



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



TECHNICAL SPECIFICATION

**SPE TANK
WASHING A_LSD
A_LSE**

**REVISION
4**

DATE

22/09/2017

PAGE

**Pagina 1
di 10**

**OBJECT:
TANK WASHING HEAD
A_LSD A_LSE**

**SUBSTITUTE: rev3
VALID FROM:
27/02/2017**

REFERENCE RULES:

WARNING: THE PAPER COPY DO NOT UNDER CONTROL

**QUALITY DOCUMENT
DISTRIBUTION CONTROLLED - VALID FOR EXECUTION
Ownership Reserved. Copy and diffusion are forbidden in law terms.**

REVISION		
Index	Date	Description
REV.0	27/02/2017	FIRST EMISSION
REV.1	23/03/2017	ADDED VERSIONS TO WELD
REV.2	16/06/2017	ADDED VERSIONS 270° WASH
REV.3	27/07/2017	CORRECT TABLE "CLIP" AND GRAPHIC CHANGE
REV 4.	22/09/2017	INSERT THE SIDE PAGE, INDICATION OF THE MODEL



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



TECHNICAL SPECIFICATION

SPE TANK
WASHING A_LSD
A_LSE

REVISION
4

DATE

22/09/2017

PAGE

Pagina 2
di 10

OBJECT:
TANK WASHING HEAD
A_LSD A_LSE

SUBSTITUTE: rev3
VALID FROM:
27/02/2017

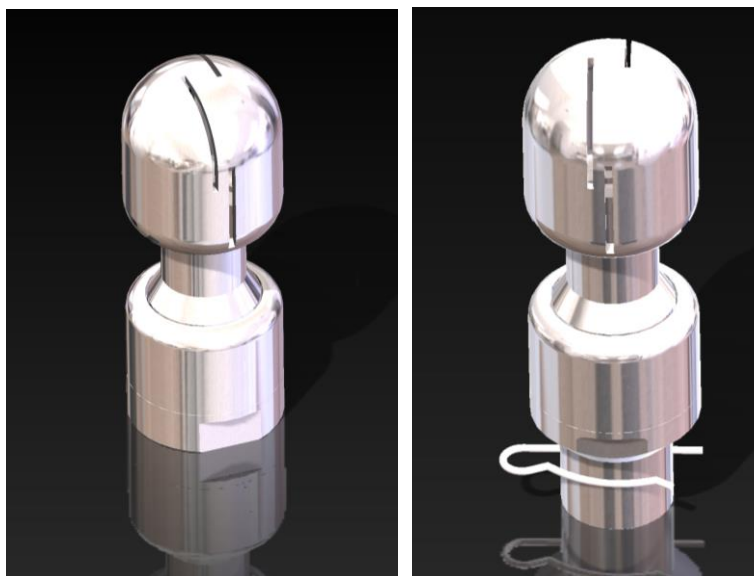
Scope

The purpose of this specification is to describe the main features of the washing balls currently supplied.

Application

The balls are applicable to washing of small containers or rinse cycles of containers up to a maximum diameter of 5 meters (wash).

TANK WASHING NOZZLES model LSD



Rotating head on ball bearing midrange A_LSD

Building:

The A_LSD rotating heads are built in AISI 316 stainless steel, and are mounted on double ball bearing, to have a correct rotation in any mounting position.

The rotating part has the peculiarity of not having coupling lines and welds, not especially appreciate in the food and pharmaceutical sector.

All the internal and external surfaces are machined with high precision, ensuring a perfectly smooth finish and free of areas where they can accumulate water residue.

Furthermore, their particular shape allows an optimal flushing of water for a perfect washing of the tanks.

The heads are available with different connections: female thread BSP (GAS), Quick thread clips or solder.



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA

**TECHNICAL SPECIFICATION**SPE TANK
WASHING A_LSD
A_LSE**REVISION**
4**DATE**

22/09/2017

PAGE**Pagina 3**
di 10**OBJECT:**
TANK WASHING HEAD
A_LSD A_LSE**SUBSTITUTE: rev3**
VALID FROM:
27/02/2017**Working:**

The washing flow produced by the LSD rotating head , generates the motion of rotation thanks to the reaction force of the jets. The speed of rotation depends on the pressure of the washing fluid, which must be limited: a rotation too fast in fact causes breakage of the jet into drops and loss of impact strength.

Technical features:

The choice of the correct washing head have to be made taking into account the diameter of the tank to wash, flow rates and pressures available, type of tank, type of contaminant to be deleted and the type of liquid used for washing.

LSD**THREADED CONNECTION MODELS**

CODE	CAPACITY AT 3 BAR (LT/MIN)	TYPE OF WASH	CONNECTION	NORM	WET Radius (Meters)
A 3 LSD 63 T	63	360	1/2	BSP	2,9
A 3 LSD 63 U	63	180 UP	1/2	BSP	2,9
A 3 LSD 63 D	63	180 DOWN	1/2	BSP	2,9
A 3 LSD 63 UW	63	270 UP	1/2	BSP	2,9
A 3 LSD 63 DW	63	270 DOWN	1/2	BSP	2,9
A 4 LSD 63 T	63	360	3/4	BSP	2,9
A 4 LSD 63 U	63	180 UP	3/4	BSP	2,9
A 4 LSD 63 D	63	180 DOWN	3/4	BSP	2,9
A 4 LSD 63 UW	63	270 UP	3/4	BSP	2,9
A 4 LSD 63 DW	63	270 DOWN	3/4	BSP	2,9



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



by eurospray spray and filter technology

TECHNICAL SPECIFICATIONSPE TANK
WASHING A_LSD
A_LSE**REVISION**
4**DATE**

22/09/2017

PAGE**Pagina 4**
di 10**OBJECT:**
TANK WASHING HEAD
A_LSD A_LSE**SUBSTITUTE: rev3**
VALID FROM:
27/02/2017

LSD

THREADED CONNECTION MODELS

CODE	CAPACITY AT 3 BAR (LT/MIN)	TYPE OF WASH	CONNECTION	NORM	WET Radius (Meters)
A 3 LSD 90 T	90	360	1/2	BSP	3,2
A 3 LSD 90 U	90	180 UP	1/2	BSP	3,2
A 3 LSD 90 D	90	180 DOWN	1/2	BSP	3,2
A 3 LSD 90 UW	90	270 UP	1/2	BSP	3,2
A 3 LSD 90 DW	90	270 DOWN	1/2	BSP	3,2
A 4 LSD 90 T	90	360	3/4	BSP	3,2
A 4 LSD 90 U	90	180 UP	3/4	BSP	3,2
A 4 LSD 90 D	90	180 DOWN	3/4	BSP	3,2
A 4 LSD 90 UW	90	270 UP	3/4	BSP	3,2
A 4 LSD 90 DW	90	270 DOWN	3/4	BSP	3,2
A 5 LSD 90 T	90	360	1	BSP	3,2
A 5 LSD 90 U	90	180 UP	1	BSP	3,2
A 5 LSD 90 D	90	180 DOWN	1	BSP	3,2
A 5 LSD 90 UW	90	270 UP	1	BSP	3,2
A 5 LSD 90 DW	90	270 DOWN	1	BSP	3,2

A 4 LSD 135 T	135	360	3/4	BSP	3,5
A 4 LSD 135 U	135	180 UP	3/4	BSP	3,5
A 4 LSD 135 D	135	180 DOWN	3/4	BSP	3,5
A 4 LSD 135 UW	135	270 UP	3/4	BSP	3,5
A 4 LSD 135 DW	135	270 DOWN	3/4	BSP	3,5
A 5 LSD 135 T	135	360	1	BSP	3,5
A 5 LSD 135 U	135	180 UP	1	BSP	3,5
A 5 LSD 135 D	135	180 DOWN	1	BSP	3,5
A 5 LSD 135 UW	135	270 UP	1	BSP	3,5
A 5 LSD 135 DW	135	270 DOWN	1	BSP	3,5

Max. working temperature 90° C. Min. working 0° C.

Note: Washing at "360°" conventionally.



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA

**TECHNICAL SPECIFICATION**SPE TANK
WASHING A_LSD
A_LSE**REVISION**
4**DATE**

22/09/2017

PAGE**Pagina 5**
di 10**OBJECT:**
TANK WASHING HEAD
A_LSD A_LSE**SUBSTITUTE: rev3**
VALID FROM:
27/02/2017**CLIP CONNECTION MODELS**

CODE	CAPACITY AT 3 BAR (LT/MIN)	TYPE OF WASH	CONNECTION	NORM	X	Y	WET RAD meters
AD C25 LSD 63 T	63	360	1" (DN 25)	ISO2037	25,3	15	2,9
AD C25 LSD 63 U	63	180 UP	1" (DN 25)	ISO2037	25,3	15	2,9
AD C25 LSD 63 D	63	180 DOWN	1" (DN 25)	ISO2037	25,3	15	2,9
AD C25 LSD 63 UW	63	270 UP	1" (DN 25)	ISO2037	25,3	15	2,9
AD C25 LSD 63 DW	63	270 DOWN	1" (DN 25)	ISO2037	25,3	15	2,9
AA C25 LSD 63 T	63	360	1" (DN 25)	BPE (US)	25,7	15	2,9
AA C25 LSD 63 U	63	180 UP	1" (DN 25)	BPE (US)	25,7	15	2,9
AA C25 LSD 63 D	63	180 DOWN	1" (DN 25)	BPE (US)	25,7	15	2,9
AA C25 LSD 63 UW	63	270 UP	1" (DN 25)	BPE (US)	25,7	15	2,9
AA C25 LSD 63 DW	63	270 DOWN	1" (DN 25)	BPE (US)	25,7	15	2,9

AD C25 LSD 90 T	90	360	1" (DN 25)	ISO2037	25,3	15	3,2
AD C25 LSD 90 U	90	180 UP	1" (DN 25)	ISO2037	25,3	15	3,2
AD C25 LSD 90 D	90	180 DOWN	1" (DN 25)	ISO2037	25,3	15	3,2
AD C25 LSD 90 UW	90	270 UP	1" (DN 25)	ISO2037	25,3	15	3,2
AD C25 LSD 90 DW	90	270 DOWN	1" (DN 25)	ISO2037	25,3	15	3,2
AA C25 LSD 90 T	90	360	1" (DN 25)	BPE (US)	25,7	15	3,2
AA C25 LSD 90 U	90	180 UP	1" (DN 25)	BPE (US)	25,7	15	3,2
AA C25 LSD 90 D	90	180 DOWN	1" (DN 25)	BPE (US)	25,7	15	3,2
AA C25 LSD 90 UW	90	270 UP	1" (DN 25)	BPE (US)	25,7	15	3,2
AA C25 LSD 90 DW	90	270 DOWN	1" (DN 25)	BPE (US)	25,7	15	3,2

AD C25 LSD 135 T	135	360	1" (DN 25)	ISO2037	25,3	15	3,5
AD C25 LSD 135 U	135	180 UP	1" (DN 25)	ISO2037	25,3	15	3,5
AD C25 LSD 135 D	135	180 DOWN	1" (DN 25)	ISO2037	25,3	15	3,5
AD C25 LSD 135 UW	135	270 UP	1" (DN 25)	ISO2037	25,3	15	3,5
AD C25 LSD 135 DW	135	270 DOWN	1" (DN 25)	ISO2037	25,3	15	3,5
AA C25 LSD 135 T	135	360	1" (DN 25)	BPE (US)	25,7	15	3,5
AA C25 LSD 135 U	135	180 UP	1" (DN 25)	BPE (US)	25,7	15	3,5
AA C25 LSD 135 D	135	180 DOWN	1" (DN 25)	BPE (US)	25,7	15	3,5
AA C25 LSD 135 UW	135	270 UP	1" (DN 25)	BPE (US)	25,7	15	3,5
AA C25 LSD 135 DW	135	270 DOWN	1" (DN 25)	BPE (US)	25,7	15	3,2

LSD



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA

**TECHNICAL SPECIFICATION**SPE TANK
WASHING A_LSD
A_LSE**REVISION**
4**DATE**

22/09/2017

PAGE**Pagina 6**
di 10**OBJECT:**
TANK WASHING HEAD
A_LSD A_LSE**SUBSTITUTE: rev3**
VALID FROM:
27/02/2017**LSD****MODELS WITH CONNECTION TO WELD**

CODE	CAPACITY AT 3 BAR (LT/MIN)	TYPE OF WASH	CONNECTION	NORM	X (ϕ)	Thickness "S"	WET RAD meters
<i>AW D25 LSD 63 T</i>	<i>63</i>	<i>360</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 63 U</i>	<i>63</i>	<i>180 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 63 D</i>	<i>63</i>	<i>180 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 63 UW</i>	<i>63</i>	<i>270 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 63 DW</i>	<i>63</i>	<i>270 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
AWA25 LSD 63 T	63	360	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 63 U	63	180 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 63 D	63	180 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 63 UW	63	270 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 63 DW	63	270 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,2

<i>AW D25 LSD 90 T</i>	<i>90</i>	<i>360</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,2</i>
<i>AW D25 LSD 90 U</i>	<i>90</i>	<i>180 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,2</i>
<i>AW D25 LSD 90 D</i>	<i>90</i>	<i>180 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,2</i>
<i>AW D25 LSD 90 UW</i>	<i>90</i>	<i>270 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,2</i>
<i>AW D25 LSD 90 DW</i>	<i>90</i>	<i>270 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,2</i>
AWA25 LSD 90 T	90	360	1" (DN 25)	BPE (US)	25,4	1,65	3,2
AWA25 LSD 90 U	90	180 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,2
AWA25 LSD 90 D	90	180 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,2
AWA25 LSD 90 UW	90	270 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,2
AWA25 LSD 90 DW	90	270 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,2



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA

**TECHNICAL SPECIFICATION**SPE TANK
WASHING A_LSD
A_LSE**REVISION**
4**DATE**

22/09/2017

PAGE**Pagina 7**
di 10**OBJECT:**
TANK WASHING HEAD
A_LSD A_LSE**SUBSTITUTE: rev3**
VALID FROM:
27/02/2017**LSD****MODELS WITH CONNECTION TO WELD**

CODE	CAPACITY AT 3 BAR (LT/MIN)	TYPE OF WASH	CONNECTION	NORM	X (ϕ)	Thickness "S"	WET RAD meters
<i>AW D25 LSD 135 T</i>	<i>135</i>	<i>360</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 135 U</i>	<i>135</i>	<i>180 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 135 D</i>	<i>135</i>	<i>180 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 135 UW</i>	<i>135</i>	<i>270 UP</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
<i>AW D25 LSD 135 DW</i>	<i>135</i>	<i>270 DOWN</i>	<i>1" (DN 25)</i>	<i>ISO2037</i>	<i>25</i>	<i>1,2</i>	<i>3,5</i>
AWA25 LSD 135 T	135	360	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 135 U	135	180 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 135 D	135	180 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 135 UW	135	270 UP	1" (DN 25)	BPE (US)	25,4	1,65	3,5
AWA25 LSD 135 DW	135	270 DOWN	1" (DN 25)	BPE (US)	25,4	1,65	3,5

Max. working temperature 90° C. Min. working temperature 0° C.

Note: Washing at "360°" conventionally.***LSD Max wetting radius:**

The distance at which a rotating head is able to wash a tank may only be determined as result of tests, for each individual process, (the values indicated in the tables are related with water at 20 °).

Instead, it is possible to define a radius as wetting distance, ie the distance at which the device can wet the entire inner surface of a tank.

Variables such as temperature, liquid to spray, pressure, have a major impact on the values of coverage indicated above.

****LSD Quick thread Clip:**

This model can be connected to a fixed feed pipe through a simple elastic pin, and offers a simple way to remove the head from the seat quickly, when it is necessary to provide for frequent cleaning operations.



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



It is possible to obtain different connections than standard models, compatibly with the geometry of the same washing heads.

TECHNICAL SPECIFICATION

SPE TANK
WASHING A_LSD
A_LSE

REVISION
4

DATE

22/09/2017

PAGE

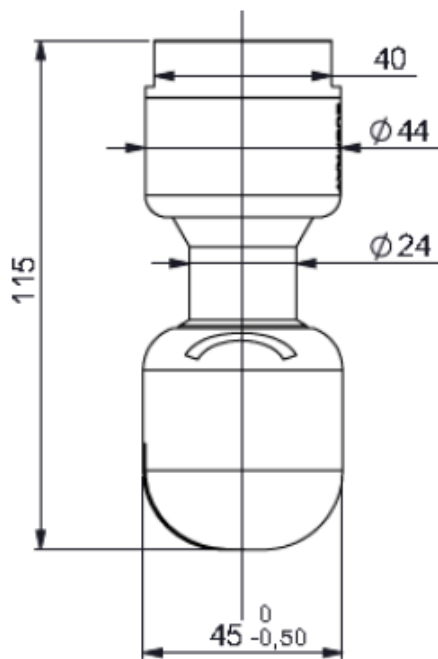
Pagina 8
di 10

OBJECT: TANK WASHING HEAD A_LSD A_LSE

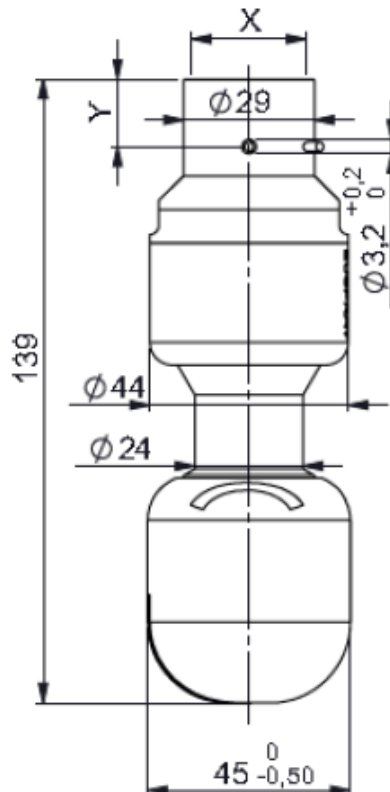
the geometry of the
SUBSTITUTE: rev3
VALID FROM:
27/02/2017

LSD Dimensions

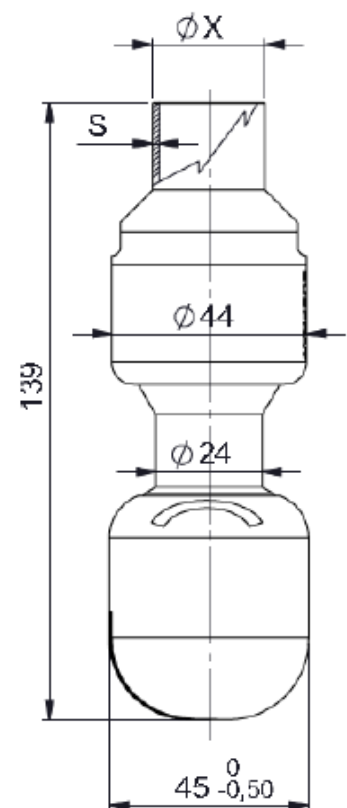
LSD Threaded



LSD with clip



LSD weld



LSD



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



TECHNICAL SPECIFICATION

SPE TANK
WASHING A_LSD
A_LSE

REVISION
4

DATE

22/09/2017

PAGE

**Pagina 9
di 10**

**OBJECT:
TANK WASHING HEAD
A_LSD A_LSE**

**SUBSTITUTE: rev3
VALID FROM:
27/02/2017**

Rotating head of a low flow axis A_LSE



Building:

The A_LSE48 rotating heads are built in AISI 316 stainless steel, and are mounted on double ball bearing, to have a correct rotation in any mounting position. Their reduced diameter allows the use, in the case where there are passages from reduced diameter.

All the internal and external surfaces are machined with high precision, ensuring a perfectly smooth finish and free of areas where they can accumulate water residue.

Furthermore, their particular shape allows an optimal flushing of water for a perfect washing of the tanks.

The heads are available with different connections: female thread BSP (GAS), Quick thread clips or solder on request.

Working:

The washing flow produced by the rotating head generates the motion of rotation thanks to the reaction force of the jets. The speed of rotation depends on the pressure of the washing fluid, which must be limited: a rotation too fast in fact causes breakage of the jet into drops and loss of impact strength.

The slight oscillation of the head during the rotation is specifically designed to improve the performance.



S.r.L.

Via Brignano, 41-
24047 TREVIGLIO -BG- I

LICENZIATARIO ESCLUSIVO PER L'ITALIA



by eurospray spray and filter technology

TECHNICAL SPECIFICATION

SPE TANK
WASHING A_LSD
A_LSE

REVISION
4

DATE

22/09/2017

PAGE

Pagina 10
di 10

OBJECT:
TANK WASHING HEAD
A_LSD A_LSE

SUBSTITUTE: rev3
VALID FROM:
27/02/2017

LSE Models:

LSE THREADED MODEL

MODEL	CAPACITY LT/MIN AT PRESSURE BAR			WASH	CONNECTION	WET RADIUS (m)
	1	2	3			
A2LSE48D	28	39	48	180 DOWN	3/8"	1,2/ 2
A2LSE48T	28	39	48	360	3/8"	1,2/ 2
A3LSE48D	28	39	48	181 DOWN	1/2"	1,2/ 2
A3LSE48T	28	39	48	361	1/2"	1,2/ 2

Note: Washing at "360°" conventionally.

LSE Dimensional features

