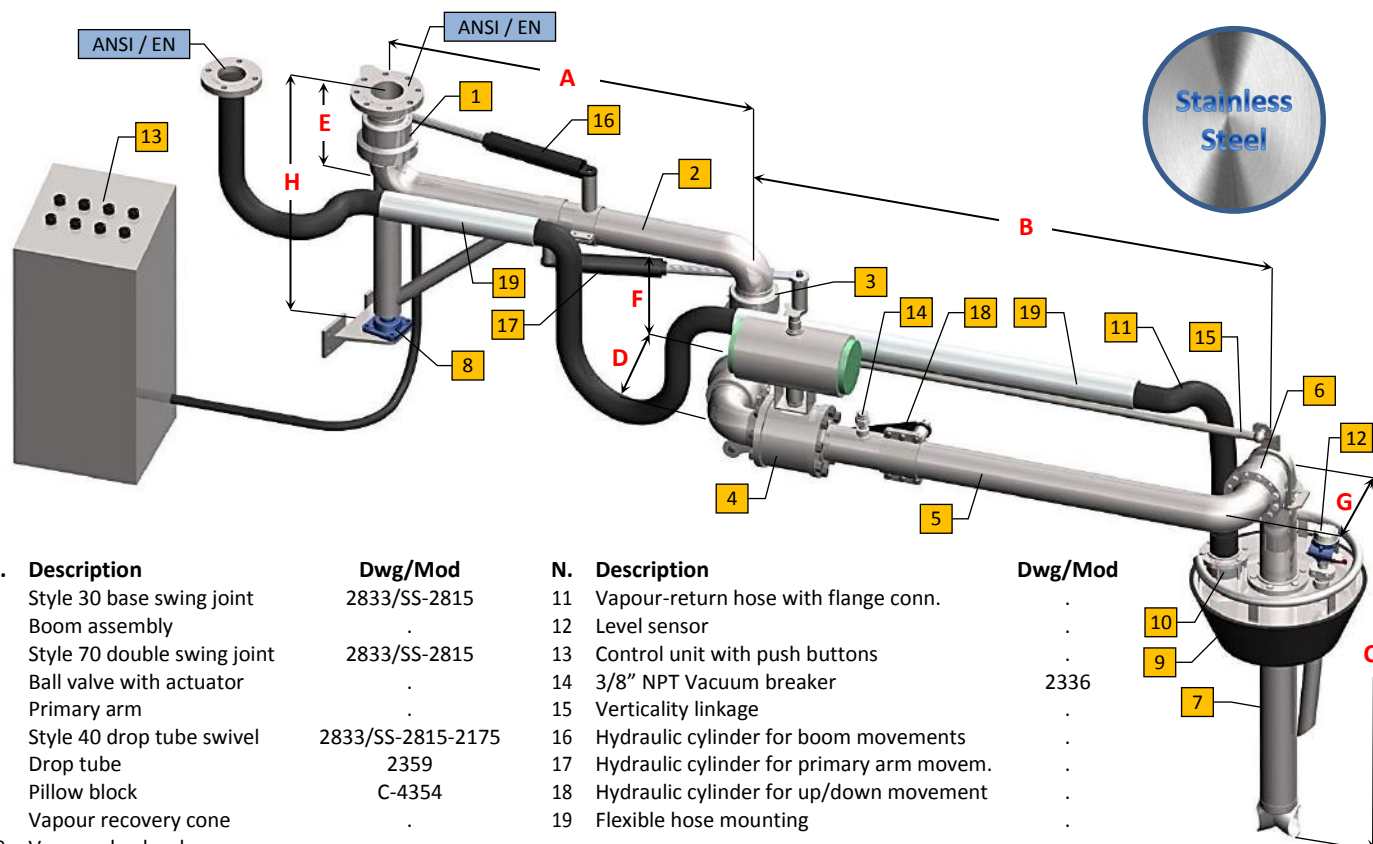
Notes

- (**) "A", "B" and "C" dimensions are calculated according to the tank height

The articulated drainage is installed inside floating roof storage tanks and has the function to drain the rainwater from the roof of the tank. The roof is designed with a slope converging on the center where there is a collection point with connection flange for the drainage unit. The drainage unit installed inside the tank follows the vertical movement of the roof.



Double range top loading arm hydraulically operated 4903



N.	Description	Dwg/Mod
1	Style 30 base swing joint	2833/SS-2815
2	Boom assembly	.
3	Style 70 double swing joint	2833/SS-2815
4	Ball valve with actuator	.
5	Primary arm	.
6	Style 40 drop tube swivel	2833/SS-2815-2175
7	Drop tube	2359
8	Pillow block	C-4354
9	Vapour recovery cone	.
10	Vapour check valve	.

N.	Description	Dwg/Mod
11	Vapour-return hose with flange conn.	.
12	Level sensor	.
13	Control unit with push buttons	.
14	3/8" NPT Vacuum breaker	2336
15	Verticality linkage	.
16	Hydraulic cylinder for boom movements	.
17	Hydraulic cylinder for primary arm movem.	.
18	Hydraulic cylinder for up/down movement	.
19	Flexible hose mounting	.

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65°C
Seal Material	PTFE
Flow Rate	3"-75 mc/h Max 4"-125 mc/h Max 6"-280 mc/h Max

Standard Dimensions

Dn.	3"	4"	6"
A	1000/1500	1000/1500	1000/1500
B	1500/2000	1500/2000	1500/2000
C	1200/1800	1200/1800	1200/1800
D	347	424	524
E	302	346	460
F	347	424	524
G	318	394	484
H	1000	1000	1000
Weight	210	300	500

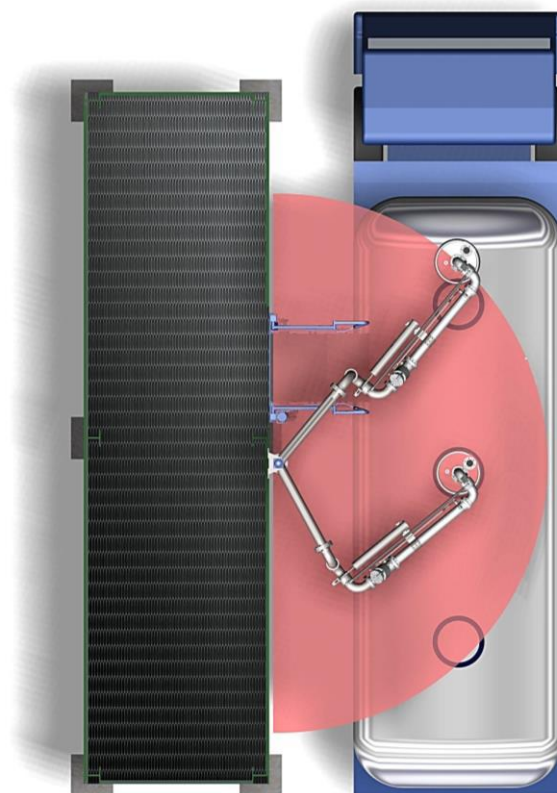
Notes

- Earthing continuity along the arm, according to ATEX directive
- Available also in Carbon Steel total construction
- 2833/SS swivels AISI 316-L total execution
- 2815 swivels with AISI 316-L internal parts and sealing surfaces and carbon steel supporting parts
- Equipped with electro-hydraulic power unit

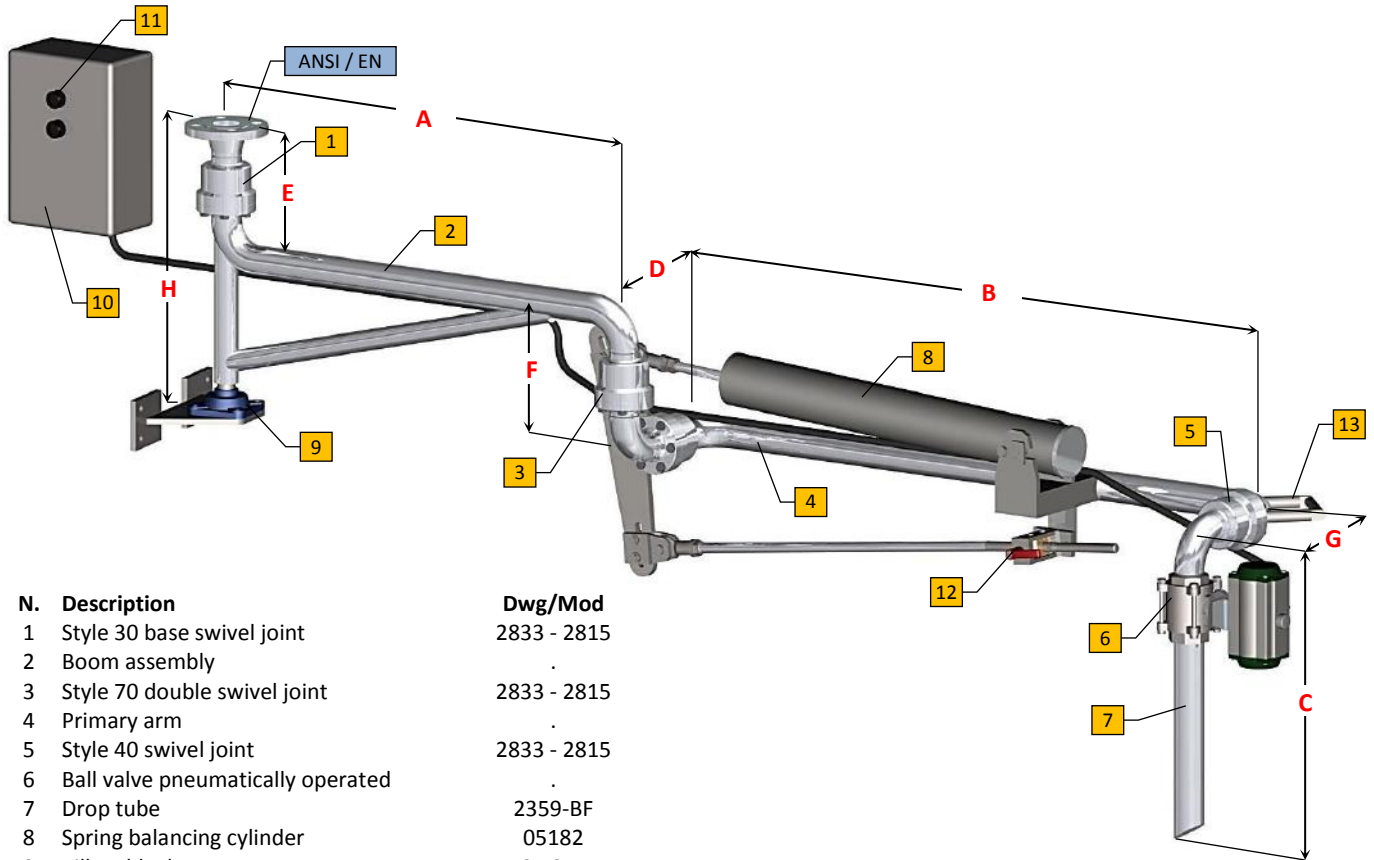
Options

- Pos.7 with anti-spill system
- Electronic level sensor instead pneumatic type
- Double level sensor (pneumatic or electronic)
- Electrically heated or jacketed for hot products
- Insulation
- Standpost C-4928-A / C-4928-B Model
- NDT test (RT-PT-MT) available on request

Demonstration of operating area



Long range top loading arm for IBC and drums 2385-LR



N. Description

- | | |
|----|-----------------------------------|
| 1 | Style 30 base swivel joint |
| 2 | Boom assembly |
| 3 | Style 70 double swivel joint |
| 4 | Primary arm |
| 5 | Style 40 swivel joint |
| 6 | Ball valve pneumatically operated |
| 7 | Drop tube |
| 8 | Spring balancing cylinder |
| 9 | Pillow block |
| 10 | Air logic control |
| 11 | Open/close valve push buttons |
| 12 | Lock down device |
| 13 | Handle |

Dwg/Mod

- | |
|-------------|
| 2833 - 2815 |
| . |
| 2833 - 2815 |
| . |
| 2833 - 2815 |
| . |
| 2359-BF |
| 05182 |
| C-4354 |
| . |
| . |
| 2429 - 4942 |
| . |

Operating Conditions

Design Pressure	10.0 Bar G
Test Pressure	15.0 Bar G
Design Temperature	-15° C / +65° C
Seal Material	PTFE
Flow Rate	1.1/2" – 10 mc/h Max 2" – 30 mc/h Max

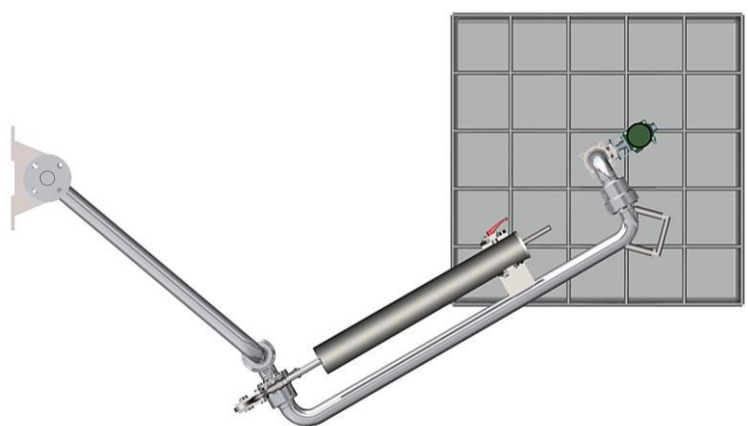
Standard Dimensions

Dn.	1.1/2"	2"
A	800/1200	800/1200
B	1000/1400	1000/1400
C	500/800	500/800
D	244	285
E	249	273
F	244	285
G	244	285
H	500	600
Weight	80	100

Options

- Microswitch to signal valve opened/closed
- Vapour return line with suction cover, flexible hose and flange connection to the pipeline
- Overfill level sensor installed on suction cover
- Check valve
- Locking device arm turned in parking position
- Standpost or flange fixing bracket
- NDT test (LT-PL-MT) available on request

Demonstration of operating area

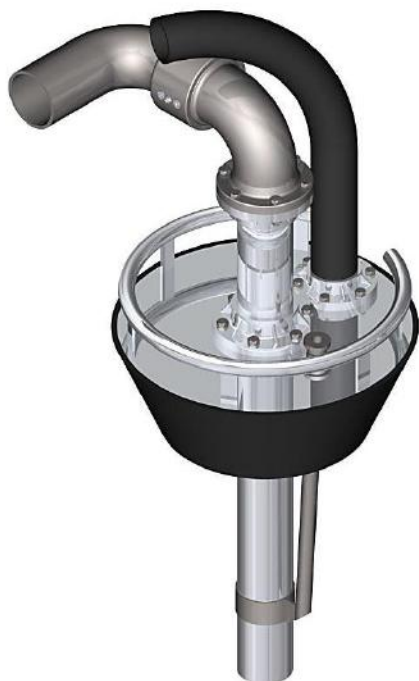


Notes

- This loading arm can also be supplied in AISI 316-L S.S. complete construction, realized with Model 2833/SS swivels

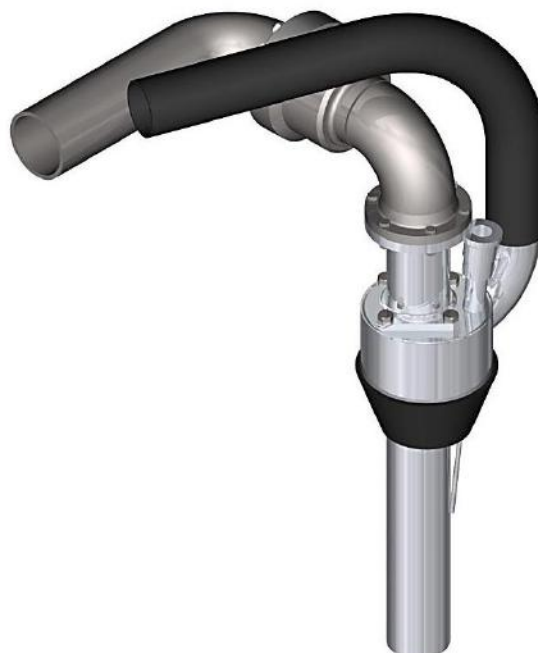


Vapour recovery systems for top loading arms



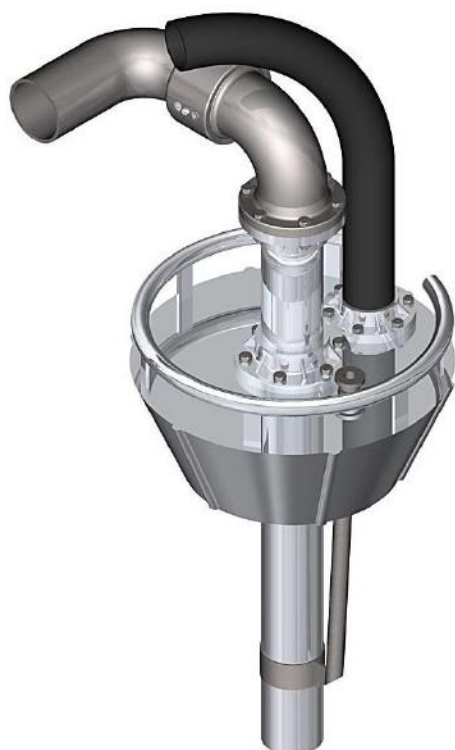
**Standard vapour recovery cone
for closed system loading**

Pg 49



**Special vapour recovery cone
for closed system loading**

Pg 49



**Smoke suction cone with
spacer for air passage**

Pg 50



Smoke suction cover

Pg 50

Vapour recovery cone for closed system loading



The vapour/smoke recovery devices used by OMC for some models of top loading arms, are designed to avoid the dispersion in the ambient of the vapors produced during the loading, which can cause air pollution and danger to the health and safety of the operators. These vapours/smoke, are conveyed in a piping fitted along the top loading arm, that it is connected with a flange at the primary pipeline.

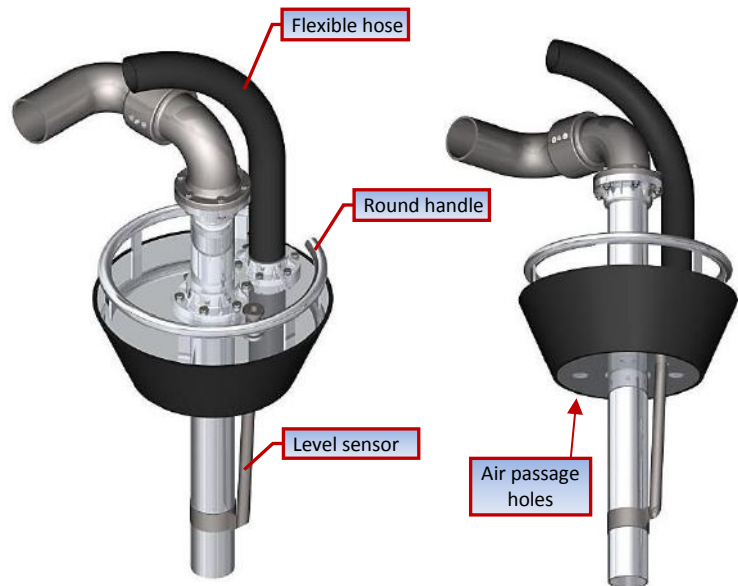
Vapour recovery cone

Standard cone outside diameter min / max 400x600mm, for hermetic closure of manhole standard sized. The continuous pushing of the covered conical surface of the cone on the manhole, grant a good percentage of recovered vapour. It is equipped with holes on the lower base for vapour passage in the cone and a flange for the connection of the flexible line dedicated to their disposal. On the cone can also be installed the following accessories:

- Level sensor (Pneumatic or electronic type) (double level sensor can be installed)
- Check valve on vapour phase
- Round handle for an easy manoeuvrability of the drop tube of the arm.

Materials:

- Aluminium (for Hydrocarbons), Stainless Steel (for Chemicals)
- Synthetic Rubber covering



Special vapour recovery cone

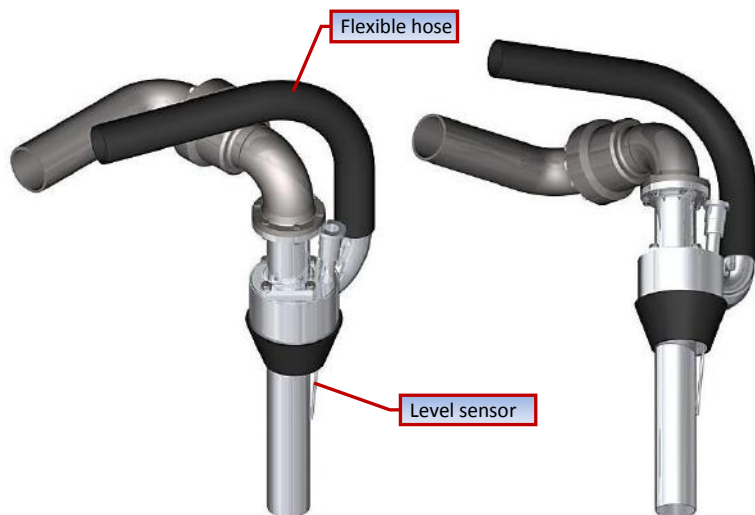
Special cone with reduced outside diameter (to be defined accordingly to the manhole diameter), for hermetic closure of small manhole. The continuous pushing of the covered conical surface of the cone on the manhole, grant a good percentage of recovered vapour. It is open on the lower base for vapour passage in the cone and it is equipped with a flange for the connection of the flexible line dedicated to their disposal.

On the cone can also be installed the following accessories:

- Level sensor (Pneumatic or electronic type) (double level sensor can be installed if the cone dimension is big enough)
- Check valve on vapour phase
- Handle for an easy manoeuvrability of the drop tube of the arm.

Materials:

- Aluminium (for Hydrocarbons), Stainless Steel (for Chemicals)
- Synthetic Rubber covering





Smoke suction devices

Smoke recovery cone with spacer for air passage

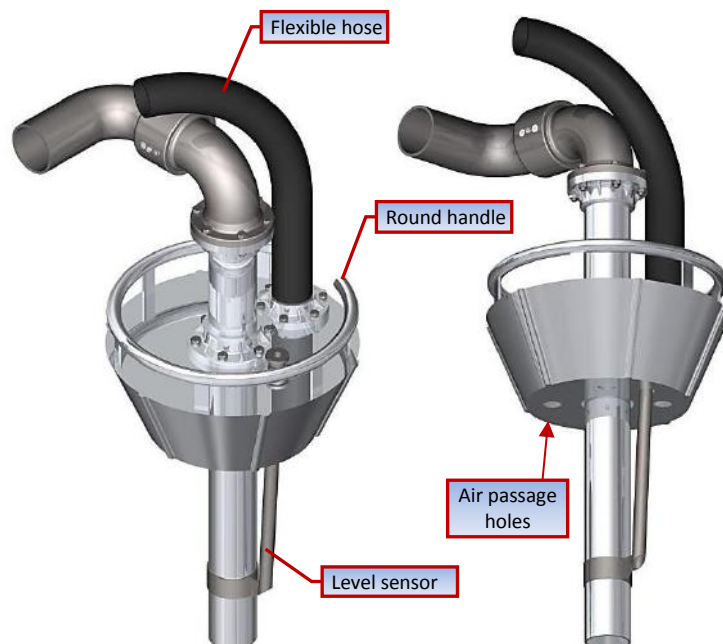
Standard cone outside diameter min / max 400x600mm, for insertion on manhole standard sized. The smoke recovery is guaranteed by higher suction in respect to the quantity of the loaded product, that will be compensated by the air input from the external through the free space between cone and manhole. It is equipped with holes on the lower base for smoke passage in the cone and a flange.

On the cone can also be installed the following accessories:

- Level sensor (Pneumatic or electronic type) (double level sensor can be installed)
- Round handle for an easy manoeuvrability of the drop tube of the arm.

Materials:

Aluminium (for hot products)



Smoke recovery cover with rubber disc

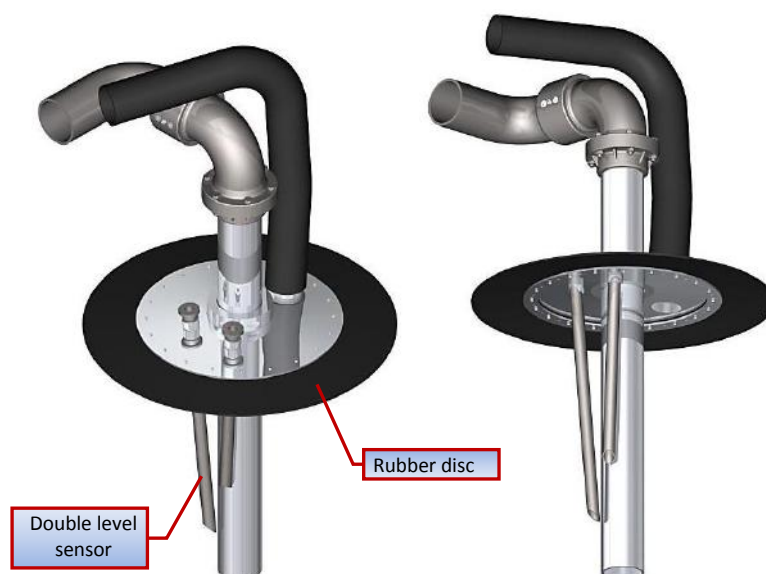
Smoke suction cover for manhole standard size complete covering. The smoke recovery will be guaranteed by an equal suction in respect to the quantity of the loaded product, with the seal disc in touch with the manhole. It is equipped with a shank for the connection of the flexible line dedicated to their disposal

On the smoke suction cover can also be installed the following accessories:

- Level sensor (Pneumatic or electronic type) (double level sensor can be installed)

Materials:

Aluminium (for hot products)



API couplers



C-3659
Pg 52



C-3659-CV
Pg 53



C-3682
Pg 54

Check valves and various valves



C-4222
Pg 55



504
Pg 56



2141
Pg 57



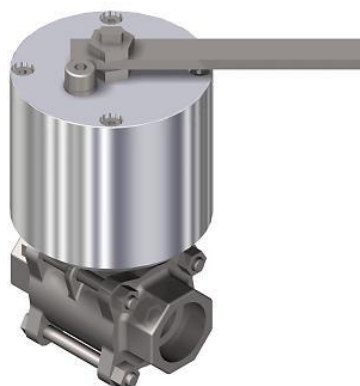
2289
Pg 58



2904
Pg 59



Vacuum breakers
Pg 60



4772
Pg 61



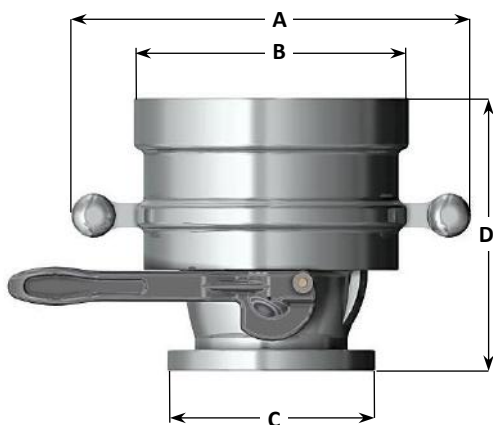
C-4871
Pg 62



Dry-disconnect coupling API RP1004 for liquid phase C-3659

Operating Conditions

Design Pressure 10.0 Bar G
Design Temperature -40° C / +65° C
Seal Material VITON
Special VITON
Flow Rate 4"– 150 mc/h Max

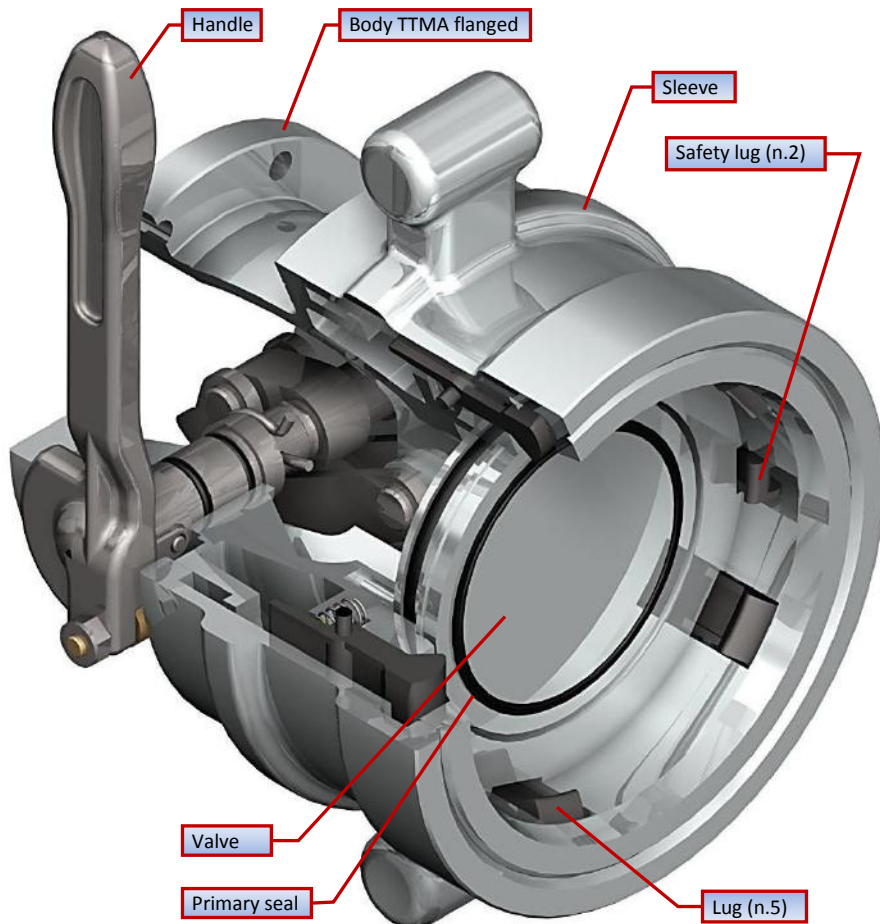


Standard Dimensions

Dn.	A	B	C	D	Weight
4"	327	225	T.T.M.A. ø170	224	10.0 Kg

Options

- EEx-ia proximity switch to signal coupler correctly connected (see **accessories**).
- Parking position adapter (see **accessories**).
- Dust cup



Coupler C-3659 in closed position



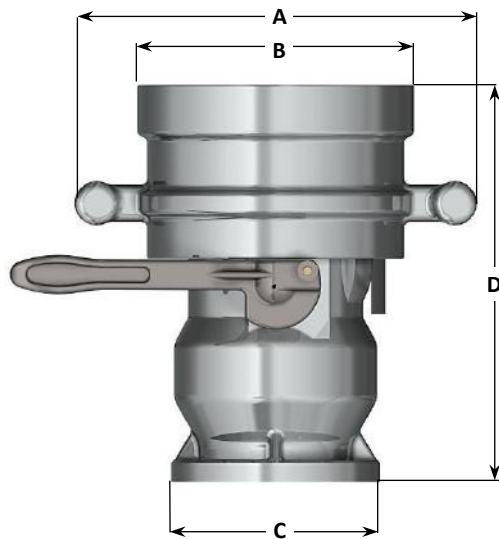
Coupler C-3659 in opened position

Dry-disconnect coupling API RP1004 for liquid phase with check valve C-3659-CV



Operating Conditions

Design Pressure	10.0 Bar G
Design Temperature	-40° C / +65° C
Seal Material	VITON
Flow Rate	Special VITON 4"– 150 mc/h Max

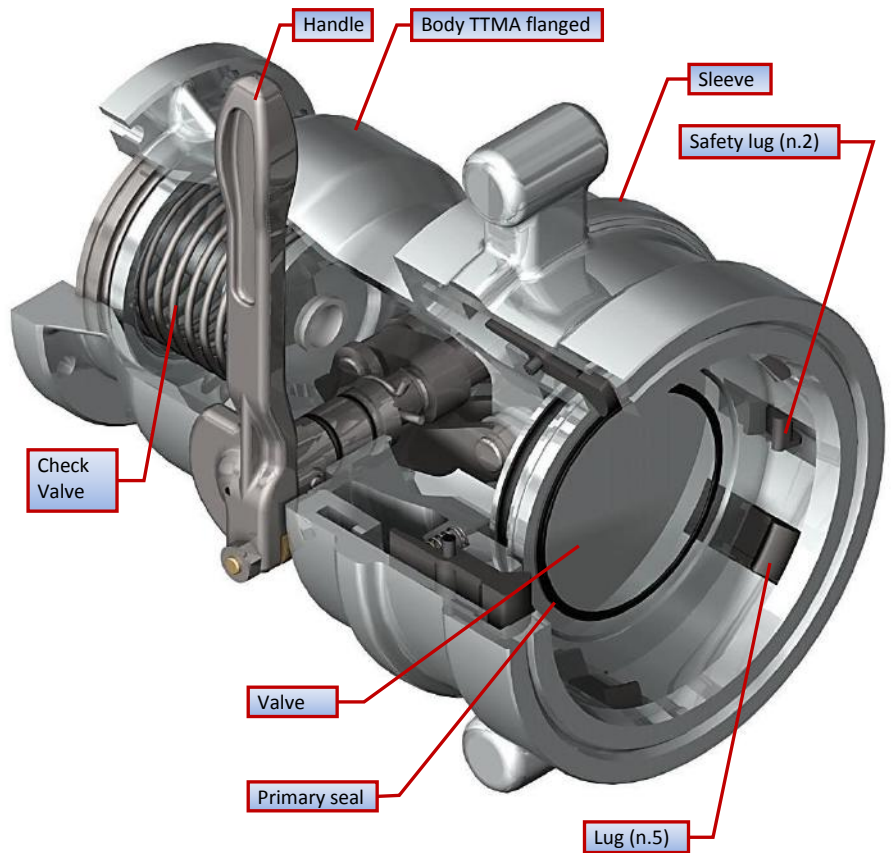


Standard Dimensions

Dn.	A	B	C	D	Weight
4"	327	225	T.T.M.A. ø170	322	12.0 Kg

Options

- EEx-ia proximity switch to signal coupler correctly connected (see **accessories**).
- Parking position adapter (see **accessories**).
- Dust cup



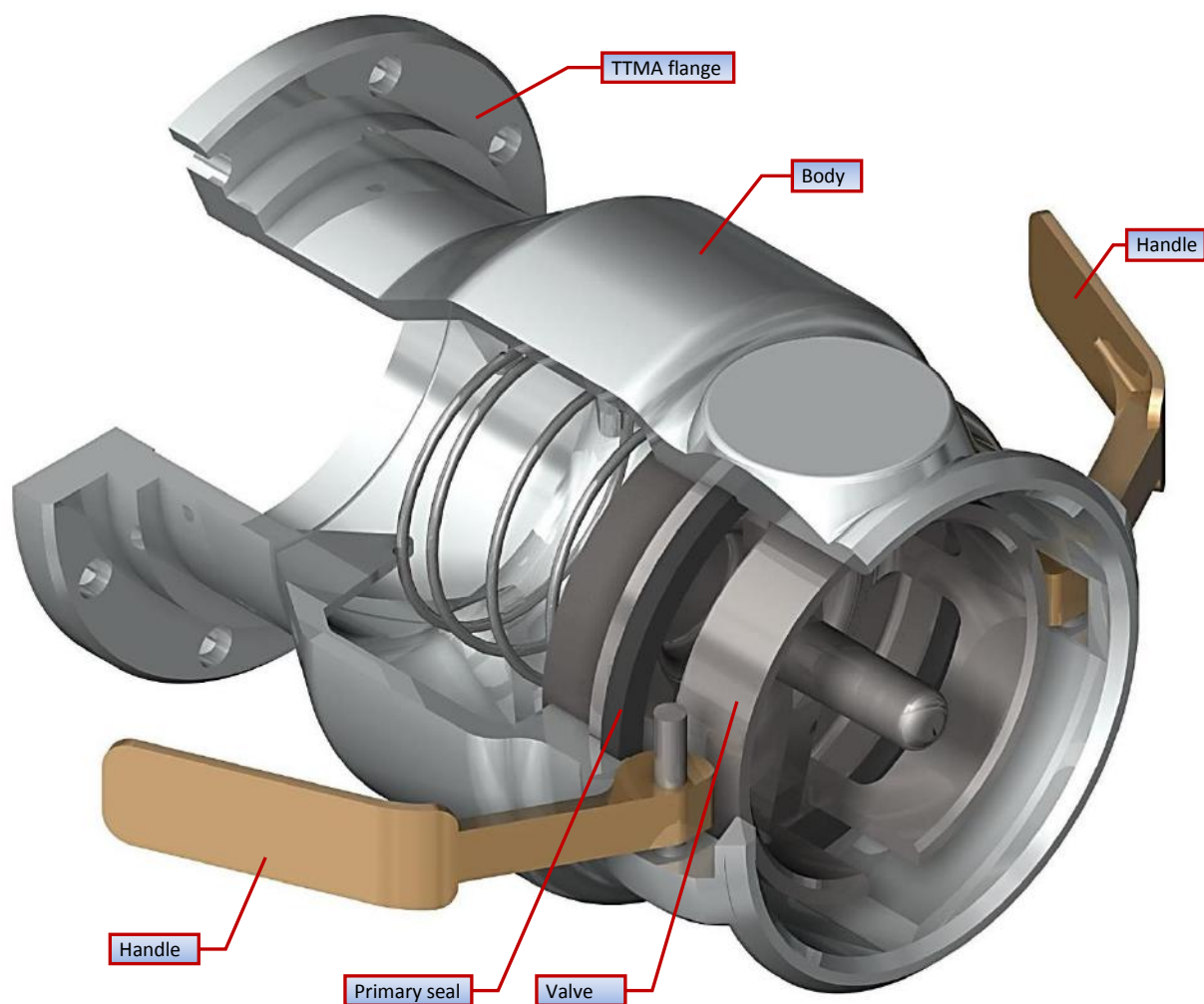
Coupler C-3659-CV in closed position



Coupler C-3659-CV in opened position



API RP1004 coupler for vapour phase C-3682



Operating Conditions

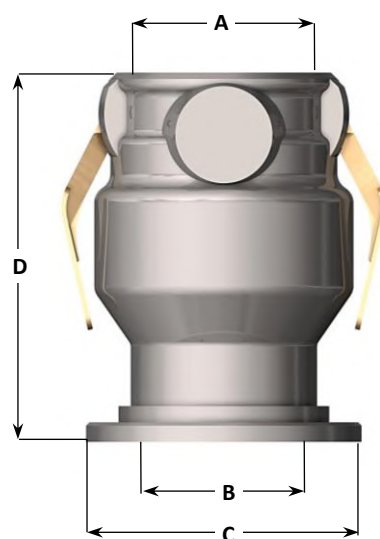
Design Pressure	1.0 Bar G
Design Temperature	-40° C / +65° C
Seal Material	VITON

Options

- EEx-ia proximity switch to signal coupler correctly connected (see **accessories**).
- Parking position adapter (see **accessories**).

Notes

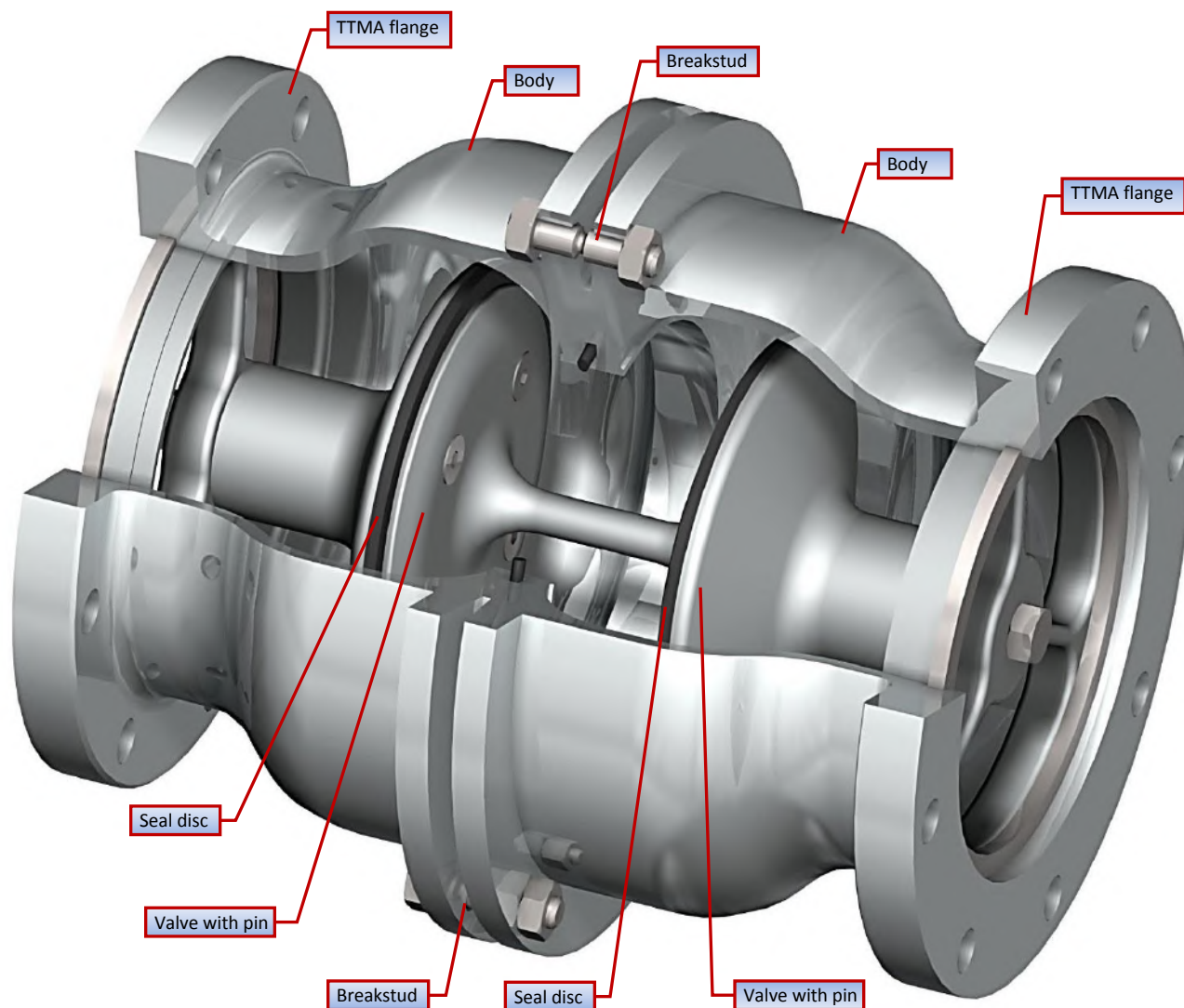
- T.T.M.A. flange standard connection. Other connections available on request



Standard Dimensions

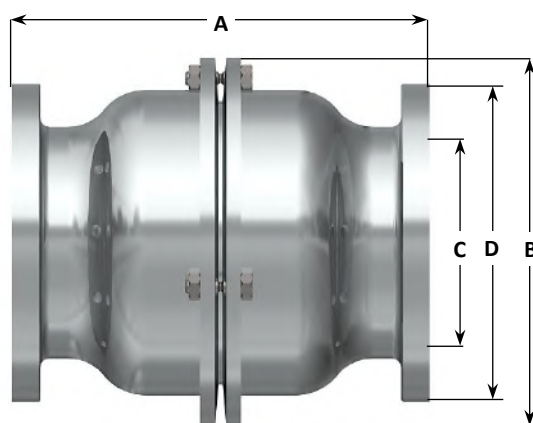
Dn.	A	B	C	D	Weight
4"	120	102	T.T.M.A. ø170	215	3.8 Kg

Safety breakaway coupling C-4222



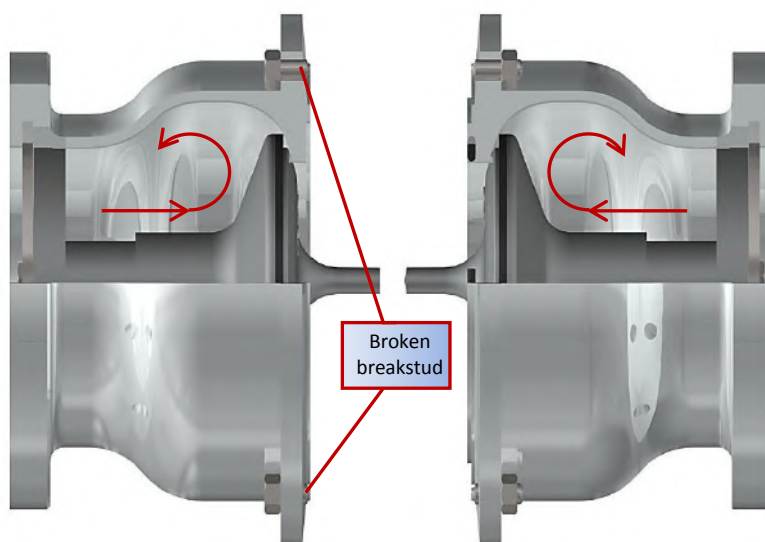
Operating Conditions

Design Pressure 10.0 Bar G
Design Temperature -40° C / +65° C
Seal Material VITON



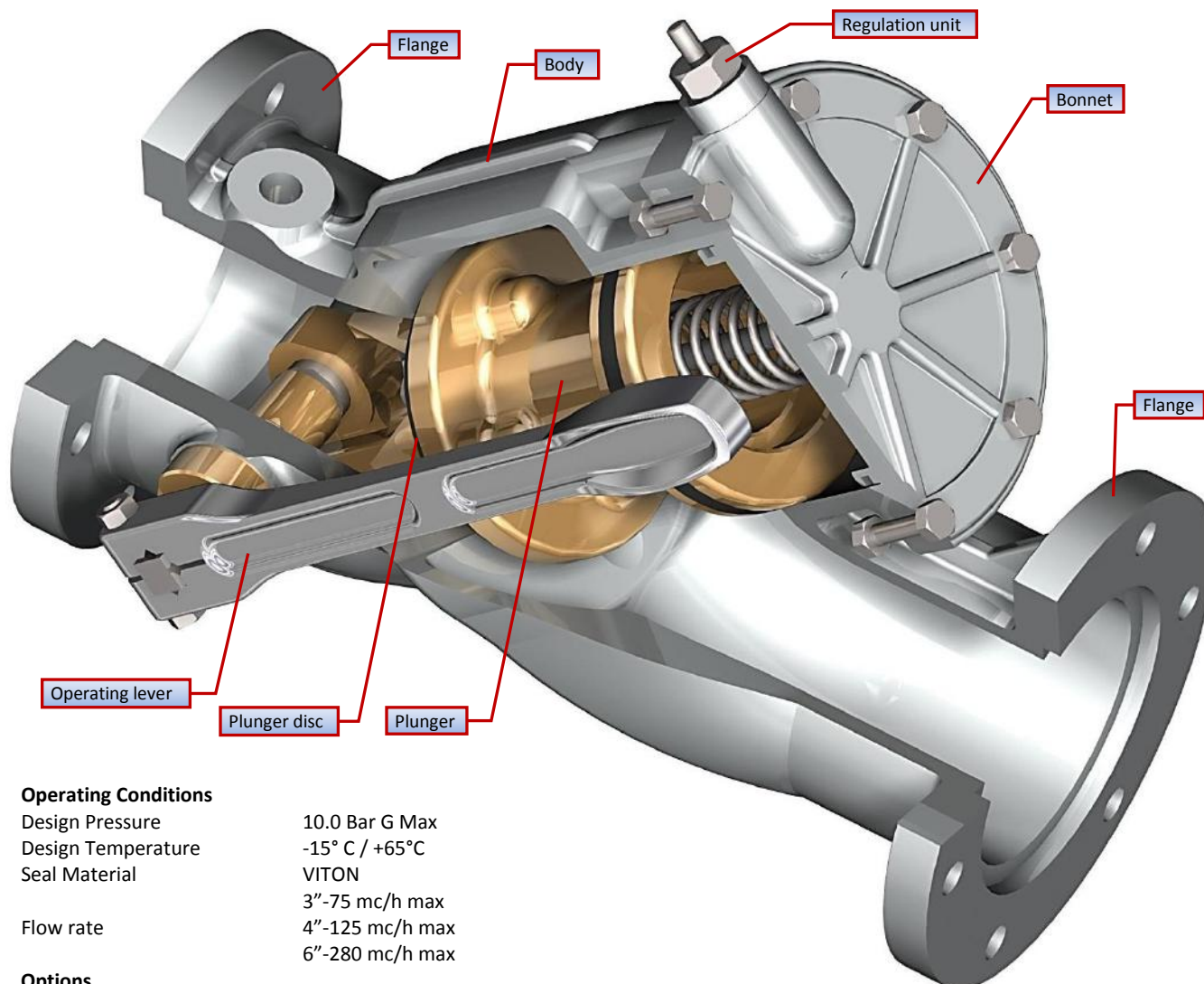
Standard Dimensions

Dn.	A	B	C	D	Weight
4"	224	198	102	T.T.M.A. ø170	4.8 Kg





Loading valve 504



Operating Conditions

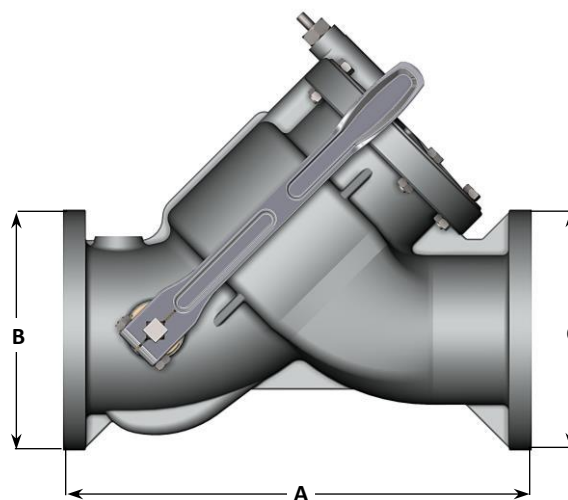
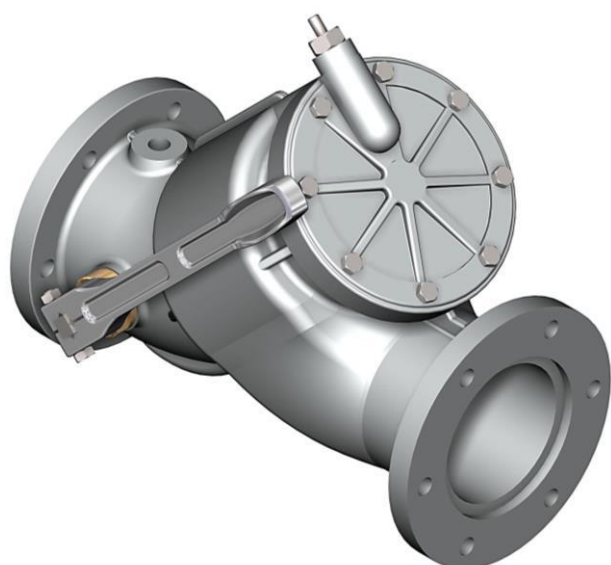
Design Pressure	10.0 Bar G Max
Design Temperature	-15° C / +65° C
Seal Material	VITON
Flow rate	3"-75 mc/h max 4"-125 mc/h max 6"-280 mc/h max

Options

- EEx-d microswitch to signal valve opened /closed (see accessories).

Notes

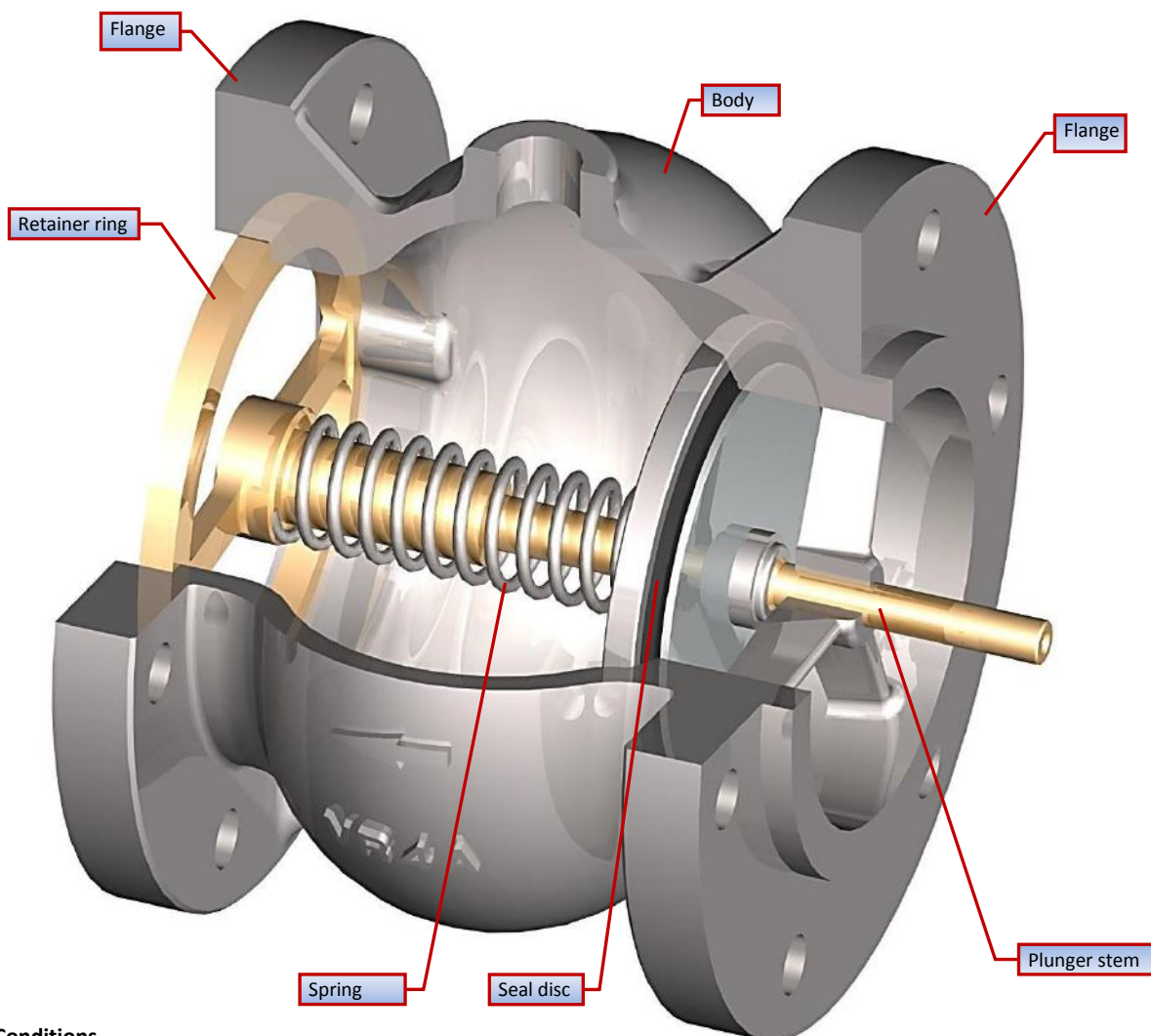
- (*) T.T.M.A. flanges is available on request



Dimensioni Standard

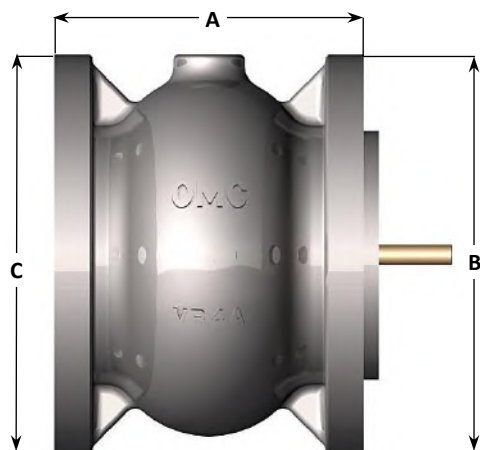
Dn.	A	B *	C *	Weight
3"	340	154	154	10.0 Kg
4"	370	190	190	15.0 Kg
6"	470	233	233	28.0 Kg

Straight check valve 2141



Operating Conditions

Design Pressure 10.0 Bar G
Design Temperature -15° C / +65° C
Seal Material VITON
BUNA N

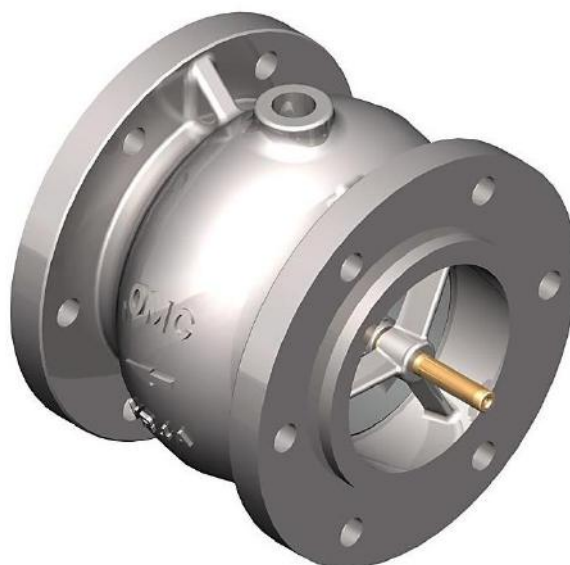


Standard Dimensions

Dn.	A	B (*)	C (*)	Weight
3"	114	154	154	2.5 Kg
4"	147	175	175 / 190	4.0 Kg
6"	184	233	233	6.5 Kg

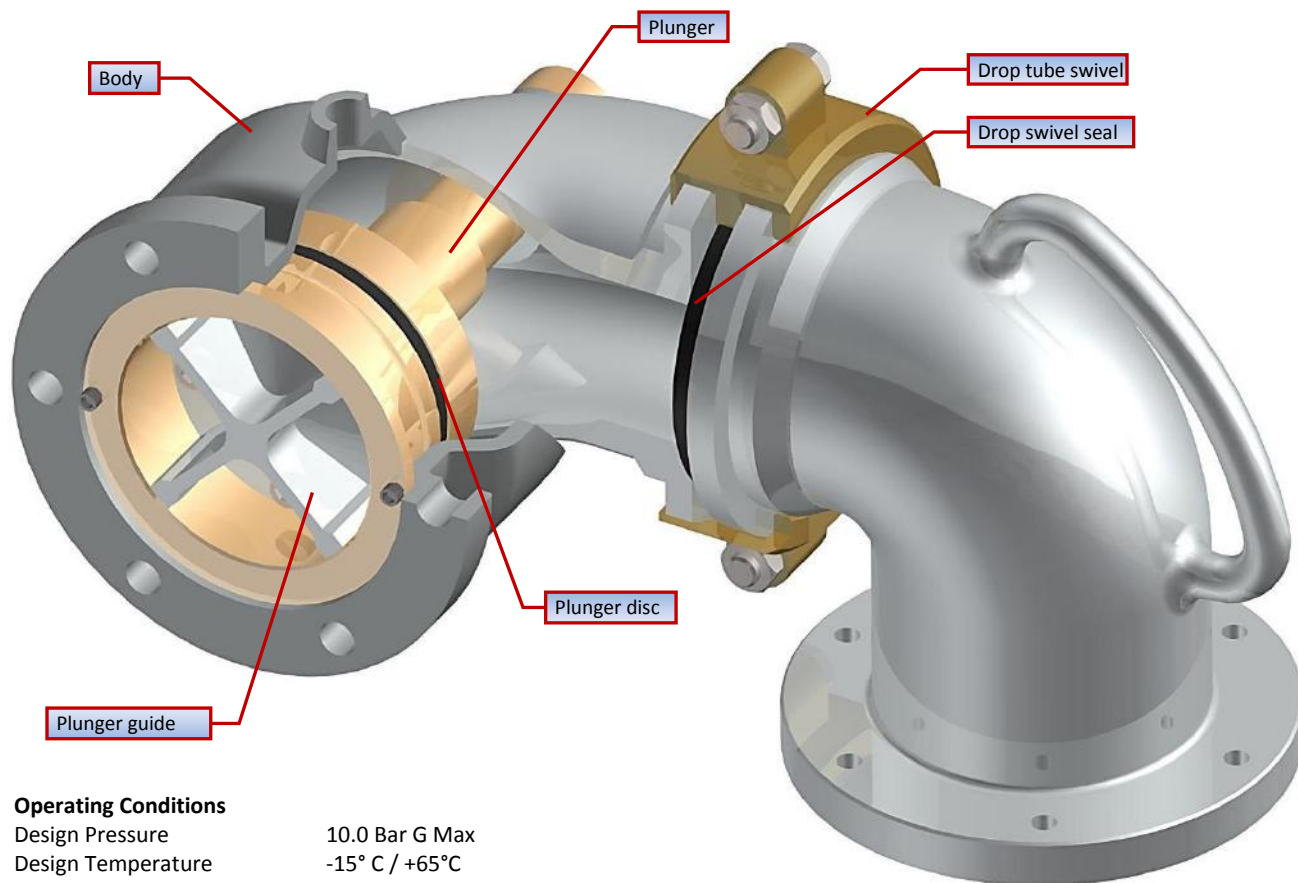
Notes

- (*) T.T.M.A. flanges is available on request





Check valve with drop tube 2289

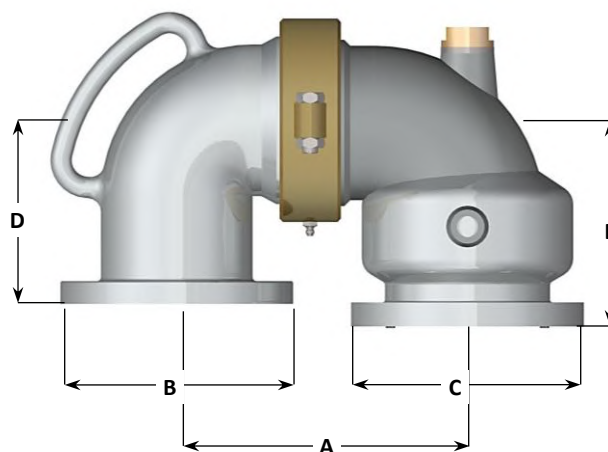
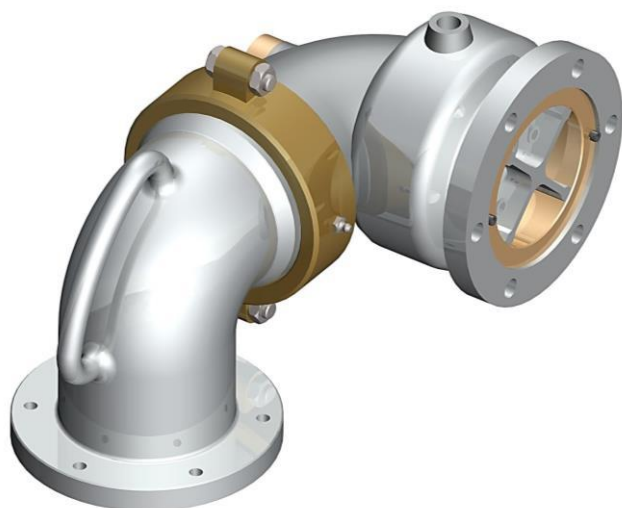


Operating Conditions

Design Pressure	10.0 Bar G Max
Design Temperature	-15° C / +65°C
Seal Material	VITON Buna N
Flow rate	3"-75 mc/h max 4"-125 mc/h max

Notes

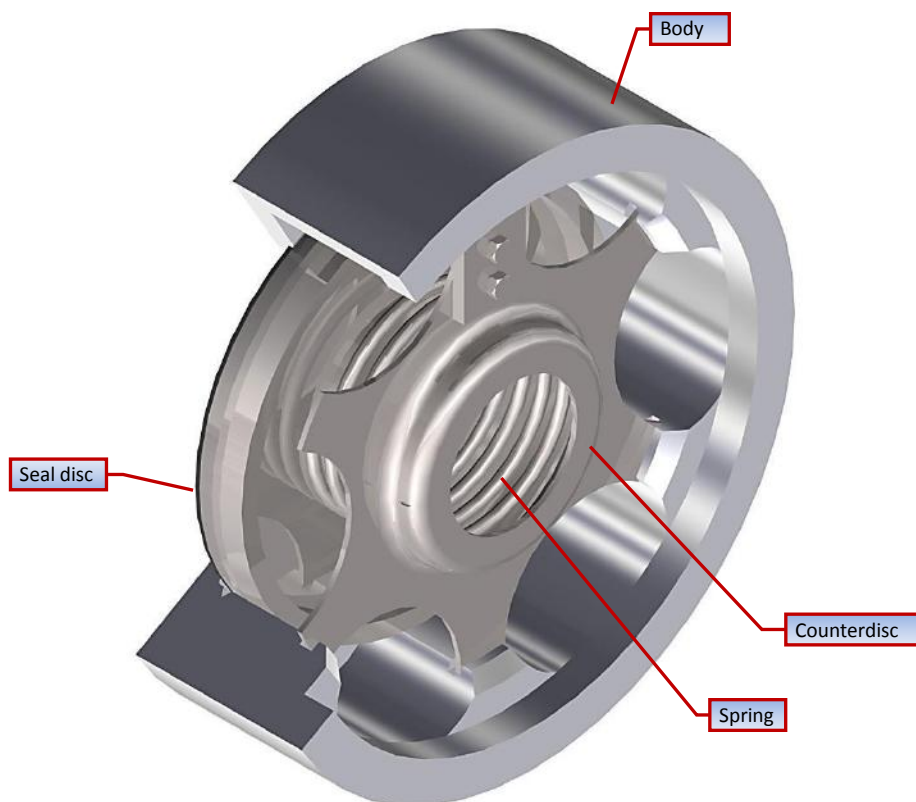
- (*) T.T.M.A. flanges is available on request



Dimensioni Standard

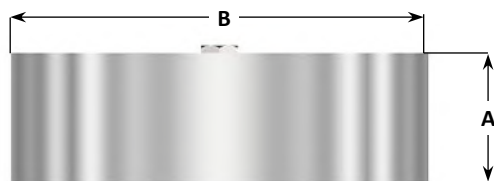
Dn.	A	B *	C *	D	E	Weight
3"	190	128	154	128	140	10.0 Kg
4"	220	159	175	138	150	15.0 Kg

Check valve for vapour 2904



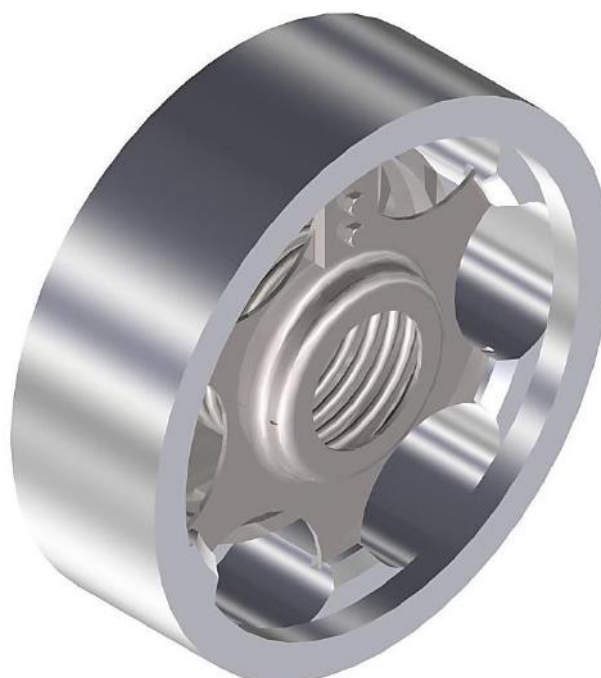
Operating Conditions

Design Pressure 35 mBar G min
 Design Temperature -15° C / +65°C
 Seal Material VITON
 BUNA N



Standard Dimensions

Dn.	A	B
3"	43	118
4"	43	136

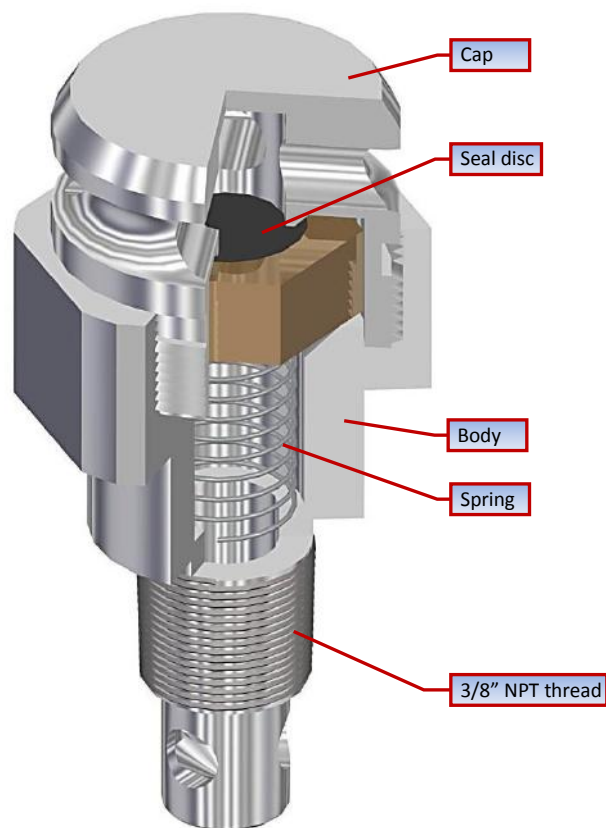




Vacuum breakers 2336 / 2361

Vacuum breaker is designed by OMC to permit the complete drainage of the product after the valve from the top loading arm, at the end of the loading. It is standard for OMC top loaders.

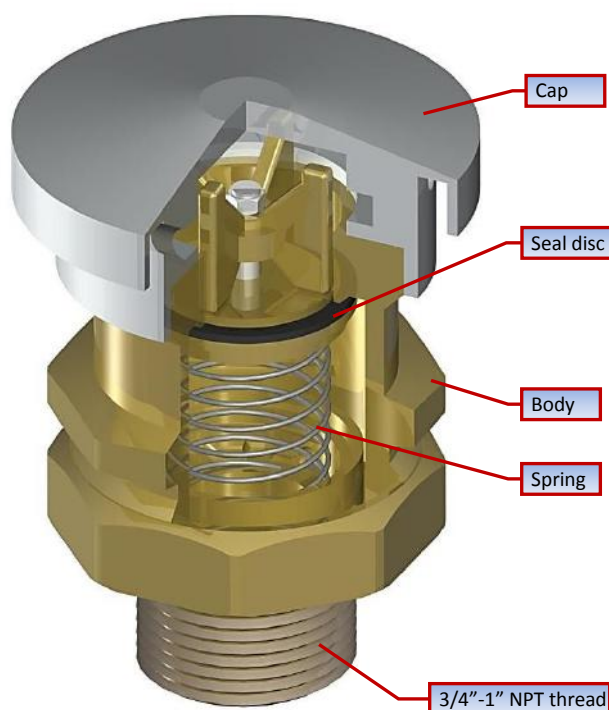
- **2336** NI-platted brass construction - suitable for Hydrocarbons
- **2336** AISI 316-L construction - suitable for Chemicals



Operating Conditions

Diameter	3/8" NPT thread
Design Pressure	10 Bar G
Vacuum for opening	57 mbar (30mbar on special request)
Seal Material	VITON (Brass) – VITON / Kalrez (AISI 316-L)

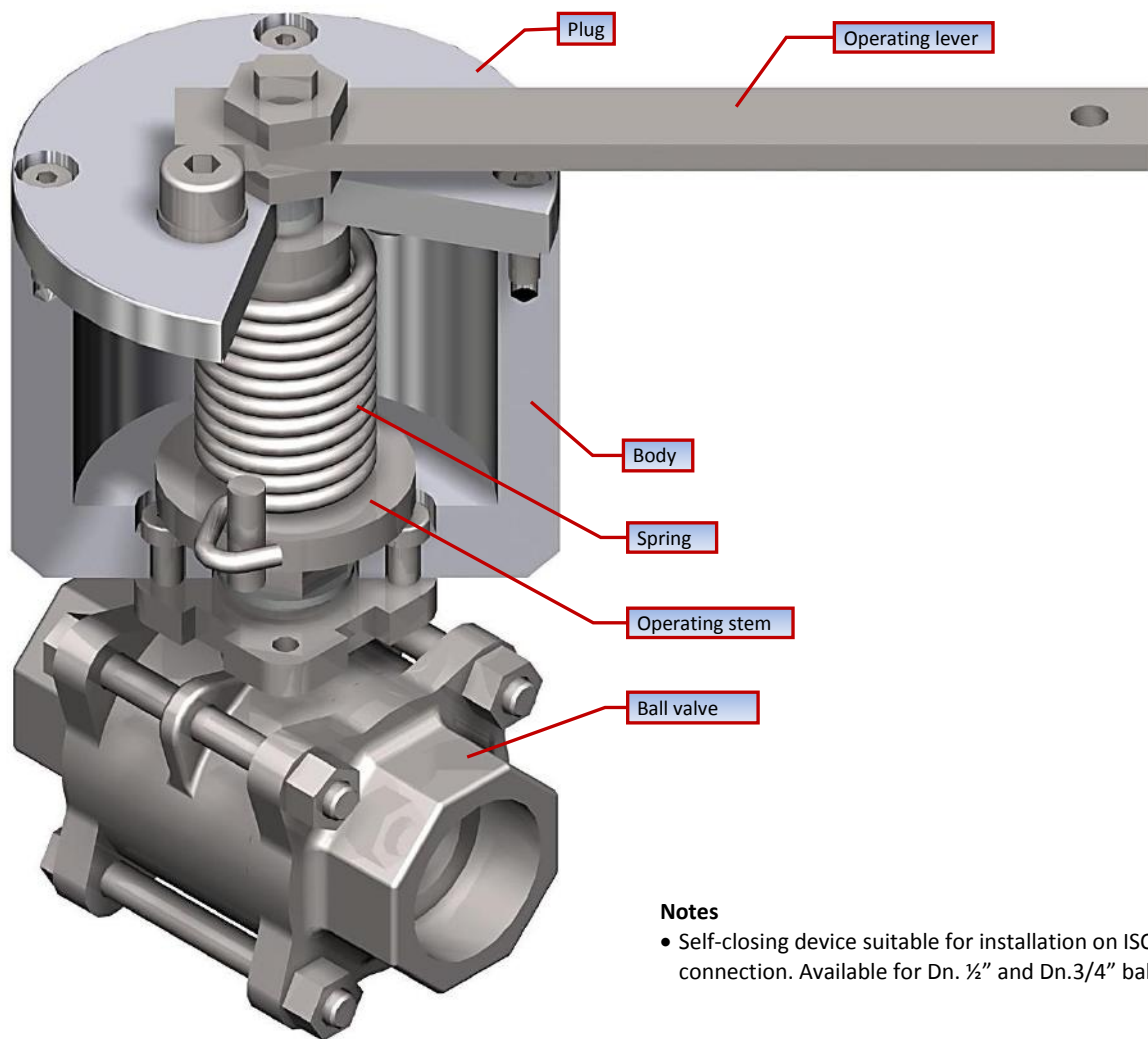
- **2361** NI-platted brass/aluminium construction - suitable for Hydrocarbons



Operating Conditions

Diameter	3/4" – 1" NPT thread
Design Pressure	10 Bar G
Vacuum for opening	20 mbar
Seal Material	VITON

Self-closing (dead man) vacuum breaker 4772



Notes

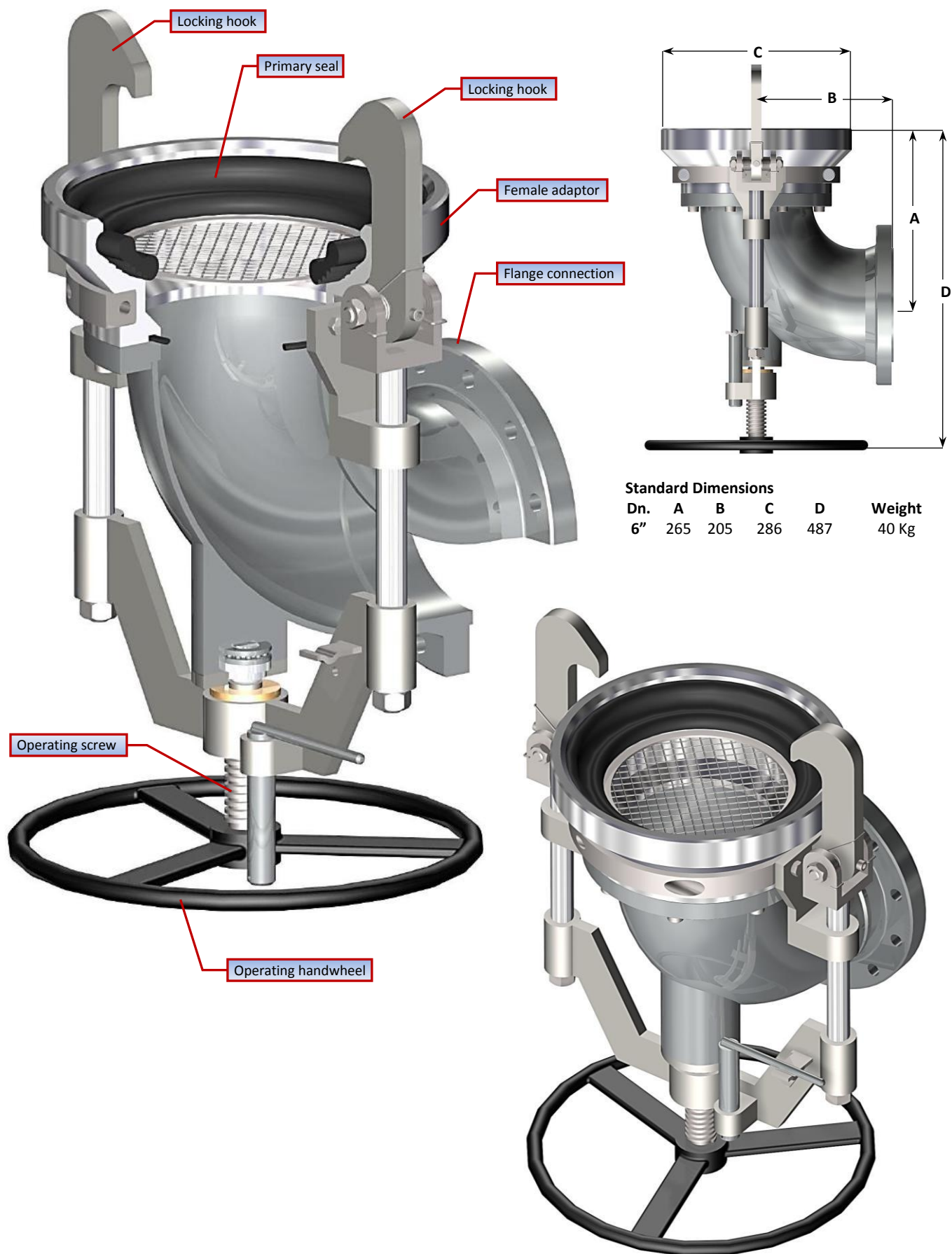
- Self-closing device suitable for installation on ISO 5211 connection. Available for Dn. ½" and Dn.3/4" ball valves





Coupler for Russian railcar unloading

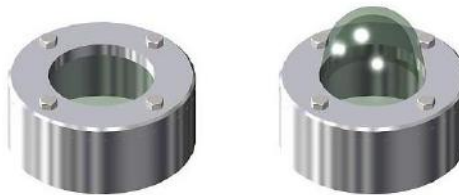
4871



Accessories



Locking devices for API couplers
Pg 64



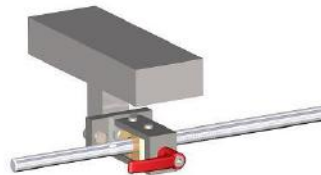
2424 model sight glass
Pg 65



Drip buckets
Pg 65



2429 model lock down device
Pg 65



4942 model locking device
Pg 65



4659 model counterweight press down
Pg 65



05182 model balancing unit
Pg 65



4517 model telescopic drop tube device
Pg 66



2453 model flexible hose for closed system loading
Pg 67



Support units
Pg 67



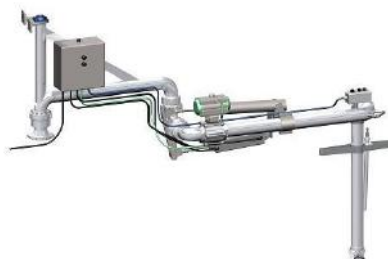
Arms position signals
Pg 68



Signal for valve status
Pg 69



Overfilling signal
Pg 70



Pneumatic control device
Pg 71



Folding stairs
Pg 72



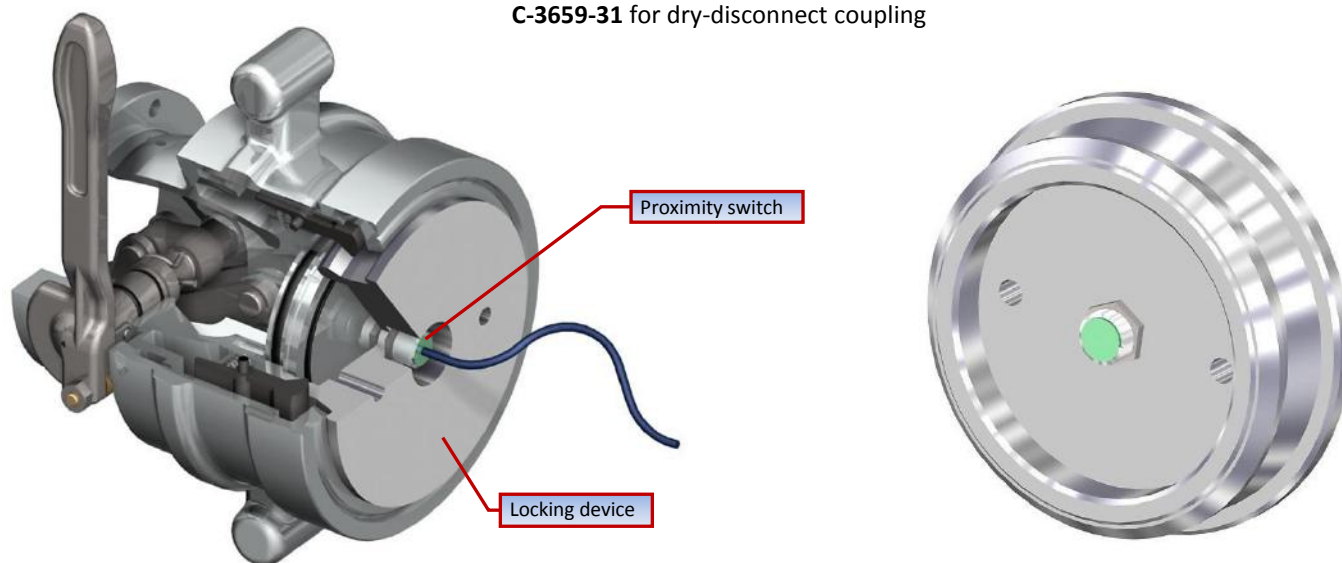
Accessories for API RP1004 couplers

Locking devices

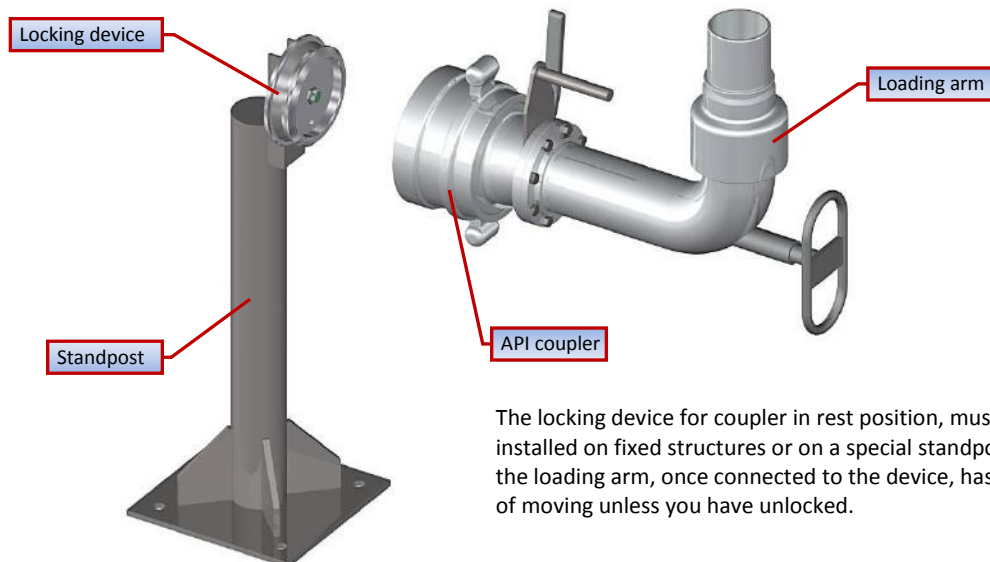
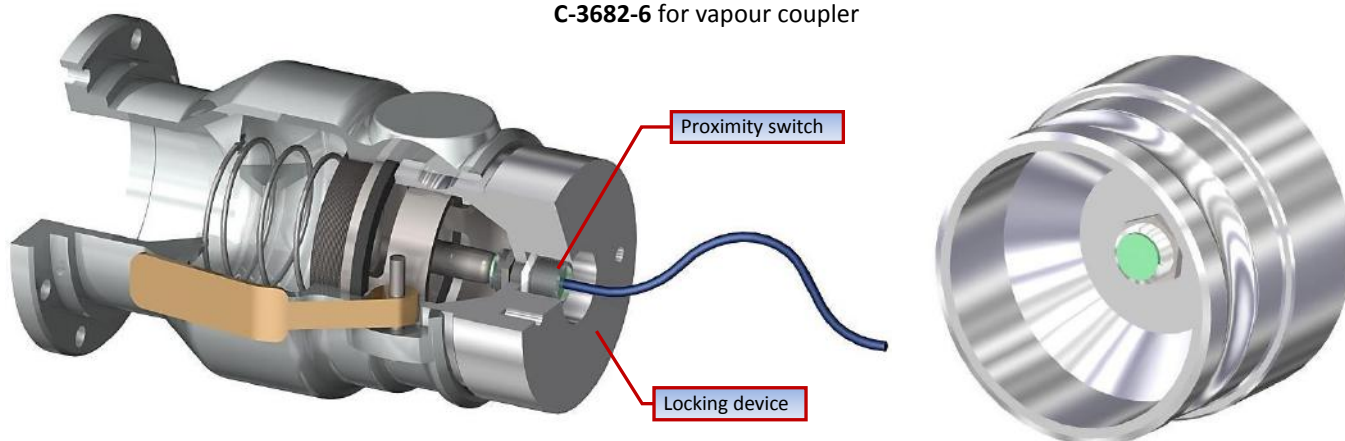
Locking device arm in parking position for couplers

Locking device for liquid and vapour API RP 1004 couplers, are designed by OMC to lock the valve in rest position and consequently also the arm will be locked in turned parking position. On request, can be equipped with proximity switch to signal coupler correctly connected and arm in rest position.

C-3659-31 for dry-disconnect coupling



C-3682-6 for vapour coupler

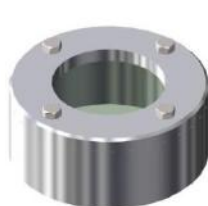


The locking device for coupler in rest position, must be installed on fixed structures or on a special standpost, so that the loading arm, once connected to the device, has no chance of moving unless you have unlocked.

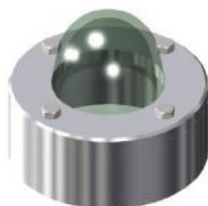
2424 Model sight glass

The sight glass can be welded near the loading valve (or check valve) inlet, to verify that the arm is in wet condition.

Material: Polycarbonate with aluminium or steel body



2424 Model
with flat glass



2424 Model
with domed glass



2410 Model
with hooks



2408 Model
with nipper

Drip buckets

The drip bucket is applied at the end of the drop tube when the loading is completed, to avoid fluid dripping.

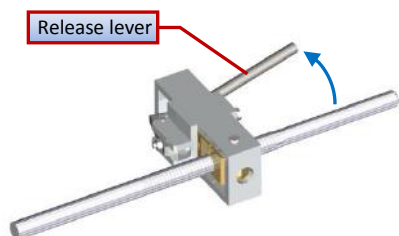
It is available with nipper (2408) or with hooks (2410).

Locking devices arm in working position

The locking devices for arm in working position are installed on top loading arms to keep the arm with the drop tube constantly lowered inserted into the manhole. They counteract the upward reaction of the pressure of the product while it is loaded into the tank. These systems are particularly suitable for installation on loading arms where there is no pneumatic system, with which you can realize a different system with continuous pneumatic pressure on the manhole. They provide pressure on the manhole, thus ensuring a continuous sealing, in order to have the best condition for vapour recovery.

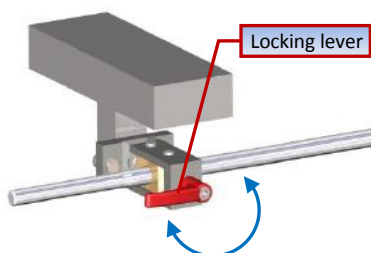
2429 Model

This locking device for the arm in working position is automatically activated by lowering the arm it prevents it from raising, but lets it to fall down. In order to raise the arm you have to unlock the device using the appropriate release lever.



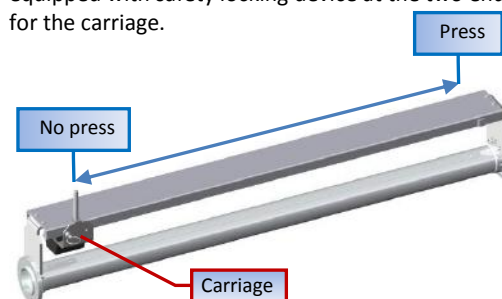
4942 Model

This locking device for the arm in working position is manually operated through the control lever, which locks the arm in the required position by screwing in it. In order to release the device, unscrew the lever and release the arm.



4659 Model

This locking device for the arm in working position is installed along the primary arm and is composed by a carriage with a sliding counterweight on rails, which is moved by the operator when the arm is in loading position to ensure the pressure of the cone on the manhole of the tank. This device is also equipped with safety locking device at the two ends for the carriage.

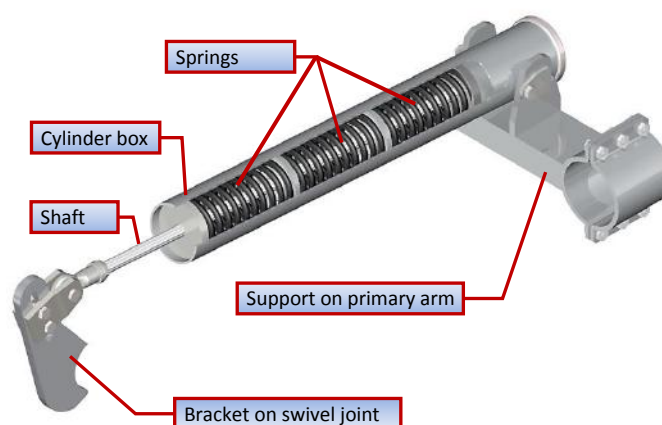


05182 Model balancing cylinder

The spring balancing cylinder Model 05182 is the standard balancing unit installed on OMC loading arms. It can keep the load arm balanced with variation of the vertical angle of 100° and more (e.g. +80°/-20° horizontally, depending on the loading arm model). This reliable unit is designed with particular care to operator's safety and has the characteristic to have a limited rear encumbrance. It is fitted with proper compression springs, closed into a cylindrical box, that can be selected according to the weight to be balanced and the required vertical working area. According to these requirements, the following models are available.

- **(L)** - Low
- **(M)** - Medium
- **(S)** - Strong
- **(XS)** - Extra Strong.

This is a maintenance-free unit and the compression springs are not replaceable because they are strongly compressed and not removable. However, spring tension regulation and working angle adjustments are possible.

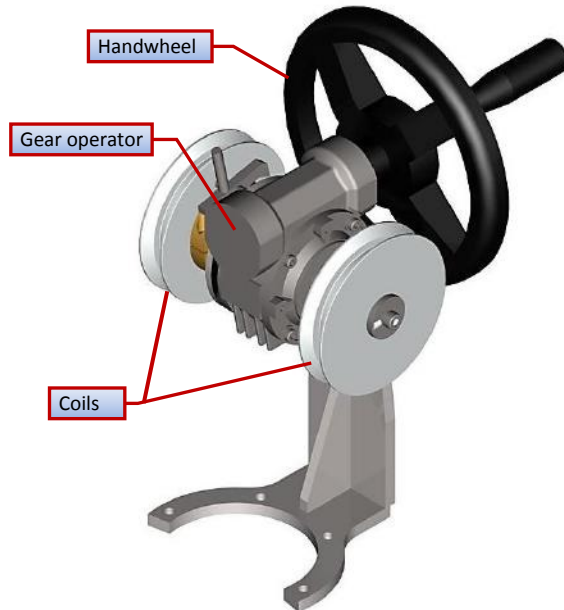




Accessories

4517 Model telescopic drop tube driving device

Current safety regulations and increasing demand for top loading arms with vapour recovery systems having the drop tube in contact with the bottom of the tank, has lead OMC to design a special drop tube driving device in order to reduce the "splashing". By acting on the driving device, it is possible to control the extension/shortening of the drop tube. This is the right compromise between manoeuvrability and the keeping the contact with the tank bottom. This driving device works with a handwheel that rolls the two cables into coils and controls the length of the telescopic drop tube. It is available with manual or pneumatic operation.



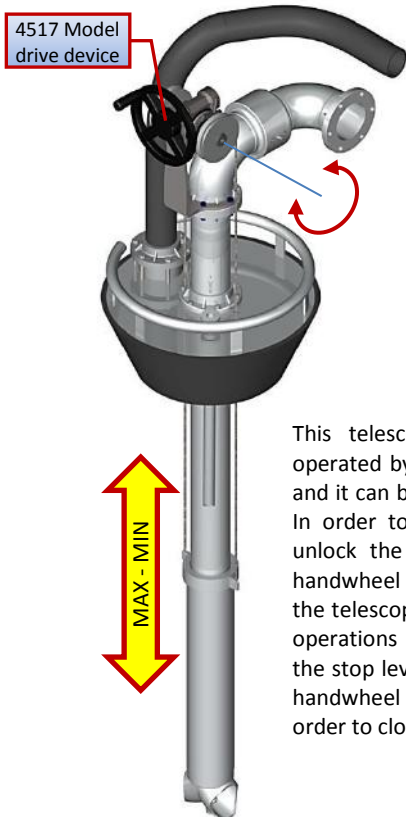
4418 Model telescopic drop tube

The telescopic drop tube is a special vertical tube installed on top loading arms with vapour recovery system, with adjustable length device. This device make it possible to extend/shorten the drop tube. This is a good compromise between easy manoeuvrability and the necessity to touch the bottom of the tank, in order to guarantee a continuous conductive patch.

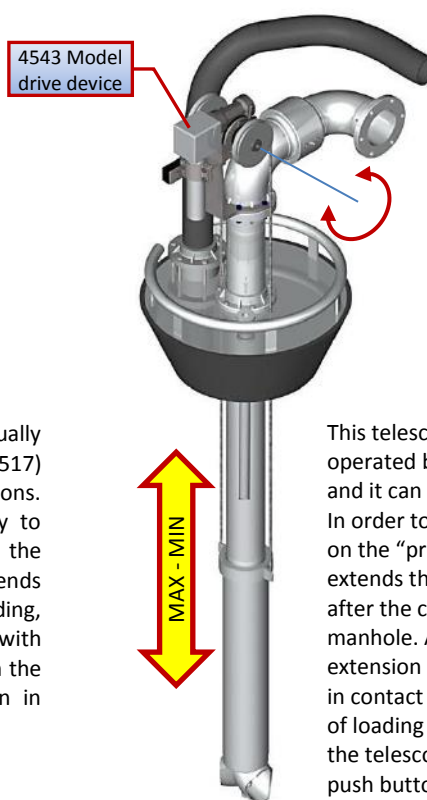
In order to meet Customer's necessities, OMC has designed two different models of telescopic drop tube.

Manual device with handwheel (C-4517)

Pneumatic device with engine (C-4543)



This telescopic drop tube is manually operated by a handwheel device (C-4517) and it can be realized with 2 or 3 sections. In order to extend it, it is necessary to unlock the stop lever, then act on the handwheel that, through 2 ropes, extends the telescopic tube. At the end of loading operations after locking the device with the stop lever, it is sufficient to act on the handwheel on the opposite direction in order to close the telescopic tube.



This telescopic drop tube is pneumatically operated by a pneumatic engine (C-4543) and it can be realized with 2 or 3 sections. In order to extend it, it is necessary to act on the "press-down" push button which extends the telescopic drop tube by 2 ropes after the cone gets in contact with the manhole. A microswitch stops the extension when the end of the drop tube is in contact with the tank bottom. At the end of loading operations, it is sufficient to close the telescopic drop tube acting on the "up" push button.

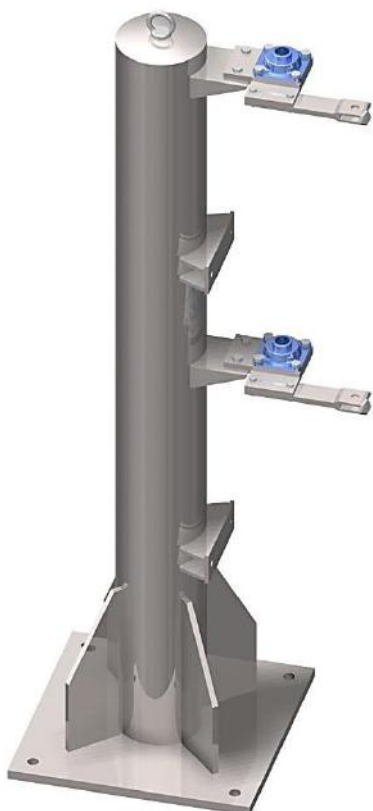
2453 Model Flexible hose for closed loading

It can be installed for top filling of closed vessels with vapour return line.



Support units for loading arms

C-4928-A/B Model support units for long range loading arms



This standpost is recommended when loaders are installed on a gantry where there is no other support structure to be used. It is available in different heights, and it is possible to install maximum 2 loaders on it.

C-4929 / C-4930 Model support units for single range loading arms



This standpost is a support for a single loading arm. It is equipped with an internal line for the product, with inlet and outlet flange (inlet on one side, outlet on the top). This is recommended for the installation of fixed-range loading arms.

It is available in different heights, and it is possible to install only one loader on it.

Support units for long range loading arms – Wall fixing plate



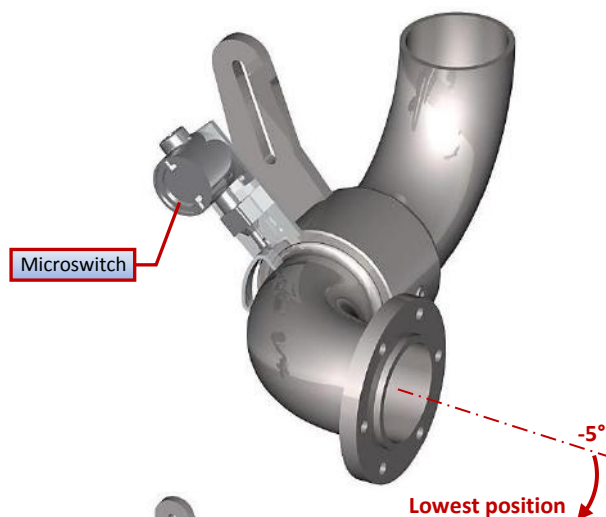
The fixing plate is recommended when loaders are installed on a wall or on the gantry structures. It is available in different heights and it is possible to install maximum 2 loaders on it.

Electrical signal switches

“Arm down” switch for top loaders

It signals the loading arm being in working position (5° under the horizontal) and it prevents loading operations unless the loading arm is in working position. By changing the position of the switch, it is possible to have the signal working when the arm is in upper/parking position.

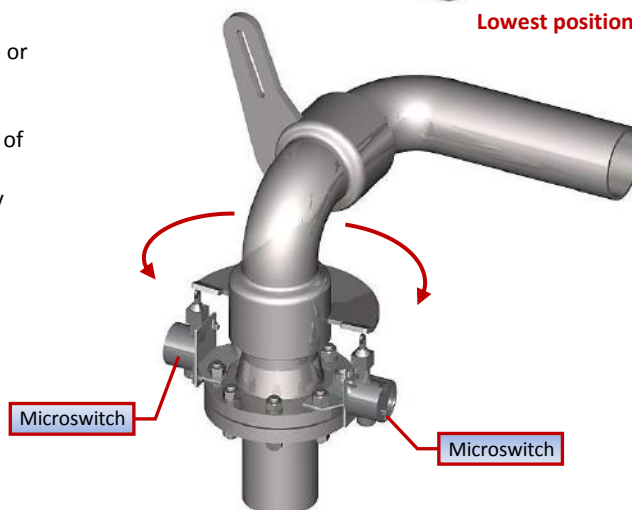
It can be realized with EEx-d microswitches or EEx-ia proximity switches.



Rotational switches

They are used to detect the side of the gantry in use (right or left) or the boom assembly in rest or working position. They may be set varying the position according to the specific necessity. Stop lugs, secured to the swing joint and the fixed flange, restrain the angle of rotation and prevent flexible conduits from twisting.

They can be realized with EEx-d microswitches or EEx-ia proximity switches.



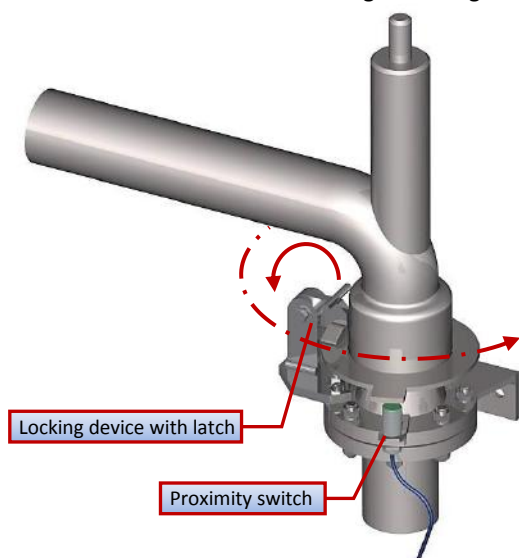
“Arm turned in parking position” signal with locking device

It is used to detect the arm turned in parking position and locked with manually operated mechanical locking device.

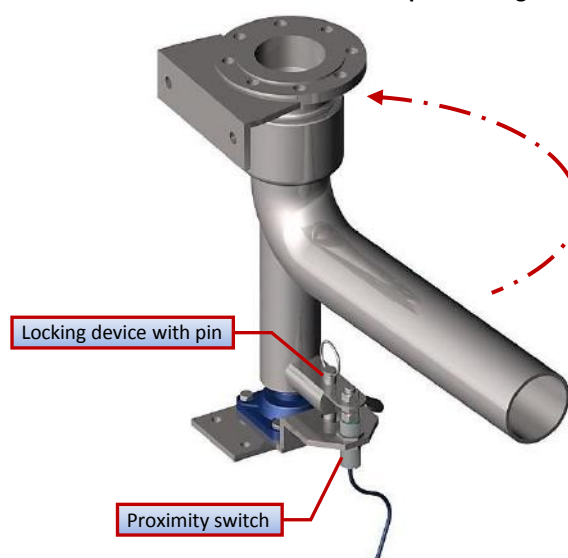
It can be realized with EEx-d microswitches or EEx-ia proximity switches.

According to the conformation of the base swivel of the arm, it can be realized as follows.

C-4662 Model for raising inlet flange



C-4389 Model for drop inlet flange

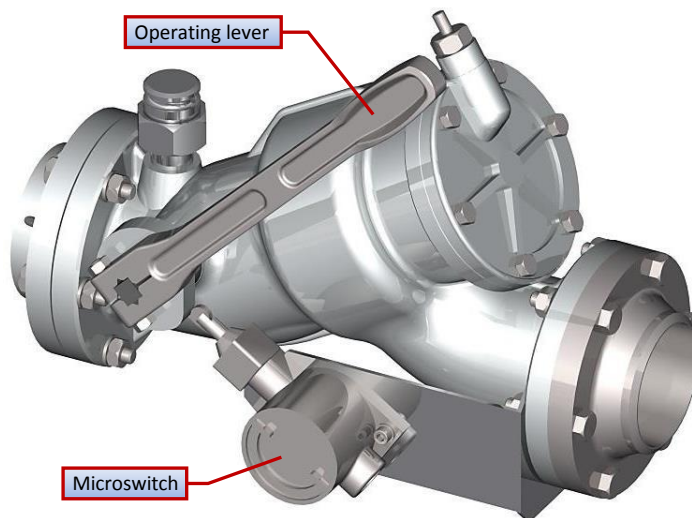


Electrical signal switches for valve position/condition

Electrical signal for open/close 504 Model loading valve detection:

It signals when the loading valve gets opened by the lever.

It can be realized with a EEx-d microswitch or a EEx-ia proximity switch.

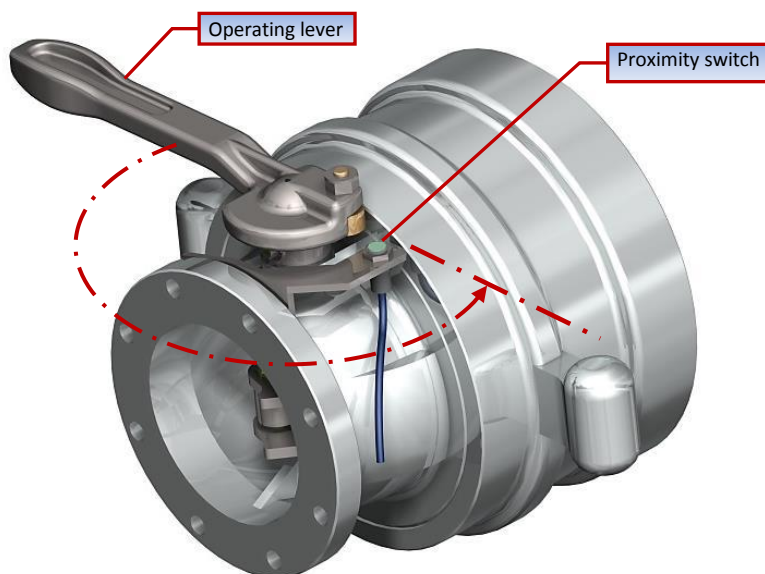


Connection of the C-3659 model dry-disconnect coupling:

It is used to signal the API RP 1004 female part being connected to the respective male and the operating lever being turned in loading position.

This signal is used on 740/750 or 2454-BC bottom loading arms.

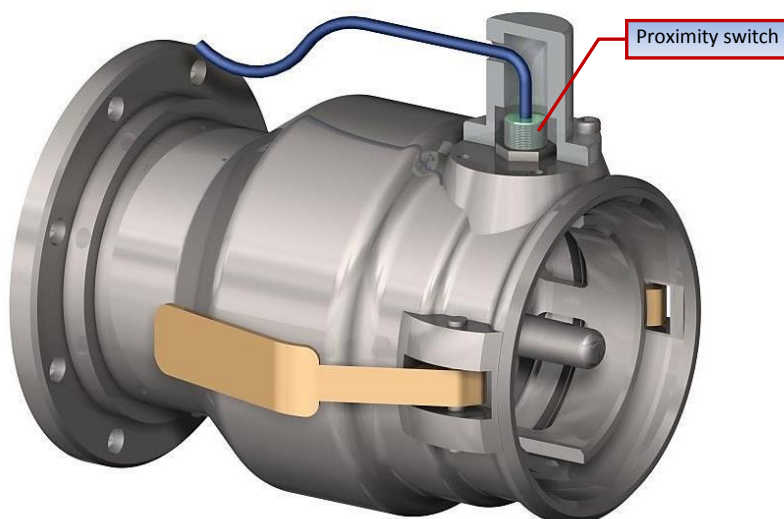
It is realized only with a proximity switch.



Connection of the C-3682 model vapour return coupler:

It is provided to signal that API RP 1004 vapour return female part (cam and groove) being connected to the respective male. This signal is used on 750 bottom loading arms.

It is realized only with a proximity switch.





Accessories

Overfilling systems

OMC offers different types of overfilling devices, especially designed to provide reliable and safe operations.

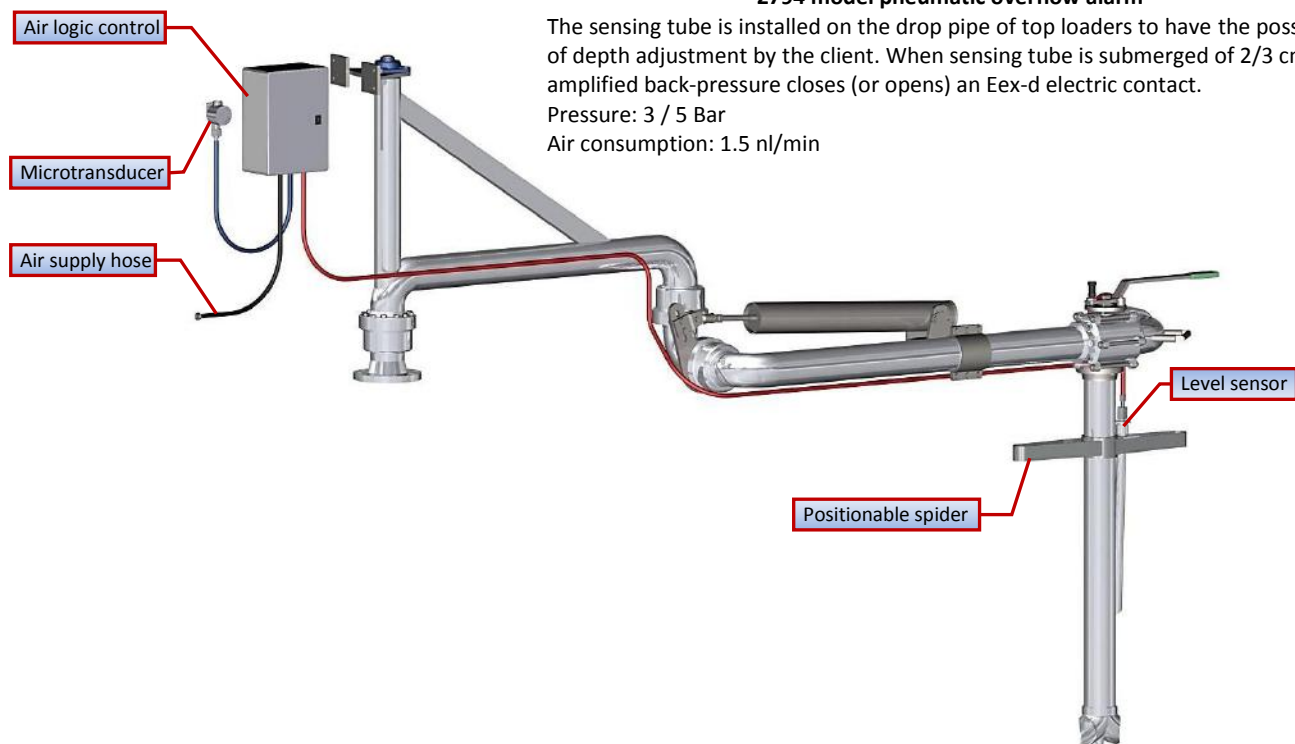
The pneumatic level controls, designed and realized by OMC, rely on first class components which are assembled in an AISI 304 stainless steel protection box in order to prevent any damage and ensure long life and reliability.

2794 model pneumatic overflow alarm

The sensing tube is installed on the drop pipe of top loaders to have the possibility of depth adjustment by the client. When sensing tube is submerged of 2/3 cm, the amplified back-pressure closes (or opens) an Eex-d electric contact.

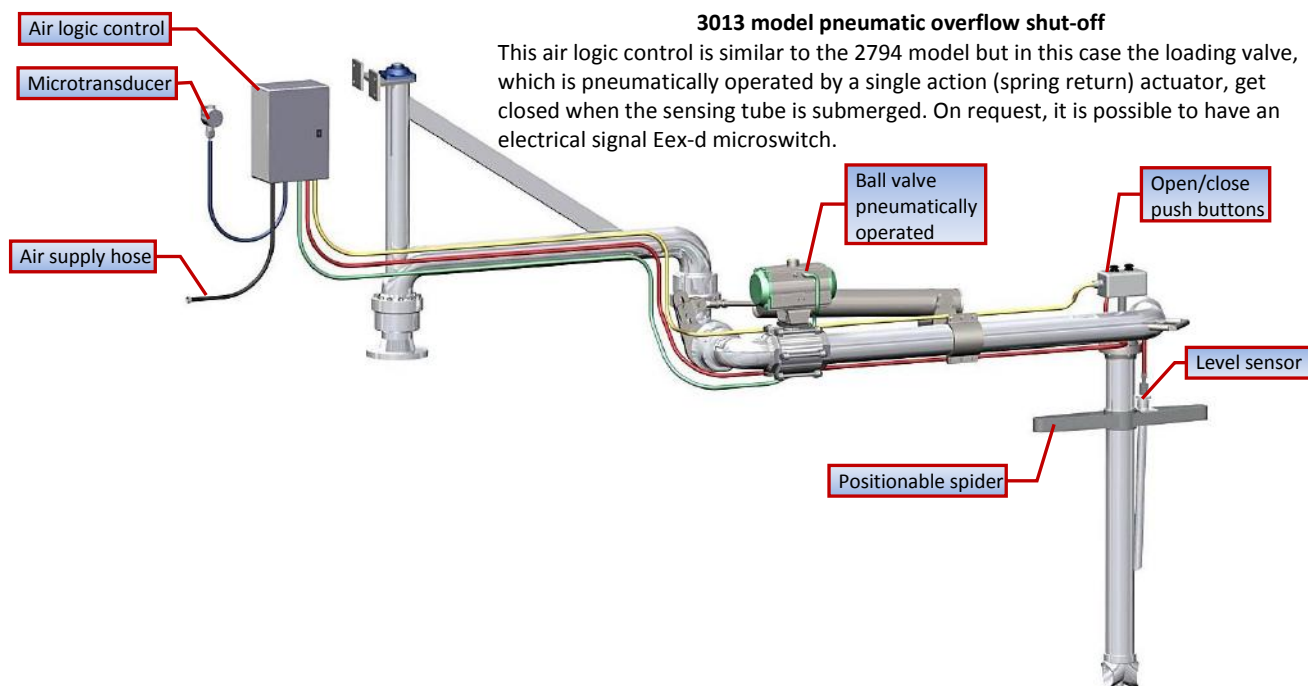
Pressure: 3 / 5 Bar

Air consumption: 1.5 nl/min



3013 model pneumatic overflow shut-off

This air logic control is similar to the 2794 model but in this case the loading valve, which is pneumatically operated by a single action (spring return) actuator, get closed when the sensing tube is submerged. On request, it is possible to have an electrical signal Eex-d microswitch.

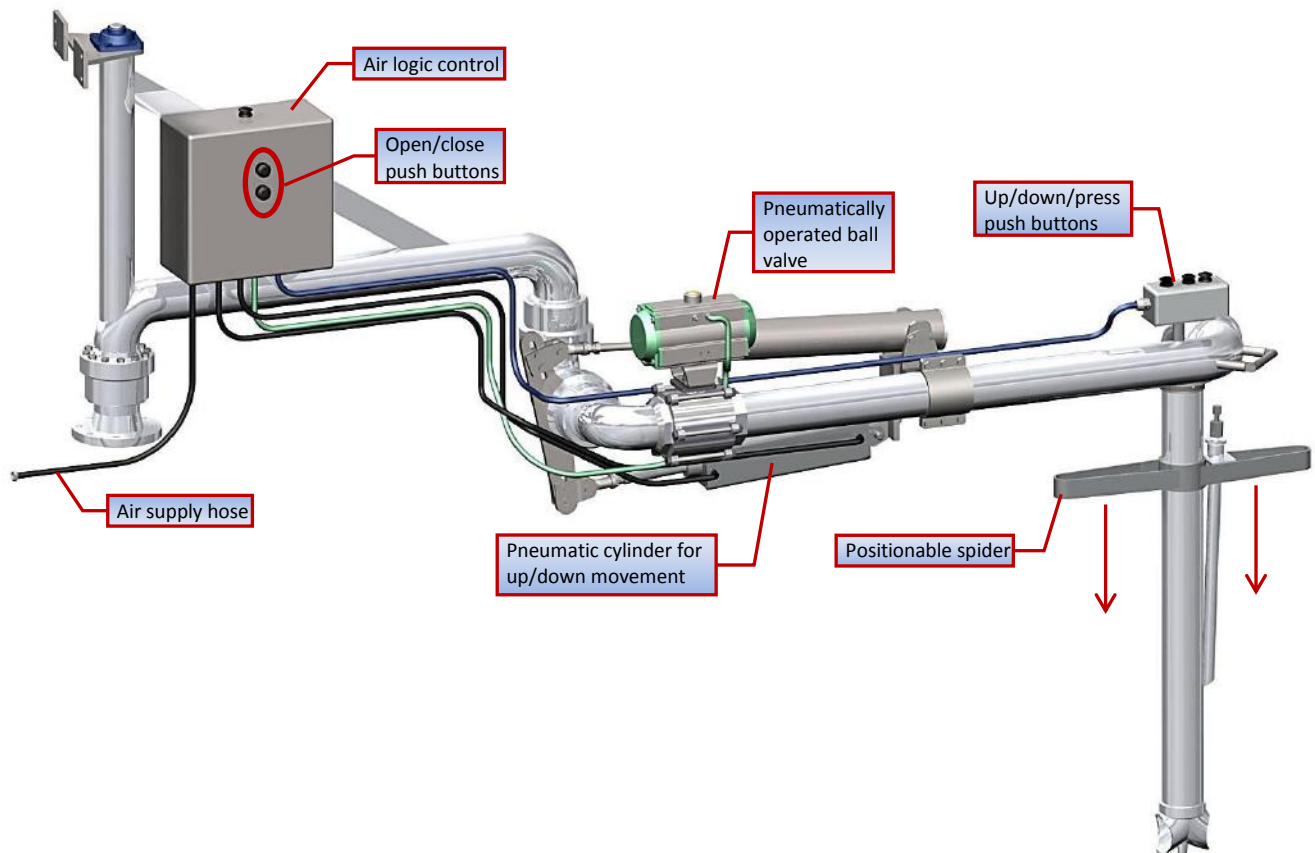


Besides using level control pneumatic systems, OMC also uses electrical level sensors. These level controls use a vibrating probe and an electronic unit (out of our scope of supply) certified EEX-d or EEx-ia. They are installed on the drop pipe of top loaders to have the possibility of depth adjustment by the client. When the product gets in contact with the probe, it gives a signal to the electronic unit that, with a proper electrical connection to the automatic closing system, will close the valve. Concerning bottom loading, the high-level control is installed in a permanent way on the tank trucks that, through a special device, are connected to the control logic on the plant. These systems are out of our scope of supply, but we can suggest some companies specialized in this sort of components.

Pneumatic operating system

Long range OMC loaders can be provided with pneumatic control to move the loading arm vertically and to open/close one or more loading valves.

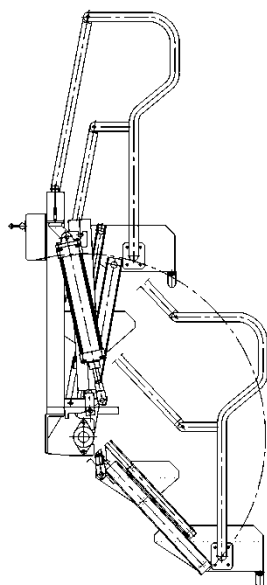
This automatic control is realized with an air logic control. The operator, by pressing the push buttons (apex push buttons for up/down loading arm and push buttons on protection box for open/close valve), transmits a pneumatic input that will control the vertical movements or the status of the valve.





Accessories

Folding stairs manually or pneumatically operated



Folding stairs are designed to ease and secure the passage between the loading rack platform and tank trucks or rail tankers.

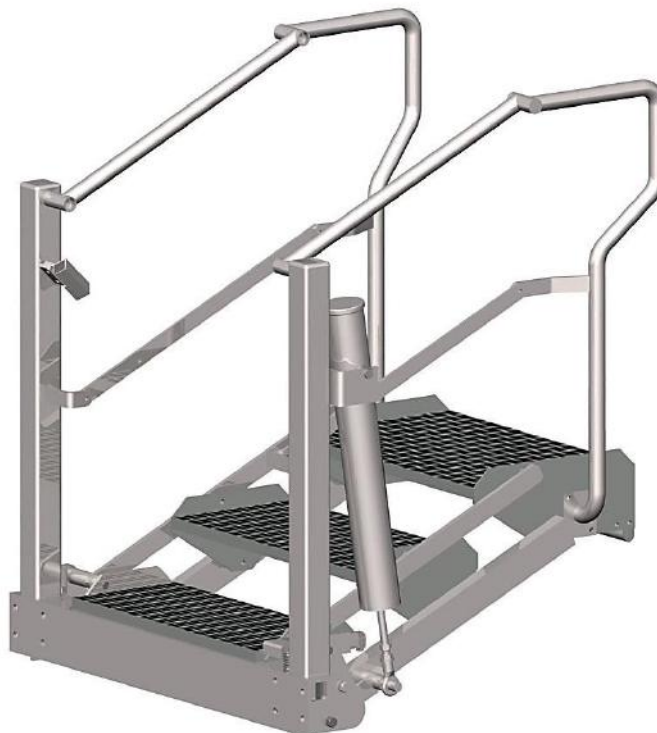
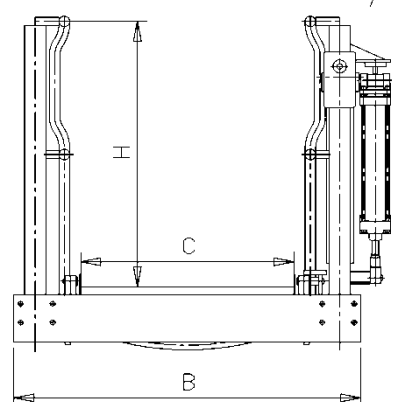
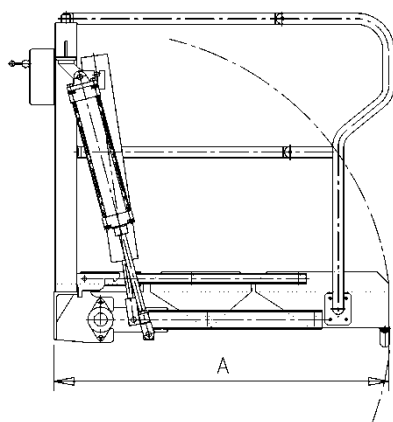
These folding stairs can be supplied manually or pneumatically operated, they are balanced in any position by a spring cylinder and fitted with anti-slip profiled steps, hand railings and rubber fender guard to prevent any possible damage to vehicles. Considering the tank truck/rail tank distance from the platform, they are available in three standard models, whose characteristics are better explained in the table here below.

On special request, folding stairs can be equipped with "safety-cage", in order to guarantee maximum protection from accidental falls from the tank truck/rail tank during loading operations.

– Pneumatic type:

Air pressure required: 5-6 Bar (3-4 Bar available on request)

Size	Steps	A	B	C	H	Weight (Kg)
S (short)	2	1250	1300	800	1000	195
M (medium)	3	1650	1300	800	1000	215
G (long)	4	2050	1300	800	1000	255



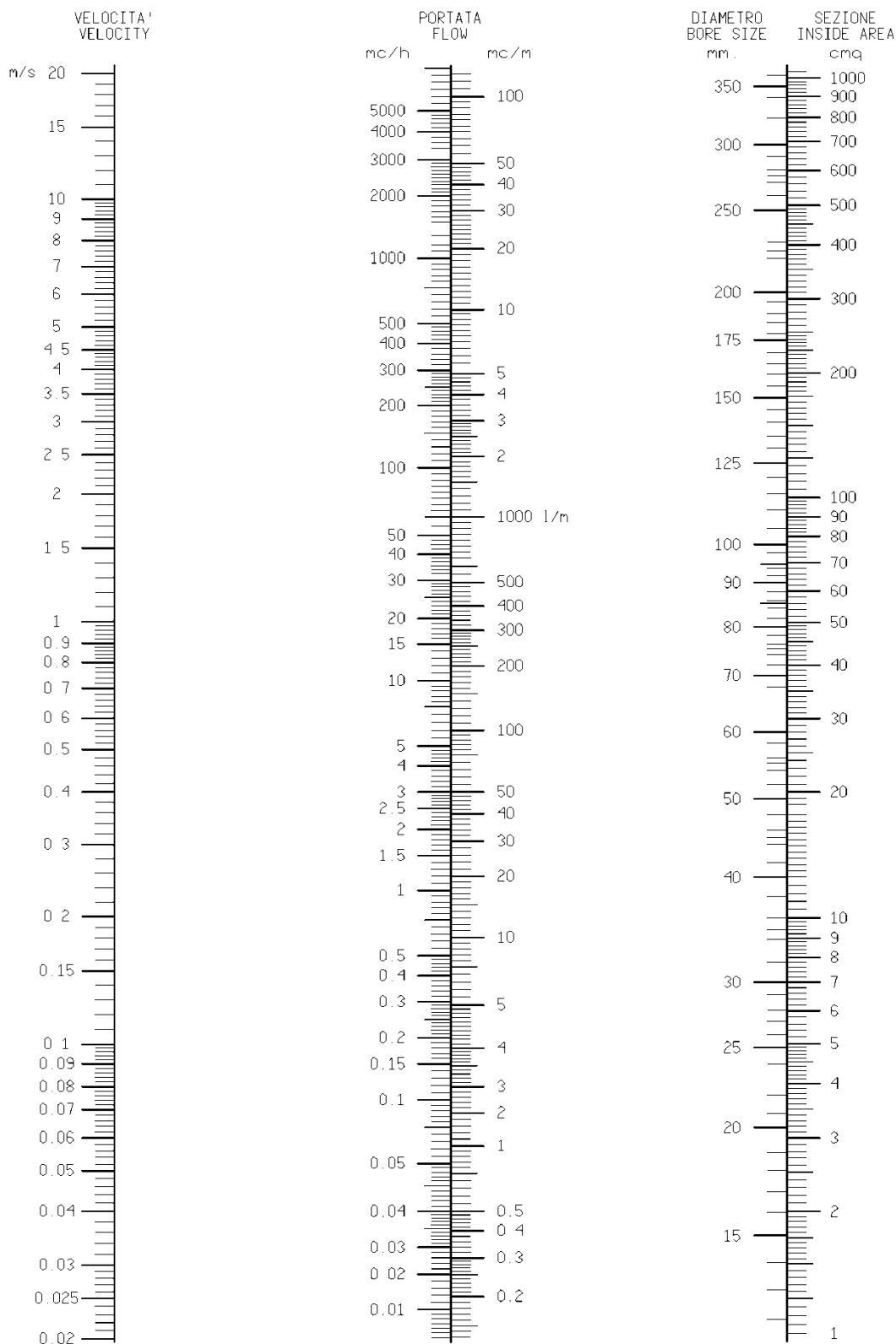
Flow chart



The chart allows easy calculation of the necessary velocity in a piping system, to obtain a given flow rate in relation to the bore size, or the proper diameter according to the desired flow rate.

A straight line across two columns will show the required value.

As general rule it is recommended that the line velocity not exceed 15 ft/s in delivery pipe and 5 ft/s in suction pipe.





Machining department

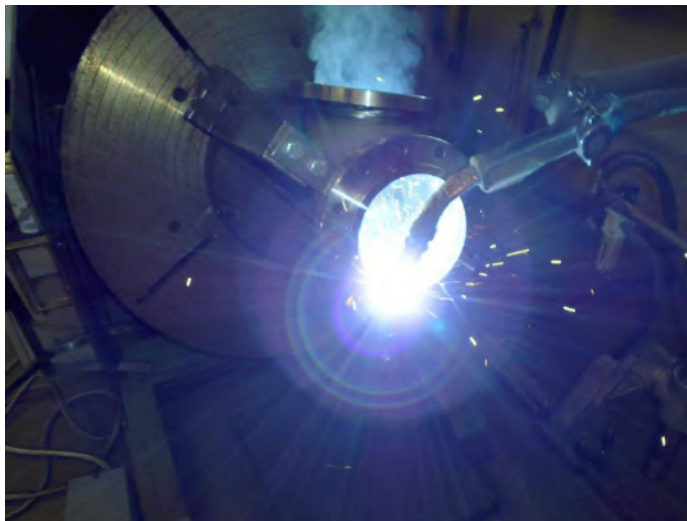
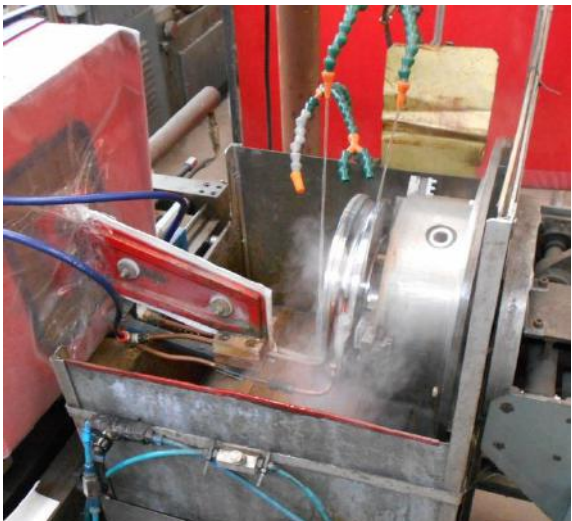
Our machining department includes high technology CNC machines and, with our specialized staff, we produce all the swivels that we install on our loading arms, valves and more. Also the use of high quality raw material present on the market allows us to obtain a final product of high precision and performances.



Assembling department



In this department, we build all the products of our production. Here we assemble by welding or mechanical installation all the components of our construction and other equipment not produced from us. The product that is obtained after assembly, functional, balancing and pressure tests, is the final product, ready for use and certified from our Quality Assurance.





Loading arms at work





Certifications

OMC works with relevant inspection authorities. The certification and labeling of the products complies with current regulations.



**MACHINERY
DIRECTIVE
2006/42/EC**

OMC is also authorized by competent authorities to trade in the Polish and the Russian markets.



ТАМОЖЕННЫЙ СОЮЗ ДЕКЛАРАЦИЯ О СООТВЕТСТВИИ

Заявитель: Общество с ограниченной ответственностью «ИНТЕКО»
Зарегистрировано Межрайонной инспекцией Федеральной налоговой службы №46 по городу Москве 25.03.2006 года. Основной государственный регистрационный номер 1067746528992.
Место нахождения: 119121, Россия, город Москва, Ружейный переулок, дом 6, строение 1
Фактический адрес: 119121, Россия, город Москва, Ружейный переулок, дом 6, строение 1
Телефон: +7 (495) 248-24-79 Факс: +7 (495) 626-43-88 Адрес электронной почты: moskvin@inteko-rus.ru

в лице Генерального директора Московия Михаил Владимировича
заявляет, что Устройства шарнирно-сочлененные верхнего и нижнего налива в железнодорожные и автомобильные цистерны, модели: 2620, 2879, 2903, 2902, 2454, 750.
Продукция изготовлена по листам технических условий № CD.

Изготовитель: "Officine Meccaniche Cavourresi S.p.A."
Место нахождения: Via Saluzzo 78 10061 Cavour, Италия
Фактический адрес: Via Saluzzo 78 10061 Cavour, Италия
Код (коды) ТН ВЭД ЕАЭС: 8422.30.000.8
Серийный выпуск.

Соответствует требованиям
Технического регламента Таможенного союза, утвержденного Решением Комиссии Таможенного союза от 18 октября 2011 года №823, ТР ТС 010/2011 "О безопасности машин и оборудования".

Декларация о соответствии принята на основании
Сертификатов на тип №81ТС RU СТ-IT.AE61.00001, TC RU СТ-IT.AE61.00002 от 02.11.2015 года, выданных органом по сертификации продукция Автономная некоммерческая организация экспертизы контроля и качества - Центр сертификации "Таро-Тест" регистрационный № РОСС RU.0001.11A.E61, выдан 16.05.2013 года Федеральной службой по аккредитации.

Протокола испытаний № 1866-2437-12-010-15 от 26.10.2015 года, выданного Испытательной лабораторией «НЛ БТ» ООО «Испытательная лаборатория электротехнической продукции ЭМС» (регистрационный номер аттестата аккредитации РОСС RU.0001.21M.031 до 16.03.2016 года).

Протокола испытаний № 15/ET-11-15 от 02.11.2015 года, выданного Испытательной лабораторией электротехнических изделий Общества с ограниченной ответственностью "Научно-технический центр сертификации электротехнических изделий для бытовых электроприборов и аппаратуры "STCC "BETI" Co.Ltd (регистрационный номер аттестата РОСС RU.0001.21ME72 до 19.03.2016 года).

Комплекта документов согласно пункту 10 Статьи 8 ТР ТС 010/2011 "О безопасности машин и оборудования" в Приложении № 1 на одном листе.

Дополнительная информация: Условия хранения: продукция хранится в сухих, проветриваемых складских помещениях при температуре от -10°C до +50 °C, при относительной влажности воздуха не более 90 %. Срок хранения: изготовителем не установлен. Срок службы: до первого капитального ремонта не менее 5000 часов в течение срока службы 15 лет.

Декларация о соответствии действительна с даты регистрации по 05.11.2020 включительно

М.В. Москвин
подпись и фамилия, наименование организации-заявителя или физического лица, зарегистрированного в качестве индивидуального предпринимателя

М.П.
Сведения о регистрации декларации о соответствии:

Регистрационный номер декларации о соответствии: TC № RU Д-IT.AE61.B.05903

Дата регистрации декларации о соответствии: 06.11.2015



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