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HMRC internal manual

Corporate Intangibles Research and Development Manual

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CIRD275300 - Patent Box: examples of streaming calculations

Example 1 – streaming by patent (and loss scenarios)

A company has a trading turnover of £10,000 in 2023/24, half of which is from the sale of a product that incorporates a qualifying patent and half of which is from the sale of other products. Column A shows the company's 'Standard' (non RIPI) income and tax deductible expenses while column B identifies the relevant IP income (RIPI) stream within total income and apportions the tax deductible expenses on a just and reasonable basis. The company as a whole has no marketing assets. There are no connected R&D subcontractors or IP acquisition costs, so the R&D Fraction is known to be 1. The company pays the ‘Small Profits rate’ of corporation tax which is 19 per cent.

-	**Column A**	**Column B**
-	Non patented products £	RIPI stream £
Sales (step 1)	9,500	500
Less trading expenses (step 3):	-	-
Cost of raw materials	(8,500)	(100)
Loan relationship debits	(50)	(50)
Marketing (all marked up)	(800)	(80)
R&D costs	(100)	(80)
R&D additional deduction	(30)	(24)
Taxable profit per stream (step 4) (total taxable profit = 186)	= 20	= 166
Patent Box relevant IP profit (step 4)	= 166	
Less routine return (step 4):	-	-

-	**Column A**	**Column B**
Total trading expenses used as basis for mark-up = £80 (mark up rate @ 10 percent) (step 4)	-	(8)
-	-	158
Add (step 3):	-	-
Loan relationship debits	-	50
R&D additional deduction	-	24
Relevant IP profit* x R&D Fraction of 1 (step 6)	-	= 232 x 1 = 232
Patent Box deduction (232 x (19-10) /19)	(109)	-
Corporation tax loss	= (89)	-

In this example, the company calculates the Patent Box deduction because it has relevant IP profits, but the deduction has created a corporation tax loss. The loss is a normal trading loss which may be group-relieved or carried forward at the full corporation tax rate in the usual way. This is to be distinguished from a 'relevant IP loss' which would be shown in column B (CIRD240100 (https://www.gov.uk/hmrc-internal-manuals/corporate-intangibles-research-and-development-manual/cird240100)).

(Where there is a 'relevant IP loss' instead of a 'relevant IP profit', there will be no Patent Box deduction formula needed because there are no profits to be taxed at a preferential rate. That loss reduces the relevant IP profits of other group members or any balance is carried forward to reduce future relevant IP profits in the same company. (See CIRD240110 to CIRD240140)

If there had been a corporation tax profit after the Patent Box deduction it would be entered onto the CT600 and taxed at 19% (small profits rate), which would equal the relevant IP profit being taxed at 10% and the other profit being taxed at 19%.

Example 2 - Streaming by product and/or process

- A company developed and patented 3 different electrical components A, B and C which are included in the manufacture of a range of branded patented products in the UK. A and B are part of product X and B and C are part of product Y
- It also licenses out the right to manufacture a product incorporating patent A using its patented technology, know-how and brand.
- In addition, the company uses its excess manufacturing capability to provide manufacturing services on a contract basis to other group companies.
- The company determines that manufacturing costs should be allocated based on the number of units produced.
- For simplicity, all ‘other costs’ are ‘routine deductions’, while none of the cost of goods are.
- Any profits relating to marketing assets are within 10% of QRP, so treated as nil
- The company allocates all its R&D department costs across all of the sub-streams as the one team developed all the patents and it has current R&D expenditure relating to a new ‘blue sky’ project which is included within the standard stream. This will not always be the case but depends on the facts.
- The £40,000 R&D costs of the onsite team is used in component D in each R&D Fraction, to reflect the onsite contribution. Delayed R&D work for patent C was sub contracted and partly developed by a connected group company’s R&D team, so that cost of £25,000 is included only within the R&D Fractions for the sub streams which include patent C (product Y only).

- The main rate of corporation tax is 25%

The company streams by product type as income received from individual patents is not easily distinguishable, and it is administratively easier for the one R&D team to track and trace its expenditure across product development rather than by patent.

The streamed calculation may be as follows:

-	Column A	Column B
-	Income from products with no relevant IP income £	RIPI sub-streams £ \n1. Patented product X\n2. Patented product Y\n3. Licence income
Turnover divided into sub streams (steps 1 and 2)	Contract Manufacturing (non RIPI) 3,000,000	1. 800,000\n2. 200,000\n3. 100,000
Less trading expenses: (step 3)	-	-
Cost of raw materials	(1,000,000)	1. 300,000\n2. 33,333\n3. 0
Other costs (within routine return categories)	(500,000)	1. 100,000\n2. 66,667\n3. 0

-	Column A	Column B
R&D expenditure – total 65,000\nThe total deduction is spread across the streams / sub-streams\nIn a just and reasonable way.	10,000 (blue sky – potential new product)	1. 10,000\n2. 35,000\n3. 10,000
Net profit\n(total profits chargeable to CT across all sub streams 2,035,000)	1,490,000	1. 390,000\n2. 65,000\n3. 90,000
routine return deduction (step 4)	-	a) 10% x 100,000 = 10,000\nb) 10% x 66,667 = 6,667\nc) 0
R&D Fraction (step 6)	a)1 (no outsourced R&D or acquisitions)\nb) 0.8 = (40,000 x 1.3) / 65,000\nc) 1 (no outsourced R&D or acquisitions)	
Combine Relevant IP profit\n(step 7)	1. 380,000\n2. 46,666\n3. 90,000\nTotal 516,666	
Patent Box deduction	-	516,666 x (25-10) / 25\n= 310,000

-	Column A	Column B
Total net profit of 2,035,000 reduced by Patent Box deduction	1,725,000	
Corporation tax charged at 25%	431,250	
Equal to relevant IP profits of 516,666 x10%=51,666\n+ 1,518,334 (total net profit less relevant IP profits) x25% = 379,584\nCT charged 431, 250	-	-

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