

Otis® R®/RN® Landing Nipples and Lock Mandrels

INDUSTRY-STANDARD FLOW CONTROLS AVAILABLE IN SELECTIVE BY RUNNING TOOL AND NO-GO OPTIONS

APPLICATIONS

- » Gauge hangers for bottomhole pressure/temperature surveys
- » Positive locator for straddle systems
- » Plugging under pressure
- » Almost unlimited locations for setting and locking subsurface flow controls

FEATURES

- » Landing Nipples
 - Large bore for minimum restriction
 - Universal nipple with one internal profile
- » Lock Mandrels
 - Retractable locking keys
 - Locks designed to hold pressure from above or below
 - Extra large ID for higher flow volumes

BENEFITS

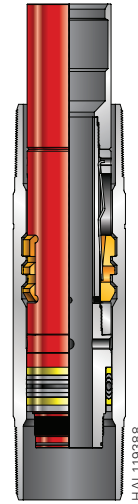
- » Landing Nipples
 - Versatility helps reduce completion and production maintenance costs
 - Simple operation
 - Multiple options when running, setting, or retrieving subsurface flow controls
- » Lock Mandrels
 - Faster slickline service because of the retractable keys
 - Operator control of locating, landing, and locking in the selected nipple
 - Inside fishing neck provides large ID to maximize production

OTIS R® LANDING NIPPLES AND LOCK MANDRELS

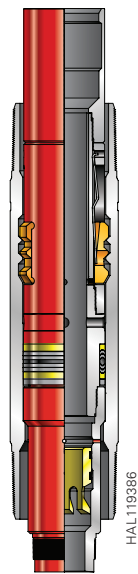
Halliburton Otis R® landing nipples are selective by running tool and are run in the well on the completion tubing to provide a specific landing location for subsurface flow control equipment. These landing nipples feature common internal profiles and are typically used with heavyweight tubing.

The completion can include as many selective nipples with the same ID in any sequence as desired in the tubing string. This versatility results in an unlimited number of positions for setting and locking subsurface flow controls. The flow control, which is attached to the required Otis R lock mandrel, is run in the well via the selective running tool on slickline.

The slickline operator using the selective running tool can set the flow control in any one of the landing nipples at the desired depth. If this location is unsatisfactory or if well conditions change, the flow control may be moved up or down the tubing string to another nipple location. These operations can be done by slickline under pressure without killing the well.



Otis® R® Landing Nipple and Lock Mandrel



Otis® RN® Landing Nipple and Lock Mandrel (Equalizing Valve also shown)

OTIS RN® NO-GO LANDING NIPPLES AND LOCK MANDRELS

Otis RN® no-go landing nipples are designed for use in single nipple installations or as the bottom nipple in a series of Otis X or R landing nipples. These landing nipples have the same packing bore ID for a particular tubing size and weight and are designed for use with standard weight tubing.

Otis® R® and RN® Landing Nipples and Lock Mandrels

Tubing								For Heavy Tubing Weights						Lock Mandrel ID	
								R® Profile		Bore		RN® Profile			
Size		Weight		ID		Drift		Packing Bore				No-Go ID			
in.	mm	lb/ft	kg/m	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1.900	48.26	3.64	5.42	1.500	38.10	1.406	35.71	1.375	34.93	1.375	34.93	1.250	31.75	0.62	15.75
2 3/8	60.33	5.3	7.89	1.939	49.25	1.845	46.86	1.781	45.24	1.781	45.24	1.640	41.66	0.88	22.35
		5.95	8.85	1.867	47.42	1.773	45.03	1.710	43.43	1.710	43.43	1.560	39.62	0.75	19.05
		6.2	9.23	1.853	47.07	1.759	44.68	1.500	38.10	1.500	38.10	1.345	34.16	0.62	15.75
		7.7	11.46	1.703	43.26	1.609	40.87	2.188	55.58	2.188	55.58	2.010	51.05	1.12	28.45
2 7/8	73.03	8.7	12.95	2.259	57.38	2.165	54.99	2.125	53.98	2.125	53.98	1.937	49.20	0.88	22.35
		8.9	13.24	2.243	56.97	2.149	54.58	2.000	50.80	2.000	50.80	1.881	47.78	0.88	22.35
		9.5	14.14	2.195	55.75	2.101	53.37	1.875	47.03	1.875	47.03	1.716	43.59	0.88	22.35
		10.4	15.48	2.151	54.64	2.057	52.25	2.562	65.07	2.562	65.07	2.329	59.16	1.38	35.05
		11	16.37	2.065	52.45	1.971	50.06	2.313	58.75	2.313	58.75	2.131	54.13	1.12	28.45
		11.65	17.34	1.995	50.67	1.901	48.29	2.188	55.58	2.188	55.58	2.010	51.05	1.12	28.45
3 1/2	88.90	12.95	19.27	2.750	69.85	2.625	66.68	2.562	65.07	2.562	65.07	2.329	59.16	1.38	35.05
		15.8	23.51	2.548	64.72	2.423	61.54	2.313	58.75	2.313	58.75	2.131	54.13	1.12	28.45
		16.7	24.85	2.480	62.99	2.355	59.82	2.188	55.58	2.188	55.58	2.010	51.05	1.12	28.45
		17.05	25.37	2.440	61.98	2.315	58.80	3.250	82.55	3.250	82.55	3.088	78.44	1.94	49.28
4	101.60	13.4	19.94	3.340	84.84	3.215	81.66	3.125	79.38	3.125	79.38	2.907	73.84	1.94	49.28
		11.6	17.26	3.428	87.08	3.303	83.90	3.813	96.85	3.813	96.85	3.725	94.62	2.12	53.85
4 1/2	114.30	12.6	18.75	3.958	100.53	3.833	97.36	3.688	93.68	3.688	93.68	3.456	87.78	2.38	60.45
		13.5	20.09	3.920	99.57	3.795	96.39	3.750	95.25	3.750	95.25	N/A		2.12	53.85
		15.5	23.07	3.826	97.18	3.701	94.01	3.688	93.68	3.688	93.68	3.456	87.78	2.38	60.45
		16.9	25.50	3.754	95.35	3.629	92.18	3.437	87.30	3.437	87.30	3.260	82.80	1.94	49.28
		17	25.30	3.740	95.00	3.615	91.82	3.63	92.20	3.63	92.20	N/A		1.94	49.28
		19.2	28.57	3.640	92.46	3.515	89.28	3.437	87.30	3.437	87.30	3.260	82.80	1.94	49.28
5	127.00	15	22.32	4.408	111.96	4.283	108.79	4.125	104.78	4.125	104.78	3.912	99.39	2.75	69.85
		18	26.79	4.276	108.61	4.151	105.44	4.000	101.60	4.000	101.60	3.748	95.20	2.38	60.45
5 1/2	139.70	17	25.30	4.892	124.26	4.767	121.08	4.562	115.87	4.562	115.87	4.445	113.16	2.85	72.39
		20	29.76	4.778	121.36	4.653	118.19	4.313	109.55	4.313	109.55	3.987	101.27	2.62	66.55
		23	34.23	4.670	118.62	4.545	115.44	5.250	133.35	5.250	133.35	5.018	127.51	3.50	88.90
6	152.40	15	22.32	5.524	140.31	5.399	137.13	5.625	142.88	5.625	142.88	5.500	139.70	3.50	88.90
		18	26.79	5.424	137.77	5.299	134.59	5.625	142.88	5.625	142.88	5.500	139.70	3.50	88.90
6 5/8	168.28	24	35.72	5.921	150.39	5.795	147.22	5.625	142.88	5.625	142.88	5.500	139.70	3.50	88.90
		28	41.67	5.791	147.09	5.666	143.92	5.625	142.88	5.625	142.88	5.500	139.70	3.50	88.90

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Tubing								For Heavy Tubing Weights						Lock Mandrel ID	
								R® Profile		Bore		RN® Profile			
Size		Weight		ID		Drift		Packing Bore				No-Go ID			
in.	mm	lb/ft	kg/m	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
7	177.80	17	25.30	6.538	166.07	6.431	163.35	5.963	151.46	5.963	151.46	5.770	146.55	3.75	95.25
		20	29.76	6.456	163.98	6.331	160.81								
		23	34.23	6.366	161.70	6.241	158.52								
		26	38.69	6.276	159.41	6.151	156.24								
		29	43.16	6.184	157.07	6.059	153.90								
		32	47.62	6.094	154.79	5.969	151.61								
		35	52.09	6.004	152.50	5.879	149.33								
								5.875	149.23	5.875	149.23	5.750	146.05		

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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