

# ICOS

## Integrated Compact Oil Sealed bearing unit



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## The product

- ✓ Integrated - Seal integrated with the bearing as one unit
- ✓ Compact - Reduced axial space compared to a "traditional bearing and oil seal" arrangement
- ✓ Oil Sealed - Spring loaded radial shaft seal

# Integrated Compact Oil Sealed bearing unit

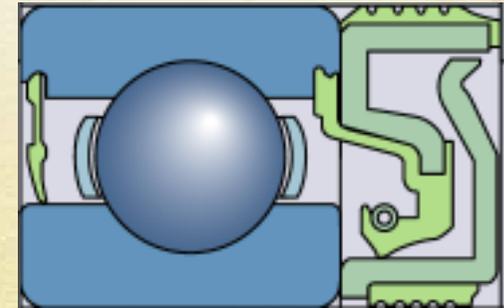
## The Applications

- All applications areas presently using a standard ball bearing and a separate oil seal. Examples :
  - Industrial gears and transmissions
  - Car gearboxes
- Space sensitive applications where the sealing is under extreme conditions. Examples :
  - Industrial fans
  - Two stroke engines
- All after-market for these applications

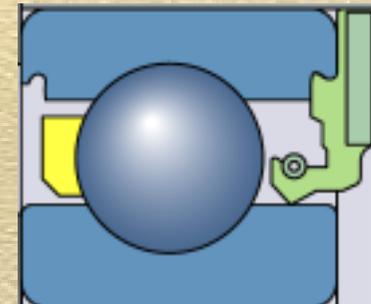
# Integrated Compact Oil Sealed bearing unit

## The benefits

- **One closed unit**
  - Single mounting operation
- **Better seal function**
  - The unit consists of several sealing systems:
    - Flinger - Keep the radial lip well protected (ICOS 1)
    - Labyrinth - Between outer ring and sleeve (ICOS 1)
    - Radial lip seal - Hydrodynamic lip Wave-seal
- **Maintenance friendly**
  - Long service life
- **Cost reduction**
  - The seal lip counterface is a part of the unit
  - No need for extended shaft for sealing
  - One part number



**ICOS 1**



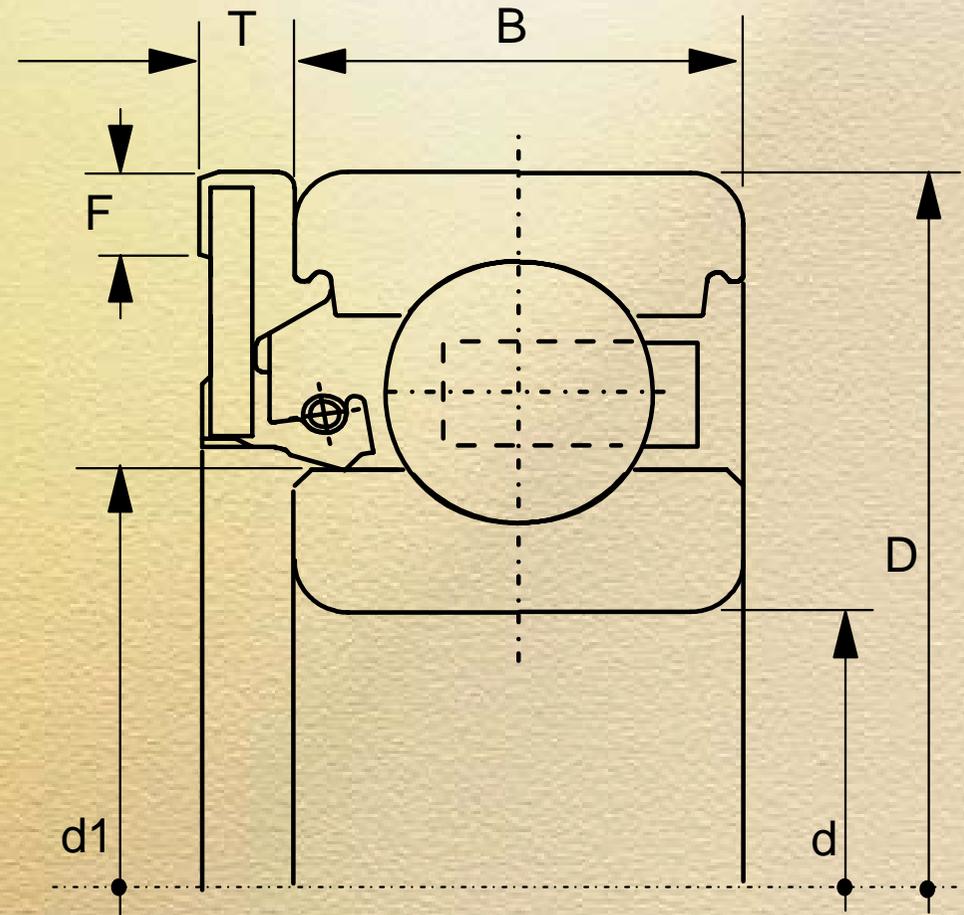
**ICOS 2**

# Integrated Compact Oil Sealed bearing unit

## Today range

### NBR material

ICOS	d	D	B	d1	T	F
ICOS-D1B01	12	32	10	18,45	2,6	6 #
ICOS-D1B02	15	35	11	21,7	2,2	2,1
ICOS-D1B03	17	40	12	24,5	2,2	2,2
ICOS-D1B04	20	47	14	28,8	2,2	2,5
ICOS-D1B05	25	52	15	34,35	2,2	2,5
ICOS-D1B06	30	62	16	40,36	3,4	3,2
ICOS-D1B07	35	72	17	46,94	3,4	3,5
ICOS-D1B08	40	80	18	52,6	3,4	4,4



# Full Rubber Cross section

# Integrated Compact Oil Sealed bearing unit

## The Product Designation



### Example:

**ICOS-D1B01 = ICOS type 2 with seal of NBR and bearing 6201**

1. Trademark = ICOS

2. Series prefix =

- 'Compact oil sealing type'

C: Icos Type 1

D: Icos Type 2

- Compact oil seal rubber material

1: NBR (Nitrile Butadiene)

2: FKM (Fluorocarbon)

- 'Built in' bearing series

A: 60

B: 62

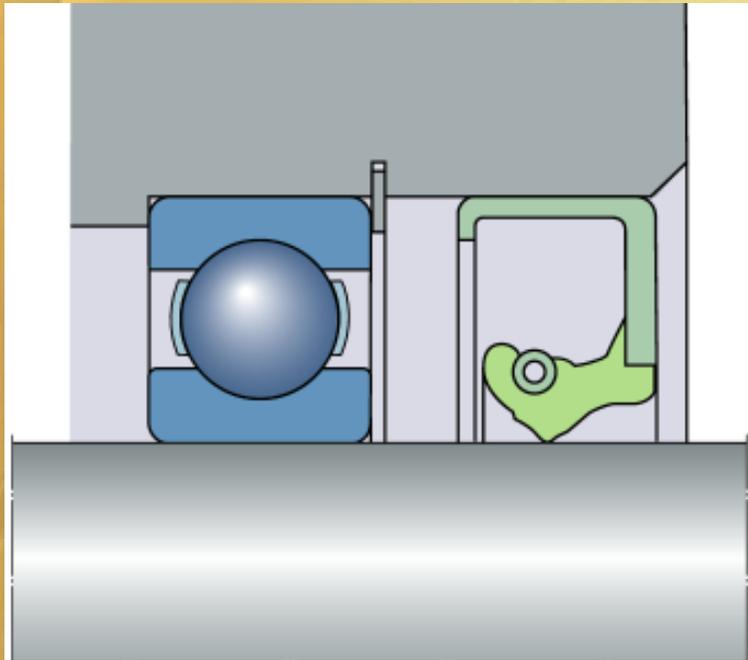
C: 63

3. Equal to the 'built in' bearing bore designation, e.g. 01 (when 6201) etc.

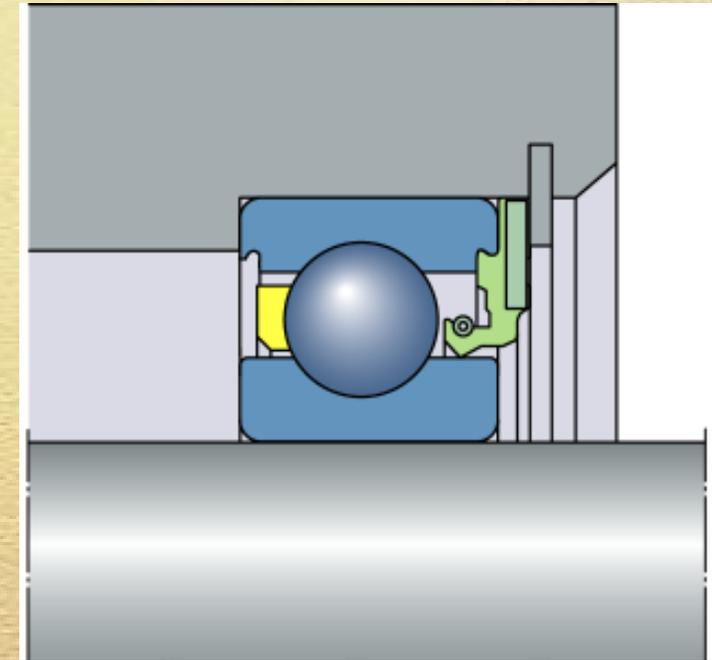
4. Suffix for variants deriving from bearing designation (according to the standard rules, e.g. -RS1/C3)

# Integrated Compact Oil Sealed bearing unit Application Complexity Examples

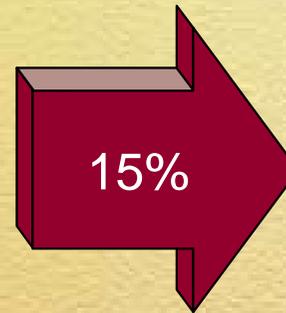
**Traditional assembly**



**ICOS concept**



**Total  
saving**

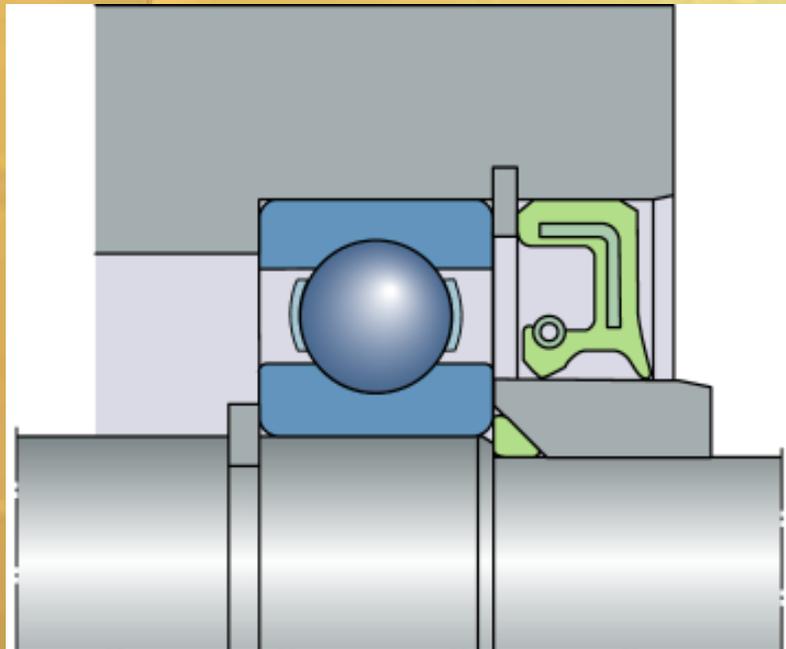


**15%**

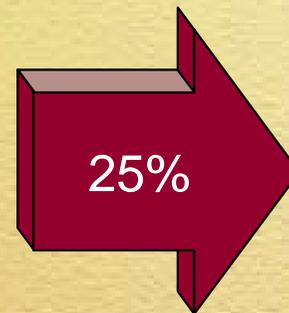
# Integrated Compact Oil Sealed bearing unit

## Application Complexity Examples

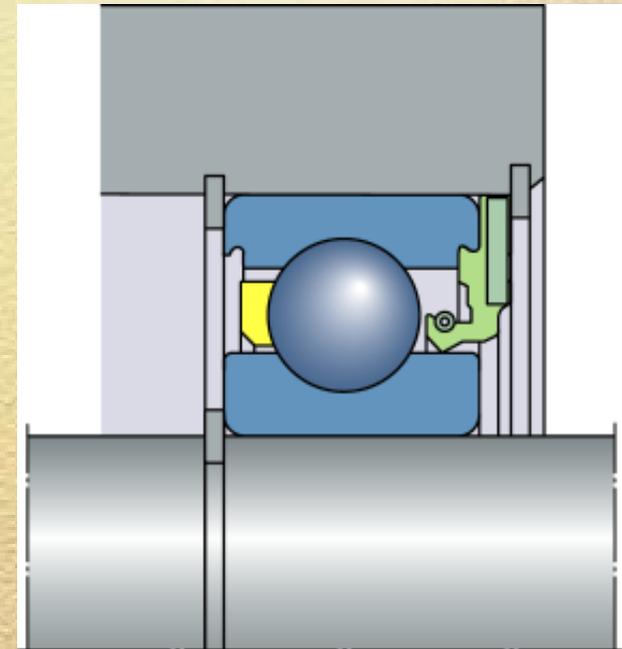
**Traditional assembly**



**Total  
saving**

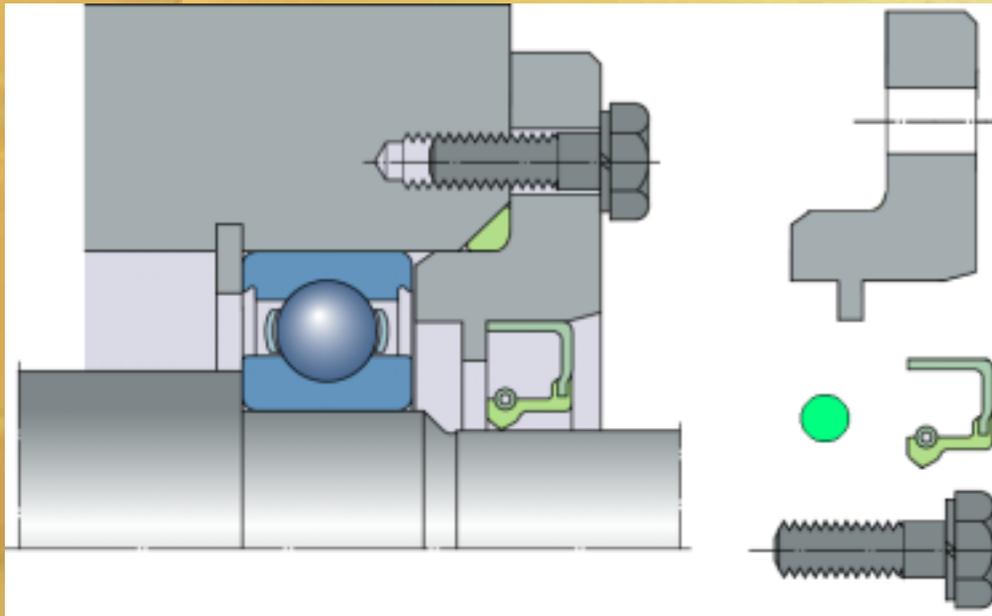


**ICOS concept**

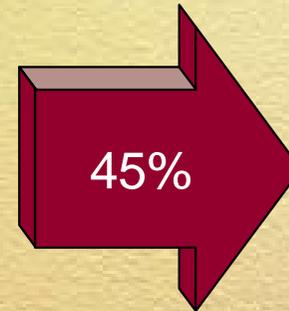


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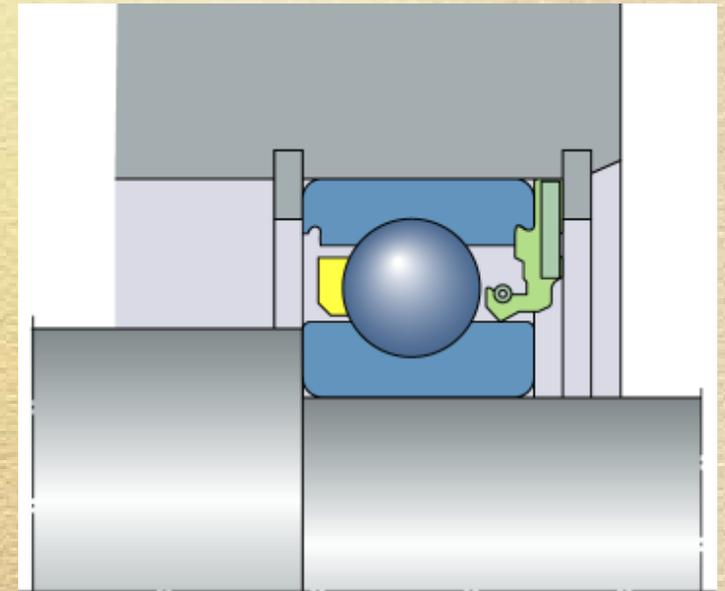
**Traditional assembly**



**Total  
saving**



**ICOS concept**



# Integrated Compact Oil Sealed bearing unit

## Why SKF ICOS

- Bearings and seals are connected products
- SKF is a manufacturing company of bearings and seals =  
One supplier for bearings and seals
- SKF is responsible for both function and quality
- The concept brings focus to a complete solution: integrating the seal and bearing function in one arrangement