

MECHANICAL SEAL US4A



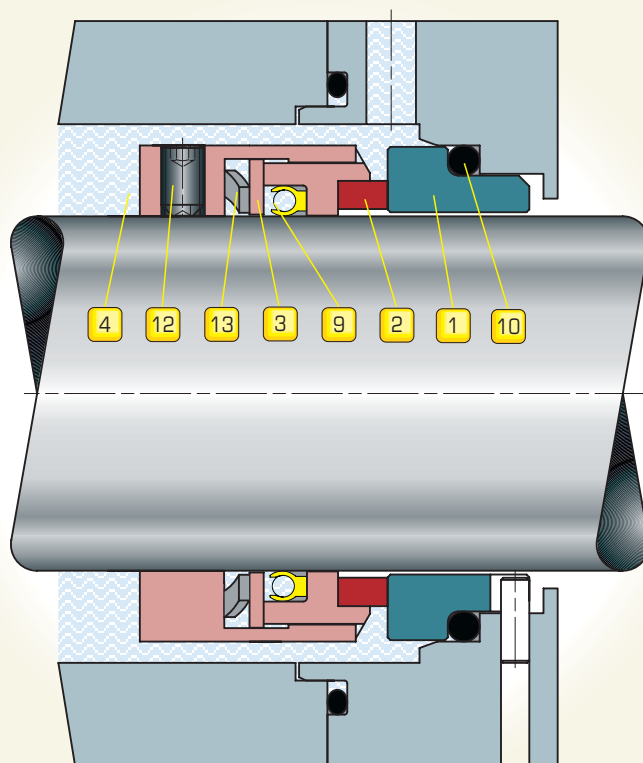
CATO18 ENG REV 01.05

Hheavy duty solution for low and medium pressures operations are widely used in the chemical industry and waterworks. The US4A is the short version of US3A, single component seal with a type A pinned stationary seat and it allows rotation in two directions.

Because of the three drive lugs on the rotating body, they can tolerate high levels of vibration, and mechanical stress.

The "O" ring is easily removed and refitted when assembling the seal on shafts with keyways, threads or sharp edges.

The US4A version is supplied with a single spring and is more suitable for moderately dirty liquids.



ELEMENTS:

- 1 STATIONARY SEAT
- 2 ROTARY FACE
- 3 THRUST RING
- 4 SEAL BODY
- 9 ROTARY FACE "O" RING
- 10 STATIONARY SEAT "O" RING
- 12 SETSCREW
- 13 SPRING

OPERATING LIMITS:

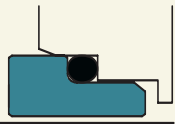
DIAMETER: (mm)	SPEED: (m/sec)	PRESSURE: (bar g)	TEMPERATURE: (°C)
100 ↑ 20	20 ↑ 0	12 ↑ 0	+250 ↑ -100

CHARACTERISTICS:

-  SINGLE
-  BI-DIRECTIONAL
-  FLUIGAM (energized dynamic "O" ring)
-  DIRTY LIQUIDS
-  RESISTANT TO ACIDS & BASES
-  RESISTANT TO MECHANICAL STRESS

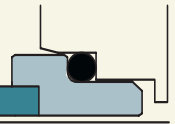
STATIONARY SEAT: 1

MASSIVE TYPE A



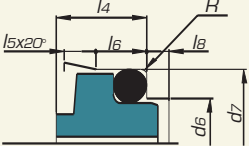
Cr-Mo Steel: **Y1**
Silicon Carbide: **U31**

TYPE A WITH INSERT



AISI 316+Tungsten Carbide: **K22**

MASSIVE TYPE C (3)



Graphite Resins impregnated: **Z31**

STATIONARY SEAT "O" RING: 10

- Nitrile Rubber: **G**
- Ethylene Propylene: **D**
- Fluoroelastomer: **V**
- Perfluoroelastomer: **G711**

■ PTFE: **T**

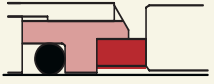
ROTARY FACE: 2

MASSIVE



Cr-Mo Steel: **Y1**
(only US4C version)

WITH INSERT



AISI 316+Graphite Resins impreg.: **Z32**
AISI 316+Silicon Carbide: **U32**
AISI 316+Tungsten Carbide: **K22**

ROTARY FACE "O" RING: 9

- Nitrile Rubber: **G**
- Ethylene Propylene: **D**
- Fluoroelastomer: **V**
- Perfluoroelastomer: **G711**

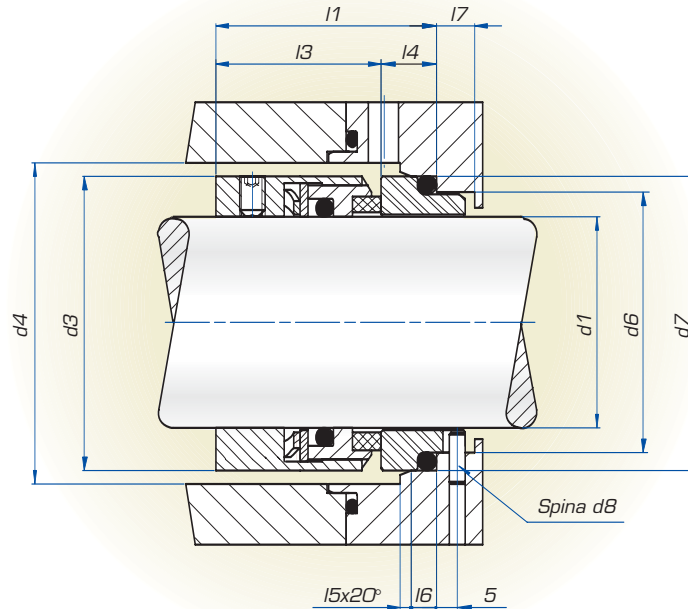
○ PTFE with AISI 316 spring: **T3**

SPRINGS: 13

O20 coil spring AISI 316: **E**
O22 - 100 wave spring Superstainless: **E9**

OTHER METAL PARTS: 4 12 3

AISI 316: **E**



Seal Diameter	d1 h6	d3	d4 min.	d6 H11	d7 H8	d8	l1 ± 0,5	l3 ± 0,5	l4	l5	l6	l7	l8	R
20	20	34	36	29	35	3	30,5	20,5	10	2	5	9	4,5	1,5
22	22	36	38	31	37	3	30,5	20,5	10	2	5	9	4,5	1,5
24	24	38	40	33	39	3	32,5	22,5	10	2	5	9	4,5	1,5
25	25	39	41	34	40	3	33,5	23,5	10	2	5	9	4,5	1,5
28	28	42	44	37	43	3	33,5	23,5	10	2	5	9	4,5	1,5
30	30	44	46	39	45	3	34,5	24,5	10	2	5	9	4,5	1,5
32	32	46	48	42	48	3	34,5	24,5	10	2	5	9	4,5	1,5
33	33	47	49	42	48	3	34,5	24,5	10	2	5	9	4,5	1,5
35	35	49	51	44	50	3	34,5	24,5	10	2	5	9	4,5	1,5
38	38	54	58	49	56	4	38	27	11	2	6	9	5	1,5
40	40	56	60	51	58	4	39	28	11	2	6	9	5	1,5
43	43	59	63	54	61	4	39	28	11	2	6	9	5	2,5
45	45	61	65	56	63	4	39	28	11	2	6	9	5	2,5
48	48	64	68	59	66	4	39	28	11	2	6	9	5	2,5
50	50	66	70	62	70	4	40	27	13	2,5	6	9	5	2,5
53	53	69	73	65	73	4	40	27	13	2,5	6	9	5	2,5
55	55	71	75	67	75	4	40	27	13	2,5	6	9	5	2,5
58	58	78	83	70	78	4	42	29	13	2,5	6	9	5	2,5
60	60	80	85	72	80	4	42	29	13	2,5	6	9	5	2,5
63	63	83	88	75	83	4	45	32	13	2,5	6	9	5	2,5
65	65	85	90	77	85	4	45	32	13	2,5	6	9	5	2,5
68	68	88	93	81	90	4	47	32	15	2,5	7	9	5	2,5
70	70	90	95	83	92	4	47	32	15	2,5	7	9	5	2,5
75	75	99	104	88	97	4	47	32	15	2,5	7	9	5	2,5
80	80	104	109	95	105	4	48	32,5	15,5	3	7	9	5	2,5
85	85	109	114	100	110	4	48	32,5	15,5	3	7	9	5	2,5
90	90	114	119	105	115	4	54	38,5	15,5	3	7	9	5	2,5
95	95	119	124	110	120	4	54	38,5	15,5	3	7	9	5	2,5
100	100	124	129	115	125	4	54	38,5	15,5	3	7	9	5	2,5

Dimensions subject to modifications without notice.

Example:

To order the seals shown on this page for shaft 20 mm and material shown in the table below:

2	1	9	10	13	4 12 3
Z32	U31	G	G	E	E

The code will be: US4A020 - Z32U31GEE (4)

NOTES:

- 1) The material shown on this page is only part of the available range, for other products stock items, please call our Technical Sales Office.
- 2) The material should be chosen according to the operating conditions. All queries should be sent to our Technical Sales Office.
- 3) The last letter of the product code **US4A** shows the type A stationary seat with a slot for an antirotation pin: or if a short stationary seat without a slot is required, please request type C. The product code will then be **US4C**. This type is not suitable for seals in PTFE.
- 4) When the material of the seal on the stationary seat "O" ring is the same as the seal on the rotary face "O" ring the product code is not repeated.