STANDARD BOTTOM LOADING ARM

A new benchmark has been set for all bottom load arms through Liquip's "bulletproof" overhead loading arms which provide effortless loading combined with safety, long service life and minimal maintenance.

Liquip's 4" overhead bottom loading arms are capable of loading at flow rates of up to 2,500 litres per minute and are designed to enable complete cross-over within the API envelope of up to 6 arms in a single bay. In regions where regulations permit, it is common to load using 3 or 4 arms at a time.

Liquip's overhead bottom loading arms are fitted with a 2 metre standard length drop hose and varying loading arm heights are accommodated with aluminium or steel drop spools.

Standard length drop hoses enable easier changeover and reduced spare parts inventory for the operating company.

Liquip can also supply loading arm couplers that provide the connection between the tanker and loading arm that are compliant with API RP 1004.

Overhead Loading Arm

Features and Benefits

- Easy to install loading arms for left hand, right hand, upward and downward configurations on site.
- Quick loading at flow rates of up to 2,500 LPM.
- Allows for cross over of multiple arms and simultaneous loading of compartments.
- Easily manoeuvre load arm within the API envelope.
- Meets API requirements and can be configurated for up to 6 arms in one bay with no need to move tankers to load all compartments.
- Superior safety through the use of Liquip's unique balance assembly swivel design.
- Simple and safe to adjust & replace.
- Can be supplied to suit a range of products including various chemicals and aviation fuel.
- Balance mechanism is greased for life.
- Uses Liquip's unique gas strut "Velvet Touch" technology for smooth operation over entire stroke of the loading arm
- A range of other balance mechanisms options available e.g. torsion spring etc.
- Standard length S/S heavy duty drop hose for all arms - reducing site spares inventory.
- Exceptional durability and minimal servicing requirements thanks to the best-in-class base swivel assembly and overall design
- Simple loading arm adjustment.

Ordering Information

Loading arm survey forms are available for users to fill out. Survey forms detail all technical requirements for your loading arm needs. These forms can be downloaded once you login to the liquip website.

Alternatively, you can contact Liquip to receive a loading arm survey form and discuss any specific requirements you may have.

Associated Equipment

Riser Pipes	As Required	**Drop Hose Covers**	3576, 3577, 4683,4748
Balance Assembly	LBM800	**Straight Swivels**	VNS-A4, VNS-A4AVI
Gas Struts	4416 or 3008	**Coupler Swivels**	VNC-A4VG, VNC-A4AVI, VNC-A4DVG, VNC-A4T
Horizontal Spool	L219A Series	**Spacer Spools**	VSA4, VSS4
Intermediate Swivels	VNI-A4VG, VNI-A4AVI	**Butterfly Valves**	LBV450xxx
Drop Spools	L229A Series or As Required	**Sightglasses**	BF4-SG-xxx
Drop Hoses	5639P	**API/LYNX Series Coupler**	LYNX85xxx, LYNX86xxx

Technical Information - General Overhead Loading Arm

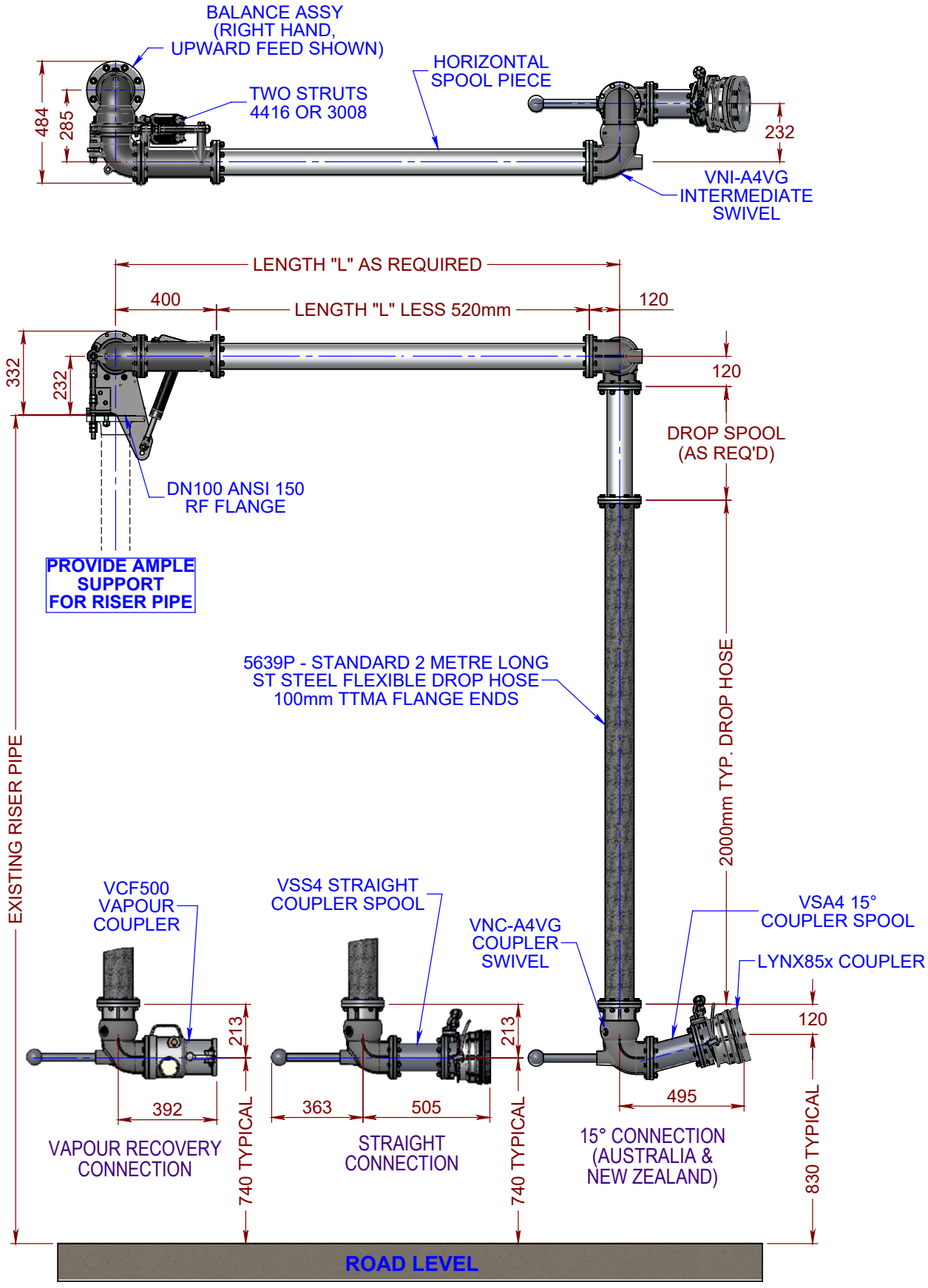
Overhead Loading Arm			
Materials	Carbon steel / Aluminium	**End connections**	Balance Mechanism Inlet - 4" (DN100) 150 lb ANSI RF flange. Outlet Coupling - API Coupler
Design Pressure	1,000 kPa.	**Counter balance type**	Single or Dual gas struts.
Test Pressure	1,500 kPa.	**Maximum coupling pressure**	517 kPa working.
Temperature limits	-28°C to +90°C (-18°F to +200°F) - GFLT seals.	**Primary seal materials**	Viton™ B70 or GFLT. (Others on request).
Range of motion	Horizontal 360°, Vertical +15° to -15°.	**Dust seal material**	Buna Nitrile, Viton™ B or HAN. (Others on request).
Typical Horizontal Spacing	600mm to 650mm	**Gasket material**	Klingerite or Viton™ A. (Others on request).
Typical Vertical Spacing	450mm	**Standard Configuration**	1.8m or 2m reach. See technical specifications.
Typical Reach	Up to 2000mm	**Typical no. of arms per bay**	6

Technical Information - Standard 1.8m/2m Reach Bottom Loading Arm

Arm Size		DN100
Flow Rate Maximum		2500 lpm
Design Pressure		1000 kPa
Reach		1800, 2000 mm
Drop Spool Length*	**Arm #1**	0 mm
	Arm #2	450mm
	Arm #3	900 mm
	Arm #4	1350 mm
	Arm #5	1800 mm
	Arm #6	2250 mm
Drop Hose Length*		2000 mm
Standard Seals		
Balance Mechanism*		Viton GFLT product seals and HAN dust seal
Intermediate and Coupler Swivels*		Viton GFLT product and Viton B dust seal
API / LYNX Coupler*		Viton B / GFLT / Others
Pipe Gaskets*		Klingersil C4430
Standard Materials		
Balance Mechanism*		Cast Steel
Primary Spool*		Aluminium Alloy
Intermediate and Coupler Swivels*		Aluminium Alloy
Drop Spool*		Aluminium Alloy
Drop Hose*		Braided Stainless Steel
Outlet Spool*		Aluminium Alloy
LYNX Coupler*		Aluminium Alloy, Steel, Stainless Steel
Fasteners*		Zinc Plated Steel/Stainless Steel
Other		
End Connections*	**Balance Mechanism Inlet**	To suit ASME DN100 150lb RF Flange
	Outlet Coupling	API Coupler
Documentation (By Request)		Material Certificates, Weld Testing Reports Installation & Operation Manual
Fasteners **(typical qty required for LBM800 BOTTOM LOADING ARM as per X750015) (over leaf.)** **Contact Liquip for fastener requirements for other configurations.**		4235: Klinger gasket ANSI for LBM800 (1) 4892: LBM800 studs (8) 4248: Klinger gasket from 4" TTMA (7) 6745: Bolt for 4" TTMA (56) 6744: Nut for 4" TTMA (56) 5261: Spring Washer for 4" TTMA (56) 5288: Flat Washer for 4" TTMA (112)	

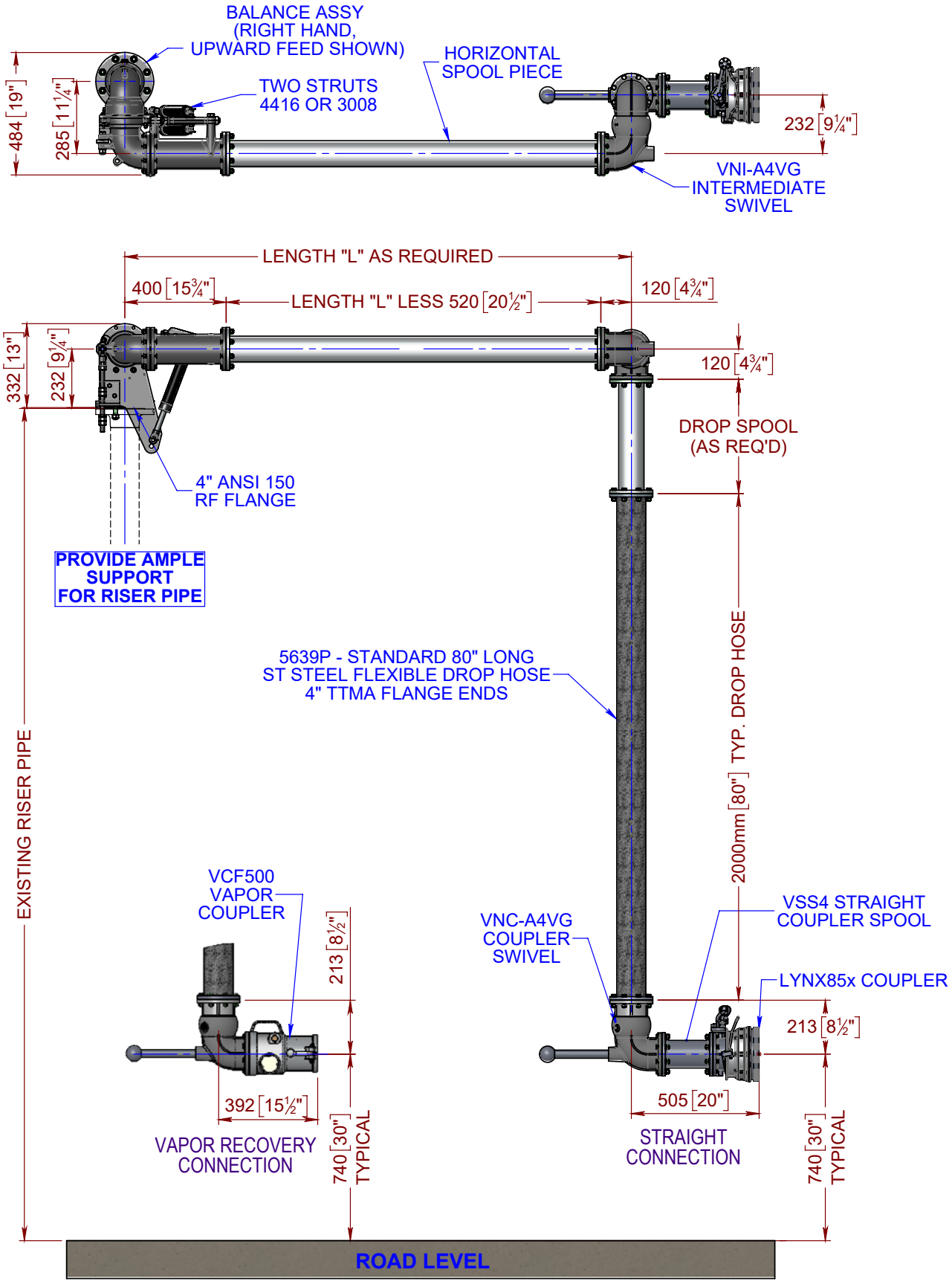
***Alternatives Available**

TYPICAL OVERHEAD BOTTOM LOADING SETUP



DRAWING X750015

TYPICAL OVERHEAD BOTTOM LOADING SETUP



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STANDARD 1.8M/2M REACH BOTTOM LOADING ARM - TYPICAL 6 ARM LAYOUT